

OTHER RECORDING FUNCTIONS

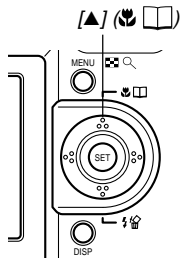
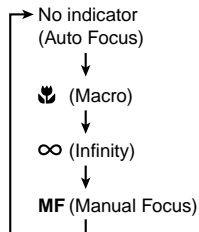
This section describes other powerful features and functions that are available for recording.

Selecting the Focus Mode

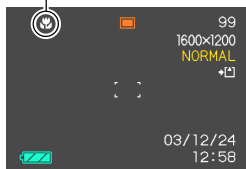
You can select one of four different focus modes: Auto Focus, Macro, Infinity, and Manual.

1. In the REC mode, press [▲] (🌿📖).

- Each press of [▲] (🌿📖) cycles through the focus mode settings in the sequence shown below.



Focus mode indicator



Using Auto Focus

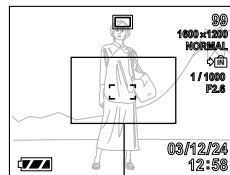
As its name suggests, Auto Focus focuses the image automatically. The automatic focus operation starts when you press the shutter release button down half way. The following is the Auto Focus range.

Range: Approximately 40cm to ∞ (1.3' to ∞)

1. Keep pressing [▲] (🌿📖) until there is no focus mode indicator on the display.

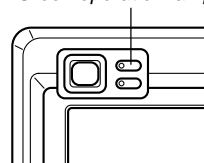
2. Compose the image so the main subject is within the focus frame, and then press the shutter release button half way.

- You can tell whether the image is focused by observing the focus frame and the green operation lamp.



Focus frame

Green operation lamp



When you see this:	It means this:
Green focus frame Green operation lamp	The image is focused.
Red focus frame Flashing green operation lamp	The image is not in focus.

3. Press the shutter release button the rest of the way to record the image.

Using the Macro Mode

The Macro mode lets you focus automatically on close up subjects. The automatic focus operation starts when you press the shutter release button down half way. The following is the focus range in the Macro mode.

Approximately 6cm to 50cm (2.4" to 19.7")

1. Keep pressing [▲] (📷) until the focus mode indicator shows 📷.

2. Record the image.

- The focus and image recording operations are identical to those in the Auto Focus mode.
- You can tell whether the image is focused by observing the focus frame and the green operation lamp. The indications of the focus frame and green operation lamp are the same as those in the Auto Focus mode.

▶▶ IMPORTANT! ◀◀

- In the Macro mode, the optical zoom range is 1x to 1.8x.

Using the Infinity Mode

The Infinity mode fixes focus at infinity (∞). Use this mode when recording scenery and other faraway images.

1. Keep pressing [**▲**] (**🌿** **☐**) until the focus mode indicator shows ∞ .
2. Record the image.

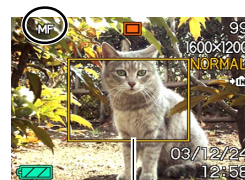
Using Manual Focus

With the Manual Focus mode, you can adjust the focus of an image manually. The following shows focus ranges in the Macro mode for two optical zoom factors.

Optical Zoom Factor	Approximate Focus Range
1X	6cm (2.4") to infinity (∞)
3X	18cm (7.1") to infinity (∞)

1. Keep pressing [**▲**] (**🌿** **☐**) until the focus mode indicator shows **MF**.

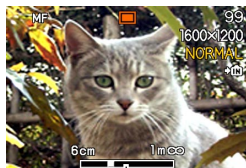
- At this point, a boundary also appears on the display, indicating the part of the image that will be used for manual focus.



Boundary

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2. While watching the image on the monitor screen, use [◀] and [▶] to focus.



Manual focus position

To do this:	Do this:
Focus out on the subject	Press [◀].
Focus in on the subject	Press [▶].

- Pressing [◀] or [▶] causes the area inside of the boundary displayed in step 1 to fill the monitor screen momentarily to aid in focus. The normal image reappears a short while later.

3. Press the shutter release button to record the image.

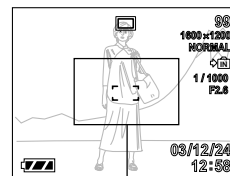
▶▶ IMPORTANT! ◀◀

- In the Manual Focus mode, the [◀] and [▶] keys adjust focus, even if you used key customization to assign other functions to them (page 77).

Using Focus Lock

Focus lock is a technique you can use to focus on a subject that is not located within the focus frame when you record an image. You can use focus lock in the Auto Focus mode and the Macro mode (👁).

1. Using the monitor screen, compose the image so the main subject is within the focus frame, and then press the shutter release button half way.



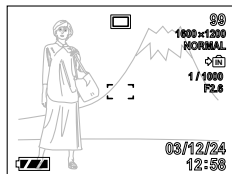
Focus frame

- You can tell whether the image is focused by observing the focus frame and the green operation lamp. The indications of the focus frame and green operation lamp are the same as those in the Auto Focus mode.

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2. Keeping the shutter release button half way down, re-compose the image as you like.

- This locks the focus on the subject that is currently within the focus frame.



3. When the image is composed the way you want, press the shutter release button the rest of the way to record it.

- The focus and image recording operations are identical to those in the Auto Focus mode.

NOTE

- Locking the focus also locks the exposure.

Exposure Compensation (EV Shift)

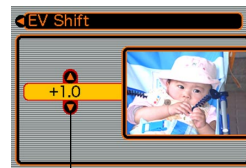
Exposure compensation lets you change the exposure setting (EV value) manually to adjust for the lighting of your subject. This feature helps to achieve better results when recording a backlit subject, a strongly lit subject indoors, or a subject that is against a dark background.

EV Shift Range: -2.0EV to $+2.0\text{EV}$

Steps: $1/3\text{EV}$

1. In the REC mode, press [MENU].

2. Select the “REC” tab, select “EV Shift”, and then press [▶].

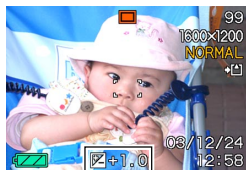


Exposure compensation value

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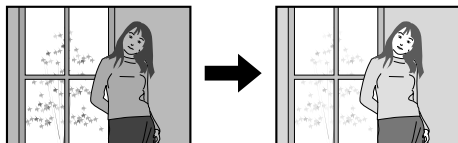
3. Use [▲] and [▼] to change the exposure compensation value, and then press [SET].

- Pressing [SET] registers the displayed value.

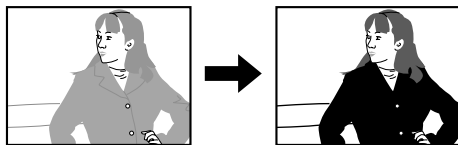


EV value

Up : Increases the EV value. A higher EV value is best used for light-colored subjects and backlight subjects.



Down : Decreases the EV value. A lower EV value is best for dark-color subjects and for shooting outdoors on a clear day.



- To cancel EV Shift, adjust the value until it becomes 0.0.

4. Record the image.

▶▶ IMPORTANT! ◀◀

- When shooting under very dark or very bright conditions, you may not be able to obtain satisfactory results even after performing exposure compensation.

▶▶ NOTES ◀◀

- Performing an EV shift operation causes the metering mode to switch automatically to center weighted metering. Returning the EV shift value to 0.0 causes the metering mode to change back to multi-pattern metering.
- You can use key customization (page 77) to configure the camera to perform exposure compensation whenever you press [◀] or [▶] while in the REC mode.





Adjusting White Balance

The wavelengths of the light produced by various light sources (sunlight, light bulb, etc.) can affect the color of a subject when it is recorded. White balance lets you make adjustments to compensate for different lighting types, so the colors of an image appear more natural.

1. In the REC mode, press [MENU].
2. Select the “REC” tab, select “White Balance”, and then press [▶].



3. Use [▲] and [▼] to select the setting you want, and then press [SET].

When shooting under these conditions:	Select this setting:
Normal conditions	Auto
Outdoor daylight	
Shade	
Incandescent light bulb (reddish tinge)	
Fluorescent light (greenish tinge)	
Difficult lighting that requires manual control (See “Adjusting White Balance Manually”.)	Manual

NOTES

- Selecting “Manual” changes white balance to the settings achieved the last time a manual white balance operation was performed.
- You can use the key customization feature (page 77) to configure the camera so the white balance setting changes whenever you press [◀] or [▶] while in the REC mode.

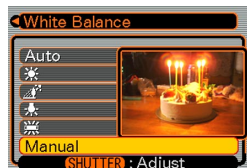
Adjusting White Balance Manually

Under some light sources, automatic white balance under the “Auto” setting can take a long time to complete. Also, the auto white balance range (color temperature range) is limited. Manual white balance helps to ensure that colors are recorded correctly for a particular light source.

Note that you must perform manual white balance under the same conditions you will be shooting under. You must also have a white piece of paper or other similar object on hand in order to perform manual white balance.

1. In the REC mode, press [MENU].
2. Select the “REC” tab, select “White Balance”, and then press [▶].
3. Use [▲] and [▼] to select “Manual”.

- This causes the object you last used to adjust manual white balance to appear on the monitor screen.



4. Point the camera at a white piece of paper or similar object under the lighting conditions for which you want to set the white balance, and then press the shutter release button.

- This starts the white balance adjustment procedure. The message “Complete” appears on the monitor screen after white balance adjustment is complete.
- Dim lighting or pointing the camera at a dark colored object while performing manual white balance adjustment can cause the procedure to take a long time to complete.

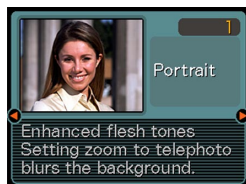
5. Press [SET].

- This registers the white balance settings and returns to the REC mode.

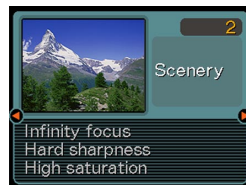
Using the Best Shot Mode

Selecting one of the 21 Best Shot scenes automatically sets up the camera for recording a similar type of image.

■ Example Sample Scene



1. In the REC mode, press [MENU].
2. Select the “REC” tab, select “REC Mode”, and then press [▶].
3. Use [▲] and [▼] to select “BS (Best Shot)”, and then press [SET].
 - This enters the Best Shot mode and displays a sample scene.
4. Use [◀] and [▶] to select the sample scene you want, and then press [SET].
5. Record the image.



▶▶ IMPORTANT! ◀◀

- Sample scene number 4 is Coupling Shot scene (page 69). Sample scene number 5 is a Pre-shot scene (page 71).
- Best Shot scenes were not recorded using this camera. They are provided as samples only.
- Images recorded using a Best Shot scene may not produce the results you expected due to shooting conditions and other factors.
- After selecting a Best Shot scene, you can change to a different one by using [◀] and [▶] to scroll through available scenes. When the one you want is displayed, press [SET].

Creating Your Own Best Shot Setup

You can use the procedure below to save the setup of an image you recorded for later recall when you need it again. Recalling a setup you save automatically sets up the camera accordingly.

1. In the REC mode, press [MENU].
2. Select the “REC” tab, select “REC Mode”, and then press [▶].
3. Use [▲] and [▼] to select “BS (Best Shot)”, and then press [SET].
 - This enters the Best Shot mode and displays a sample scene.
4. Use [◀] and [▶] to display “Register Favorites”.
5. Press [SET].



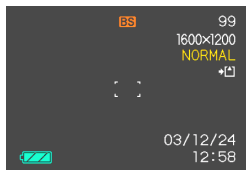
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6. Use [◀] and [▶] to display the image whose setup you want to register as a Best Shot scene.



7. Use [▲] and [▼] to select "Save", and then press [SET].

- This registers the setup.
- Now you can use the procedure on page 65 to select your user setup for recording.



IMPORTANT!

- Setups that you register as Best Shot sample scenes are located after the built-in sample scenes.
- When a Best Shot user setup is recalled, the monitor screen in step 4 of the procedure on page 65 displays the text "Recall Favorites".
- Note that formatting the built-in memory (page 117) deletes all Best Shot user setups.

NOTES

- Best Shot user setups are located in the camera's built-in memory after the built-in sample scenes.
- The following are the settings that are included in a Best Shot user setup: focus mode, EV shift value, white balance mode, flash mode, and ISO sensitivity.
- Note that images recorded with this camera only can be used to create a Best Shot user setup.
- You can have up to 999 Best Shot user setups in the camera's built-in memory at one time.
- You can check the current setup of a scene by displaying the various setting menus.
- User setups are assigned file names using the format "UEXZ3nnn.jpe" (where n = 0 to 9).

■ To delete a Best Shot user setup

1. In the REC mode, press [MENU].
2. Select the “REC” tab, select “REC Mode”, and then press [▶].
3. Use [▲] and [▼] to select “BS (Best Shot)”, and then press [SET].
 - This enters the Best Shot mode and displays a sample scene.
4. Use [◀] and [▶] to display the user setup you want to delete.
5. Press [▼] (⚡🏠) to delete the user setup.
 - You can also delete a user setup by using your computer to delete its file in the “SCENE” folder in the camera’s built-in memory (page 136).

Combining Shots of Two People into a Single Image (Coupling Shot)

The Coupling Shot mode lets you record images of two people and combine them into a single image. This makes it possible for you to include yourself in group images, even when there is no one else around to record the image for you. Coupling Shot is available in the Best Shot mode (page 65).

- First Image



This is the part of the image that does not include the person who is recording the first image.

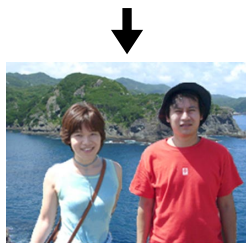


- Second Image



Making sure that the background of the image is aligned correctly, record the image of the person who recorded the first image.

- Combined Images

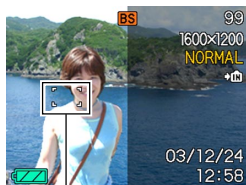


1. In the REC mode, press [MENU].
2. Select the "REC" tab, select "REC Mode", and then press [▶].
3. Use [▲] and [▼] to select "[BS] (Best Shot)", and then press [SET].
4. Use [◀] and [▶] to select "Coupling Shot", and then press [SET].

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5. Align the focus frame on the monitor screen with the subject you want on the left side of the image, and then press the shutter release button to record the image.

- The focus, exposure, white balance, zoom, and flash settings are fixed for this type of image.



Focus frame

6. Next, align the focus frame with the subject you want in the right side of the image, taking care to align the actual background with the semi-transparent image of the background of the first image, which is shown on the monitor screen. When everything is aligned correctly, record the image.

- Pressing [MENU] any time after step 5 of the above procedure cancels the first image and returns to step 5.



Semi-transparent image

Recording a Subject onto an Existing Background Image (Pre-shot)

Pre-shot helps you get the background you want, even if you need to ask someone else to record the image for you. Basically, Pre-shot is a two-step process.

1. You compose the background you want and press the shutter release button, which causes a semi-transparent image of the background to remain on the monitor screen.
2. Ask someone else to record a shot of you against your original background, telling them to compose the image by using the semi-transparent monitor screen image as a guide.
 - The camera stores the image produced by step 2 only.
 - Depending on how the image is actually composed in step 2, its background may not be exactly the same as the one you composed in step 1.

Note that Pre-shot is available in the Best Shot mode only (page 65).

- Freeze the background on the monitor screen.



- Record the image, using the background on the monitor screen as a guide.



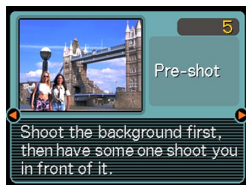
- This records the image.



OTHER RECORDING FUNCTIONS

1. In the REC mode, press [MENU].
2. Select the “REC” tab, select “REC Mode”, and then press [▶].
3. Use [▲] and [▼] to select “BS (Best Shot)”, and then press [SET].

4. Use [◀] and [▶] to select “Pre-shot”, and then press [SET].



5. **Freeze the background on the monitor screen.**
 - Though a semi-transparent image of the background appears on the monitor screen in step 6, the background image is not saved in memory at this time.
 - The focus, exposure, white balance, zoom, and flash settings are fixed for this type of image.

6. Next, align the focus frame with the subject, composing the subject with the semi-transparent background shown on the monitor screen. When everything is aligned correctly, record the image.



Semi-transparent image

- This records the image composed on the monitor screen in step 6. The reference background image is not recorded.
- Pressing [MENU] any time after step 5 of the above procedure cancels the background image and returns to step 5.

Using the Movie Mode

You can record movies with audio, up to 30 seconds long.

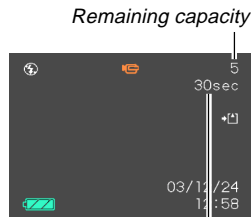
- File Format: AVI
AVI format conforms to the Motion JPEG format promoted by the Open DML Group.
- Image Size: 320 x 240 pixels
- Movie File Size: Approximately 130KB/second.
- Maximum Movie Length
 - One Movie: 30 seconds
 - Total Movie Time:
80 seconds with built-in memory; 500 seconds with 64MB SD memory card

1. In the REC mode, press [MENU].

2. Select the “REC” tab, select “REC Mode”, and then press [▶].

3. Use [▲] and [▼] to select  (Movie), and then press [SET].

- “Remaining capacity” shows how many 30-second movies can still be recorded to memory.

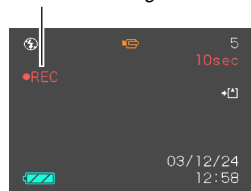


Remaining recording time

4. Point the camera at the subject and then press the shutter release button.

- Movie recording continues for 30 seconds, or until you stop it by pressing the shutter release button again.
- Starting a movie record operation causes optical zoom to be disabled. Only digital zoom is available while a movie record operation is in progress. If you want to use optical zoom to record a movie, perform the zoom operation before starting the record operation.

Movie recording indicator



OTHER RECORDING FUNCTIONS

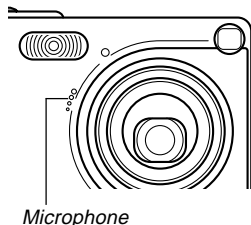
- The remaining recording time value counts down on the monitor screen as you record.

5. When movie recording is complete, the movie file is stored in file memory.

- To cancel storage of the movie file, use [▼] to select “Delete” while file storage is being performed, and then press [SET].

▶▶ IMPORTANT! ◀◀

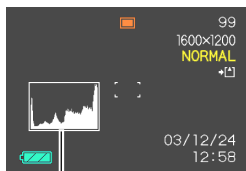
- The flash does not fire in the Movie mode.
- This camera also records audio. Note the following points when recording a movie.
 - Take care that you do not block the microphone with your fingers.
 - Good recording results are not possible when the camera is too far from the subject.
 - Operating camera buttons during recording can cause button noise to be included in the audio.



- Movie audio is recorded in monaural.
- The camera focuses automatically whenever you have Auto Focus (page 57) or Macro (📷) selected as the focus mode. Note that the confirmation tone that sounds during the Auto Focus operation will be recorded in the audio. If you do not want confirmation tones in your audio, select Manual Focus (MF) and manually focus the image before starting your recording.
- Auto Focus is not performed in the case of the Manual Focus (MF) and Infinity (∞) focus modes, and so no confirmation tone sounds. In the case of the Manual Focus mode, you cannot adjust focus settings while recording is in progress. Be sure to make all adjustments before beginning the record operation.

Using the Histogram

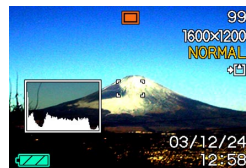
You can use the [DISP] button to display a histogram on the monitor screen. The histogram lets you check exposure conditions as you record images (page 24). You can also display the histogram of a recorded image in the PLAY mode.



Histogram

A histogram is a graph that represents the lightness of an image in terms of the number of pixels. The vertical axis indicates the number of pixels, while the horizontal axis indicates lightness. You can use the histogram to determine whether an image includes the shadowing (left side), mid tones (center), and highlighting (right) required to bring out sufficient image detail. If the histogram appears too lopsided for some reason, you can use EV shift (exposure compensation) to move it left or right in order to achieve better balance. Optimum exposure can be achieved by correcting exposure so the graph is as close to the center as possible.

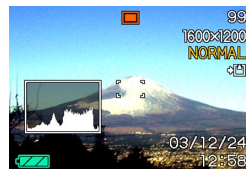
- When the histogram is too far to the left, it means that there are too many dark pixels. This type of histogram results when the overall image is dark. A histogram that is too far to the left may result in “black out” of the dark areas of an image.



- When the histogram is too far to the right, it means that there are too many light pixels. This type of histogram results when the overall image is light. A histogram that is too far to the right may result in “white out” of the light areas of an image.



- A centered histogram indicates that there is good distribution of light pixels and dark pixels. This type of histogram results when the overall image is at optimal lightness.



▶▶ IMPORTANT! ◀◀

- Note that the above histograms are shown for illustrative purposes only. You may not be able to achieve exactly the same shapes for particular subjects.
- A centered histogram does not necessarily guarantee optimum exposure. The recorded image may be over-exposed or under-exposed, even though its histogram is centered.
- You may not be able to achieve an optimum histogram configuration due to the limitations of EV shift.
- Use of the flash as well as certain shooting conditions can cause the histogram to indicate exposure that is different from the actual exposure of the image when it was recorded.
- This histogram does not appear when you are using Coupling Shot (page 69).

REC Mode Camera Settings

Specifying ISO Sensitivity

Use the following procedure to select the ISO sensitivity setting that suits the type of image you are recording.

1. In the REC mode, press [MENU].
2. Select the “REC” tab, select “ISO”, and then press [▶].
3. Use [▲] and [▼] to select the setting you want and then press [SET].

To get this:	Select this setting:
Automatic sensitivity selection	Auto
Conforms with ISO 50	ISO 50
Conforms with ISO 100	ISO 100
Conforms with ISO 200	ISO 200

▶▶ IMPORTANT! ◀◀

- Increasing ISO sensitivity can cause static to appear inside an image. Select the ISO sensitivity setting that suits your shooting needs.
- Using a high ISO sensitivity setting along with the flash to shoot a nearby subject may result in improper illumination of the subject.

Turning Image Review On and Off

Image review displays an image on the monitor screen as soon as you record it. Use the following procedure to turn image review on and off.

1. In the REC mode, press [MENU].
2. Select the “REC” tab, select “Review”, and then press [▶].
3. Use [▲] and [▼] to select the setting you want, and then press [SET].

To do this:	Select this setting:
Display images on the monitor screen for about one second immediately after they are recorded	On
Do not display images immediately after they are recorded	Off

Assigning Functions to the [◀] and [▶] Keys

A “key customization” feature lets you configure the [◀] and [▶] keys so they change camera settings whenever they are pressed in the REC mode. After you configure the [◀] and [▶] keys, you can change the setting assigned to them without going through the menu screen.

1. In the REC mode, press [MENU].
2. Select the “REC” tab, select “L/R Key”, and then press [▶].
3. Use [▲] and [▼] to select the setting you want, and then press [SET].

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When you want to assign this function to [◀] and [▶] keys:	Select this:
Recording mode • [◀] and [▶] cycle through recording modes: Snapshot, Best Shot, Movie (page 154).	REC Mode
EV shift • [◀] decreases compensation, [▶] increases compensation (page 61).	EV Shift
White balance setting • [◀] and [▶] cycle through white balance settings (page 63).	White Balance
ISO sensitivity • [◀] and [▶] cycle through sensitivity settings (page 76).	ISO
Self-timer mode • [◀] and [▶] cycle through self-timer modes (page 53).	Self-timer
No function assigned	Off


NOTE

- The initial default setting is “REC Mode”.

Specifying Power On Default Settings

The camera’s “mode memory” feature lets you specify the power on default settings individually for the REC mode, flash mode, focus mode, white balance mode, ISO sensitivity, digital zoom mode, and manual focus position. Turning on mode memory for a mode tells the camera to remember the status of that mode when you turn off the camera, and restore it the next time you turn the camera back on. When mode memory is turned off, the camera automatically restores the initial factory default setting for the applicable mode.

The following table shows what happens when you turn mode memory on or off for each mode.

Function	On	Off
REC Mode	Setting when camera is turned off	 Snapshot
Flash		Auto
Focus		Auto
White Balance		Auto
ISO		Auto
Digital Zoom		On
MF Position		Last Auto Focus position that was in effect before you switched to manual focus

1. In the REC mode, press [MENU].
2. Select the “Memory” tab, select the item you want to change, and then press [▶].
3. Use [▲] and [▼] to select the setting you want, and then press [SET].

To do this:	Select this setting:
Turn on mode memory so settings are restored at power on	On
Turn off mode memory so settings are initialized at power on	Off

▶▶ IMPORTANT! ◀◀

- Note that Best Shot mode settings take priority over mode memory settings. If you turn the camera off while in the Best Shot mode, the camera’s Flash, White Balance, and ISO Sensitivity will be configured according to the Best Shot sample scene when you turn it back on again, regardless of mode memory on/off setting.
- If you turn the camera off while in the Movie mode, the flash will be turned off when you turn the camera back on again, regardless of mode memory on/off setting.

Resetting the Camera

Use the following procedure to reset all of the camera’s settings to their initial defaults as shown under “Menu Reference” on page 154.

1. In the REC mode or the PLAY mode, press [MENU].
2. Select the “Set Up” tab, select “Reset”, and then press [▶].
3. Select “Reset”, and then press [SET].
 - To cancel the procedure without resetting, select “Cancel” and press [SET].