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 [▲] (♥ □□).





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 60cm to ∞ (2['] to ∞)

- 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.

Specifying the Auto Focus Area

You can use the following procedure to change the Auto Focus area used in the Auto Focus Mode and the Macro Mode. Note that the configuration of the focus frame changes in accordance with the Auto Focus area you select.

- 1. In the REC mode, press [MENU].
- 2. On the "REC" tab, select "AF Area", and then press [▶].

3. Select the Auto Focus area you want, and then press [SET].

For this type of Auto Focus area:	Select this:
Very limited range in the center of the screen • This setting works well with focus lock (page 69).	Spot
 Automatic selection of the focus area where the subject closest to the camera is located With this setting, a wide focus frame, which contains five focus points, appears on the monitor screen first. When you press the shutter release button half way, the camera automatically selects the focus point where the subject closest to the camera is located, and a focus frame appears at that point. This setting works well for group photos. 	Multi



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 10cm to 70cm (3.9" to 27.6")

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 1.2x.

Using the Infinity Mode

Use this mode when recording scenery and other faraway images.

- 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	10cm (3.9") to infinity (∞)
3X	60cm (23.6") to infinity (∞)

- 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

 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 89).

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 (B).

 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.

- 2. Keeping the shutter release button half way down, recompose 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 +2.0EV Steps: 1/3EV

- 1. In the REC mode, press [MENU].
- Select the "REC" tab, select "EV Shift", and then press [▶].



Exposure compensation value

- 3. Use [▲] and [▼] to change the exposure compensation value, and then press [SET].
 - Pressing [SET] registers the displayed 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 89) 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].

 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)	羔
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 89) 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 " (Best Shot)", and then press [SET].



- This enters the Best Shot mode and displays a sample scene.
- Use [◄] and [▶] to select the sample scene you want, and then press [SET].
- 5. Record the image.

- Sample scene number 4 is Coupling Shot scene (page 77). Sample scene number 5 is a Pre-shot scene (page 79).
- 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 "🕃 (Best Shot)", and then press [SET].
 - This enters the Best Shot mode and displays a sample scene.
- 4. Use [◀] and [▶] to display "Register User Scene".



5. Press [SET].

 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 74 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 74 displays the text "Recall User Scene".
- Note that formatting the built-in memory (page 128) deletes all Best Shot user setups.

NOTES (((

- The following are the settings that are included in a Best Shot user setup: focus mode, EV shift value, filter, metering mode, white balance mode, flash intensity, sharpness, saturation, contrast, 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 "UQR40nnn.jpe" (where n = 0 to 9).

To delete a Best Shot user setup

- 1. In the REC mode, press [MENU].
- Select the "REC" tab, select "REC Mode", and then press [▶].
- 3. Use [▲] and [▼] to select "💽 (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 $[\mathbf{\nabla}]$ (\mathfrak{C}) 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 146).

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 73).

• 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].
- Select the "REC" tab, select "REC Mode", and then press [▶].
- 3. Use [▲] and [▼] to select "🕃 (Best Shot)", and then press [SET].
- 4. Use [◀] and [▶] to select "Coupling Shot", and then press [SET].

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.



Focus frame

- The focus, exposure, white balance, zoom, and flash settings are fixed for this type of image.
- While "Coupling Shot" is selected, the "AF Area" (page 66) setting automatically becomes "Spot".

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.



Semi-transparent image

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

IMPORTANT! ((

• Coupling Shot temporarily uses file memory to store data. You may get an error during Coupling Shot recording if there is not enough file memory available to store the required data. If this happens, delete images you no longer need and try again.

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.
- 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 73).

• Freeze the background on the monitor screen.





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





• This records the image.



- 1. In the REC mode, press [MENU].
- 2. Select the "REC" tab, select "REC Mode", and then press [▶].
- 3. Use [▲] and [▼] to select "💽 (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 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 150KB/second.
- Maximum Movie Length
 - One Movie: 30 seconds
 - Total Movie Time:
 60 seconds with built-in memory; 410 seconds with
 64MB SD memory card
- 1. In the REC mode, press [MENU].
- Select the "REC" tab, select "REC Mode", and then press [▶].

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

4. Point the camera at

press the shutter

release button.

 Movie recording continues for 30

again.

the subject and then

seconds, or until you stop it by pressing the

shutter release button

Remaining capacity



Remaining recording time

Movie recording indicator



 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.

- 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.

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 31). 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.



- 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 77).

REC Mode Camera Settings

The following are the settings you can make before recording an image using a REC mode.

- ISO sensitivity
- Metering
- Color filtering
- Saturation
- Contrast
- Sharpness
- Grid on/off
- Image Review on/off
- L/R key setting
- Power on default settings
- · Resetting the camera

NOTE (((

- You can also configure the settings listed below. See the referenced pages for more information.
- Size and Quality (page 63)
- White Balance (page 71)
- Flash Intensity (page 60)
- Digital Zoom (page 56)
- AF Area (page 66)

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].
- 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 to ISO 80	ISO 80
Conforms to ISO 160	ISO 160
Conforms to ISO 320	ISO 320

- 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.

Selecting the Metering Mode

Use the following procedure to specify multi-pattern metering, spot metering, or center-weighted metering as the metering mode.

- 1. In the REC mode, press [MENU].
- Select the "REC" tab, select "Metering", and then press [▶].
- *3.* Select the setting you want, and then press [SET].

Multi (Multi-pattern):

Multi-pattern metering divides the image into sections and measures the light in each section for a balanced exposure reading. The camera automatically determines shooting conditions according to the measured lighting pattern, and makes exposure settings accordingly. This type of metering provides error-free exposure settings for a wide range of shooting conditions.



• Center weighted (Center-weighted):

Center-weighted metering measures light concentrating on the center of the focus area. Use this metering method when you want to exert some control over exposure, without leaving settings totally up to the camera.

Spot (Spot):

Spot metering takes readings at a very small area. Use this metering method when you want exposure to be set according to the brightness of a particular subject, without it being affected by surrounding conditions.





- When "Multi" is selected as the metering mode, certain procedures cause the metering mode setting to change automatically as described below.
- Changing the exposure compensation setting (page 70) to a value other than 0.0 changes the metering mode setting to "Center Weighted." The metering mode changes back to "Multi" when you return the exposure compensation setting to 0.0.

Using the Filter Function

The camera's filter function lets you alter the tint of an image when you record it.

- 1. In the REC mode, press [MENU].
- Select the "REC" tab, select "Filter", and then press [▶].
- *3.* Select the setting you want, and then press [SET].
 - Available filter settings are: Off, B/W, Sepia, Red, Green, Blue, Yellow, Pink, Purple

DD IMPORTANT! ((

• Using the camera's filter feature produces the same effect as attaching a color filter to the lens.

Specifying Color Saturation

Use the following procedure to control the intensity of the image you are recording.

- 1. In the REC mode, press [MENU].
- 2. Select the "REC" tab, select "Saturation", and then press [▶].
- *3.* Select the setting you want, and then press [SET].

To get this:	Select this setting:
High color saturation (intensity)	High
Normal color saturation (intensity)	Normal
Low color saturation (intensity)	Low

Specifying Contrast

Use this procedure to adjust the relative difference between the light areas and dark areas of the image you are recording.

- 1. In the REC mode, press [MENU].
- 2. Select the "REC" tab, select "Contrast", and then press [▶].
- *3.* Select the setting you want, and then press [SET].

To get this:	Select this setting:
High contrast	High
Normal contrast	Normal
Low contrast	Low

Specifying Outline Sharpness

Use the following procedure to control the sharpness of image outlines.

- 1. In the REC mode, press [MENU].
- Select the "REC" tab, select "Sharpness", and then press [▶].
- *3.* Select the setting you want, and then press [SET].

To get this:	Select this setting:
High sharpness	Hard
Normal sharpness	Normal
Low sharpness	Soft

Turning the On-screen Grid On and Off

You can display gridlines on the monitor screen to help you compose images and ensure that the camera is straight when recording.

		99 1600×1200 NORMAL
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< <u>~~</u>		03/12/24 12:58

- 1. In the REC mode, press [MENU].
- Select the "REC" tab, select "Grid", and then press [▶].
- *3.* Select the setting you want, and then press [SET].

To do this:	Select this setting:
Display the grid	On
Hide the grid	Off

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].
- 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 $[\blacktriangleleft]$ and $[\blacktriangleright]$ keys so they change camera settings whenever they are pressed in the REC mode. After you configure the $[\blacktriangleleft]$ and $[\blacktriangleright]$ 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].

When you want to assign this function to [◀] and [▶] keys:	Select this:
 Recording mode [◀] and [▶] cycle through recording modes: Snapshot, Best Shot, Movie (page 162). 	REC Mode
EV shift • [◀] decreases compensation, [▶] increases compensation (page 70).	EV Shift
White balance setting • [◀] and [▶] cycle through white balance settings (page 71).	White Balance
 ISO sensitivity [◀] and [▶] cycle through sensitivity settings (page 84). 	ISO
 Self-timer mode [◀] and [▶] cycle through self-timer modes (page 61). 	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, AF Area, metering mode, flash intensity, 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
AF Area		Spot
Metering		Multi
Flash Intensity		Normal
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].
- 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 162.

- 1. In the REC mode or the PLAY mode, press [MENU].
- 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].