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DiMAGE Xi

E INSTRUCTION MANUAL

BEFORE YOU BEGIN

Thank you for purchasing this Minolta product. Please take the time to read through this instruction manual so you can enjoy all the features of your new digital camera.

This manual contains information regarding products introduced before October, 2002. To obtain compatibility information for products released after this date, contact a Minolta Service Facility listed on the back cover of this manual.

Check the packing list before using this product. If any items are missing, immediately contact your camera dealer.

Minolta DiMAGE Xi digital camera
Lithium-ion battery NP-200
Lithium-ion battery charger BC-200
Hand strap HS-DG100
16MB SD Memory Card
AV cable AVC-200
USB cable USB-500
DiMAGE software CD-ROM
DiMAGE Viewer manual
Camera manual
Warranty card

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FOR PROPER AND SAFE USE

NP-200 Lithium-ion batteries

The DiMAGE Xi operates on a small, but powerful lithium-ion battery. Misuse or abuse of the lithium-ion battery can cause damage or injury through fire, electric shock, or chemical leakage.

Read and understand all warnings before using the battery.

DANGER

- Do not short, disassemble, damage, or modify the battery.
- Do not expose the battery to fire or high temperatures over 60°C (140°F).
- Do not expose the battery to water, or moisture. Water can corrode or damage the internal battery safety devices and cause the battery to overheat, ignite, rupture, or leak.
- Do not drop or subject the battery to strong impacts. Impacts can damage the internal battery safety devices and cause the battery to overheat, ignite, rupture, or leak.
- Do not store the battery near or in metallic products.
- Do not use the battery with any other products.
- Only use the specified charger within the voltage range specified on the charger unit. An inappropriate charger or current may cause damage or injury through fire or electric shock.
- Do not use a leaking battery. If fluid from the battery enters your eye, immediately rinse the eye with plenty of fresh water and contact a doctor. If fluid from the battery makes contact with your skin or clothing, wash the area thoroughly with water.
- Only use or charge the battery in an environment with ambient temperatures between 0° and 40°C (32° and 104°F). Only store the battery in an environment with ambient temperatures between -20° and 30°C (-4° and 86°F) and a humidity of 45% to 85% RH.

(Continued on the next page.)

FOR PROPER AND SAFE USE

WARNING

- Tape over the lithium-ion battery contacts to avoid short-circuiting during disposal; always follow local regulations for battery disposal.
- If charging is not completed after the specified period elapses, unplug the charger and discontinue charging immediately.

General warnings and cautions for product use.

Read and understand the following warnings and cautions for safe use of the digital camera and its accessories.

WARNING

- Only use the battery specified in this manual.
- Only use the specified AC adapter within the voltage range indicated on the adapter unit. An inappropriate adapter or current may cause damage or injury through fire or electric shock.
- Do not disassemble the camera or charger. Electric shock may cause injury if a high voltage circuit inside the product is touched.
- Immediately remove the battery or unplug the AC adapter and discontinue use if the camera is dropped or subjected to an impact in which the interior, especially the flash unit, is exposed. The flash has a high voltage circuit which may cause an electric shock resulting in injury. The continued use of a damaged product or part may cause injuries or fire.

- Keep the battery, memory card, or small parts that could be swallowed away from infants. Contact a doctor immediately if an object is swallowed.
- Store this product out of reach of children. Be careful when around children, not to harm them with the product or parts.
- Do not fire the flash directly into the eyes. It may damage eyesight.
- Do not fire the flash at vehicle operators. It may cause a distraction or temporary blindness which may lead to an accident.
- Do not use the monitor while operating a vehicle or walking. It may result in injury or an accident.
- Do not look directly at the sun or strong light sources through the viewfinder. It may damage your eyesight or cause blindness.
- Do not look at the sun or strong light sources directly through the viewfinder or lens. It may damage your eyesight or cause blindness.
- Do not use these products in a humid environment, or operate them with wet hands. If liquid enters these products, immediately remove the battery or unplug the product, and discontinue use. The continued use of a product exposed to liquids may cause damage or injury through fire or electric shock.
- Do not use these products near inflammable gases or liquids such as gasoline, benzene, or paint thinner. Do not use inflammable products such as alcohol, benzene, or paint thinner to clean these products. The use of inflammable cleaners and solvents may cause an explosion or fire.
- When unplugging the AC adapter or charger, do not pull on the power cord. Hold the plug when removing it from an outlet.
- Do not damage, twist, modify, heat, or place heavy objects on the AC adapter or charger cord. A damaged cord may cause damage or injury through fire or electric shock.
- If these products emits a strange odor, heat, or smoke, discontinue use. Immediately remove the battery taking care not to burn yourself as the battery may become hot with use. The continued use of a damaged product or part may cause injuries or fire.
- Take the product to a Minolta Service Facility when repairs are required .

CAUTION

- Do not use or store these products in a hot or humid environment such as the glove compartment or trunk of a car. It may damage the camera, charger, and battery which may result in burns or injuries caused by heat, fire, explosion, or leaking battery fluid.
- If the battery is leaking, discontinue use of the product.
- The camera, charger, and battery temperature rises with extended periods of use. Care should be taken to avoid burns.
- Burns may result if the memory card or battery is removed immediately after extended periods of use. Turn the camera off and wait for it to cool.
- Do not fire the flash while it is in contact with people or objects. The flash unit discharges a large amount of energy which may cause burns.
- Do not apply pressure to the LCD monitor. A damaged monitor may cause injury, and the liquid from the monitor may cause inflammation. If liquid from the monitor makes contact with skin, wash the area with fresh water. If liquid from the monitor comes in contact with the eyes, immediately rinse the eyes with plenty of water and contact a doctor.
- When using the AC adapter and charger, insert the plug securely into the electrical outlet.
- Do not use if the AC adapter or charger cord is damaged.
- Do not cover the AC adapter or charger. A fire may result.
- Do not obstruct access to the AC adapter or charger; this can hinder the unplugging of the units in emergencies.
- Unplug the AC adapter or charger when cleaning or not in use.

ABOUT THIS MANUAL

The getting up and running section covers how to prepare the camera for use. It contains important information about power supplies and memory cards. The basic operation of this camera is covered in the recording-mode section between pages 20 and 29, and the playback-mode section between pages 54 and 60. Read the data-transfer mode section in its entirety before connecting the camera to a computer.

Many of the features of this camera are controlled with menus. The menu navigation sections concisely describe how to change menu settings. Descriptions of the settings immediately follow the navigation sections.

The appendix contains a troubleshooting section to help answer questions about the operation of the camera. Information covering camera care and storage is also provided. Please store this manual in a safe place.

Names of parts	10
Getting up and running.....	12
Charging the lithium-ion battery	12
Changing the lithium-ion battery.....	13
Battery-condition indicator	14
Auto power off	14
AC adapter (sold separately).....	15
Attaching the hand strap	15
Installing and removing a memory card	16
About memory cards	17
Setting the date and time	18
Recording mode	20
Handling the camera	20
Setting the camera to record images	20
Using the zoom lens.....	21
LCD monitor display - recording mode.....	22
Camera-shake warning	22
Basic recording operation.....	23
Focus lock	24
Focus range.....	24
Focus signals.....	25

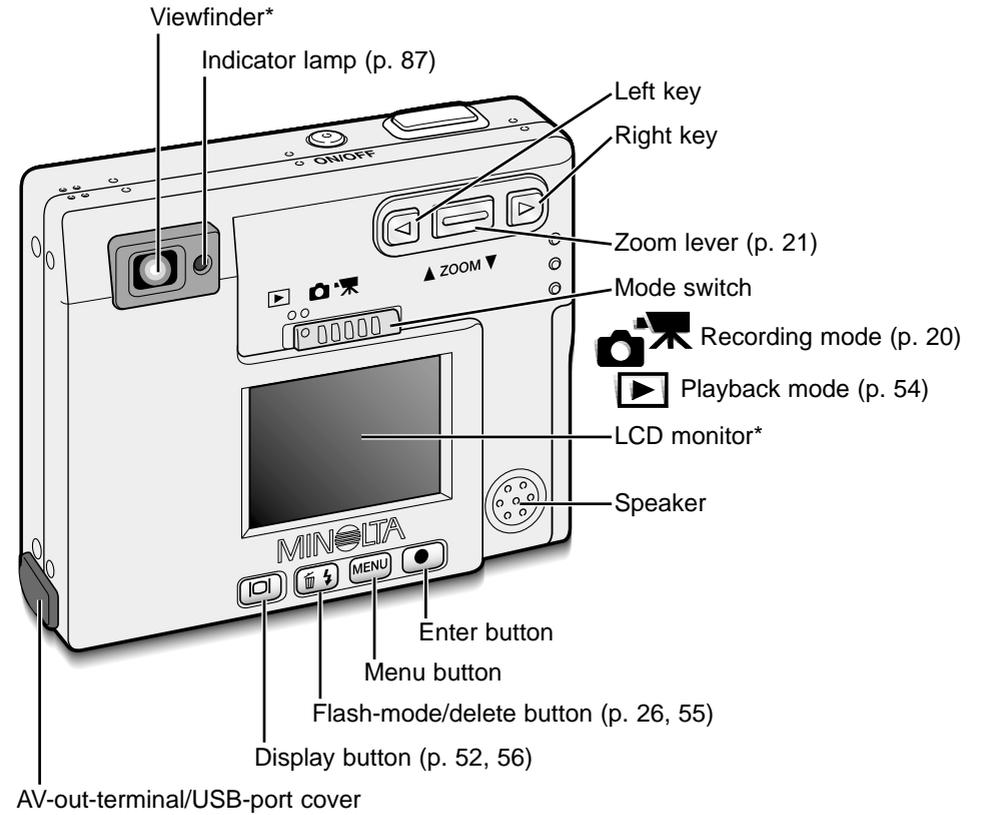
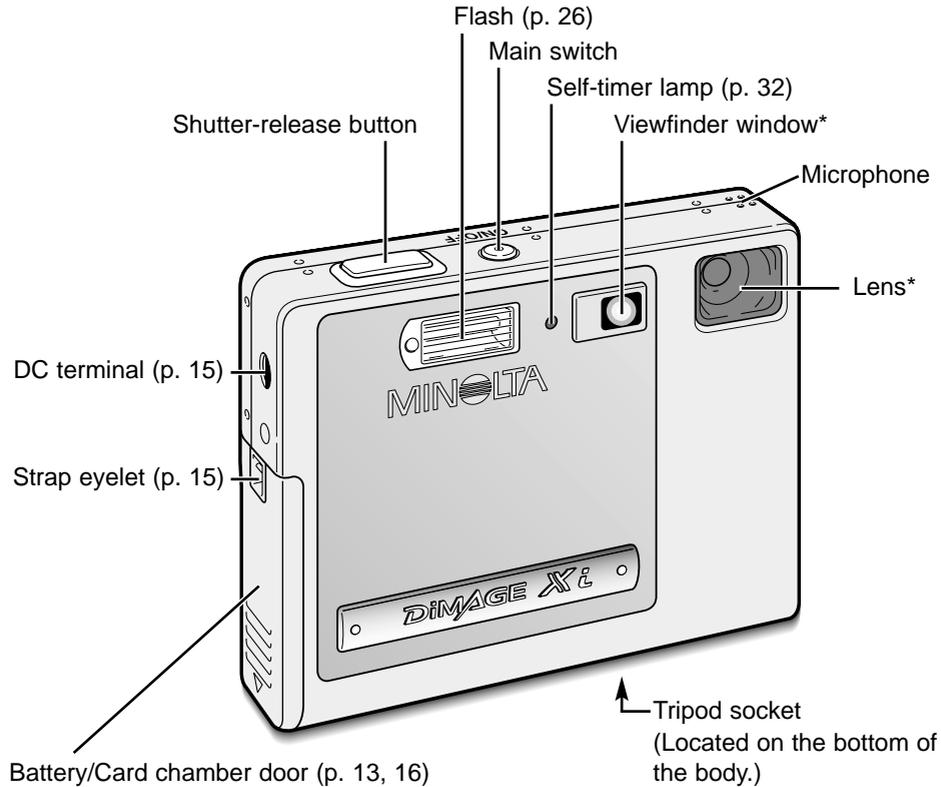
TABLE OF CONTENTS

Special focusing situations	25
Flash modes	26
Flash range - Automatic operation	27
Flash signals.....	27
Navigating the recording-mode menu	28
Drive modes	30
Single-frame advance	30
Continuous advance	31
Self-timer	32
Movie recording	33
Audio recording.....	34
Image size	35
Image quality	36
The frame counter and memory card capacity.....	37
White balance	38
Automatic white balance	38
Preset white balance	39
Auto reset	40
Digital zoom.....	41
Instant playback.....	42
Voice memo	43
Camera sensitivity - ISO.....	44
Flash range and camera sensitivity	43
LCD brightness.....	45
Auto-power-off menu settings.....	45
Audio signals	45
Imprinting the date and time.....	46
Setting the date and time	47
Setting the date format	47
Exposure compensation	48
What is an Ev?	49
Spot AF.....	50
Display button - recording mode	52
A short guide to photography	53
Playback mode	54
Single-frame playback display.....	54
Viewing images and playing back audio recordings	55
Display button - playback mode	56

Deleting single images	55
Enlarged playback	57
Navigating the playback-mode menu	58
Frame-selection screen	60
Audio captioning	61
Deleting image and audio files	62
Locking image and audio files.....	63
About DPOF	64
Creating a DPOF print order	64
E-mail copy	66
Folder name	67
File # memory.....	68
Setting the language.....	69
Formatting memory cards.....	70
Video output	70
Viewing images on a television	71
Data-transfer mode	72
DiMAGE Xi system requirements.....	72
Connecting the camera to a computer	73
Connecting to Windows 98 and 98SE.....	75
Automatic installation	75
Manual installation	76
Connecting to Mac OS 8.6	78
QuickTime system requirements	78
Auto power off - data-transfer mode	78
Changing the memory card - data-transfer mode	79
Memory card folder organization.....	80
Disconnecting the camera from the computer	82
Windows 98 and 98SE	82
Windows Me, 2000 Professional, and XP	82
Macintosh.....	83
Appendix	84
Troubleshooting	84
System accessories (sold separately).....	89
Care and storage.....	90
Technical specifications	94

NAMES OF PARTS

* This camera is a sophisticated optical instrument. Care should be taken to keep these surfaces clean. Please read the care and storage instructions in the back of this manual (p. 90).



GETTING UP AND RUNNING

GETTING UP AND RUNNING

This section covers how to prepare your camera for use. Details on the use and installation of the battery and memory card are given as well as how to attach the hand strap and optional AC adapter.

Charging the lithium-ion battery

Before the camera can be used, the lithium-ion battery must be charged. Before charging the battery, read the safety warnings on pages 3 and 4 of this manual. Only recharge the battery with the supplied battery charger. The battery should be recharged before each shooting session. See page 91 for battery care and storage.

Plug the power cord into the charger unit (1).

With the battery terminals toward the front and the label face up, slide the battery into the charger (2).

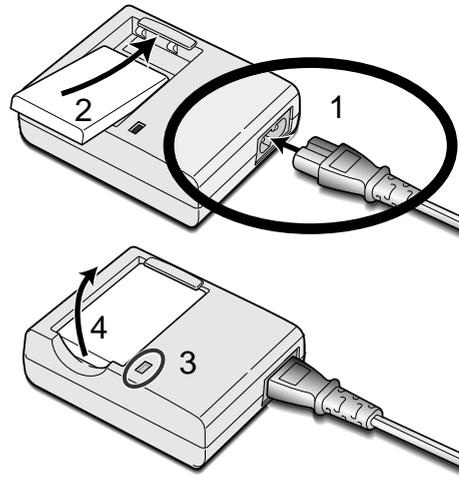
Plug the charger into a live household outlet.

- After a few seconds, the indicator lamp (3) will glow to show the battery is charging. The lamp will go out when the battery has been charged. Charging time is approximately eighty minutes.

Unplug the power cord from the outlet.

Remove the battery from the charger (4).

- The included AC cord is designed for the current of the sales region. Only use the cord in the region it was purchased. For more on the AC cable, see page 86.



Changing the lithium-ion battery

This digital camera uses one NP-200 lithium-ion battery. Before using the battery, read the safety warnings on pages 3 and 4 of this manual. When replacing the battery, the camera should be turned off.

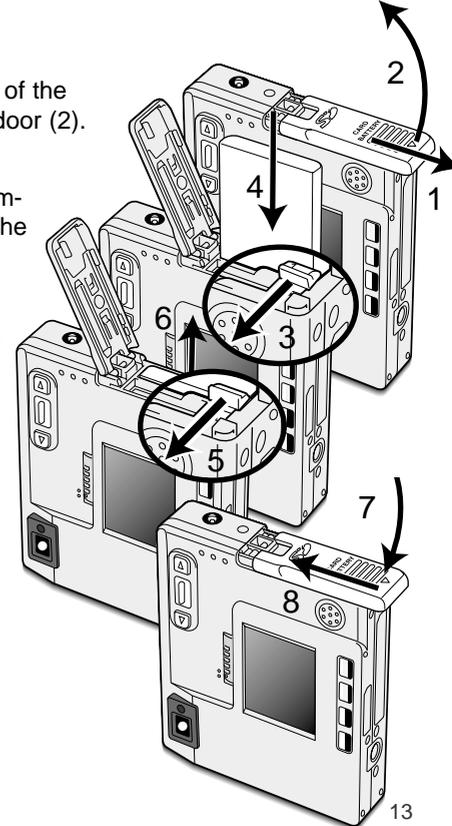
Slide the battery-chamber door toward the bottom of the camera to release the safety catch (1). Open the door (2).

Move the battery latch towards the back of the camera to insert the battery (3). Slide the battery into the battery chamber (4) with the battery terminals first until it is caught by the latch.

To remove the battery, move the latch towards the back of the camera until the battery is released (5). Pull the battery out of the chamber (6).

Close the battery-chamber door (7) and slide it toward the top of the camera to engage the safety catch (8).

- After installing the battery, the set-time/date message may appear on the monitor. The clock and calendar is set in the setup 1 section of the menu (p. 18). An internal battery protects the clock, calendar, and memory settings for more than 24 hours if the camera is used for at least 5 minutes before removing the battery.



GETTING UP AND RUNNING

Battery-condition indicator

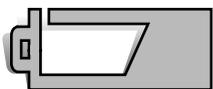
This camera is equipped with an automatic battery-condition indicator displayed on the LCD monitor. The icon will change from white to red when battery power is low.



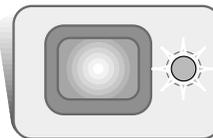
Full-battery icon - the battery is fully charged. This icon is displayed for three seconds when the camera is on or switched between the recording or playback mode.



Half-full-battery icon - the battery is partially charged. This icon is displayed for three seconds. The LCD monitor will turn off when the flash is charging.



Low-battery warning - battery power is very low. The battery should be replaced as soon as possible. This warning automatically appears and remains on the monitor until the battery is recharged. If the power level falls below this level when the camera is on, the battery-exhausted message will appear just before the camera shuts down.



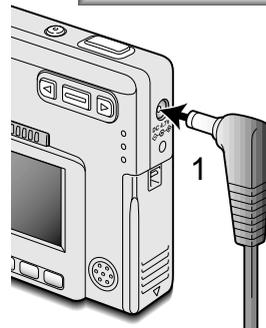
If power is insufficient for camera operation, the indicator lamp next to the viewfinder will turn red and blink for three seconds. The shutter will not release. The battery must be recharged.

Auto power off

To conserve battery power, the camera will shut down if an operation is not made within three minutes. To restore power, press the main switch. The length of the auto-power-off period can be changed in the setup 1 section of the recording and playback-mode menu (p. 28, 58). When the camera is connected to a computer, the auto-power-off period is set to ten minutes and cannot be changed.

AC adapter (sold separately)

Do not change the power supply while the camera is on.
Always turn off the camera before changing between power supplies.

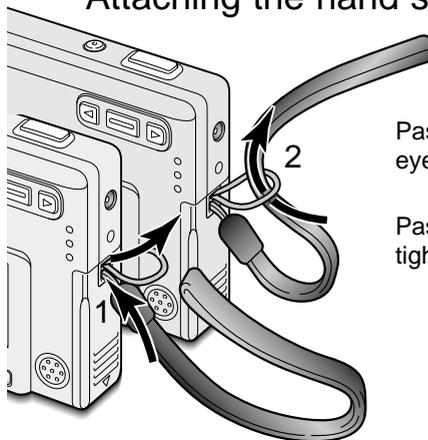


The AC adapter AC-4 or AC-5 allows the camera to be powered from a household outlet. The AC adapter is recommended when the camera is interfaced with a computer or during periods of heavy use. AC adapter model AC-4 is for use in North America, Japan, and Taiwan, and AC-5 is for use in all other areas.

Insert the mini plug of the AC adapter into the DC terminal (1).

Insert the AC adapter plug into an electrical outlet.

Attaching the hand strap



Always keep the strap around your wrist in the event that the camera is accidentally dropped.

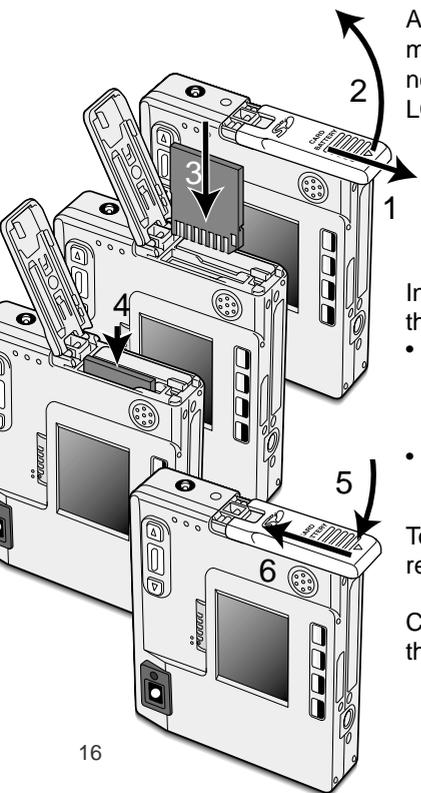
Pass the small loop of the hand strap through the strap eyelet on the camera body (1).

Pass the other end of the strap through the small loop and tighten (2).

GETTING UP AND RUNNING

Installing and removing a memory card

Always turn off the camera and confirm the indicator lamp is not orange and blinking before changing the memory card, otherwise the card may be damaged, and data lost.



1 An SD (Secure Digital) Memory card or MultiMediaCard must be inserted for the camera to operate. If a card has not been inserted, a no-card warning will appear on the LCD monitor; the shutter can still be released.

2 Slide the battery-chamber door toward the bottom of the camera to release the safety catch (1). Open the door (2).

3 Insert the memory card all the way into the card slot and then release (3). The card should catch in the slot.

- Insert the card so the face is toward the front of the camera. Always push the card in straight, never at an angle. Never force the card. If the card does not fit, check that it is orientated correctly.
- If a MultiMediaCard is inserted incorrectly, it will lock, but the card chamber door will not close.

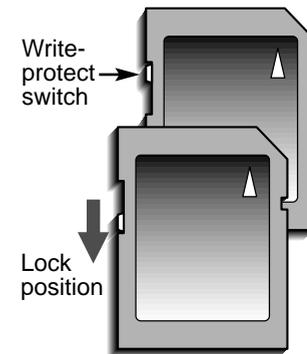
4 To eject a memory card, press the card into the slot and release (4). The card can now be pulled out.

5 Close the battery-chamber door (5) and slide it toward the top of the camera to engage the safety catch (6).

About memory cards

The response time during recording and playback is longer with MultiMediaCards compared with SD Memory Cards. This is not a defect, but rather due to the specifications of the cards. When using large capacity cards, some operations like deletion may take longer.

The SD Memory Card has a write-protect switch to prevent image data from being deleted. By sliding the switch to the bottom of the card, the data will be protected. However, when the card is protected, images cannot be recorded. If an attempt is made to record or delete an image with the camera, the card-locked message will appear and the LED lamps near the viewfinder will turn red and blink quickly. For memory card care and store see page 90.

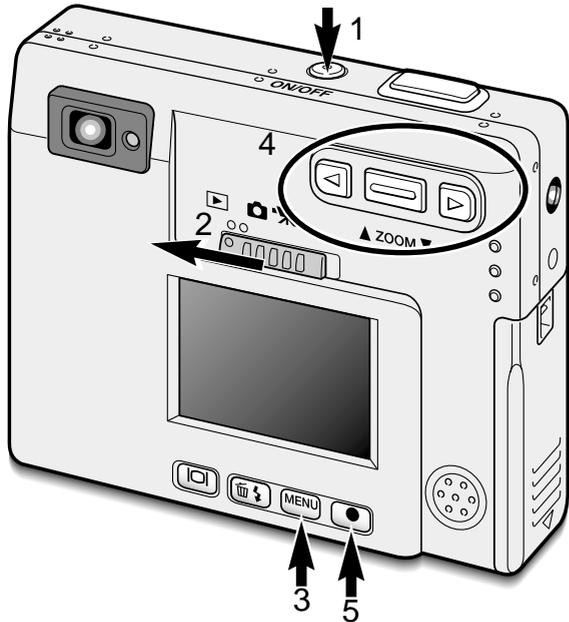


If the unable-to-use-card message appears, the inserted card in the camera may need to be formatted. A card used in another camera may also have to be formatted before being used. A card can be formatted in the setup 2 section of the playback menu (p. 58). When a card is formatted, all the data on the card is permanently erased.

GETTING UP AND RUNNING

Setting the date and time

After initially inserting a memory card and charging the battery, the camera's clock and calendar must be set. When images are recorded, the image data is saved with the date and time of recording. Depending on the region, the menu language may also have to be set. To change the language, refer to page 69.



Turn the camera on by pressing the main switch near the shutter-release button (1).

Slide the mode switch to the playback position (2).

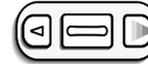
The date and time can be set on the playback menu. Navigating the menu is simple. The menu button (3) turns the menu on and off. The zoom lever and left and right keys (4) control the cursor and change settings on the menu. The enter button (5) selects menu options and sets adjustments.



Playback menu: setup 1 section



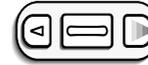
Press the menu button to active the playback menu.



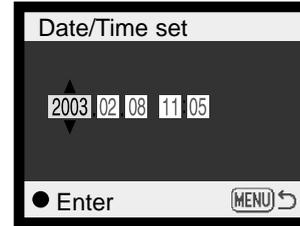
Use the right key to highlight the setup 1 tab at the top of the menu.



Use the zoom lever to highlight the date/time-set menu option.



Press the right key. "Enter" will appear on the right side of the menu.



Date/Time setting screen



Press the enter button to display the date/time setting screen.



Use the left and right keys to select the item to be changed. Use the zoom lever to adjust the item.



Press the enter button to set the clock and calendar. The playback menu will be displayed.



Press the menu button to close the playback menu.

RECORDING MODE

RECORDING MODE

This section covers the basic recording operation as well as advanced recording functions. To start using the camera, read pages 20 through 29. Many of the recording functions are controlled with menus. The menu navigation sections concisely describe how to change menu settings. Descriptions of the settings immediately follow the navigation section.

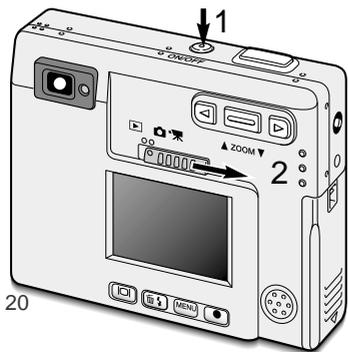
Handling the camera

While using the viewfinder or LCD monitor, grip the camera firmly with your right hand while supporting the camera body with your left. Keep your elbows at your side and your feet shoulder-width apart to hold the camera steadily.

When taking vertical pictures, hold the camera so that the flash is above the lens with the shutter-release button to the top. Take care not to cover the lens with your fingers or the strap.

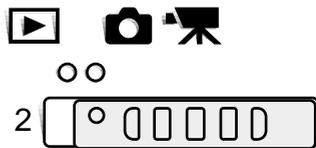


Setting the camera to record images



Turn the camera on by pressing the main switch (1).

Slide the mode switch to the recording position (2).



Using the zoom lens

This camera is equipped with a unique 5.7 - 17.1mm zoom lens. This is equivalent to a 37 to 111mm lens on a 35mm camera. The lens is controlled by the zoom lever at the back of the camera.

In 35mm photography, focal lengths below 50mm are referred to as wide-angle; the angle of view is larger than that of the human eye. Above 50mm is referred to as telephoto and makes distant objects appear closer. The effect of the optical zoom is visible in both the viewfinder and LCD monitor.



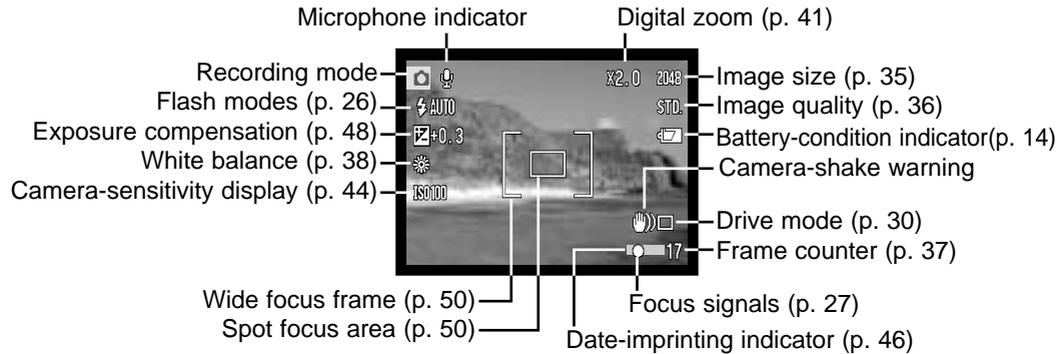
To zoom in on the subject, push the zoom lever up.

To zoom out, push the zoom lever down.

The digital-zoom function can double the power of the lens. The digital zoom is activated in the custom section of the recording-mode menu (p. 28).

RECORDING MODE

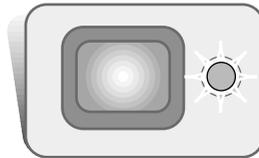
LCD monitor display - recording mode



Camera-shake warning

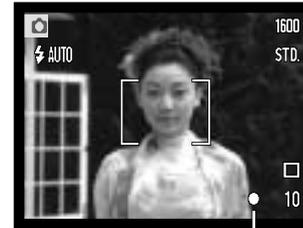


If the shutter speed falls below the point where the camera can be hand held safely, the camera-shake warning indicator will appear on the monitor and the viewfinder indicator lamp will turn green and blink slowly. Camera shake is slight blurring caused by subtle hand motion and is more pronounced at the telephoto position of the lens than at the wide-angle position. Although the warning appears, the shutter can still be released. If the warning appears, place the camera on a tripod or use the built-in flash.



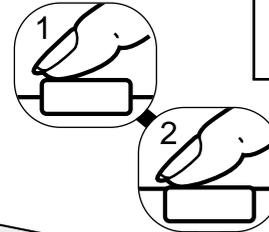
Basic recording operation

Turn the camera on and slide the mode switch to the recording position.



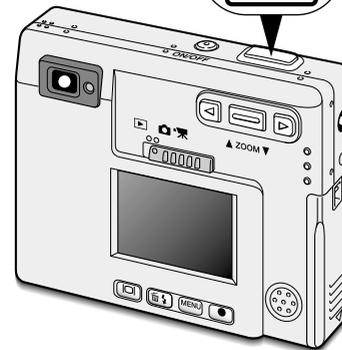
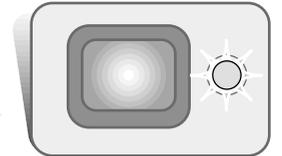
Place the subject within the focus frame on the LCD monitor or center the subject in the viewfinder.

- The focus-lock function (p. 24) can be used with off-center subjects.
- If the subject is closer than 1m (3ft.) at the zoom lens' wide-angle position or 3m (10ft) at the telephoto position, only use the LCD monitor to frame the subject.
- The spot focus area can be used for focusing; press the enter button for about 1 second to activate the area (p. 50).



Press the shutter-release button partway down (1) to lock the focus and exposure.

- The focus signals (p. 25) on the monitor and the indicator lamp next to the viewfinder will confirm that the image is in focus. If the monitor focus signal is red or the indicator lamp is green and blinks quickly, the camera was unable to focus on the subject. Repeat the previous steps until the focus signal is white and the lamp glows steadily.



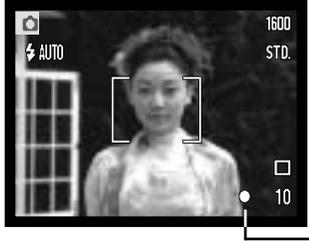
Press the shutter-release button all the way down (2) to take the picture.

- After the shutter releases, the indicator lamp next to the viewfinder will turn orange and blink indicating image data is being written to the memory card. Never remove a memory card while data is being transferred.
- The image can be previewed after it is captured by continuing to hold down the shutter-release button. This function is disabled if the monitor is off. Instant playback also can be used (p.42).

RECORDING MODE

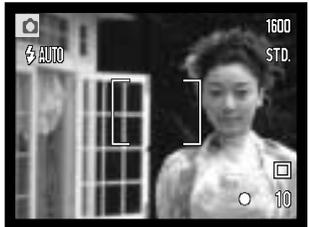
Focus lock

The focus-lock function is used when you want to compose the image with the subject off-center and outside the focus frame. Focus lock may also be used when a special focusing situation prevents the camera from focusing on the subject. This function is controlled with the shutter-release button.



Place the subject within the monitor focus frame or center the subject in the viewfinder. Press and hold the shutter-release button partway down to lock the focus.

- The focus signal on the monitor and the viewfinder indicator lamp will indicate if the focus is locked.



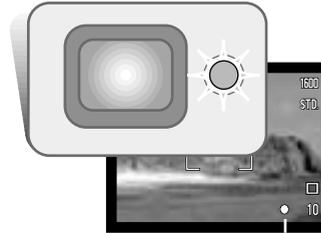
Without lifting your finger from the shutter-release button, recompose the subject within the image area. Press the shutter-release button all the way down to take the picture.

Focus range

The focus range is 25cm (0.8ft.) to infinity. Both the LCD monitor and viewfinder can be used to frame the subject. However, because of parallax, only the monitor's live image will be accurate with subjects closer than 1m (3ft.) at the zoom lens' wide-angle position or 3m (10ft) at the telephoto position.

Focus signals

This digital camera has a quick, accurate autofocus system. The focus icon in the lower right corner of the LCD monitor and the indicator lamp next to the viewfinder indicate the focus status. The shutter can be released regardless if the camera can focus on the subject or not.



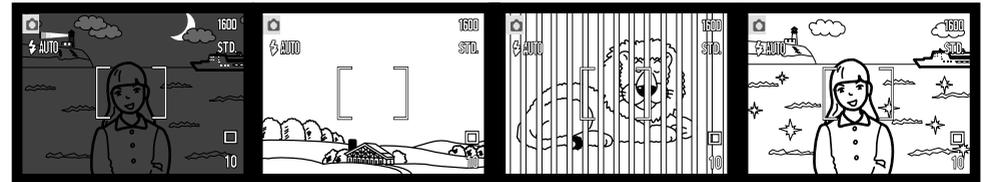
Focus signal

Focus confirmed - the LCD monitor focus signal is white and the viewfinder indicator lamp is green and steady.

Cannot focus - the LCD monitor focus signal is red and the viewfinder indicator lamp is green and blinking quickly. When the AF system cannot focus, the focus is set to 20m (65.6ft) or 2m (6.5ft) when using the flash.

Special focusing situations

The camera may not be able to focus in certain situations. In these situations the focus-lock function (p. 24) can be used to focus on another object at the same distance as your main subject, and then the image can be recomposed to take the picture.



The subject is too dark.

The subject in the focus frame is low in contrast.

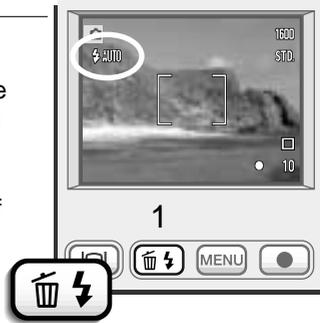
Two subjects at different distances overlap in the focus frame.

The subject is near a very bright object or area.

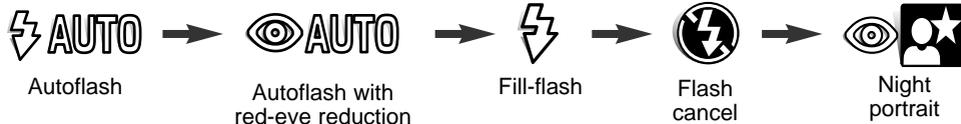
RECORDING MODE

Flash modes

The flash can be used when taking still images. To set the flash mode, simply press the flash mode/delete button (1) on the back of the camera until the desired mode is displayed. The active flash mode is displayed in the top left corner of the LCD monitor. When the camera is turned off and auto reset (p.40) is active, the flash mode is reset to autoflash with red-eye reduction if this mode was last set, if not the mode will be reset to autoflash. While the flash is charging, the shutter cannot be released.



The flash modes are displayed in the following order:



Autoflash

Autoflash with red-eye reduction

Fill-flash

Flash cancel

Night portrait

Autoflash - the flash fires automatically in low-light and backlit conditions.

Red-eye reduction - the flash fires multiple bursts before the main flash burst to reduce red-eye; an effect caused by light reflected from the retina. Use in low-light conditions when taking photographs of people or animals, the pre-flashes contract the pupils of the subject's eyes.

Fill-flash - the flash fires with each exposure regardless of the amount of ambient light. Fill-flash can be used to reduce harsh shadows caused by strong direct light or sunshine.



Flash cancel - the flash will not fire. Use flash cancel when flash photography is prohibited, natural light is desired to illuminate the subject, or the subject is beyond the flash range. The camera-shake warning may appear when flash cancel is selected (p. 22).

Night portrait - for flash portraits at night. The camera automatically balances the flash and background exposures. When taking portraits, ask your subject not to move after the flash burst; the shutter will still be open for the background exposure. The red-eye reduction function is used with night portrait.



Flash range - Automatic operation

The camera automatically controls the flash output. For well-exposed images, the subject must be within the flash range. Because of the optical system, the flash range is not the same at the lens' wide-angle position as it is at the telephoto position. The flash ranged can be changed with camera sensitivity (ISO), see page 44.

Wide-angle position

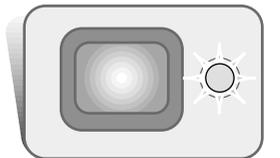
0.25m ~ 3.2m (0.8 ft. ~ 10.5 ft.)

Telephoto position

0.25m ~ 2.5m (0.8 ft. ~ 8.2 ft.)

Flash signals

The indicator lamp next to the viewfinder indicates the status of the flash. When the lamp is red and blinks quickly, the flash is charging and the shutter will not release. When the lamp turns green, the flash is charged and ready to fire.



RECORDING MODE

Navigating the recording-mode menu

Camera operations and recording functions are controlled on the menu. Navigating the menu is simple. The menu button turns the menu on and off. The zoom lever and left and right keys control the cursor and change settings on the menu. The enter button selects menu options and sets adjustments.

MENU To activate the recording-mode menu, press the menu button.

 The "Basic" tab at the top of the menu will be highlighted. Use the left/right keys to highlight the appropriate menu tab; the menus will change as the tabs are highlighted.

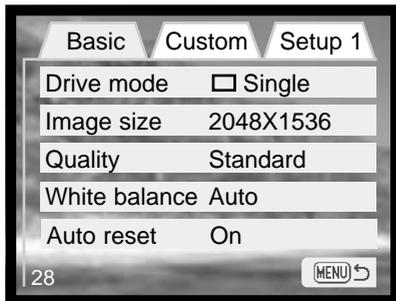
 When the desired menu section is displayed, use the zoom lever to scroll through the menu options. Highlight the option whose setting needs to be changed.

 With the menu option to be changed highlighted, press the right key; the settings will be displayed with the current setting indicated by an arrow.

- To return to the menu options, press the left key.

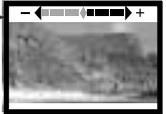
 Use the zoom lever to highlight the new setting.

- If "Enter" is displayed, press the enter button to display the setting screen.



 Press the enter button to select the highlighted setting.

Once a setting has been selected, the cursor will return to the menu options and the new setting will be displayed. Changes can continue to be made. To return to the recording mode, press the menu button.

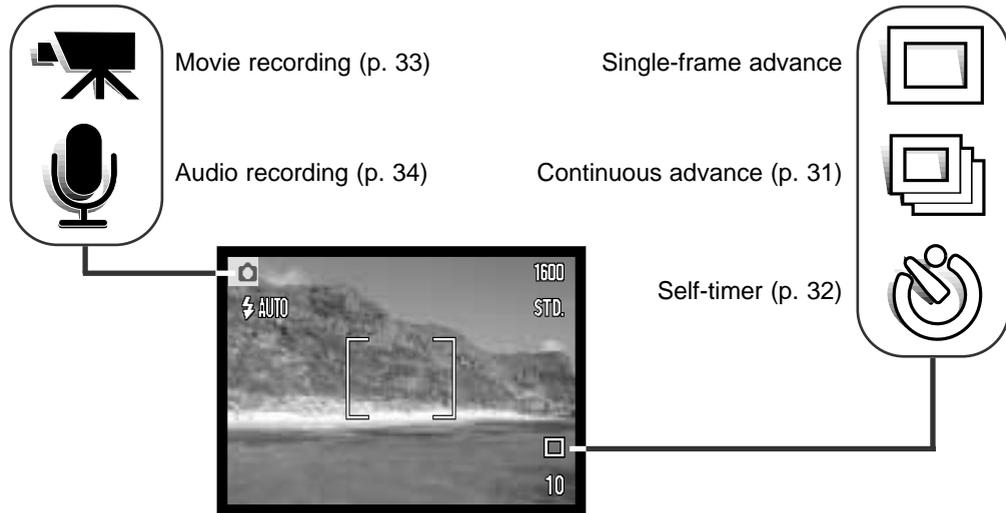
<table border="0"> <tr> <td style="background-color: #cccccc; padding: 2px;">Basic</td> <td style="padding: 2px;">Drive mode</td> <td style="padding: 2px;"><input type="checkbox"/> Single</td> </tr> <tr> <td></td> <td></td> <td style="padding: 2px;"><input type="checkbox"/> Continuous</td> </tr> <tr> <td></td> <td></td> <td style="padding: 2px;"> Self-timer</td> </tr> <tr> <td></td> <td></td> <td style="padding: 2px;"> Movie</td> </tr> <tr> <td></td> <td></td> <td style="padding: 2px;"> Audio rec.</td> </tr> <tr> <td style="background-color: #cccccc; padding: 2px;">Image size</td> <td style="padding: 2px;">2048 X 1536</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;">1600 X 1200</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;">1280 X 960</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;">640 X 480</td> <td></td> </tr> <tr> <td style="background-color: #cccccc; padding: 2px;">Quality</td> <td style="padding: 2px;">Super fine</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;">Fine</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;">Standard</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;">Economy</td> <td></td> </tr> <tr> <td style="background-color: #cccccc; padding: 2px;">White balance</td> <td style="padding: 2px;">Auto</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;"> Daylight</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;"> Cloudy</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;"> Tungsten</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;"> Fluorescent</td> <td></td> </tr> <tr> <td style="background-color: #cccccc; padding: 2px;">Auto reset</td> <td style="padding: 2px;">On / Off</td> <td></td> </tr> </table>	Basic	Drive mode	<input type="checkbox"/> Single			<input type="checkbox"/> Continuous			Self-timer			Movie			Audio rec.	Image size	2048 X 1536			1600 X 1200			1280 X 960			640 X 480		Quality	Super fine			Fine			Standard			Economy		White balance	Auto			Daylight			Cloudy			Tungsten			Fluorescent		Auto reset	On / Off		<table border="0"> <tr> <td style="background-color: #cccccc; padding: 2px;">Custom</td> <td style="padding: 2px;">Digital zoom</td> <td style="padding: 2px;">4X</td> </tr> <tr> <td></td> <td></td> <td style="padding: 2px;">2X</td> </tr> <tr> <td></td> <td></td> <td style="padding: 2px;">Off</td> </tr> <tr> <td style="background-color: #cccccc; padding: 2px;">Instant playback</td> <td style="padding: 2px;">On / Off</td> <td></td> </tr> <tr> <td style="background-color: #cccccc; padding: 2px;">Voice memo</td> <td style="padding: 2px;">On / Off</td> <td></td> </tr> <tr> <td style="background-color: #cccccc; padding: 2px;">Sensitivity</td> <td style="padding: 2px;">ISO400</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;">ISO200</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;">ISO100</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;">ISO50</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;">Auto</td> <td></td> </tr> <tr> <td style="background-color: #cccccc; padding: 2px;">Date imprint</td> <td style="padding: 2px;">On / Off</td> <td></td> </tr> <tr> <td style="background-color: #cccccc; padding: 2px;">Setup 1</td> <td style="padding: 2px;">LCD brightness</td> <td style="padding: 2px;">Enter →</td> </tr> <tr> <td></td> <td style="padding: 2px;">Power off</td> <td style="padding: 2px;">30 minutes</td> </tr> <tr> <td></td> <td></td> <td style="padding: 2px;">10 minutes</td> </tr> <tr> <td></td> <td></td> <td style="padding: 2px;">5 minutes</td> </tr> <tr> <td></td> <td></td> <td style="padding: 2px;">3 minutes</td> </tr> <tr> <td></td> <td></td> <td style="padding: 2px;">1 minute</td> </tr> <tr> <td style="background-color: #cccccc; padding: 2px;">Audio signals</td> <td style="padding: 2px;">On</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;">SoundFX only</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;">w/o soundFX</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;">Off</td> <td></td> </tr> <tr> <td style="background-color: #cccccc; padding: 2px;">Date/Time set</td> <td style="padding: 2px;">Enter →</td> <td></td> </tr> <tr> <td style="background-color: #cccccc; padding: 2px;">Date format</td> <td style="padding: 2px;">YYYY/MM/DD</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;">MM/DD/YYYY</td> <td></td> </tr> <tr> <td></td> <td style="padding: 2px;">DD/MM/YYYY</td> <td></td> </tr> </table>	Custom	Digital zoom	4X			2X			Off	Instant playback	On / Off		Voice memo	On / Off		Sensitivity	ISO400			ISO200			ISO100			ISO50			Auto		Date imprint	On / Off		Setup 1	LCD brightness	Enter →		Power off	30 minutes			10 minutes			5 minutes			3 minutes			1 minute	Audio signals	On			SoundFX only			w/o soundFX			Off		Date/Time set	Enter →		Date format	YYYY/MM/DD			MM/DD/YYYY			DD/MM/YYYY		
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Refer to the following sections for details on the menu options and their settings. The setup 1 section can be accessed from both the recording-mode and playback menu (p. 58).

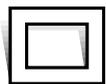
RECORDING MODE

Drive modes

The drive modes control the rate and method images are captured. Icons indicating the selected drive mode appear on the monitor. The drive mode is selected in the basic section of the recording-mode menu (p. 28). If auto reset (p.40) is active, the drive mode is reset to single-frame advance when the camera is turned off.



Single-frame advance



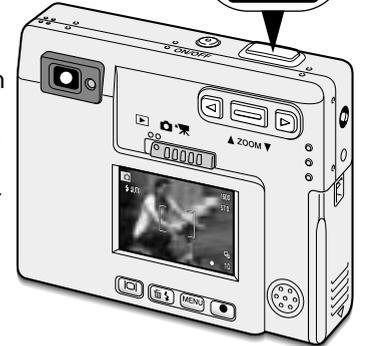
Single-frame advance allows only one image to be captured each time the shutter-release button is pressed. This is the camera's default setting.

Continuous advance



The continuous-advance drive mode allows a series of images to be captured while holding down the shutter-release button. The number of images that can be captured at one time and the rate of capture depend on the image-quality and image-size setting. With the image-size setting of 2048 X 1536, the maximum rate of capture is 1.6 fps. If the image quality is set to super fine (p. 36) only one frame can be captured at a time. Continuous advance is selected in the basic section of the recording-mode menu (p. 28).

Compose the picture as described in the basic recording operation section (p. 23). Press the shutter-release button partway down to lock the exposure and focus for the series. Press and hold the shutter-release button all the way down (1) to begin taking pictures. When the shutter-release button is pressed and held, the camera will begin recording images until the maximum number has been taken or the shutter button is released. The built-in flash can be used, but the rate of capture is reduced because the flash must recharge between frames. Date imprinting (p.46) also reduces the rate of capture. The frame counter is adjusted after the series has been taken while the images are being saved.



The chart lists the maximum number of images that can be captured with different image-quality and image-size combinations.

Image Quality \ Image Size	2048 X 1536	1600 X 1200	1280 X 960	640 X 480
Fine	6	9	15	56
Standard	11	19	29	104
Economy	23	37	56	178

RECORDING MODE

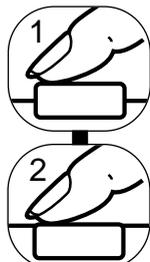
Self-timer



Used for self-portraits, the self-timer will delay the release of the shutter for approximately ten seconds after the shutter-release button is pressed. The self-timer drive mode is selected in the basic section of the recording-mode menu (p. 28).

With the camera on a tripod, compose the picture as described in the basic recording operation section (p. 23). Focus lock (p.24) can be used with off-center subjects. Press the shutter-release button partway down to lock the exposure and focus (1). Press the shutter-release button all the way down to begin the countdown (2). Because focus and exposure are determined when the shutter-release button is pressed, do not stand in front of the camera when taking a self-timer image. Always confirm the focus with the focus signals before beginning the countdown (p. 25).

During the countdown, the self-timer lamp on the front of the camera (3) will start to blink and is accompanied by an audio signal. A few seconds before the exposure, the self-timer lamp will blink rapidly. The lamp will glow steadily just before the shutter fires. To stop the countdown, press the zoom lever. To stop the countdown and cancel the self-timer, press the main switch. The drive mode will be reset to single-frame advance after the exposure. The audio signal can be turned off in the setup menu.



Movie recording



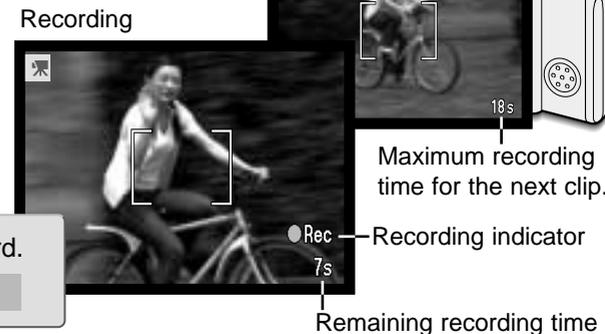
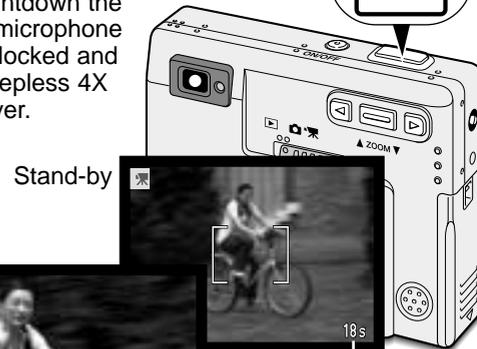
The movie-recording drive mode is selected in the basic section of the recording-mode menu (p. 28). Movie clips up to approximately thirty-five seconds in length with audio can be recorded. The movie image is 320 X 240 pixels (QVGA) and is recorded at a rate of around 340KB/s.

Approximately one 41-second movie clip can be stored on one 16MB memory card.

Shooting digital video is simple. Frame the picture on the LCD monitor. Press and release the shutter-release button to begin recording (1); "Rec" will be displayed during recording. The camera will continue to record until the recording time is used or the shutter-release button is pressed again.

When recording, the frame counter will countdown the recording time. Take care not to cover the microphone while recording. During recording, focus is locked and the optical zoom is disabled. However, a stepless 4X digital zoom can be used with the zoom lever. The optical zoom position, exposure compensation, and white balance must be set before recording.

After recording, a screen will appear indicating the movie clip is being saved to the memory card. Never remove the memory card or disconnect the power supply while the clip is being saved.



Maximum recording time for the next clip.

RECORDING MODE

Audio recording



30 minutes of audio can be recorded without an image. The audio-recording drive mode is selected in the basic section of the recording-mode menu (p. 28). When the function is active, the live view is replaced with a blue screen.

Approximately 31 minutes of audio can be stored on one 16MB memory card. Audio is recorded at approximately 8KB/s.

In stand-by, the monitor displays the approximate recording time available. To begin recording, press the shutter-release button (1). A bar graph and the frame counter (2) will display the amount of recorded time. The recording will stop when the shutter-release button is pressed again or 30 minutes limit has elapsed.

When making audio recordings, be careful not to touch or cover the microphone. The quality of the recording is proportional to the subject to microphone distance. For best results, hold the camera approximately 20cm (8in) from your mouth.

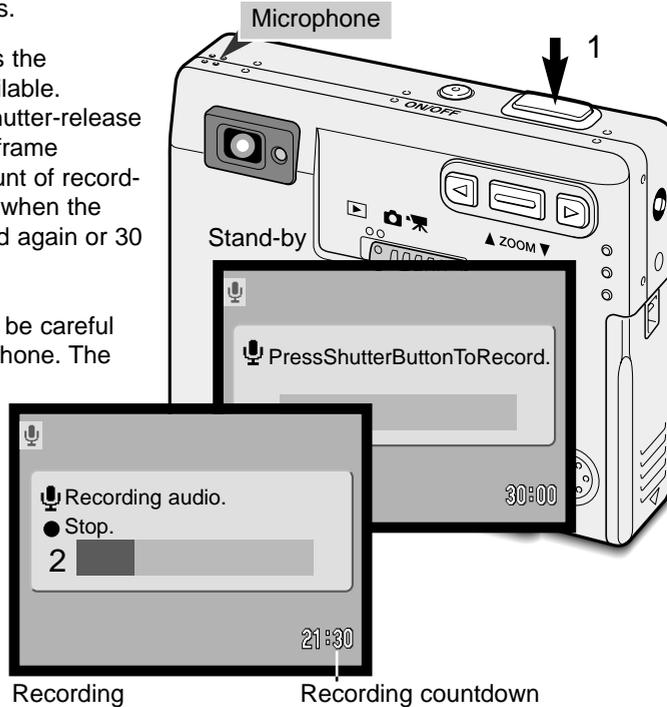


Image size



Changing image size affects the number of pixels in each image. The greater the image size, the larger the file size. Choose image size based on the final use of the image - smaller images will be more suitable for web sites whereas larger sizes will produce higher quality prints. Image size must be set before the picture is taken. Image size is set in the basic section of the recording-mode menu (p. 28).

Four image sizes are available: 2048 X 1536 (FULL), 1600 X 1200 (UXGA), 1280 X 960 (SXGA), and 640 X 480 (VGA). Image size is defined by the image's horizontal and vertical dimensions in pixels. The selected image-size setting is displayed on the LCD monitor by the horizontal dimension only.

If the image size is changed, the frame counter will display the approximate number of images that can be recorded at that setting on the installed memory card. One memory card can contain images with differing sizes.

RECORDING MODE

Image quality

This camera has four image-quality settings: super fine, fine, standard, and economy. Always select the desired setting before taking the picture. Image quality is set in the basic section of the recording-mode menu (p. 28).

Image quality controls the rate of compression, but has no effect on the number of pixels in the image. The higher the image quality, the lower the rate of compression and the larger the file sizes. If the economical use of the memory card is important, use the economy mode. Standard image quality is sufficient for normal usage. The super-fine mode will produce the highest quality image and the largest image files.

File formats vary with the image quality setting. Super fine images are saved as a TIFF file. Fine, standard, and economy images are formatted as JPEG files.

If the image quality is changed, the LCD monitor will display the approximate number of images that can be recorded at that setting on the installed memory card. One memory card can contain images with differing qualities.

LCD monitor display		File type
S. FIN	Super fine - the highest-quality image.	TIFF
FINE	Fine - high-quality image.	JPEG
STD	Standard - the default setting.	JPEG
ECON	Economy - the smallest file sizes.	JPEG

The frame counter and memory card capacity

The number of images that can be stored on a memory card is determined by the size and type of card and the file size of the images. The actual file size is determined by the scene; some subjects can be compressed further than others.

Approximate file sizes.				
Image quality \ Image size	2048 X 1536	1600 X 1200	1280 X 960	640 X 480
Super fine	9.2MB	5.5MB	3.5MB	0.91MB
Fine	1.6MB	0.95MB	0.61MB	0.17MB
Standard	0.80MB	0.48MB	0.32MB	0.09MB
Economy	0.40MB	0.25MB	0.17MB	0.05MB
Approximate card capacity for an 16MB memory card.				
Super fine	1 image	2 images	3 images	15 images
Fine	9 images	15 images	23 images	82 images
Standard	18 images	29 images	45 images	150 images
Economy	36 images	56 images	82 images	226 images

The frame counter indicates the approximate number of images that can be stored on the memory card at the camera's image quality and size settings. If the settings are changed, the frame counter adjusts accordingly. Because the calculation is based on approximate file sizes, the actual image taken may not change the counter or may decrease it by more than one.

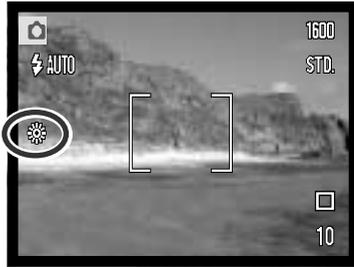
When the frame counter displays three red zeros and card-full message appears, it indicates no more images at the image size and quality settings can be captured. Changing the image size or quality settings may allow more images to be captured.

RECORDING MODE

White balance

White balance is the camera's ability to make different types of lighting appear neutral. The effect is similar to selecting daylight or tungsten film, or using color compensating filters in conventional photography.

One automatic and four preset white-balance settings are available with still image and movie recording. When one of the preset white-balance settings is selected, an icon will be displayed on the LCD monitor to indicate the active white-balance setting. White balance is set in the basic section of the recording-mode menu (p. 28). When auto reset (p.40) is active, the white balance will be reset to automatic white balance when the camera is turned off.



Automatic white balance

The automatic white balance compensates for the color temperature of a scene. In most cases, the auto setting will balance the ambient light and create beautiful images, even under mixed-lighting conditions. When the built-in flash is used, the white balance is set for the color temperature of the flash.

Shooting tips

White balance cannot correct high-energy vapor lighting: sodium-vapor (yellow highway lights), or mercury vapor. For portraits under these lighting conditions, the flash can be used to overpower the ambient light. With landscapes containing these types of lights, set the white balance to the preset daylight setting.

Preset white balance

Preset white-balance settings must be set before the image is taken. Once set, the effect is immediately visible on the monitor.

To record the ambient light, set the flash mode to flash cancel (p. 26). The built-in flash can be used with preset white-balance, but will create a pinkish or blueish cast with the fluorescent and tungsten settings. The flash is daylight balanced and will produce good results with the daylight and cloudy settings.



Daylight - for outdoor and sunlit subjects.



Cloudy - for overcast outdoor scenes.



Tungsten - for incandescent lighting: household filament light bulbs.



Fluorescent - for fluorescent lighting: office ceiling lights.

RECORDING MODE

Auto reset

When auto reset is active, the following functions return to their program setting when the camera is turned off:

Function	Reset to	Page
Flash mode*	Auto	26
Drive mode	Single-frame advance	30
White balance	Auto	38
Camera sensitivity	Auto	44
LCD monitor	Full display	52
Spot focus area	Wide focus frame	50

*The flash mode is reset to autoflash with red eye reduction if autoflash with red eye reduction was last set, if not the mode will be reset to autoflash. See page 26 for information on flash modes.

Auto reset is initially active. To prevent the camera resetting, this function can be turned off in the basic section of the menu. However, the camera will reset it the battery is removed for an extended period. An internal battery will protect the clock, calendar, and camera settings for more than 24 hours if the camera is used for at least 5 minutes before the battery is removed.

Exposure compensation will be disabled when the auto reset function is active and any previous exposure-compensation setting is canceled.

Digital zoom

Assisting the optical zoom is a 2X and 4X digital zoom. The digital zoom is activated in the custom section of the recording-mode menu (p. 28).

The digital zoom increases the magnification of the greatest telephoto setting of the optical zoom in 0.2 steps up to 2X or 4X. Although the images recorded with the digital zoom are interpolated to the set image size, the quality of the images may not be equal to images taken without the digital zoom; the greater the power of the digital zoom the lower the image quality. The effect of the digital zoom is visible on the LCD monitor only. The digital-zoom function is canceled if the LCD monitor is turned off (p. 52).

Activate the digital zoom in the custom section of the recording mode menu.

- The digital zoom will remain active until reset on the menu.

At the maximum telephoto position, press the zoom lever up to engage the digital zoom.

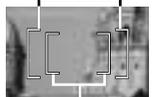
- The zoom magnification will be displayed in the top right corner of the monitor.
- To zoom out, press the zoom lever down.

When using the movie-recording drive mode, the 4X digital zoom is active even when the 2X zoom is set.



When the digital zoom is active, the wide focus frame and spot focus area (p.50) are enlarged.

Wide focus frame



Spot focus area

RECORDING MODE

Instant playback

After a still image is captured, it can be displayed on the monitor for two seconds before being saved. Instant playback shows the last frame in the series when used with the continuous-advance drive mode (p. 31). When the LCD monitor is turned off (p. 52), it will automatically activate for the instant playback period.

Instant playback can be activated in the custom section of the recording-mode menu (p. 28). When used with voice memo, the audio recording will begin after the image is played back.



Camera notes

Images can be previewed immediately after they have been captured regardless if instant playback is active or not. Simply continue to hold down the shutter-release button after taking the picture to display the image on the monitor. Release the shutter button to end the playback. This function is disabled if the monitor is turned off or the continuous advance, movie, or the self-timer drive mode is used.

Voice memo

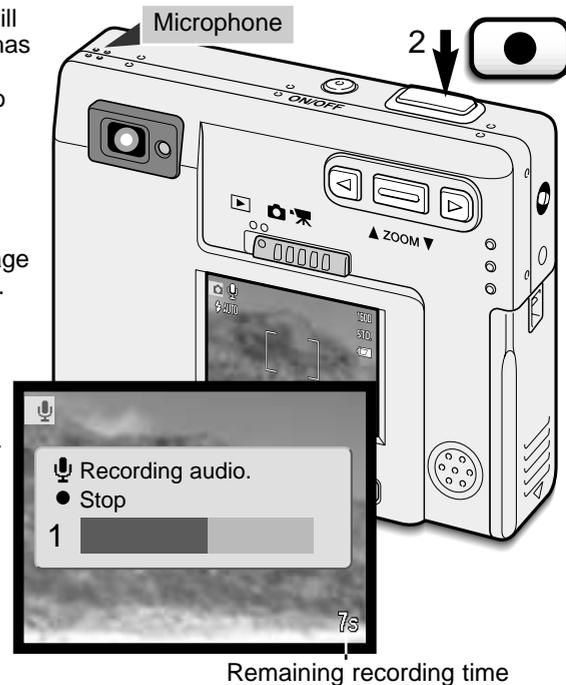


Voice memo allows an audio track up to fifteen seconds to be recorded with a still image. The function is activated in the custom section of the recording-mode menu (p. 28). When the function is active, the white microphone icon is displayed on the LCD monitor. The voice memo must be set before taking a picture. It will remain in effect until reset. When the LCD monitor is turned off (p. 52), it will automatically activate for the voice-memo period.

After an image is captured, a screen will appear indicating the audio recording has started. A bar graph (1) will display the amount of recording time remaining. To stop the recording, press the shutter-release button or enter button (2). The recording will automatically stop when the fifteen-second limit has elapsed.

Voice memo is attached to the last image of a continuous-advance series (p. 31). When played back, images with voice-memo audio tracks have a note icon displayed with them (p. 55).

When making audio recordings, be careful not to touch or cover the microphone. The quality of the recording is proportional to the subject to microphone distance. For best results, hold the camera approximately 20cm (8in) from your mouth.

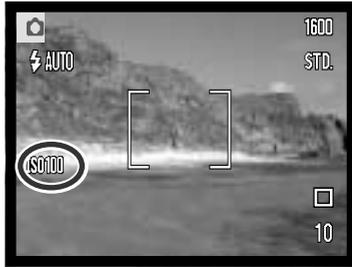


RECORDING MODE

Camera sensitivity - ISO

Four camera sensitivity settings can be selected with a still image: Auto, 50, 100, 200, 400; the numerical values are based on an ISO equivalent. ISO is the standard used to indicate film sensitivity: the higher the number, the more sensitive the film. Sensitivity can be activated in the custom section of the recording-mode menu

The auto setting automatically adjusts the camera sensitivity to the light conditions between ISO 50 and ISO 160. When any other setting than auto is used, "ISO" and the set value will appear on the LCD monitor.



A specific sensitivity setting can be selected. As the ISO value doubles, the camera sensitivity doubles. Like grain in silver-halide film that increases with speed, noise increases with the sensitivity in digital imaging ; an ISO setting of 50 will have the least noise and 400 will have the most.

Flash range and camera sensitivity

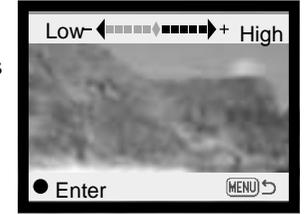
Because of the optical system, the flash range is not the same at the lens' wide-angle position as it is at the telephoto position.

ISO setting	Flash range (wide angle)	Flash range (telephoto)
AUTO	0.25m ~ 3.2m (0.82ft. ~ 10.5ft)	0.25m ~ 2.5m (0.82ft. ~8.2ft)
50	0.25m ~ 1.8m (0.82ft. ~ 5.9ft)	0.25m ~ 1.4m (0.82ft. ~4.6ft)
100	0.25m ~ 2.5m (0.82 ft. ~8.2 ft)	0.25m ~ 2.0m (0.82ft. ~6.6ft)
200	0.25m ~ 3.6m (0.82 ft. ~11.8 ft)	0.25m ~ 2.8m (0.82ft. ~9.2ft)
400	0.25m ~ 5.1m (0.82 ft. ~16.7 ft)	0.25m ~ 4.0m (0.82ft. ~13.1ft)

LCD brightness

The brightness of the LCD monitor can be set in eleven levels. After selecting the LCD brightness option and pressing the enter button on the menu (p. 28, 58), the LCD brightness screen will be displayed. Pressing and holding the display button will also activate the LCD brightness screen.

Use the left and right keys (1) to adjust the brightness level; the monitor image will change accordingly. To set the level, press the enter button (2); the camera will return to the recording or playback mode. The LCD brightness level will affect both modes.



Auto-power-off menu settings

To conserve battery power, the camera will shut down if an operation is not made within a certain period. To restore power, press the main switch. The length of the auto-power-off period can be changed in the setup 1 section of the recording and playback-mode menu (p. 28, 58): 1, 3, 5, 10, and 30 minutes. The length of the auto-power-off period is fixed at 10 minutes when the camera is connected to a computer.

Audio signals

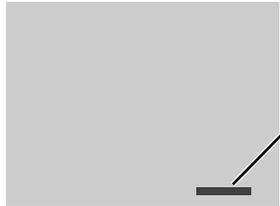
The camera's audio signals can be turned off and on in the setup 1 section of the recording and playback-mode menu (p. 28, 58). When on, both tone signals and sound effects are used. The sound effect simulates a film camera when the shutter is released. The sound effects and tones can be turned off independently of each other.

Menu setting	
Off	All audio signals are turned off.
SoundFX only	Shutter effect only. No tone signals during operation.
w/o sound FX	Tone signals only to indicate the camera operations.
On	Shutter effect and tone signals.

RECORDING MODE

Imprinting the date and time

The date of recording can be printed directly on the image. The imprinting function must be activated before the image is taken. Once activated, the date will continue to be imprinted until the function is reset: a yellow bar is displayed next the frame counter on the monitor to indicate the imprinting function is active. Date imprinting is activated in the custom section of the recording-mode menu.



The date is imprinted in the lower right corner of the image when viewed horizontally. It is printed directly on the photograph writing over the image information. The date can be imprinted in three formats, see next page.

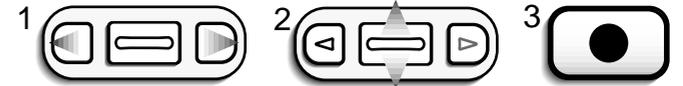
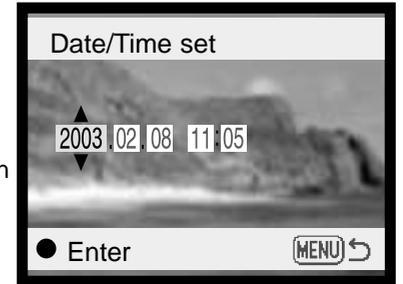
Camera Notes

Every time a still image is recorded, it is stored with an exif tag that contains the date and time of recording as well as shooting information. This information can be viewed on a computer with the DiMAGE Viewer software.

Setting the date and time

It is important to accurately set the clock. When a recording is made, the date and time of the recording are saved with the file and are displayed in playback mode or with the DiMAGE Viewer software included on the CD-ROM. The date and time are set in the setup 1 section of the recording and playback-mode menu (p. 28, 58).

When the Date/Time-set option is selected and entered, the date/time screen will be displayed. The left and right keys (1) are used to select the item to be changed and the zoom lever (2) is used to change the value. From left to right, the screen shows the year, month, day, hour, and minute. When the date and time have been adjusted, set the clock by pressing the enter button (3). The menu button cancels the screen without applying any changes.



Setting the date format

The date format that is displayed can be changed: YYYY/MM/DD (year, month, day), MM/DD/YYYY (month, day, year), DD/MM/YYYY (day, month, year). Simply select the format and enter it by pressing the enter button; the new format will be displayed on the menu. The date format does not affect date folder names (p. 67). The date format is set in the setup 1 section of the recording and playback-mode menu (p. 28, 58).

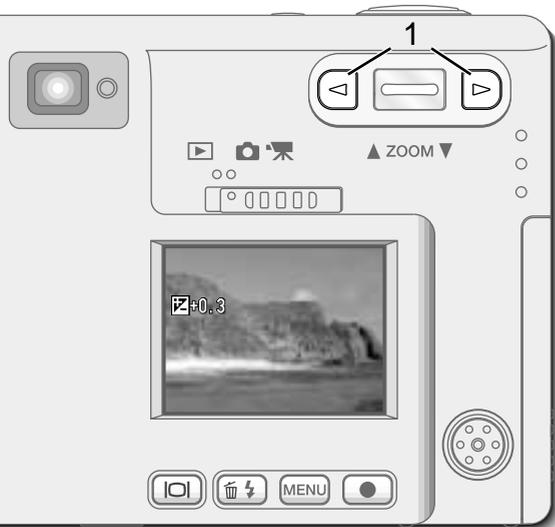
RECORDING MODE

Exposure compensation



The camera exposure can be adjusted to make the final picture lighter or darker by as much as $\pm 2\text{Ev}$ in $1/3$ increments with still image and movie recording. The exposure-compensation value will remain in effect until it has been reset.

The exposure compensation must be set before the image is captured. When setting the exposure compensation, the amount of compensation is shown next to the exposure-compensation icon on the monitor. When set to any value other than 0.0, the icon will remain on the LCD monitor as a warning. To set the exposure compensation, the monitor must be on.



Use the left and right keys (1) to adjust the exposure-compensation value.

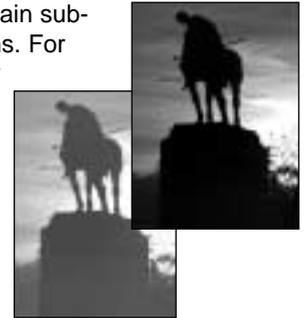
- The LCD monitor will display the exposure-compensation icon and value.
- Change in exposure compensation is visible in the live image on the monitor.

The adjustment in exposure will be automatically set after five seconds or when another camera button is pressed.

When auto reset is active, exposure compensation is disabled. Any exposure-compensation value set will also be canceled when the auto-reset function is turned on.

Sometimes the camera's exposure meter is deceived by certain subjects. Exposure compensation can be used in these situations. For example, a very bright scene, such as a snowy landscape or a white sandy beach, can appear too dark in the captured image. Before taking the picture, adjusting the exposure by +1 or +2 Ev will result in an image with normal tonal values.

In this example, the dark scene appears bright and washed-out on the LCD monitor. By decreasing the exposure by -1.5 Ev , the richness of the sunset is preserved.



What is an Ev?

Ev stands for exposure value. A change of one Ev will adjust the exposure calculated by the camera by a factor of two.

Change in Ev	Adjustment to exposure
+2.0 Ev	4X as much light
+1.0 Ev	2X as much light
0.0 Ev	Calculated exposure
-1.0 Ev	1/2 as much light
-2.0 Ev	1/4 as much light