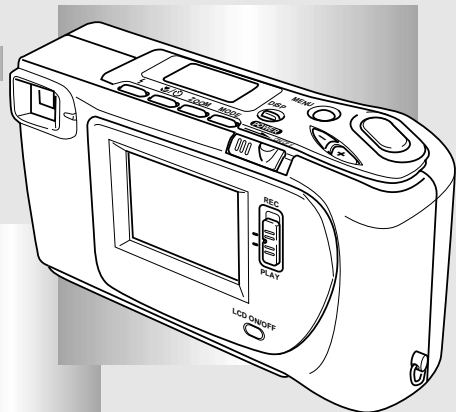**LCD Digital Camera**

QV-5000SX
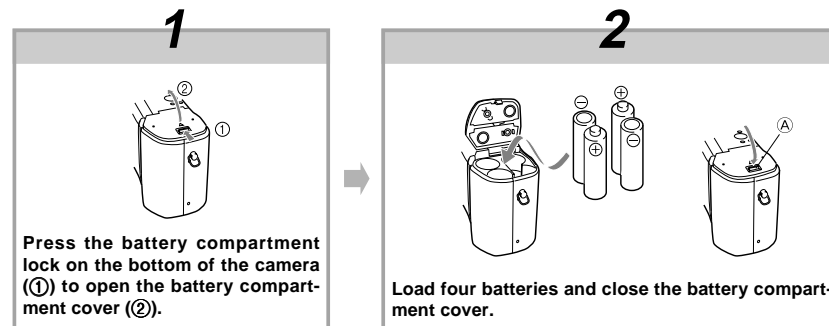
Owner's Manual

If you need help with
your camera, please
call: 1(800)435-7732

(英)

CASIO®

QUICK REFERENCE

Loading Batteries (page 18)

Be sure to load the four AA size batteries that come with the camera before using it.

1

Press the battery compartment lock on the bottom of the camera (①) to open the battery compartment cover (②).

2

Load four batteries and close the battery compartment cover.

• Be sure to use alkaline or lithium batteries. Never use manganese batteries.
• Press down on the battery compartment cover at the point marked Ⓐ in the above illustration until the cover locks into place with a click.
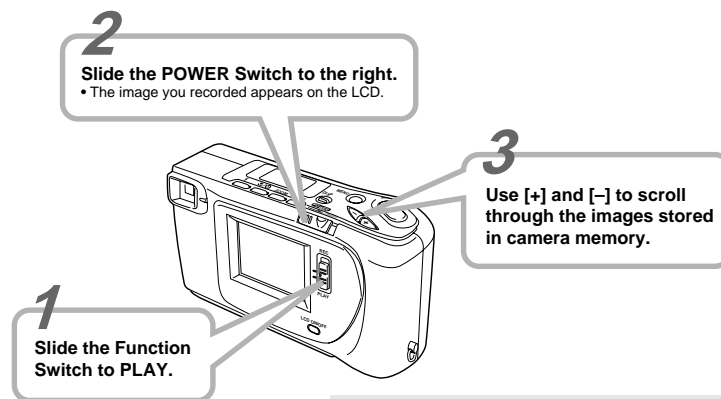
2

QUICK REFERENCE

Recording Images (page 22)

2
Slide the POWER Switch to the right to turn on the camera.

3
After composing the image in the viewfinder, press the shutter button about half way and hold it there.
* The camera's Auto Focus feature automatically focuses the image.

Viewfinder

Operation indicator

4
After confirming that the Auto Focus operation is complete (the operation indicator lights green), press the shutter button.

1
Slide the Function Switch to REC.

3

QUICK REFERENCE

Playing Back Images (page 37)

2
Slide the POWER Switch to the right.
• The image you recorded appears on the LCD.

3
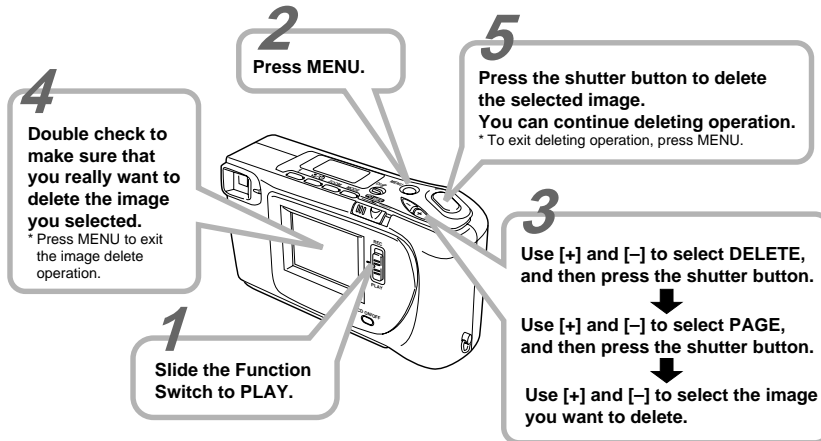Use [+] and [–] to scroll through the images stored in camera memory.

1
Slide the Function Switch to PLAY.

The camera may contain pre-recorded demonstration images when you purchase it. To delete these images, see page 5.

4

QUICK REFERENCE

Deleting Images (page 57)

2 Press MENU.

5 Press the shutter button to delete the selected image.
You can continue deleting operation.
* To exit deleting operation, press MENU.

4 Double check to make sure that you really want to delete the image you selected.
* Press MENU to exit the image delete operation.

3 Use [+] and [–] to select DELETE, and then press the shutter button.

Use [+] and [–] to select PAGE, and then press the shutter button.

Use [+] and [–] to select the image you want to delete.

1 Slide the Function Switch to PLAY.

5

CONTENTS

6

7

FEATURES

Compact, lightweight design
A built-in monitor provides the ultimate in go-along-anywhere portability.

Powerful display functions, including movies and panoramas!
Record and play back movies that are about 3.2 to 6.4 seconds long and panoramas that link multiple images together. Digital zoom lets you zoom image twice or four times its normal size. Multi-page shows multiple images on a single screen, Close-up lets you zoom in close for more detail, Auto Playback automatically show a series of images.
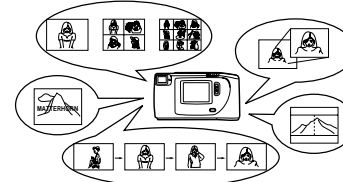
On-the-spot viewing of images as soon as they are recorded
A high-resolution TFT LCD screen produces low-glare images even under bright light.

Multiple interfaces
VIDEO OUT lets you output images to a TV for big-screen presentations. A DIGITAL port lets you transfer image data to a computer for storage and editing. Data can be transferred back to the camera when you need it.

8

PRECAUTIONS

General Precautions

Be sure to observe the following important precautions whenever using the QV-5000SX.

All references in this manual to "this camera" and "the camera" refer to the CASIO QV-5000SX Digital Camera.

• Never try to take pictures or use the built-in display while operating a motor vehicle or while walking. Doing so creates the danger of serious accident.
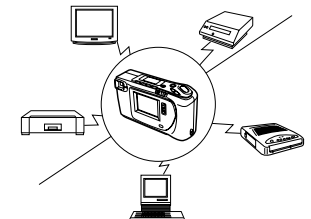• Never try to open the case of the camera or attempt your own repairs. High-voltage internal components create the risk of electrical shock when exposed. Always leave maintenance and repair work up to authorized CASIO service providers.
• Never fire the flash in the direction of a person operating a motor vehicle. Doing so can interfere with the driver's vision and create the danger of accident.
• Never fire the flash while it is too close to the subject's eyes. Be especially careful with small children. Intense light from the flash can cause eye damage if it is fired too close to the eyes, especially with young children. When using the flash, the camera should be at least one meter (40″) from the eyes of the subject.
• Keep the camera away from water and other liquids, and never let it get wet. Moisture creates the danger of fire and electrical shock. Never use the camera outdoors in the rain or snow, at the seashore or beach, in the bathroom, etc.

• Should foreign matter or water ever get into the camera, immediately turn power off, unplug the AC adaptor from the power outlet, and contact your dealer or nearest CASIO service provider. Using the camera under these conditions creates the danger of fire and electrical shock.
• Should you ever notice smoke or a strange odor coming out of the camera, immediately turn power off and unplug the AC adaptor from the power outlet. Using the camera under these conditions creates the danger of fire and electrical shock. After making sure there is no more smoke coming from the camera, take it to your nearest CASIO service provider for repair. Never attempt your own maintenance.
• If the camera's case should ever become cracked due to dropping it or otherwise subjecting it to rough treatment, immediately turn power off, unplug the AC adaptor from the power outlet, and contact your nearest CASIO service provider.
• Never use the camera inside of an air craft or in any other areas where its use is prohibited. Doing so can result in an accident.
• Physical damage and malfunction of this camera can cause the image data stored in its memory to be deleted. Be sure to always keep backup copies of data by transferring them to personal computer memory.
• Never open the battery compartment cover, disconnect the AC adaptor from the camera or unplug it from the wall socket while the "WAIT" message is on the LCD. Doing so will not only make storage of the current image impossible, it can also corrupt other image data already stored in camera memory.

Operating conditions

• This camera is designed for use in temperatures ranging from 0°C to 40°C (32°F to 104°F).
• Do not use or keep the camera in the following areas.
  — In areas subject to direct sunlight
  — In areas subject to high humidity or dust
  — Near air conditioners, heaters, or other areas subject to temperature extremes
  — Inside of a closed vehicle, especially one parked in the sun
  — In areas subject to strong vibration

Condensation

• When you bring the camera indoors on a cold day or otherwise expose it to a sudden change of temperature, there is the possibility that condensation can form on the exterior or on interior components. Condensation can cause malfunction of the camera, so you should avoid exposing it to conditions that might cause condensation.
• To keep condensation from forming, place the camera into a plastic bag before moving it into a location that is much warmer or colder than your current location. Leave it in the plastic bag until the air inside the bag has a chance to reach the same temperature as the new location. If condensation does form, remove the batteries from the camera and leave the battery compartment cover open for a few hours.

About the camera's backlight…

• The camera is equipped with a fluorescent light source to provide the back lighting for its LCD.
• The normal service life of the backlight is approximately six years, when the camera is used for about two hours a day.
• Should the LCD image appear abnormally dark, take the camera to your dealer or an authorized CASIO service provider to have the light source replaced. Note that you will be charged for this replacement.
• Under very cold conditions, the backlight may require more time than normal to light, or reddish bands may appear in the image. These conditions do not indicate malfunction, and normal operation should return at higher temperatures.

GUIDELINES LAID DOWN BY FCC RULES FOR USE OF THIS UNIT IN THE U.S.A. (not applicable to other areas).

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTICE

This equipment has been tested and found to comply with the limits for a Class B peripheral, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.

FCC WARNING

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
Properly shielded cables with ferrite core must be used for connection to host computer and/or peripherals in order to meet FCC emission limits.

THE SPECIAL VIDEO CABLE THAT COMES WITH THE CAMERA
----- THE CAMERA TO A VIDEO IN TERMINAL OF A COMPUTER
THE SPECIAL CONNECTION CABLE THAT COMES WITH QV-Link SOFTWARE
----- THE CAMERA TO A PROPER TERMINAL OF A COMPUTER

Declaration of Conformity

Model Number: QV-5000SX
Trade Name: CASIO COMPUTER CO.,LTD.
Responsible party: CASIO INC.
Address: 570 MT. PLEASANT AVENUE,
                       DOVER,NEW JERSEY 07801
Telephone number: 973-361-5400

This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

CASIO COMPUTER CO.,LTD.   QV-5000SX
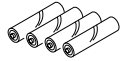
FC

Tested To Comply
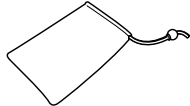With FCC Standards

FOR HOME OR OFFICE USE

UNPACKING

Check to make sure that all of the items shown below are included with your camera. If something is missing, contact your dealer as soon as possible.

Camera

*Alkaline batteries
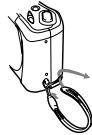(AA-size × 4)*

Soft case

Wrist strap

Video cable

Manual

Connecting the Wrist Strap

Pass the wrist strap through the hole on the side of the camera as shown in the illustration.

▷▷▷ IMPORTANT! ◁◁◁
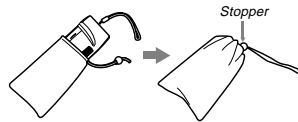
Be sure to keep the wrist strap around your wrist whenever using the camera to protect against accidentally dropping it.

Using the Soft Case

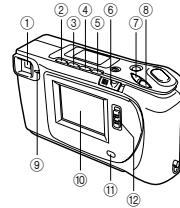Keep the camera in its soft case to protect it when not in use. Slide the stopper and close the soft case as shown in the illustration.

Stopper

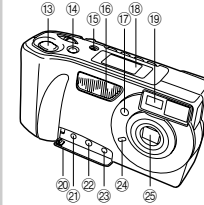# GENERAL GUIDE

The following illustrations show the names of each component, button and switch on the camera.

Top and Display

① Viewfinder
② FLASH button
③ MACRO/SELF-TIMER buton
④ ZOOM button
⑤ MODE button
⑥ POWER switch
⑦ [–]
⑧ [+]
⑨ Operation indicator
⑩ LCD
⑪ LCD button
⑫ Function switch

Lens
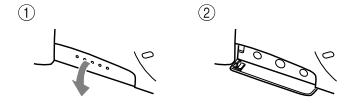
⑬ Shutter button
⑭ MENU button
⑮ DISP button
⑯ Flash
⑰ Exposure sensor
⑱ Indicator display
⑲ Distance sensor
⑳ Terminal panel cover
㉑ AC Power terminal
㉒ VIDEO OUT terminal
㉓ DIGITAL terminal
㉔ Self-timer indicator
㉕ Lens

Bottom
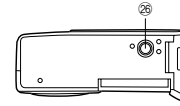
㉖ Tripod hole
㉗ Battery compartment cover
㉘ Battery compartment lock

Opening the Terminal Panel Cover

① ②

Self-Timer Indicator and Operation Indicator

• The Self-timer Indicator flashes when the self-timer is performing a timer operation prior to releasing the shutter.

Self-timer indicator

• The Operation Indicator shows the operational status of the camera as described below.
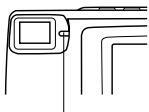
Operation indicator

Operation Indicator

Record Mode

Indicator Color	On	Flashing
Green	Auto Focus operation complete	Please wait (after power on)
		Image store operation in progress
Amber	Exposure warning	Charging
Red	Cannot focus	Error
	Memory full	
	Cannot charge	

Playback Mode (when connecting video cable)

Indicator Color	On	Flashing
Green	Playing back	Please wait (after power on)
Red	Low battery	

Low Battery Warning

Flashes for 3 seconds and then goes out.

MONITOR SCREEN

Pressing DISP causes various indicators to appear on the monitor screen. If the monitor screen is turned off, press the LCD button to turn it on before pressing DISP.
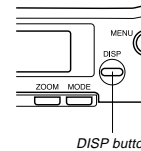
DISP button
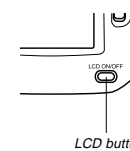
LCD button

Recording Mode

Macro indicator

Self-timer

Remaining number of pages

Flash Mode
Auto   **None**
Flash On   ⚡
Flash Off   🚫
Red-eye reduction ◉

Mode
S (SUPER FINE)
F (FINE)
N (NORMAL)
E (ECONOMY)

Recording Mode

Zoom factor

Battery capacity

EV shift

Focus indicator

20F
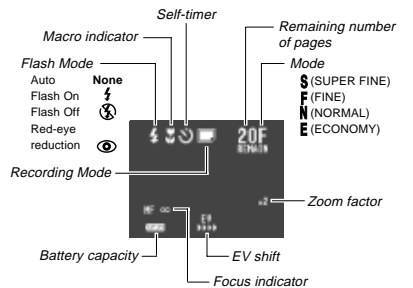
Recording Mode Indicators

	Normal Recording		Panorama Recording
	Movie Recording		Title Recording

Indicator display

The indicator display located on the top of the camera also shows various camera status indicators during image recording. The indicator display especially comes in handy when the monitor screen is turned off.
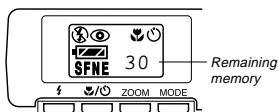
Remaining memory

♥	Macro indicator	**S**	Resolution mode indicator "SUPER FINE"
⏱	Self-timer indicator	**F**	Resolution mode indicator "FINE"
⚡	Flash On	**N**	Resolution mode indicator "NORMAL"
⚡̸	Flash Off	**E**	Resolution mode indicator "ECONOMY"
⊙	Red-eye reduction	**Remaining memory**	Remaining memory indicator
🔋	Battery indicator		

Playback Mode

Protect indicator

Pages

Mode
S (SUPER FINE)
F (FINE)
N (NORMAL)
E (ECONOMY)

Battery capacity

17

POWER SUPPLY

The camera features a two-way power supply that lets you use either batteries (AA-size alkaline or lithium) or household AC current.

To load batteries

Be sure that camera power is turned off whenever loading or replacing batteries.

1. **Press the battery compartment lock on the bottom of the camera in the direction indicated by arrow (❶), and swing open the battery compartment cover as indicated by arrow (❷).**

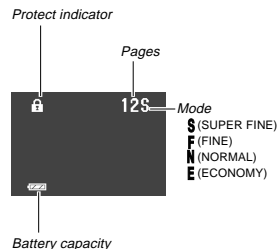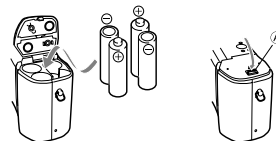**2.** **Insert four batteries and close the battery compartment cover.**

Be sure to use **alkaline** or **lithium** batteries. Never use manganese batteries (see precautions on the next page).

• Press down on the battery compartment cover at the point marked Ⓐ in the illustration until the cover locks into place with a click.

18

Battery Handling Precautions

Incorrect use or handling of batteries can cause them to leak or burst and seriously damage your camera. Be sure to note the following important precautions to avoid problems with batteries.

⚠ **CAUTION**

• Use only LR6 (AM-3) type alkaline or FR6 type lithium dry cell batteries with this camera. Never mix old batteries with new ones. Failure to do so can result in bursting or leaking of batteries, creating the danger of fire or personal injury.
• Always make sure that the positive [+] and negative [–] ends of the batteries are facing correctly, as noted by the markings on the camera itself. Improper loading of batteries can result in bursting or leaking of batteries, creating the danger of personal injury or soiling of objects nearby.

• Remove batteries from the camera if you do not plan to use it for more than two weeks.
• Never recharge batteries, never allow direct connection between two ends of a battery, and never try to take batteries apart.
• Do not expose batteries to direct heat or dispose of them by burning. Doing so can create the danger of explosion.

• Never mix batteries of different types.
• Dead batteries are susceptible to leakage, which can cause serious damage to your camera. Remove batteries from the camera as soon as you notice they are dead.
• The batteries that power this camera normally become warm when they lose power. This does not indicate malfunction.

Low Battery Indicator

The battery capacity indicator in the lower left of the monitor screen (shown only when image information display is turned on) changes to "🔋" whenever battery power goes low. If you continue to use the camera, a battery warning indicator "🔋" will appear in the center of the monitor screen, and then camera power will automatically turn off. If this happens, replace all four batteries with new ones as soon as possible.
Note that the camera may automatically shut down at a somewhat higher level of remaining battery capacity when a computer is connected to its DIGITAL terminal for data communication. This is to protect against problems caused by sudden power outage during data communications. Because of this, we strongly recommend that you use the optionally available AC adaptor to power the camera whenever performing data communication with a personal computer.

19

Standard Battery Life

This camera can be power using AA-size alkaline or lithium batteries.
The battery life reference values given below indicate the amount of time at standard temperature (25°C) until power automatically turns off due to battery failure. They do not guarantee that batteries will perform the amount of service indicated. Battery life is reduced by low temperatures and continued use.

Type of Operation	AA-size Alkaline Batteries LR6	AA-size Lithium Batteries FR6
Continuous Playback	Approximately 120 minutes	Approximately 210 minutes
Continuous Recording	Approximately 320 shots	Approximately 780 shots

• The above guidelines are based on the following battery types:
  Alkaline: MX1500 (AA) DURACELL ULTRA
  Lithium: Fuji Film
• Battery life varies with brand.

"Continuous Recording" is made without use of the camera's flash.
Regardless of use of the camera's flash, turning on and off the POWER Switch, as well as other operating conditions may affect the above values.

● **Tips for Prolonging Battery Life**
• Press the LCD button to turn off the monitor screen whenever you are using the viewfinder to compose images.
• Use the ⚡ button to turn off the flash when you are not using it.

Auto Power Off

Power automatically turns off whenever you do not perform any camera operation for a period of time. Power turns off after about two minutes in the Record Mode or after about five minutes in the Playback Mode.
• To restore power, simply slide the POWER Switch to the right as you normally do.
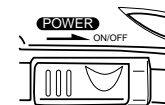
▶▶ **IMPORTANT!** ◀◀

The Auto Power Off function does not operate under the following conditions.

• During playback of a movie (page 38)
• During playback of a panorama (page 39)
• During Auto Play (page 43)
• When operations are being performed on a computer connected to the camera via the camera's DIGITAL terminal. (page 66)
• Whenever the AC adaptor is connected to the camera.

20

Using AC Power

Use the optional AC adaptor (AD-C620) to power the camera from standard AC power.

AC adaptor

AC power terminal
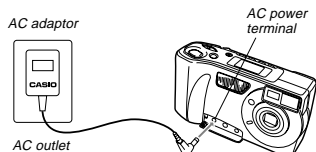
AC outlet

AC Adaptor precautions

⚠ **CAUTION**

- Never use an electrical outlet whose voltage is outside the rating marked on the AC adaptor. Doing so can create the danger of fire or electrical shock. Use only the optional AC adaptor specified for this camera.
- Should the cord of the AC adaptor become damaged (exposed internal wiring or shorts), request a replacement from an authorized CASIO service provider. A damaged AC adaptor cord creates the danger of fire or electrical shock.

⚠ **CAUTION**

- Always be sure to use the AD-C620 AC adaptor only. Using any other AC adaptor can cause damage to the camera not covered by the warranty.
- When unplugging the AC adaptor from the wall socket, be sure to grasp the adaptor (not the cord).
- Avoid any undue bending, pulling, and twisting of the AC adaptor's cord, and never try to lengthen the cord by splicing it with other wire.

- Be sure to turn power off before connecting or disconnecting the adaptor.
- Always turn camera power off before disconnecting the AC adaptor, even if the camera has batteries installed. If you don't, the camera will turn off automatically when you disconnect the AC adaptor. Even so, you run the risk of damaging the camera whenever you disconnect the AC adaptor without first turning power off.
- The AC adaptor may become warm to the touch after extended periods of use. This is normal and is not cause for alarm.
- After use turn off the POWER switch of the camera and unplug adaptor from the AC outlet.

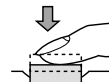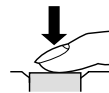
RECORDING

Using the Shutter Button

The following steps describe how to operate the shutter button so that Auto Focus has a chance to focus the image.

1. Press the shutter button about half way.

- The Auto Focus feature automatically focuses the image.

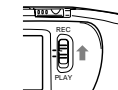**2. Press the shutter button as far as it will go to record the image.**
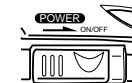
Basic Recording Operation

The following describes the basic operation for recording images.

1. Slide the Function Switch to REC.

- The REC position selects the Record Mode, while PLAY selects the Playback Mode.

2. Slide the POWER Switch in the direction indicated by the arrow.

- The POWER Switch returns to its original position when you release it.
- Turning on power enters the normal Recording Mode.
- You can perform step 2 before step 1, if you want.
- If power turns off, slide the POWER Switch again to turn it back on.

---

3. After composing the image in the viewfinder, press the shutter button about half way and hold it there.

- The camera's Auto Focus feature automatically focuses the image.
- The operation indicator lights green when the Auto Focus operation is complete.
- Viewing the subject in the viewfinder, carefully compose it within the frames.
- Take care to avoid blocking the lens with your fingers.
- If you plan to use the LCD to compose the image, press the LCD button to turn it on.
- Carefully press the shutter button, taking care not to move the camera as you do.

▶▶▶ **IMPORTANT!** ◀◀◀

Auto Focus tends not to work well with the following types of subjects.
- Solid color walls or objects with little contrast
- Strongly backlit objects
- Polished metal or other brightly reflective objects
- Venetian blinds or other horizontally repeating patterns
- Multiple images that are varying distances from the camera
- Subjects in poorly lit areas

These cases may make it impossible for Auto Focus to focus properly, which is indicated by the red operation indicator. When this happens switch to the Manual Mode for focusing (page 34). The following are the fixed focusing distances when Auto Focus is unable to focus.

Well-lit Location: 1.5 meters (4.3') minimum
With Flash: 1 to 2 meters (3.3' to 6.6')

4. After confirming that the Auto Focus operation is complete (operation indicator is green), press the shutter button all the way down to record the image.

- You can view images immediately after you record them by sliding the Function Switch to PLAY.

▶▶▶ **CAUTION** ◀◀◀

- Never open the battery compartment cover, disconnect the AC adaptor from the camera, or unplug the adaptor from the wall socket while the operation indicator is flashing green. Doing so will not only make storage of the current image impossible, it can also corrupt other image data already stored in camera memory.
- Fluorescent lighting actually flickers at a frequency that cannot be detected by the human eye. When using the camera indoors under such lighting, you may experience some brightness or color problems with recorded images.

▶▶▶ **NOTES** ◀◀◀

- This camera is equipped with "flash memory" that retains images even when batteries go dead and the AC adaptor is not connected. Images can be recalled after new batteries are loaded or the AC adaptor is connected.
- Note that strong direct or reflected light can cause vertical lines in an image. This is due to the characteristics of the camera's charge-coupled device (CCD), and it does not indicate malfunction.

Using the Viewfinder for Recording

The illustrations below show what you see when you look through the viewfinder to compose an image for recording.

Auto Focus Frame

Close Up Range Frame

Focus Range Frame

Focus range for 1m to ∞ (40" to ∞)

Focus range for 30cm (11.8")
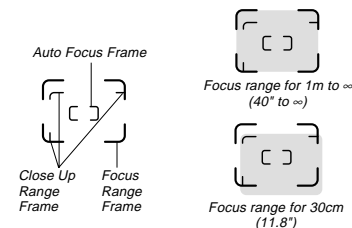
Close Up Range Frame

This frame shows the focus range when the distance from the lens to the subject is 1 meter (40") to infinity.

Macro Correction Frame

This frame shows the focus range when the distance from the lens to the subject is 30 cm (11.8"). You can use the viewfinder for distances from 30 cm (11.8") to infinity. When using Auto Focus, compose the subject so it is within the Auto Focus Frame.

Press ♣/⟳ to enter the Macro Mode or use the Manual Mode for distances less than 30 cm (11.8").

• Entering the Macro Mode automatically turns on the monitor screen. Use the monitor screen to compose images in the Macro Mode.

Using Focus Lock

Normally, Auto Focus automatically focuses on the object that is inside the Auto Focus Frame. Focus lock is a technique that lets you lock the focus on a subject and then move the camera so the Auto Focus Frame is pointed at another subject when you record. This keeps the original subject in focus, even though a different object is within the Auto Focus Frame.

1. **Align the Auto Focus Frame with the subject you want to lock on and press the shutter button half way down.**

2. **While keeping the shutter button depressed half way, move the camera and compose the image as you want.**
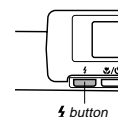
3. **Press the shutter button all the way down to record the image.**

Using the Flash

You can use the built-in flash unit to provide illumination during recording.

1. **Press ⚡.**
   • Each press of ⚡ cycles through the flash mode in the following sequence: Auto → On → Off → Red-eye Reduction.

⚡ button

Indicator	Flash Mode	Description
None	Auto Flash	Flash is automatically enabled and disabled in accordance with exposure conditions.
⚡	Flash On	Flash is always fired, regardless of exposure conditions.
⚡⊗	Flash Off	Flash is never fired, regardless of exposure conditions.
◉	Red-eye Reduction	Fires a pre-flash followed by recording with flash, which reduces the chance of red-eye.

• The monitor screen goes blank and the operation indicator flashes while the flash unit is charging.

Operation indicator
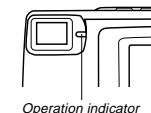
▶▶▶ IMPORTANT! ◀◀◀

• Never use the flash in areas where combustible or explosive gas is present. Doing so creates the danger of fire and explosion.
• Never fire the flash in the direction of a person operating a motor vehicle. Doing so can interfere with the driver's vision and create the danger of accident.
• Never fire the flash while it is too close to the subject's eyes. Be especially careful with small children. Intense light from the flash can cause eye damage if it is fired too close to the eyes, especially with young children. When using the flash, the camera should be at least one meter (40") from the eyes of the subject.
• Make sure that you do not touch or block the flash or exposure sensor with your fingers. Doing so can soil these components and interfere with correct flash operation.

• Flash should be used for distances within the range of about 0.7 meters to 2 meters (2.3' to 6.6'). Flash does not work well outside this range.
• Depending on operating conditions (type of battery being used, temperature, etc.), it may take up to 10 seconds for the flash unit to charge.
• The flash is disabled during movie recording. The ⚡⊗ indicator flashes to indicate this condition.
• The flash unit will not charge when battery power is low. The ⚡⊗ indicator flashes red to warn you that the flash will not fire correctly, which may affect exposure of the image. Replace batteries as soon as possible when this happens.
• Red-eye reduction may not work well when the camera is not pointed directly at the subject or when the subject is far from the camera.
• In the Red-eye Reduction Mode, the flash is fired automatically in accordance with exposure. Because of this, the flash will not fire in a well-lit area.
• Use the flash in areas where available lighting is dim. If you do not use a flash, shutter speed slows down and creates the possibility of blurred images due to camera movement. Mount the camera on a tripod if you decide not to use the flash.

Resolution Settings

The camera has four resolution modes: Super Fine (**S**), Fine (**F**), Normal (**N**), Economy (**E**). The following shows the number of images that can be recorded in memory when all images are the same resolution. Use the procedure under "Manual Recording" on page 34 for details on changing the resolution modes.

Setting Indicator	Resolution	Number of Images	Computer Output image
S	Super Fine	16 (450KB compressed)	1280 x 960 pixels
F	Fine	30 (225KB compressed)	1280 x 960 pixels
N	Normal	57 (113KB compressed)	1280 x 960 pixels
E	Economy	88 (64KB compressed)	640 x 480 pixels

The above figures are approximations only. The actual number of images depends on image subject matter.

Exposure Adjustment

This camera features an program AE function that automatically changes shutter speed and aperture in accordance with available light. In addition, you can also manually adjust the exposure to compensate for backlighting, indirect indoor lighting, dark backgrounds, and other special conditions.
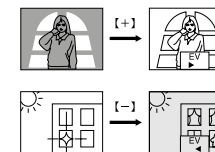
To manually adjust the exposure

If the LCD is turned off, press the LCD button to turn it on.

1. **Set the Function Switch to REC.**

2. **Use [+] and [–] to perform exposure compensation.**
   • Pressing [+] or [–] displays an EV indicator that shows the current exposure compensation setting.
   • Pressing [+] makes the image on the LCD brighter. Use it to adjust for dim indoor lighting and backlighting.
   • Pressing [–] makes the image on the LCD darker. Use it to adjust for bright sunlight.
   • The EV indicator turns red whenever the compensation value is at its limit.

3. **After adjusting the exposure, press the shutter button to record the image.**

NOTES

• Exposure adjustment is generally expressed in terms of an exposure adjustment (EV) value. The exposure adjustment value is always set to zero whenever you turn on the camera.
• The exposure adjustment value is changed by 0.5EV with each press of [+] or [–]. The range of the value is –2EV to +2EV.
• The exposure adjustment value automatically reverts to zero whenever the shutter button is pressed. You can manually reset the exposure adjustment value by using [+] and [–] to change the value back to zero, which is indicated when the EV indicator disappears from the monitor. EV value is fixed during panorama recording.
• Shutter speed and aperture is fixed whenever you manually adjust the exposure setting.

IMPORTANT!

• When exposure adjustment is too bright or too dark, you may not be able to adjust within the range of –2EV to +2EV.
• The aperture setting of this camera switches automatically in accordance with available lighting when an image is recorded.

29

OTHER RECORDING FUNCTIONS

This section describes more advanced recording operations that are also provided by this camera.
Use the monitor screen for zoom, macro, movie, panorama, manual, and title recording operations.

Using the Zoom Feature

The zoom feature lets you move in closer on subjects that are located far from the camera. You can select either 2X or 4X zoom.
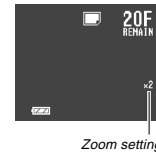
Zoom Settings: 2X, 4X
Focusing Distance: 30 cm (12") to infinity

To record an image using the zoom feature

1. Slide the Function Switch to REC.

2. Press ZOOM to display the current zoom setting in the lower right of the monitor screen.
   • Press ZOOM again to cycle through the zoom settings until the one you want is on the monitor screen.

Zoom setting

3. After composing the image on the monitor screen, press the shutter button about half way and hold it there to activate Auto Focus.

4. After confirming that the Auto Focus operation is complete (operation indicator is green), press the shutter button all the way down to record the image.

30

Using the Macro Feature

With the macro feature, you can record close up images of subjects locate only 10cm (4") from the lens.
• ♣ is shown on the monitor screen when the macro feature is turned on.
• Auto Focus is disabled while the Macro feature is in use.
• With the macro feature, use the monitor screen to compose the image. Do not use the viewfinder.

To record an image using the macro feature

1. Slide the Function Switch to REC.

2. Press ♣/⟳ to display the macro setting you want to use.
   • Each press of ♣/⟳ cycles through the macro and self-timer settings in the following sequence: SELF-TIMER "⟳" → MACRO "♣" → MACRO + SELF-TIMER "♣/⟳"

Macro setting

3. After composing the image on the monitor screen, press the shutter button all the way down to record the image.

Movie Recording

You can record movies that are 3.2, 4.8, or 6.4 seconds long. Use the procedure under "Movie Length" on page 35 to specify the length of a movie.

1. Slide the Function Switch to REC.

2. Press MODE a number of times until the screen shown on the right appears, which indicates the Movie Recording Mode.

Movie Recording Mode

3. Compose the image on the monitor screen and then press the shutter button about half way.

4. After confirming that the Auto Focus operation is complete (operation indicator is green), press the shutter button all the way down to record the image.
   • See "Playing Back a Movie" on page 38 for details on playing back a movie.

31

IMPORTANT!

• Flash is disabled during movie recording.
• The number of images worth of memory used when you record a movie depends on the movie length (in seconds), as shown below. In all cases, images are VGA size (640 x 480 pixels).
   3.2 seconds: 2 images
   4.8 seconds: 3 images
   6.4 seconds: 4 images
• Movie images that are uploaded to a personal computer and then downloaded back to the camera cannot be played back as a movie.
• Movie recording is disabled while the zoom feature (2x, 4x) is in use.
• During movie recording, Auto Focus becomes fixed at the setting in effect when the shutter button is pressed. If there is the possibility that the distance between the camera and subject will change during recording of the movie, start out with at least 2 meters from the subject to ensure correct focus.

Panorama Recording

With panorama recording you record a series of images and then link them to create a single panoramic effect.
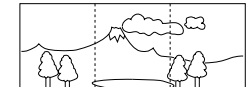
1. Slide the Function Switch to REC.

2. Press MODE a number of times until the screen shown on the right appears, which indicates the Panorama Recording Mode.

Panorama Recording Mode

3. Compose the image on the monitor screen and then press the shutter button about half way.

32

4. **After confirming that the Auto Focus operation is complete (operation indicator is green), press the shutter button all the way down to record the image.**

- The left edge of the previous image you recorded remains on the monitor screen, so you can use it to compose the next image correctly.
- Up to nine images can be grouped into a panorama. Press MENU when you want to stop a panorama recording operation.
- If you want to link more than 9 images into a panorama, upload the images to a computer and use your computer application to link them.
- Aperture and white balance settings are locked when you record the first image of a panorama, and these settings are applied to all subsequent images in that panorama.
- See "Panorama Playback" on page 39 for details on playing back panoramas.
- Panorama images that are uploaded to a personal computer and then downloaded back to the camera cannot be played back using panorama playback.

Using the Self-timer

The self-timer performs a record operation 10 seconds after the shutter button is pressed.

To record an image using the self-timer

1. **Slide the Function Switch to REC.**

2. **Press ❁/↻ to display the self-timer setting you want to use.**

Self-timer setting

- Each press of ❁/↻ cycles through the macro and self-timer settings in the following sequence: SELF-TIMER "↻" → MACRO "❁" → MACRO + SELF-TIMER "❁/↻"

3. **After composing the image on the monitor screen, press the shutter button about half way and hold it there to activate Auto Focus.**

33

---

4. **After confirming that the Auto Focus operation is complete (operation indicator is green), press the shutter button all the way down to start the self-timer.**

- The self-timer indicator flashes to count the seconds until the shutter releases.
- Pressing the shutter button in step 4 also causes the monitor screen to go blank.

Manual Recording

In the Manual Mode you can make your own white balance, focus, and other settings to create exactly the type of image you want. The following describes each of the settings you can make in the Manual Mode.

QUALITY (Resolution) :

You can select one of four different resolutions: Super Fine (**S**), Fine (**F**), Normal (**N**), or Economy (**E**). Super Fine produces the most detailed image, but it also requires the most memory. See page 27 for details.

WB (White Balance) :

This setting lets you adjust white areas to produce a more natural-looking image.

AUTO .... Use this setting for normal recording.

WB1 ❄ ...... Use this setting when indoor lighting is making the image appear reddish.

WB2 ▦ ..... Use this setting when indoor lighting is making the image appear bluish.

WB3 ☼ ..... Use this setting for outdoor recording.

34

FOCUS:

Select either AF (Auto Focus) or MF (Manual Focus).

PICTURE (Sharpness) :

You can select from among one of three settings that determines the sharpness of the image.

AUTO ...... Normal sharpness
SOFT ...... Soft focus
HARD ...... Hard focus that makes images crisp and clear.

MOVIE TIME (Movie Length) :

Use this setting to specify the length of movie recordings (page 31). You can select 3.2, 4.8, or 6.4 seconds.

To make Manual Mode settings

1. **Slide the Function Switch to REC.**

2. **Press MENU.**

3. **Use [+] and [–] to select the item you want to set, and then press the shutter button.**

35

---

4. **Use [+] and [–] to make the setting on the monitor screen, and then press the shutter button.**

- After you make settings for one item, press MENU and then repeat steps 3 and 4 to set other items.
- Settings you make remain in effect until you change them or turn off the camera.

5. **If you selected MF (Manual Focus) for the focus setting, use [+] and [–] to focus the image.**

6. **After confirming that the focus is the way you want it, press the shutter button to record.**

- Turning off the camera returns the white balance (WB) setting to "AUTO" and the focus setting (FOCUS) to "AF". The sharpness setting, however, is retained until you change it, even when camera power is turned off.

36

PLAYBACK

The following describes the different techniques that you can use to playback recorded images.

Basic Playback Operation

The built-in monitor screen of the camera lets you play back recorded images without connecting an external monitor.

1. Slide the Function Switch to PLAY.

- The PLAY position selects the Playback Mode, while REC selects the Record Mode.

2. Use [+] and [−] to scroll through the images stored in camera memory.

- Press [+] to scroll forward and [−] to scroll back. Holding down either button scrolls at high speed.
- Pressing the shutter button and [+] at the same time jumps forward 10 images, while pressing the shutter button and [−] jumps back 10 images.
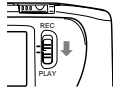
▶▶▶ NOTES ◀◀◀

- Sliding the Function Switch to PLAY immediately after recording an image displays the image you just recorded first.
- Pressing the shutter button while a movie or panorama image is on the monitor screen starts playback of the movie or panorama .
- The image that initially appears on the monitor screen in the PLAY Mode is rather rough. The full details of the image appear after a few seconds.
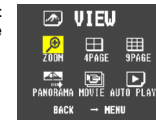

Playing Back a Movie

Use the following operation to play back a movie that was recorded using the operation under "Movie Recording" on page 31.

1. Slide the Function Switch to PLAY.

2. Press MENU.

3. Use [+] and [−] to select VIEW, and then press the shutter button.

4. Use [+] and [−] to select MOVIE, and then press the shutter button.

5. Use [+] and [−] to select the movie you want to play back.

6. Press the shutter button to start playing back the movie.

- You can use [+] (forward) and [−] (reverse) while playing back a movie to change the playback direction.
- Pressing MENU while playing back a movie changes to the menu screen. While the menu screen is on the monitor, you can use [+] (forward) and [−] (reverse) to move frame-by-frame through the movie, or you can press DISP to change to full screen display.

---

7. After the movie is complete, press the shutter button again.

- If you play back a movie using the basic (non-movie) playback operation, only the first frame of the memory page that contains the first 16 frames of the movie appears on the screen.
- You can still play back a movie, even after you delete an image that is part of the movie.
- Auto Power Off is disabled while playback of a movie is in progress.
- Pressing the shutter button while a movie image is on the monitor screen during normal (non-movie) image playback starts playback of the movie.

Panorama Playback

Use the following operation to playback panoramas recorded using the operation under "Panorama Recording" on page 32.

1. Slide the Function Switch to PLAY.

2. Press MENU.

3. Use [+] and [−] to select VIEW, and then press the shutter button.

4. Use [+] and [−] to select PANORAMA, and then press the shutter button.

---

5. Use [+] and [−] to select the panorama you want to play back.

6. Press the shutter button to start panorama playback.

- Pressing the shutter button during panorama playback pauses playback at the currently displayed image. Then you can use [+] (forward) and [−] (reverse) to scroll forward and back, one image at a time. Pressing DISP while playback is paused changes to the full-screen display.

7. Press MENU to stop panorama playback.

▶▶▶ NOTES ◀◀◀

- The Auto Power Off function is disabled while panorama playback is being performed.
- Pressing the shutter button while a panorama image is on the monitor screen during normal (non-panorama) image playback starts playback of the panorama.

Using Zoom

The following operation lets you magnify an image to twice its normal size. Note that you can zoom only a single still image.

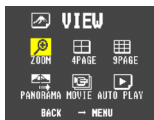### ▶▶▶ IMPORTANT! ◀◀◀

Movie and panorama images cannot be zoomed.

1. Slide the Function Switch to PLAY.

2. Use [+] and [−] to select the image you want to zoom in.

3. Press MENU.

**4.** **Use [+] and [–] to select VIEW, and then press the shutter button.**

5. **Use [+] and [–] to select ZOOM, and then press the shutter button.**

• This magnifies the center part of the image to twice its normal size.

6. **Use [+] and [–] to slide the image so you can view the part of it that you want.**

7. **After you are finished, press any button besides [+], [–], or DISP return the image to its normal size.**

Enlarged Image Movement
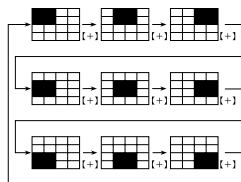
• Pressing [–] slides the image in the opposite direction.

▶▶▶ NOTE ◀◀◀

Zooming an image while image information is turned on (page 16), an image part indicator ▣ appears in the upper right corner to indicate which part of the image is currently on the screen. Display of the image part indicator can be toggled on and off by pressing DISP.

Displaying Multiple Images

The following operation lets you simultaneously view either four or nine images on the same screen. This capability is especially useful when playing back to the screen of a connected TV, and can be used to display a catalog of products, etc.

• The multi-image screen shows all 16 images of a movie on a single screen.

1. **Slide the Function Switch to PLAY.**

2. **Press MENU.**

3. **Use [+] and [–] to select VIEW, and then press the shutter button.**
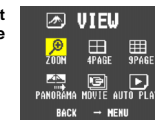
4. **Use [+] and [–] to select 4PAGE or 9PAGE, and then press the shutter button.**

• The first image of the set is the image that was on the screen when you performed step 2 of this operation. The other images are those that sequentially follow the first one.

5. **Use [+] and [–] to scroll through images stored in memory.**

6. **After you are finished, press any button besides [+], [–], or DISP return to the normal single-image display.**

Selecting a Specific Image

Use the following operation to select one of the images on a multi-image screen and change to the display of that image only.

1. **Use the operation on page 42 to display the multi-image screen that contains the image you want.**

2. **Press DISP.**

• This displays the image number on the upper left image.

3. **Use [+] and [–] to move the page (image) number display from image-to-image on the monitor screen.**

4. **Press the shutter button to display the image whose page (image) number is shown.**

Auto Play

Auto Play automatically scrolls through the images stored in memory. You can also specify how much time should be allowed between each image.
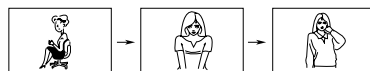
▶▶▶ IMPORTANT! ◀◀◀

Auto Power Off (page 20) is disabled whenever Auto Play is being used. This means you should not leave Auto Play running when using batteries to power the camera. Doing so may rundown batteries. Be sure to stop Auto Play and turn off the camera after you are finished.

To start Auto Play

1. **Slide the Function Switch to PLAY.**

2. **Press MENU.**

3. **Use [+] and [–] to select VIEW, and then press the shutter button.**
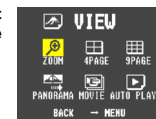
4. **Use [+] and [–] to select AUTO PLAY, and then press the shutter button.**
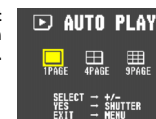
5. **Use [+] and [–] to select the screen size, and then press the shutter button.**

• Auto Play starts using the screen size you specify.

6. **To stop Auto Play, press any button besides MENU or LCD button.**

• Note that all buttons are disabled while an image change is in progress. Wait until an image is stopped on the screen before performing a button operation, or hold down the button until the image stops.

Setting the Auto Play Interval

You can use the following operation to set the amount of time that should be allowed between each image during Auto Play (the Auto Play interval).

1. Start Auto Play using the operation under "To start Auto Play" on page 44.

2. Press MENU.
- Be sure to wait for the image on the screen to stop before performing any button operation.

```
▶ AUTO PLAY

SPEED ⬛3SEC

SELECT  → +/−
START   → SHUTTER
```

3. Use [+] and [−] to set the Auto Play interval value you want and then press the shutter button.
- You can set the Auto Play interval to any value in the range of 1 to 30 (seconds).
- After you make the above setting, Auto Play resumes using the interval you set.

Screen Saver

The screen saver function automatically activates Auto Play (which automatically scrolls through images) whenever you do not perform any operation for about five minutes in the Playback Mode. This protects the camera's monitor screen and the screen of a connected TV against "burn in" of a static image that is left displayed too long.

▶▶▶ IMPORTANT! ◀◀◀
- The screen saver is enabled only when the camera is being powered by its optional AC adaptor. If you do not perform any operation for five minutes under battery power, camera power automatically turns off (Auto Power Off).
- The screen saver is disabled (it does not activate) if there are no images stored in memory.

45

To turn the screen saver on and off

1. Slide the Function Switch to PLAY.

2. Press MENU.

```
MENU
VIEW  EFFECT  TOOL
SETUP DELETE  EXIT
VIEW
ZOOM        PANORAMA
4PAGE       MOVIE
SPACE       AUTO PLAY
```

3. Use [+] and [−] to select SETUP, and then press the shutter button.

```
🔧 SETUP

VIDEO OUT  SCREEN SAVER

SELECT  → +/−
YES     → SHUTTER
BACK    → MENU
```

4. Use [+] and [−] to select SCREEN SAVER, and then press the shutter button.

5. Use [+] and [−] to select ON, and then press the shutter button.
- To turn off the screen saver, perform the above procedure and select OFF in step 5.
- The screen saver activates if you do not perform any operation for about five minutes in the Playback Mode.
- To stop an ongoing screen saver operation, press the shutter button.
- When changing between images, the screen saver uses the interval that is specified for Auto Play (page 45). To change the interval, press MENU while a screen saver operation is in progress, and then specify the interval time you want.

46

EDITING IMAGES

A selection of powerful built-in editing tools helps you to create the effects you want.

Using Image Filters

Use the following operation to apply black-and-white, sepia, or another filter to an image. Filters alter the appearance of an image and create interesting effects.

▶▶▶ IMPORTANT! ◀◀◀

The FILTER icon is blue, indicating that the filter operation is disabled in the following cases.
- When there is not enough remaining memory to store the result of the filter operation.
- While a movie image or panorama image is on the monitor screen.
- When the "MEMORY FULL" message is on the monitor screen.

Applying a filter to a rotated image automatically causes the image to return to its normal (unrotated) orientation.

1. Slide the Function Switch to PLAY.

2. Use [+] and [−] to display the image to which you want to apply the filter.

3. Press MENU.

```
MENU
VIEW  EFFECT  TOOL
SETUP DELETE  EXIT
VIEW
ZOOM        PANORAMA
4PAGE       MOVIE
SPACE       AUTO PLAY
```

4. Use [+] and [−] to select EFFECT, and then press the shutter button.

```
🖼 EFFECT

FILTER  TITLE

SELECT  → +/−
YES     → SHUTTER
BACK    → MENU
```

5. Use [+] and [−] to select FILTER, and then press the shutter button.

```
🖼 FILTER        1/5

IN

SELECT  → +/−
YES     → SHUTTER
CANCEL  → MENU
```

47

6. Use [+] and [−] to select the type of filter you want, and then press the shutter button to store the filtered image.
- Each press of [+] and [−] cycles through one of the five available filters.
- Applying a filter does not affect the original image. Instead, the filtered version is saved as a new image immediately after the original image. All images following the original image are automatically shifted to make room.
- The amount of time it takes the camera to apply a filter depends on the composition of the original image and the type of filter you select.

Adding a Title to an Image

Adding a title to an image is actually a two-step process. First you record the title into title memory, and then you superimpose the title onto the image. Because of this, you should prepare the title by printing it out on your computer or handwriting it on a sheet of paper.
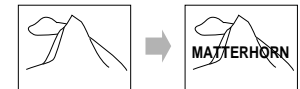
Recording the Title

▶▶▶ IMPORTANT! ◀◀◀
- There is space for only one title in title memory. Any title already in memory is automatically deleted whenever you record a new title.
- Use the monitor screen when recording a title.
- The zoom feature cannot be used when recording a title.

48

1. Slide the Function Switch to REC.

2. Press MODE a number of times until the screen shown on the right hand appears, which indicates the Title Recording Mode.

Title Recording Mode

CASIO

3. After composing the title on the monitor screen, press the shutter button about half way and hold it there to activate Auto Focus.

• When recording a title, make sure that the title is between the lines provided.

• You can use [+] and [–] to adjust the exposure of the title image. See "Exposure Adjustment" on page 28 for details.

4. After confirming that the Auto Focus operation is complete (operation indicator is green), press the shutter button all the way down to record the image.

BRIGHTNESS
CASIO
+30
SELECT → +/–
YES → SHUTTER
CANCEL → MENU

5. Use [+] and [–] to adjust the brightness of the title image (±30), and then press the shutter button.

• The brightness adjustment you make here is stored along with the title image data.

49

Superimposing a Title onto an Image

▶▶▶ IMPORTANT! ◀◀◀

The TITLE icon is blue, indicating that the title operation is disabled in the following cases.
• When there is not enough remaining memory to store the result of the title operation.
• While a movie image or panorama image is on the monitor screen.
• When the "MEMORY FULL" message is on the monitor screen.

Adding a title to a rotated image automatically causes the image to return to its normal (unrotated) orientation.

1. Slide the Function Switch to PLAY.

2. Use [+] and [–] to display the image onto which you want to superimpose the title.

3. Press MENU.

MENU
VIEW EFFECT TOOL
SETUP DELETE EXIT
VIEW
ZOOM PANORAMA
4PAGE MOVIE
SPACE AUTO PLAY

4. Use [+] and [–] to select EFFECT, and then press the shutter button.

EFFECT
FILTER TITLE
SELECT → +/–
YES → SHUTTER
BACK → MENU

5. Use [+] and [–] to select TITLE, and then press the shutter button.

TITLE COLOR
CASIO
1/20
SELECT → +/–
YES → SHUTTER
CANCEL → MENU

50

---

6. Use [+] and [–] to select the color you want the title to be, and then press the shutter button.

• Each press of [+] or [–] scrolls through the selection of 20 available title colors.
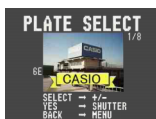
PLATE SELECT
1/8
6E CASIO
SELECT → +/–
YES → SHUTTER
BACK → MENU

7. Use [+] and [–] to select the type of title plate you want to use, and then press the shutter button.

• Each press of [+] or [–] scrolls through the selection of 9 available title plate settings.

• Title plate settings consist of 8 plate variations, plus a setting that specifies no title plate.

PLATE COLOR
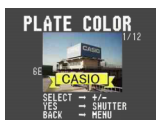1/12
6E CASIO
SELECT → +/–
YES → SHUTTER
BACK → MENU

8. Use [+] and [–] to select the color you want the plate to be, and then press the shutter button.
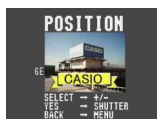
• Each press of [+] or [–] scrolls through the selection of 12 available plate colors.

POSITION
6E CASIO
SELECT → +/–
YES → SHUTTER
BACK → MENU

9. Use [+] and [–] to select the position of the title on the image, and then press the shutter button.

• Each press of [+] or [–] changes to one of 5 available title locations.

• Pressing the shutter button to register the title location superimposes the title onto the image and stores the result immediately after the original image. All images following the original image are automatically shifted to make room.

51

Moving an Image

Use the following operation when you want to move an image to a different location in the sequence of images stored in memory.

1. Slide the Function Switch to PLAY.

2. Press MENU.

MENU
VIEW EFFECT TOOL
SETUP DELETE EXIT
VIEW
ZOOM PANORAMA
4PAGE MOVIE
SPACE AUTO PLAY

3. Use [+] and [–] to select TOOL, and then press the shutter button.

TOOL
PROTECT MOVE ROTATE
CONVERT
BACK → MENU
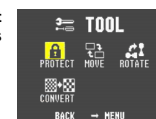
4. Use [+] and [–] to select MOVE, and then press the shutter button.

MOVE
SELECT → +/–
YES → SHUTTER
EXIT → MENU

5. Use [+] and [–] to scroll the images on the monitor screen left and right, until the one you want to move is in the center, above the white line on the monitor screen.

MOVE
SELECT → +/–
YES → SHUTTER
BACK → MENU

6. Press the shutter button. This causes the image in the center to shift upwards slightly, indicating that it is selected.

7. Use [+] and [–] to shift the selected (raised) image left and right. When the selected image is in the location to which you want to move it, press the shutter button.

52

Rotating an Image

The following operation rotates an image.

▶▶ IMPORTANT! ◀◀

The rotate icon is blue, indicating that the image rotate operation is disabled when the displayed image is a movie or panorama image.

1. Slide the Function Switch to PLAY.

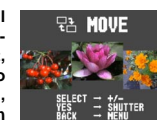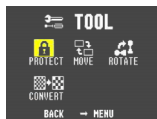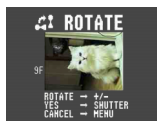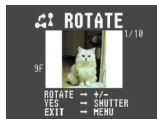**2.** Use [+] and [–] to display the image you want to rotate.

3. Press MENU.

4. Use [+] and [–] to select TOOL, and then press the shutter button.

5. Use [+] and [–] to select ROTATE, and then press the shutter button.

6. Use [+] and [–] to specify the rotation, and then press the shutter button.

▶▶ IMPORTANT! ◀◀

The above operation only rotates the displayed representation of the image, without actually rotating the image itself. This means that uploading the image to a computer or outputting it to a QV Color Printer sends the original un-rotated image.

53

IMAGE PROTECTION

Use the following operations when you want to protect images against accidental deletion. A protected image cannot be deleted until it is unprotected. You can protect and unprotect a single specific image, or all images currently in memory.

Protecting and Unprotecting a Single Image

1. Slide the Function Switch to PLAY.

2. Press MENU.

3. Use [+] and [–] to select TOOL, and then press the shutter button.
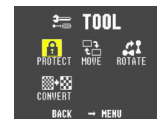
4. Use [+] and [–] to select PROTECT, and then press the shutter button.
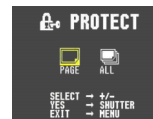
5. Use [+] and [–] to select PAGE, and then press the shutter button.

6. Use [+] and [–] to select the image you want to protect or unprotect.

7. Press the shutter button to toggle image protection on and off.

• The 🔒 indicator in the upper left corner of an image indicates that it is protected.

54

---

8. If you want to protect or unprotect other images, repeat steps 6 and 7.

• To exit the image protect operation, press MENU. The image protect operation is also cancelled automatically if you do not perform any button operation for about one minute.

Protecting and Unprotecting All Images in Memory

1. Slide the Function Switch to PLAY.

2. Press MENU.

3. Use [+] and [–] to select TOOL, and then press the shutter button.

4. Use [+] and [–] to select PROTECT, and then press the shutter button.

55

---
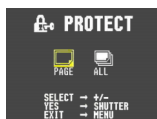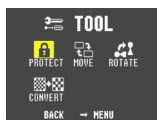
5. Use [+] and [–] to select ALL, and then press the shutter button.

6. Use [+] and [–] to select ALL (protect) or CANCEL (unprotect), and then press the shutter button.

• The 🔒 indicator that is shown in the upper left corner of the images when image information is turned on (page 16) indicates they are protected.

• The 🔒 indicator does not appear when images are not protected.

56

DELETING IMAGES

Use the following operations when you want to delete images from memory. You can delete a single specific image, or all images currently in memory.

▶▶ IMPORTANT! ◀◀

• Image deletion cannot be undone. Before deleting an image, make sure you no longer need it or you have a back-up copy saved on you computer, on diskette, or on some other medium.
• Be especially careful with the DELETE ALL operation, which deletes all unprotected images in memory.
• A protected image cannot be deleted. See "Image Protection" on page 54 for details on protecting and unprotecting images.
• The delete icon is blue, indicating that the image delete operation is disabled, when all images in memory are protected.

Deleting a Single Image

1. Slide the Function Switch to PLAY.

2. Press MENU.

3. Use [+] and [–] to select DELETE, and then press the shutter button.

4. Use [+] and [–] to select PAGE, and then press the shutter button.

---

5. Use [+] and [–] to select the image you want to delete.

6. Double check to make sure that you really want to delete the image you selected.

• To abort the delete operation without deleting anything, press any button besides [+], [–], or the shutter button.

7. To actually delete the selected image, press the shutter button.

• The selected image is deleted and the next image in sequence is selected.
• Deleting a single movie image deletes all the frames that make up the image.
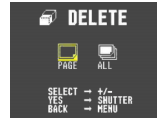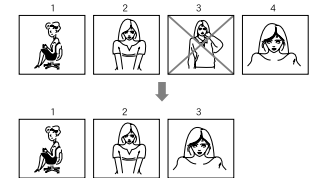
8. If you want to delete more images, repeat steps 5 through 7.

• To exit the image delete operation, press any button besides [+], [–], or the shutter button.

▶▶ NOTE ◀◀

The camera does not maintain open spaces in its memory. Deleting an images causes all images following the deleted image to be shifted up.

Deleting All Unprotected Images

The following operation deletes all unprotected images. See "Image Protection" on page 54 for details on protecting and unprotecting images.

1. Slide the Function Switch to PLAY.

2. Press MENU.

3. Use [+] and [–] to select DELETE, and then press the shutter button.
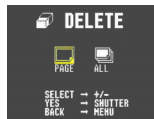
4. Use [+] and [–] to select ALL, and then press the shutter button.
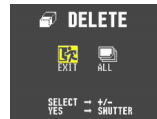
▶▶ IMPORTANT! ◀◀

The next step deletes all unprotected images in memory. To abort this operation without deleting anything, select EXIT instead of ALL.

5. Use [+] and [–] to select ALL, and then press the shutter button.

• The message "NO IMAGE" appears on the monitor screen after all the images are deleted.

CHANGING IMAGE RESOLUTION

The following operation changes the resolution of an image. Note that image resolution can be changed downwards only (from super fine to fine, from fine to normal, or from normal to economy).

▶▶ IMPORTANT! ◀◀

• Changing the resolution causes the original image to be replaced with the new one.
• The resolution of movie, panorama and protected images cannot be changed.
• The economy images cannot be changed.

1. Slide the Function Switch to PLAY.

2. Use [+] and [–] to display the image whose resolution you want to change.

3. Press MENU.

4. Use [+] and [–] to select TOOL, and then press the shutter button.
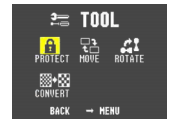
5. Use [+] and [–] to select CONVERT, and then press the shutter button.

6. Press the shutter button.

7. If you want to convert other resolution, repeat step 6.

• After you are finished converting images, press MENU.
• Changing the resolution of a rotated image automatically causes the image to return to its normal (unrotated) orientation.

CONNECTIONS

This camera is equipped with VIDEO OUT terminal for connection to a television or video deck, and a DIGITAL interface for connection to a computer or other equipment.

VIDEO OUT Terminal

• Television (page 64)
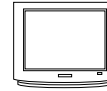
• Video Deck, Video Printer

You can connect to a video tape deck and record image to tape. Or you can connect to a video printer to produce hard copy print-outs of your images.

INPUT

L R VIDEO
AUDIO

Special video cable that comes with camera

VIDEO IN terminal of other device

VIDEO OUT Terminal
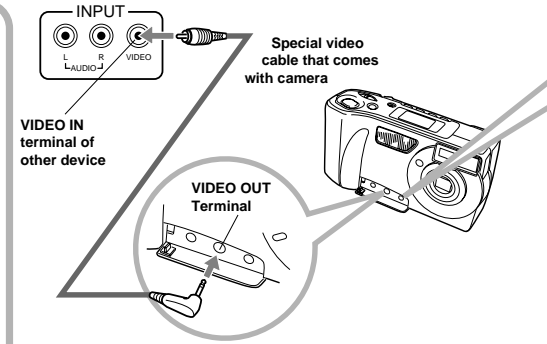
DIGITAL Terminal

Cables

The type of cable you should use depends on the type of equipment to which you are connecting.

DIGITAL Interface

• Computer (page 66)

• QV Color Printer (page 65)

▶▶ IMPORTANT! ◀◀

• Be sure to turn off both the camera and other equipment before making any connections.
• Check the documentation that comes with your other equipment for information you may need to know when making connections.
• Leaving the same image displayed on a television or computer display screen for very long periods can cause the image to be "burned in" on the screen. When this happens, a faint after-image remains on the screen, even after you disconnect the camera. To avoid this, you should not leave the same image displayed on such a screen for very long periods.
• This camera cannot exchange images with another CASIO digital camera.

CONNECTING TO OTHER EQUIPMENT

Connecting to a Television

You can playback images in camera memory on the screen of a connected television.

TV   *Accessory video cable*   *VIDEO OUT terminal*

INPUT
L R VIDEO
AUDIO

VIDEO IN terminal
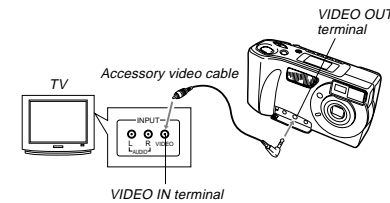
1. Connect one end of the video cable to the camera and the other end to the television.

2. Set up the television for video input.

• See the documentation that comes with the television for information about how to do this.

3. Use the operations under "Playback" on page 37 to playback images on the television screen.

▶▶ IMPORTANT! ◀◀

• A television must have a video input terminal like the one shown in the illustration to connect to this camera.
• Battery capacity (page 20) and other displays that normally appear on the camera's monitor screen are also displayed on the television screen.

Selecting the Video Output Signal Mode

You can select either of two common video output modes: NTSC or PAL.
The video system you should use depends on the country where you plan to use the output signal. In the United States or Japan, for example, you should use NTSC, but in Europe you need to use PAL.
Check with your local video or TV retailer if you are unsure about which video mode you should use in your country.

Changing the Video Output Mode

1. Slide the Function Switch to PLAY.

2. Press MENU.

3. Use [+] and [–] to select SETUP, and then press the shutter button.

4. Use [+] and [–] to select VIDEO OUT, and then press the shutter button.

5. Use [+] and [–] to select the video mode you want to use, and then press the shutter button.

Connecting to a QV Color Printer

You can use a QV Color Printer to produce printouts of your image data.

Supported Printer Models: DP-300, DP-8000

Digital connector

Data communication cable   DIGITAL terminal

1. Connect one end of the cable that comes with the QV Color Printer to the camera and the other end to the printer.
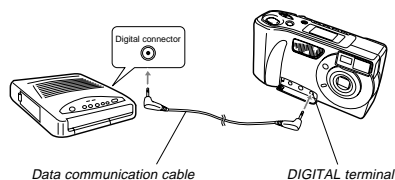
2. Slide the camera's Function Switch to PLAY and then turn on camera power.

3. Perform the QV Color Printer operations required for printing.

- See the documentation that comes with the QV Color Printer for details.
- Performing a print operation for a movie prints the 16 individual frames that make up the movie.
- Printing a panorama prints the individual images that make up the panorama.

PC Link Software

Special PC Link software available from CASIO makes image data transfers with a personal computer quick and easy. The software is also designed to minimize loss of image quality due to data transfer.
For details on how to connect to a personal computer and exchange data, see the documentation that comes with the PC Link software.

LK-12S for Windows
LK-22S for Windows and Macintosh (scheduled to go on sale soon)

▶▶▶ IMPORTANT! ◀◀◀

This camera does not fully support the software that comes with the LK-1, LK-1A, LK-10V, LK-11 connection kits for Windows, and the LK-2, LK-2A, LK-2V, LK-21 connection kits for the Macintosh. Never try to use the software that comes with these connections kits with this digital camera.

TROUBLESHOOTING

	Symptom	Probable Cause	Action
Power Supply	No power	1. Batteries not loaded correctly. 2. Dead batteries 3. Wrong AC adaptor	1. Correctly load batteries (page 18). 2. Replace batteries with new ones (page 18). 3. Use only recommended AC adaptor .
	Sudden power failure	1. Auto Power Off 2. Low battery power 3. Use of manganese batteries.	1. Turn power back on. 2. Replace batteries with new ones (page 18). 3. Replace manganese batteries with alkaline batteries.
	⊠ indicator on LCD	Batteries are about to go dead.	Replace all four batteries with a set of new ones (page 18).
Recording	No recording when shutter button is pressed	1. Function Switch set to PLAY. 2. Flash unit is charging. 3. The message "MEMORY FULL" is on the monitor screen. 4. The message "REMAINING" is on the monitor screen.	1. Set Function Switch to REC. 2. Wait until flash unit charging is finished. 3. Delete images you no longer need from camera memory. 4. Change to another resolution mode, or delete images you no longer need from camera memory.
	Auto Focus cannot focus the image.	1. Lens or distance sensor is dirty. 2. The object you want to focus is not in the focus frame. 3. Conditions make it impossible to obtain proper focus.	1. Clean off the lens or distance sensor. 2. Aim the camera so the object you want to focus is in inside the focus frame. 3. Switch to the Manual Mode and focus manually.
	Power failure during self-timer operation	Low battery power	Replace batteries (page 18).

	Symptom	Probable Cause	Action
Recording	Monitor screen image is out of focus.	1. Failure to focus the image while the camera is in the Manual Mode. 2. Camera is in the Macro Mode. 3. Camera is in the Normal Mode while the subject is too close.	1. Focus the image before recording it. 2. Use the Normal Mode for scenery and group shots. 3. Use the Macro Mode for close ups.
	Poor color and brightness when indoors	Indoor fluorescent lighting	Shoot under incandescent or other non-fluorescent lighting (page 24).

	Part of the image is missing.	1. Blocking of the lens when recording.
		
		2. Failure to correctly center the object when aiming through the viewfinder.
			1. Hold the camera correctly, making sure that your finger or the wrist strap is not blocking the lens.
			2. Take particular care under the following conditions, which can cause the recorded image to be slightly different from the image that appears in the viewfinder.
			• Macro photography
			  For more precise image composition, use the LCD monitor screen instead of the viewfinder.
			• Aiming at an angle that is diagonal to the viewfinder's optical axis.
			  It is best to point the lens directly at the subject, and not at an angle.

	Cannot perform movie recording.	1. Movie Record Mode is not selected. 2. Insufficient camera memory capacity.	1. Press MODE to enter the Movie Record Mode (page 31). 2. Delete images you no longer need from camera memory, so there are at least two images worth of free memory capacity (page 57).

	Symptom	Probable Cause	Action
Playback	Color of recorded image is strange.	Reflection from sunlight or light from another source	Reorient the camera so that light is not shining directly into lens.
Playback	No +/− button operation during multi-page display	Button operation during page change	Wait until an image is on the LCD before performing a button operation.
Playback	Camera is connected to a TV, but LCD monitor contents do not appear on TV screen.	1. Incorrect camera-TV connection 2. Wrong TV set up 3. Wrong video mode is selected.	1. Connect correctly using the video cable (page 64). 2. Set up the TV correctly. 3. Change the video mode.
Deletion	Delete operation does not operate.	All pages are protected.	Unprotect the page you want to delete (page 54).
Other	Menu icon is blue and nothing happens when it is selected.	• Indicates function not available during playback. • Memory full	Select a different function or change to the Record Mode.
Other	All buttons and switches do not operate.	• Malfunction due to static electrical charge or strong impact. • Camera is connected to a computer or QV Color Printer.	Remove batteries and disconnect the AC adaptor if you are using one. Restore power and turn the camera on. If this does not work, contact your dealer or an authorized CASIO service provider.
Other	Auto Play starts even though it is not selected.	Activation of the screen saver	Turn off screen saver (page 45).
Other	Nothing appears on the monitor screen.	1. Monitor screen is turned off. 2. Video cable connected to the VIDEO OUT terminal.	1. Press the LCD button to turn on the monitor screen. 2. Disconnect the video cable. The monitor screen is disabled while it is connected.

69

MESSAGES

ERROR — Error during data communication. Check cable connections and mode settings.

FULL — Indicates that movie recording is not possible because camera memory is full.
Delete images you no longer need or reduce the resolution of some of the images in camera memory.

MEMORY ERROR #1, #3 CONSULT THE OWNER'S MANUAL! — Problem with internal memory. Perform the following procedure.

Important!
• The following procedure deletes all images stored in memory. You can use the optionally available connection kit (LK-10V/LK-12S/LK-22S) to make copies of images before deleting them.
• Be sure to power the camera using the AC adaptor or a new set of alkaline or lithium batteries when performing a system reset. Weak batteries or manganese batteries can result in a power failure while the system reset operation is in progress, causing damage to camera memory.

1. Hold down ZOOM and MENU at the same time.

```
SYSTEM RESET
YES → SHUTTER
NO  → CALL
     TECH SUPPORT
```

2. After checking that the SYSTEM RESET message is on the display, press the shutter button to perform a system reset or turn power off if you do not want to perform a system reset.
• Never turn off power while system reset is in progress! Doing so will damage camera memory are require servicing by an authorized service provider!
• If the MEMORY ERROR message continues to appear on the display after you perform the reset procedure, contact your nearest CASIO service provider.

3. After the final "SYSTEM RESET" confirmation message appears, press the shutter button.
The display should return to normal after the system reset is complete.

MEMORY ERROR #2, #4 CONSULT THE OWNER'S MANUAL! — Problem with internal memory. Contact your dealer or an authorized CASIO service provider.

MEMORY FULL — Not enough memory for further recording. Change resolution or delete some images from memory (pages 34, 57).

NO IMAGE — No images are stored in memory.

REMAINING — Not enough memory for recording in current resolution mode. Change to another resolution mode, change resolution of stored images or delete some images from memory (pages 34, 57).

SYSTEM ERROR CALL TECH SUPPORT — Problem with internal memory. Contact your dealer or an authorized CASIO service provider.

70

SPECIFICATIONS

Recording System .... Digital (JPEG base); PC Link software can be used to input images in CAM, JPEG, TIFF and other format.

Recording Medium .... Flash memory (8MB)

Memory Capacity/
Computer Output image ... SUPER FINE: 16 images
(450KB compressed – 1280 x 960 pixels)
FINE: 30 images
(225KB compressed – 1280 x 960 pixels)
NORMAL: 57 images
(113KB compressed – 1280 x 960 pixels)
ECONOMY: 88 images
(64KB compressed – 640 x 480 pixels)
The above figures are approximations only. The actual number of images depends on image subject matter.

Image Element .... 1/3-inch CCD (Total Pixels: 1,310,000; Effective Pixels: 1,250,000)

Computer Output image ... 1280 x 960 / 640 x 480 pixels

Lens .... F2.8, f = 5.47mm

Focusing .... Selectable between phase-difference detection system autofocus and manual focus

Aperture .... Lens shutter/auto iris

Focus Range .... NORMAL: 0.3m to ∞ (12" to ∞)
MACRO: 10cm (4")
(From surface of protective lens.)

Light Metering .... TTL center priority by CCD

Exposure Metering .... Program AE

Exposure Range .... EV +6 to 17

Exposure Correction .... −2EV to +2EV (1/2EV units)

Shutter .... CCD electronic shutter/mechanical shutter

Shutter Speed .... 1/8 to 1/500 second

White Balance .... Automatic

Self-timer .... 10 seconds

Recording Modes .... Single-image; Self-timer; Movie; Panorama; Title; Macro

Flash Modes .... AUTO, ON, OFF, Red-eye Reduction

Monitor/Viewfinder .... 1.8-inch TFT low-glare color LCD; 122,100 (555 x 220) pixels

Video Output .... NTSC/PAL (selectable)

Input/Output Terminals .... DIGITAL OUT, VIDEO OUT, AC adaptor connector

Power Supply .... Four batteries (AA-size alkaline or lithium batteries)/AC adaptor (AD-C620)

Power Consumption .... Approximately 7.6 W

71

Dimensions .... 131(W) x 69(H) x 43(D) mm / 5.1" (W) x 2.7" (H) x 1.7" (D)

Weight .... Approximately 250g / 8.8oz. (excluding batteries)

Standard Accessories ...... wrist strap; soft case; video cable; four LR6 alkaline batteries; owner's manual

• The liquid crystal panel built into this camera is the product of precision engineering, with an effective pixel rate of 99.99%. This also means, however that 0.01% of the pixels can be expected to fail to light or to remain lit at all times.

72

CASIO®