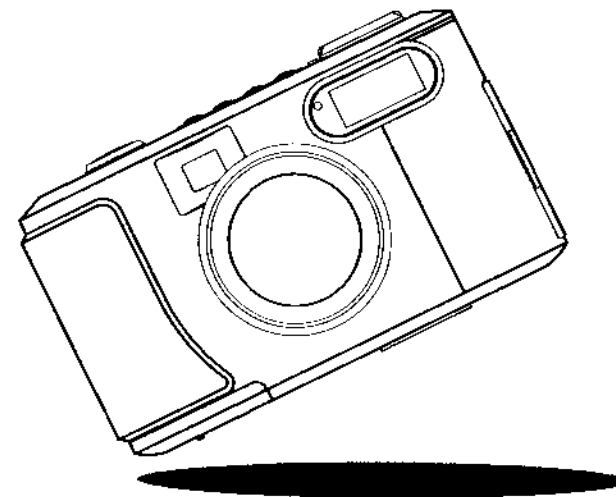


P*REMIER* TAIWAN FACTORY & SALES OFFICE

DIGITAL CAMERA

Owner's Manual
(DC 2000)



91239-400

Warranty Policy

This camera is under warranty for one full year from the date of purchase by the original purchaser. In case of defects in materials or workmanship, we will replace or repair the camera free of charge. This warranty applies to the camera only. This warranty does not include batteries, or other accessories which have not been manufactured by our company. This warranty will not be honored if the camera has been mishandled or tampered with, or altered by anyone other than the manufacturer. Other than for the warranty herein, we are not responsible for loss, damage, or inconvenience of any kind.

A defective camera being returned under warranty must be accompanied by a brief description of the difficulties encountered and also by a proof of purchase with the date of purchase clearly indicated. All related transportation costs and insurances are at the owner's expense. Any alteration of this warranty cannot be made without the written approval from our company.

FCC Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in commercial 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, detectable by turning the equipment in question 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 distance between the equipment and the receiver, Connect the equipment to an outlet on a different circuit than that which the receiver is connected to; Or consult the dealer or an experienced radio/TV technician for help.

NOTE

A shielded-type DC power cable incorporated with a ferrite core is required in order to meet the FCC emission limits and also to prevent interference to the nearby radio and television reception.

Use only shielded I/O cable incorporated with a ferrite core to connect this equipment to host computer and TV set. Shielded A/C power cable and shielded I/O cables are required in order to meet the FCC emission limits. It is essential that only the supplied power cord and I/O cable(s) be used.

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをして下さい。

CAUTION



Do not place this camera in damp or dusty location. This may cause a fire or electric shock.



Do not place this camera in a location affected by oil fumes or steam, such as near a cooking stove or humidifier. This may cause a fire or electric shock.



Do not leave this camera in places subject to extremely high temperatures, such as in a sealed vehicle or in direct sunlight. Exposure to high temperatures may adversely affect the camera case and internal components and cause a fire.



Do not cover or wrap the camera or the AC power adapter with a cloth or quilt. This may cause heat to build up and distort the case or cause a fire. Always use the camera and its accessories in well-ventilated locations.



Take care that the camera is not bumped when it is being moved. This may cause the camera to malfunction.



Do not move the camera while it is switched on. (If you are using the AC power adapter, unplug the adapter from the AC power outlet after you have switched off the camera.) Then ensure that any connector cords or cables to other devices are disconnected before moving the camera. Failure to do so may damage the cords or cables and cause a fire or electric shock.



When handling the camera, always unplug it from the power source (batteries or AC power adapter) for safety. (If you are using the AC power adapter, unplug the adapter from the AC power outlet after you have disconnected the camera.) Failure to do so could result in an electric shock.

CAUTION



When leaving the camera unused for long periods, such as during a vacation, always unplug the camera from the power source (batteries or AC power adapter) for safety. (If you are using the AC power adapter, unplug the adapter from the AC power outlet after you have disconnected the camera.) Failure to do so could result in a fire.



Do not use batteries other than those specified for use with your camera.

The use of unsuitable batteries may result in the batteries splitting or leaking and causing a fire, injury, or soiling of the battery compartment.



When fitting a battery into the camera, check the polarity markings on the battery (and) to ensure that you insert the battery correctly.

Incorrect battery polarity may result in the batteries splitting or leaking and causing a fire, injury, or soiling of the battery compartment.



Remove the batteries if the camera will not be used for an extended period of time. The batteries may leak and cause a fire, injury or soiling of the battery compartment. If the batteries leak, clean and wipe the battery compartment carefully and install new batteries. Wash your hands carefully if you touch the battery fluid.

WARNING

Unplug from power socket.



Do not use this camera when it is emitting smoke, is unusually hot to the touch, is emitting any unusual odor or noise, or is in any other abnormal state. Use of the camera in any of these situations may cause a fire or electric shock. Stop using the camera immediately, turn the camera off, and then disconnect the power source (batteries or AC power adapter). (If you are using the AC power adapter, unplug the adapter from the AC power outlet after you have disconnected the camera.) After checking that smoke is no longer being emitted, contact your dealer or your local authorized service facility and request repairs. never attempt to repair this camera yourself as this is dangerous.



Do not use the camera if any water has entered the camera. Switch the camera off, and then disconnect the power source (batteries or AC power adapter). (If you are using the AC power adapter, unplug the adapter from the AC power outlet after you have disconnected the camera.) Then contact your dealer or your local authorized service facility. Do not continue to use the camera as this may cause a fire or electric shock.



Do not use the camera if any foreign objects have entered the camera. Turn the camera off, and then disconnect the power source (batteries or AC power adapter). (If you are using the AC power adapter, unplug the adapter from the AC power outlet after you have disconnected the camera.) Then contact your dealer or your local authorized service facility. Do not continue to use the camera as this may cause a fire or electric shock.



If the camera has been dropped or the camera case has been damaged, switch the camera off, and then disconnect the power source (batteries or AC power adapter). (If you are using the AC power adapter, unplug the adapter from the AC power outlet after you have disconnected the camera.) Then contact your dealer or your local authorized service facility. Do not continue to use the camera as this may cause a fire or electric shock.

WARNING



Do not place the camera in unstable locations such as on a wobbly table or sloping surface where the camera may fall or tip over and cause injury.



Take care that the camera is not exposed to moisture and that water does not get into the camera. Take particular care when it is raining or snowing or when you are using the camera at the beach or near water. Water in the camera may cause a fire or electric shock.



Do not insert or drop metallic or inflammable foreign objects into the camera through access points such as the Compact Flash card slot. This may cause a fire or electric shock.



Do not attempt to modify this camera. This may cause a fire or electric shock.

Do not disassemble



Do not remove the camera casing. This may cause an electric shock. Internal inspection, maintenance and repairs should be carried out by your dealer or local authorized service facility.

Do not use in wet areas.



Do not use this camera in the bathroom. This may cause a fire or electric shock.

Do not touch



Do not touch the power plug during a thunderstorm if you are using the AC power adapter. This may cause an electric shock.

WARNING



Never use this camera, look through the viewfinder, or watch the LCD (liquid crystal display) while you are operating a moving car, motorcycle or bicycle.
This may cause a traffic accident.



Do not attempt to charge the alkaline battery.
This may cause the battery to split or leak, causing fire or injury.



Do not carry or store a battery with objects such as metal pens, necklaces, coins or hairpins. This could short circuit the positive and negative poles of the battery.
This may cause the battery to split or leak, resulting in fire or injury.



Do not heat or attempt to disassemble a battery, and do not place a battery in water or in a fire.
Any of these may cause the battery to split or leak, cause fire or injury.



Do not subject a battery to strong impacts, such as hitting it with a hammer, stepping on it or dropping it. Any of these may cause the battery to split or leak, cause fire or injury.



Use only the specified batteries or AC power adapter specified for use with this camera.
The use of other power sources may cause a fire.

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Introduction

Congratulations on purchasing your new digital camera. Capturing high quality digital images is easy with this state-of-the-art smart camera. Equipped with a 2.3 mega pixel CCD, this camera is capable of capturing images with a resolution of up to 1792X1200 pixels. With Macro Mode for taking pictures of objects very close to the camera and a 4.6X Zoom (2.3X optical and 2X digital), the range of pictures that you can take with this digital camera is almost unlimited. In addition, built-in sensor automatically analyze the lighting environment and customize camera settings such as White Balance, EV Compensation and flash function to ensure optimum picture quality. The 1.8" full-color liquid crystal display (LCD) on the back of the camera makes it easy to frame images when taking pictures, and displays a preview of an image after it has been captured. USB and RS232 output capabilities make it easy to connect the camera to your computer, and with the included software, downloading and editing your images is a breeze. It can also be connected directly to a television, allowing the user to display images stored on the camera on the television screen. The easy-to-use Compact Flash Memory Cards provides reliable, flexible image storage capacity for your images.

In total, this state-of-the-art camera affords the convenience and flexibility of a digital image capture device while retaining the ease of use of traditional cameras.

What's Inside

- Digital Camera
- Quick Start Guide
- Owner's Manual
- Serial Cable (PC)
- USB Cable
- Video Cable
- CD-ROM (Twain driver and Bundled software)
- 4 x AA alkaline batteries
- AC Power Adapter
- Pouch and Strap
- Compact Flash Memory Card

Optional Items

- Compact Flash Memory Card--4MB, 8MB, 16MB, 32MB, 48MB, 64MB, 96MB and 128MB

CD-ROM Contents

- TWAIN Acquire Module - Lets you download pictures from all TWAIN-compliant devices to your computer.
- Image Application Software- Allows you to quickly and easily touch up any photo captured with your camera.

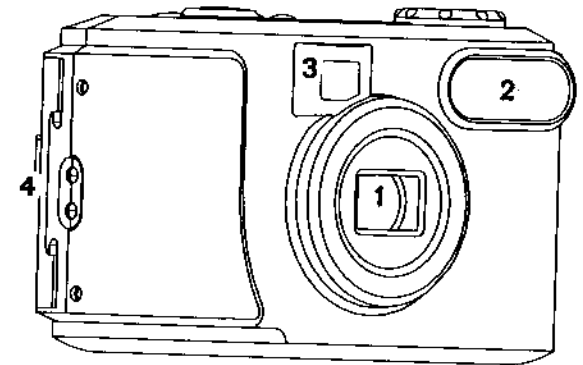
System Requirements (Windows)

- Personal Computer with minimum Pentium 166 MHz with graphic card
- Microsoft Windows 98, ME, 2000 (both RS232 and USB connection)
- Microsoft Windows 95, NT (RS232 connection only)
- 32MB or more of RAM
- 80MB of hard disk space
- Available serial port or USB port
- CD-ROM drive
- Color display (800x600 24-bit or higher recommended)

Getting To Know The Camera

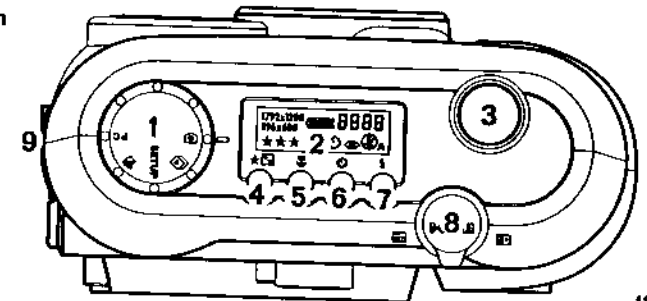
Front View Diagram

1. Lens
2. Flash
3. Viewfinder Window
4. CF Card Slot Door



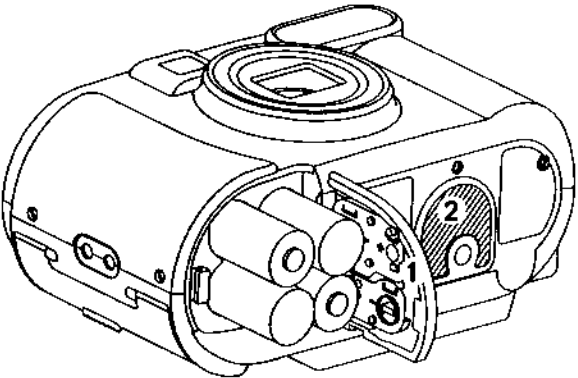
Top View Diagram

1. Mode Knob
2. Status LCD
3. Shutter Button
4. Resolution and Quality Button
5. Macro Mode Button
6. Self-Timer Button
7. Flash Button
8. Zoom Control
9. Connector Door



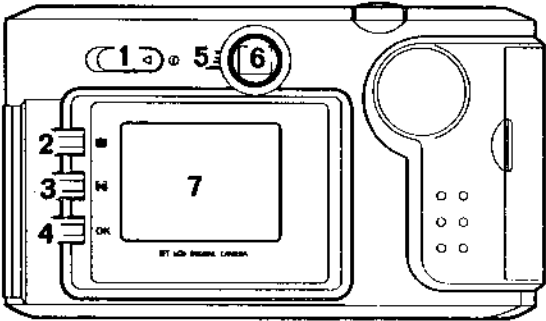
Bottom View Diagram

- 1. Battery door
- 2. Tripod Socket



Back View Diagram

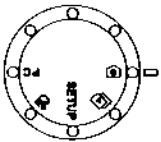
- 1. Power ON/OFF Switch
- 2. LCD ON/OFF Button
- 3. Menu Button
- 4. OK Button
- 5. Processing LED
- 6. Optical Viewfinder
- 7. Display LCD



Mode Knob

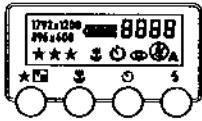
The mode knob allows you to choose from five camera modes:

- Record Mode () - to capture and store images
- Play Mode () - to view stored images
- Setup Mode (SETUP) - to set various camera options
- Erase Mode () - to erase stored images
- PC Mode (PC) - to transfer stored images to a PC



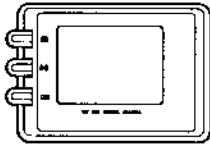
Status LCD

- Resolution/ Quality () - to define the image resolution and quality
- Macro Mode () - to take close-up shot
- Self-Timer () - to set the 10-sec delay
- Flash () - to set the flash mode



Color Display LCD

- LCD () - to toggle the Color Display LCD between On and Off.
- Menu (M) - to toggle between entering and exiting the camera mode menu
- OK (OK) - press to confirm the highlighted field



Zoom Control

- In Record Mode () () - Zoom control is used to zoom in and out the subject
- In Play, Setup, Erase Modes () () - Zoom control is acted as menu select button to scroll up and down through the menus or to increase or decrease the value for some specific numeric highlighted field.



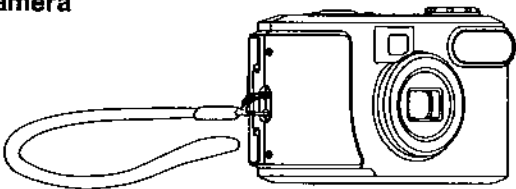
Getting Started

Attaching the Strap

It is best to use the included carrying-strap whenever carrying the camera, and especially when taking pictures outdoors. This will help to prevent the camera from being dropped or otherwise too roughly handled. Dropping the camera may cause external or internal damage.

To attach the strap to the camera

1. Insert the small loop at the end of the strap into one side of the camera's strap holder.
2. Push inward until the loop comes out of the other side of the strap holder.
3. Insert the other end of the strap through the loop and pull it until the strap is securely attached to the camera.

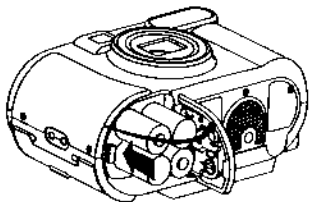


Power Supply

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

Loading the Batteries

1. Slide the battery door in the direction indicated by the arrow.
2. The door should spring partially open. Gently open it the rest of the way with your finger.
3. Insert the batteries and follow the polarity directions indicated on the inner side of the battery door.
4. Close the battery door.

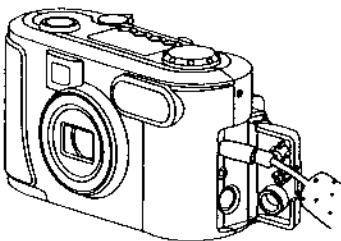


NOTE

- If you are not going to be using the camera for an extended period of time, you should remove the batteries to prevent leaks or corrosion.
- Never use manganese batteries.
- Never mix old and new batteries.
- Low temperatures (under 0°C) may reduce the output efficiency of batteries, thereby shortening the operation time of camera.
- The recommended battery is AA-size alkaline battery.

Using the Power Adapter

If you prefer to operate the camera on AC power, use the 7V/1A adapter that comes with the camera. Simply connect the power adapter into the DC IN port on the camera, and then plug the power adapter to a wall socket.



NOTE

- Always be sure to use the AC adapter which comes with the camera, or optional from the manufacturer. Any other adapter may cause damage to the camera, which is not covered under the warranty.
- Grasp the adapter, not the cord, when unplugging the adapter from a wall socket.
- If the power cord becomes damaged (exposed or severed wires, etc.), please purchase a new AC adapter. Use of a damaged cord may cause fire or electrical shock.
- Switch off and disconnect the camera from the AC adapter before unplugging it from the wall socket.

Battery Life Indicator

Located on the Status LCD, the Battery Status Indicator is active at all times while the camera is on. When battery power is close to full, all three bars of the indicator will be shaded. When battery power is down to roughly half, the left-most bar in the indicator will be off, and the other two will remain shaded. When battery power is low, only the right-most bar in the indicator will be on. This indicates that the batteries are weak and need to be replaced. It is recommended that you do not use the Flash or Auto-Flash features while battery power is low. When the batteries are completely dead, the camera will not turn on.

- Full Battery Power
- Medium Battery Power
- Low Battery Power
- No Battery Power

Memory

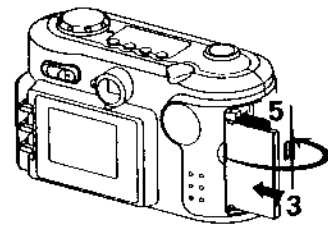
Compact Flash Card

This camera features a removable ATA-compatible memory device, called a Compact Flash Memory Card, for storing image information. This means that any pictures you take will not be lost when the camera is turned off or low on power. If the batteries go dead, simply insert a new set or connect the AC power supply and you will be able to retrieve and view any previously captured photos.

You can increase the storage capacity of the camera by using a Compact Flash Memory Card with a higher capacity. Compact Flash Memory Cards are available with capacities of 4MB, 8MB, 16MB, 32MB, 48MB, 64MB, 96MB and 128MB.

To install the Compact Flash Memory Card

1. Open the card slot located on the side of the camera.
2. Make sure the front of the CF card toward the front of the camera and the end with pin-connector toward the card slot.
3. Push the memory card all the way into the card slot until you hear a clicking sound.
4. Close the card slot cover.
5. To remove the card, push the Eject button.



Card Full

When your camera's memory is full, the Display LCD will show a "Card Full" message.

Once your camera's memory is full, you must remove pictures from memory or remove the current Compact Flash Memory Card and insert a new one before capturing new images. To save pictures, transfer them from the camera to your computer. (For more detailed instructions on how to transfer captured images to your computer, see the section entitled Downloading Pictures into your PC later in this manual.)

Turning the camera on and off

1. Insert a Compact Flash Memory Card.
2. Set the camera to Record Mode.
3. Turn the camera on by sliding the power switch in the direction indicated by the arrow, and then releasing it.
 - The lens will extend.
 - The red Processing LED on the back of the camera lights on until the camera is ready to take pictures.
4. To turn off the camera, sliding the power switch again and releasing it.
 - When the camera is turned off, the lens will automatically be retracted.

ATTENTION

You cannot take pictures without a memory card in the camera. Without a memory card in the camera, the camera cannot be turned on.

Taking Pictures



The camera allows you to easily take digital photo shots. This section shows you the basic camera operation and get to know the functions of Status LCD. The Status LCD is located on the top of the camera. It displays the current camera settings, such as flash mode, image remaining numbers, battery indicator, self-timer, macro mode, resolution / quality.

Taking Pictures

1. Ensure the camera is **ON**.
2. Set the camera to **Record Mode**.
3. Using the Optical Viewfinder or the Display LCD to select your image.
4. Press **Shutter button** halfway down to focus on the object.
 - The Processing LED will come on green and indicate locking in the auto focus and exposure.
5. Press **Shutter button** all the way down captures the image.
 - The Processing LED will come on red and remain on until the camera has completed processing and storing the image.
 - Releasing the **Shutter button** will clear focus so that another image may be captured.

Quick View

If the Display LCD is on and Quick View mode is enabled, a preview of the captured image is shown on the Display LCD as soon as the image acquired. When the two seconds are over, the Display LCD will return to viewfinder mode.

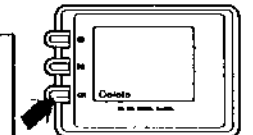
If the Display LCD is off but QuickView mode is enabled, a preview of the captured image is temporarily shown on the Display LCD for two seconds as soon as the image acquired. After the two seconds is over, the Display LCD will be automatically turned off.

During this two seconds of preview in either case, the user will have the option, by means of an on-screen prompt, of deleting the image just captured by pressing the OK button once processing is completed.

(For more information about QuickView, see page22.)

NOTE

Using the Display LCD while taking pictures shortens the life span of your batteries. To save battery power you can take pictures without the Display LCD. Simply turn off the LCD Display and use the Optical Viewfinder to frame the image as you would with a traditional camera.



Zoom Control

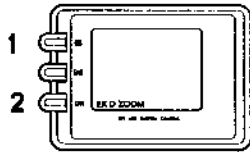
This camera features two types of zooming, optical zooming (2.3X) and digital zooming (2X). Use the zoom control to adjust the optical zoom lens from Wide Angle (38 mm) to TelePhoto (90 mm). Use the digital zooming to zoom in on an object beyond the range provided by the optical zoom lens. To access digital zoom, LCD display is required.

Optical Zoom

1. Set the camera to **RECORD MODE**.
2. Pushing the **Zoom Control** to the right will move the lens towards the Telephoto position, meaning zoom in on your subject.
3. Pushing the **Zoom Control** to the left will move the lens towards the Wide-angle position, meaning zoom away from your subject.

Digital Zoom

1. Press **LCD** button to turn on the LCD display.
2. Press **OK** button to active 2X digital zoom
3. Adjust the **zoom control** for fine-tuning the framing image.



NOTE

Digital zoom is disabled when the LCD Display is off.

Setting the Picture Resolution and Quality

Two different elements combine to determine the overall quality of the pictures that you take. The first is resolution. This digital camera can take pictures at two different resolutions: 1792x1200 pixels and 896x600 pixels. The second element is the amount of compression applied to captured images. This camera can capture at three types of compression settings: ★ high compression, ★★ medium compression and ★★★ low compression. The higher the resolution, the higher the image quality will be. The lower the compression, the higher the image quality will be. Higher quality images, however, have larger image file sizes, and therefore, fewer of them can be stored on the camera at one time.

Picture resolution and quality is set using the Resolution/Quality Button. This button is active only in RECORD mode. The current resolution and quality settings are displayed in the Status LCD. Each time the Resolution/Quality button is pressed, the next lower resolution/quality setting is selected, in a fixed sequence. There are six combination of resolution and quality settings which are given in the following table:

Best	1792x1200	★★★
Better	1792x1200	★★
Good	1792x1200	★
Fine	896x600	★★★
Normal	896x600	★★
Economy	896x600	★

Setting the Macro Mode

Pressing the Macro Mode button toggles between Normal and Macro Mode. Use the Macro mode setting to gain sharpness and detail in pictures at close range between the objects 8cm to 40cm from the camera.

How to take Close-up shots

1. Set the camera to **RECORD MODE**.
2. Press the **Macro button** once to active macro mode.
3. Press the **Shutter button** half way to lock the focus and exposure.
4. Press the **Shutter button** all the way down to take the picture.

NOTE

Enabled Macro Mode will cause the flash mode forced to OFF or ON. The Macro Mode button is active only in RECORD Mode.

Setting the Self-Timer

Press the Self-Timer button once to active the self-timer. The Self-Timer creates a 10-second delay between the time you press the Shutter button and the time the picture is taken. The 10-second delay is marked by the Self-Timer LED flashing, and if "Beep On" is enabled (see Sound option under SETUP Mode), by beeping for the final three seconds.

NOTE

The Self-Timer is automatically turned off after the picture is taken or if the camera is powered off. The Self-Timer button is active only in RECORD Mode.

Setting the Flash Mode



Toggle the flash button to select auto, red-eye reduction, fill-in and off. The flash has an effective range of approximately 1m - 3m. There are four flash modes as follows:

	Auto	The camera automatically fires the flash when the brightness of the subject or scene is too low
	Red-Eye	Auto Mode with Pre-Flash to reduce Red-Eye
	Fill-In	Flash is always enabled
	Off	Flash is disabled

NOTE

Flash Mode is forced to Off when one of the manual White Balance settings is selected in SETUP mode.
The Flash Mode Button is active only in RECORD mode.

Images Remaining

The approximate number of additional images that can be stored at the current Resolution and Quality settings is displayed in the Status LCD when the camera is in RECORD Mode. As Resolution and Quality settings are decreased, the number of additional pictures storable will increase, and vice versa. This number will automatically be updated after each new image is captured and stored.

NOTE

The total number of stored images may be varied with the free space of the card, the mixture of the image quality mode, and also the complexity of the subject.

Camera Operating Modes

The camera provides five camera operating modes-RECORD, PLAY, SETUP, ERASE, PC. The operating mode is selected using the Mode Knob on the top panel of the camera. You can access the advanced camera setting to customize your camera according to your personal preferences. To access the advanced camera setting with different camera modes, the built-in Display LCD is required. The built-in Display LCD acts as the primary user-interface for many camera functions. This section describes each camera operating mode and how to change the settings in details.

To access the menu of each camera operating mode

1. Switch on the camera by **Power ON/OFF**.
2. Rotate the **Mode Knob** to the desired operating mode.
3. Press the **Menu** button.

Once a menu is invoked, the Zoom Control is used to move the highlight through the menu items. For the top-level menus (RECORD, PLAY, ERASE, SETUP), pressing the OK button will cause the corresponding submenu to be displayed. When submenus with multi-field data items (e.g., Date/Time) are invoked, the Zoom Control is used to increase or decrease the currently highlighted numeric field. For all menus and submenus, the OK button is used to select the highlighted menu item, or, in the case of multi-field data items to move the highlight to the next field. If there are no submenus for the highlighted menu item, or the highlight is on the final field of a multi-field data item, pressing the OK button will cause the previous, higher-level menu to be redisplayed.

RECORD Mode

The camera is able to capture images only when in RECORD Mode. In this mode, a numeric display on the Status LCD indicates the approximate number of additional pictures that can be stored at the current Resolution and Quality settings. In RECORD Mode, the user can frame subjects either through the optical viewfinder or by using the Display LCD. Framed images can be captured by fully depressing the Shutter button. (For more detailed instructions on taking pictures, see the Taking Pictures section on page 17.)



- LCD Brightness - allows the brightness of the Display LCD to be changed, with a range of -5 to +5.
- QuickView - allows QuickView Mode to be enabled or disabled.
- White Balance - allows one of several manual white balance settings to be enabled, to remove the color cast at a variety of lighting condition that add.
- EV Compensate - allows manually adjust the overall brightness with a range of -1.5 to +1.5

To access Record Menu:

1. Set the camera to **RECORD** mode (●).
2. Press the **Menu** button.
3. Use the **Zoom Control** to scroll through the items.
4. Press **OK** button to enter the sub-menu.

LCD Brightness

The LCD Brightness submenu allows the brightness of the Display LCD to be adjusted. Brightness can be adjusted over a range of -5.0 to +5.0.



- 1. Pushing the Zoom Control to the left will decrease the brightness of the Display LCD by one step (-1.0).
- 2. Pushing the Zoom Control to the right will increase the brightness of the Display LCD by one step (+1.0).
- 3. Pressing OK saves the new brightness setting, and returns to the RECORD menu.

NOTE

This option is also available under the PLAY menu

QuickView

The QuickView submenu allows the QuickView feature to be toggled on and off. Enabling QuickView is useful when operating the camera with the LCD turned off, because it causes newly acquired pictures to be displayed on the LCD for two seconds after being captured. During the two-second intervals, the picture just captured may be deleted by pressing the OK button. The word "DELETE" will appear in the lower left corner of the LCD while the delete option is available. After two seconds, the LCD will turn off again and the image is stored in memory. The image may still be deleted later in ERASE mode.



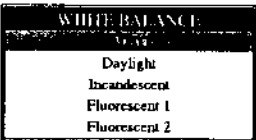
- 1. Pushing the Zoom Control to move the highlight between On and Off.
- 2. Pressing OK saves the new setting, and returns to the RECORD menu.

White Balance

White Balance allows you to obtain the highest color fidelity possible by taking into account the lighting conditions in which the camera is operating. Set the appropriate white balance setting to remove the color cast that the current lighting conditions add. The default Auto White Balance mode should work well under most normal lighting conditions. For those circumstances where the Auto mode does not produce the desired result, one of several manual White Balance settings can be used, depending on the ambient lighting conditions. The available settings correspond approximately to the following lighting conditions:

Auto	Automatically chooses the best White Balance for given lighting conditions
Daylight	Outdoor daylight
Incandescent	Incandescent light
Fluorescent 1	Cool Fluorescent lighting (5800K)
Fluorescent 2	Warm Fluorescent lighting (3950K)

- 1. Pushing the Zoom Control to make a selection.
- 2. Pressing OK saves the new setting, and returns to the RECORD menu.



NOTE

Selecting any of the manual White Balance modes will disable flash operation.

EV Compensation

The Exposure Value (EV) Compensate is a method of adjusting the exposure for pictures that are too light or too dark. The EV Compensate can be manually adjusted using this submenu over a range of -1.5 to +1.5 EV in steps of 0.3 EV. Pushing the Zoom Control to the left will decrease the EV Compensate setting by one step (-0.3). Pushing the Zoom Control to the right will increase the EV Compensate setting by one step (+0.3). Pressing OK saves the new setting and returns to the RECORD menu.



- 1. Pushing the Zoom Control to change the value.
 - If the ambient light is normal, maintain +0.0 will automatically choose the correct exposure for the image.
 - If the ambient light is too dark, increase (+) the exposure compensation setting to achieve a better result.
 - If the ambient light is too light, decrease (-) the exposure compensation setting to achieve a better result.
- 2. Pressing OK saves the new setting, and returns to the RECORD menu.


PLAY Mode

In PLAY Mode, the user can view previously captured images either on the Display LCD, or a TV. On first entering PLAY Mode, the last image captured will be displayed. When an image is displayed in PLAY Mode, the Zoom Control can be used to scroll backwards or forwards through stored images.



- LCD Brightness - allows the brightness of the Display LCD to be changed, with a range of -5 to +5.
- Video Mode - is used to select whether NTSC or PAL as the video output format.
- SlideShow menu - plays back stored images as a slideshow.
- Protect Files - protects stored images in CF card from being erased accidentally.

To access Play Menu

1. Set the camera to **PLAY** mode. 
2. Press the **Menu** button.
3. Use the **Zoom Control** to scroll through the items.
4. Press **OK** button to enter the sub-menu.

LCD Brightness

The LCD Brightness submenu allows the brightness of the Display LCD to be adjusted. Brightness can be adjusted over a range of -5.0 to +5.0.



1. Pushing the Zoom Control to the left will decrease the brightness of the Display LCD by one step (-1.0).
2. Pushing the Zoom Control to the right will increase the brightness of the Display LCD by one step (+1.0).
3. Pressing OK saves the new brightness setting, and returns to the RECORD menu.

NOTE

This option is also available under the RECORD menu

Video Mode

The Video Mode submenu allows the selection of either NTSC or PAL as the video output format. On first entering this submenu, the current Video Mode will be highlighted.



1. Pushing the Zoom Control to select the NTSC or PAL.
2. Pressing OK saves the new setting, and returns to the PLAY menu.

SlideShow

The SlideShow submenu allows stored images to be displayed as a slideshow. The user must specify the delay (in seconds) between images, from 1 to 10 seconds.

While the slide show is running, pressing the LCD, Menu, OK or Zoom Control buttons will interrupt the slideshow display and cause an immediate return to the currently active play mode.



1. Pushing the Zoom Control to increase or decrease the delay between images from 1 to 10 seconds.
2. Pressing OK saves the new setting, and returns to the PLAY menu.

Protecting Files

You can protect your pictures from being erased accidentally from the camera memory card. It is recommended to use this feature if the camera and the memory card are used by more than one person.



To protect files

- 1. Push the Zoom Control to highlight Protect Current to lock current picture or Protect ALL to lock all the pictures in the memory card.
- 2. Press OK and returns to the PLAY menu.

Unprotect Files

If there is files been locked, the items of PROTECT FILES submenu appear as Unprotect Current and Unprotect All



To unprotect files

- 1. Push the Zoom Control to highlight Unprotect Current to unlock current picture or Unprotect ALL to unlock all the pictures in the memory card.
- 2. Press OK and returns to the PLAY menu.

NOTE
If you are attempting to erase protect files, will cause a series of beeps and leave the protected files without erased.

SETUP Mode

SETUP mode allows various camera settings to be altered. Selecting SETUP Mode with the Mode Knob will automatically display the Setup Menu.

To check the Camera Firmware version

- 1. Set the camera to SETUP Mode
- 2. Turn on the camera by sliding the Power ON/OFF switch
- 3. The firmware version is shown on the first splash screen at camera starting.



- **Date/Time** - to set the current date and time
- **Language** - to select the language for all menus.
- **Sound** - to turn on or off the sound
- **Format Media** - allows the Compact Flash Memory Card currently installed in the camera to be reformatted.
- **Auto Power Off** - to set the auto power off at delay of 1,2 or 3 minutes.

To access Setup Menu

- 1. Set the camera to **SETUP** mode, the menu is displayed as soon as SETUP Mode is entered
- 2. Use the Zoom Control to scroll through the items
- 3. Press OK button to enter the sub-menu

Date/Time

The Date/Time is used to set the current date and time. The date format is MM/DD/YY. The time format is 24-hour. If the battery is removed from the camera, you may need to reset the correct Date and Time.

To set the Date/Time

- 1. Set the camera to **SETUP** Mode
- 2. Select the **Date/Time** from the SETUP MENU
- 3. Press **OK** to enter DATE/TIME submenu
- 4. Use the **Zoom Control** to adjust the value for the highlighted field over the full legal range for that field.
- 5. Press **OK** to move the highlights to the next field.
- 6. Press **OK** on the minutes field will save the new setting and return to the SETUP Menu.



Language

The Language dialog box is used to select the language used for all menus and prompts. On first entering this submenu, the current language setting will be highlighted.



- 1. Use the Zoom to move the highlight up or down the list of items to select the language.
- 2. Pressing OK saves the new setting, and returns to the SETUP menu.

Sound

The Sound submenu allows the user to choose whether or not confirmation "beeps" are produced when buttons are pressed or when the camera prompts or alerts the user. When set to Beep On, short beeps are produced when an image is captured in RECORD mode, during the last 3 seconds of Self-Timer mode, and when any button is pressed.



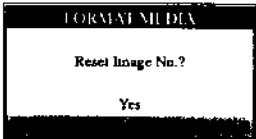
- 1. Pushing the Zoom Control to select the Beep On or Beep Off.
- 2. Pressing OK saves the new setting, and returns to the SETUP menu.

Format Media

- 1. Set the camera to **SETUP Mode**.
- 2. Use the zoom control to select **Format Media**.
- 3. Press **OK** button to enter Format Media submenu.
- 4. Use the Zoom Control to select Yes and press OK button to format the Compact Flash Memory Card.
-- Selecting No and pressing OK will return to the SETUP Menu without formatting the Compact Flash Memory Card. Upon completion of formatting, the following submenu will appear:



- 5. Use the Zoom Control to select No and Press OK to return to the SETUP Menu without resetting image numbers. Selecting Yes and pressing OK resets the image number to 001, and then returns to the SETUP menu.

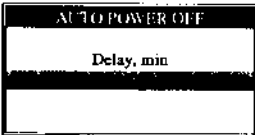


NOTE

Formatting a Compact Flash Memory Card will cause all images currently stored on that card to be erased.

Auto Power Off

This camera is equipped with an automatic power off function to help conserve battery power. If no operations are performed for a period of 1, 2 or 3 minutes, the camera will automatically power off. The camera lens will be retracted and covered. After the lens has retracted, the power switch must be used to power the camera back on.
1 Pushing the Zoom Control to increase or decrease the delay from 1 to 3 minutes.
2 Pressing OK saves the new settings, and returns to the SETUP menu.



ERASE Mode

In ERASE mode, the user can view previously captured images either on the Display LCD, or a TV. When an image is displayed in ERASE Mode, the Zoom Control can be used to scroll backwards or forwards through stored images. Pressing the Menu button in ERASE Mode entering the ERASE Menu.

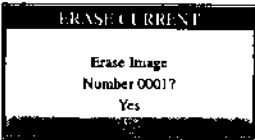


To access Erase Menu

- 1. Set the camera to Erase mode.
- 2. Use the zoom control to scroll through the images.
- 3. Press menu button to enter Erase menu.

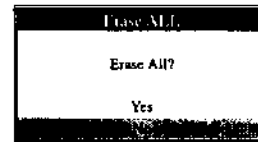
Erase Current

- 1. Set the camera to **Erase Mode**, the most recent captured image will be shown on the LCD Display.
- 2. Use the zoom control to select the image to be erased
- 3. Press **Menu** button to enter Erase Menu
- 4. Use the zoom control to select Erase Current
- 5. Press **OK** button to enter the ERASE CURRENT sub-menu.
- 6. Use the zoom control to select **YES**. Press **OK** button to erase the current image, and returns to ERASE mode, displaying the next available image.
--Select NO and press OK button to immediately returns to ERASE mode, leaving the current image without erasing.



Erase All

1. Set the camera to **Erase Mode**, the most recent captured image will be shown on the LCD Display.
2. Press **Menu** button to enter the Erase Menu
3. Use the zoom control to select **Erase All**
4. Press **OK** button to enter the ERASE ALL sub-menu.
5. Use the zoom control to select **YES**. Press **OK** button to erase all the images stored, and returns to ERASE mode.
--Select NO and press OK button immediately returns to ERASE mode, leaving the images without erased.



PC Mode

You must set the camera to PC Mode to connect your camera to your computer. In PC Mode, images may be transferred to a PC via either RS-232 or USB. There are no menus associated with this mode, and no buttons are active in this mode.

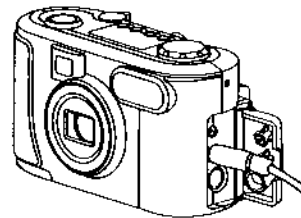
VIEWING PICTURES



Viewing on a TV

Before you can view pictures on your TV, you need to identify first what TV standard your television uses. If you have a NTSC standard TV, set the camera to NTSC. If you have a PAL standard TV, set the camera to PAL. (For more information on how to set the TV output for your camera, see page 30.)

1. Attach one end of a video line to the Video Output port of the digital camera.
2. Attach the other end to the video-in port on the television.
3. Turn on the camera and television.
4. Set the camera to Play mode
5. Scroll backwards and forwards through your pictures using zoom control



Viewing on the Display LCD

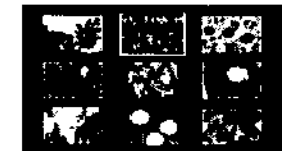
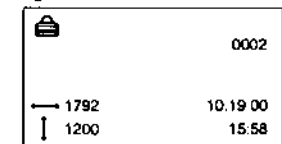
The images already stored in the camera's memory can be viewed in PLAY Mode. Entering play mode will cause the most recently acquired image to be displayed on the Display LCD.

1. Set the camera to **PLAY** Mode
2. Scroll backwards and forwards through your pictures using zoom control

View Image information and thumbnails

General image information can be viewed. This information includes, Image number, Resolution, and the Date and Time at which the picture was taken.

1. Set the camera to **PLAY** Mode
2. Pressing the **LCD** button once when an image is displayed will cause the image information to be displayed over the image.
3. Pressing the LCD button again while this image information is displayed will cause the images to be displayed as thumbnails, with nine images appearing on the screen at the same time.
4. The Zoom Control can then be used to move the highlight through the displayed images.
--Pressing the LCD button again while in thumbnail mode will cause the currently highlighted thumbnail to be displayed full screen on the Display LCD. The user can then continue to scroll through the images as usual, using the Zoom Control.



Viewing as a Slide Show

The camera can setup a slideshow and playback the stored images for a specified interval.

1. Set the camera to **PLAY** Mode
2. Press **Menu** button to invoke the PLAY MENU
3. Use the zoom control to highlight selecting Slideshow
4. Press **OK** button to enter SLIDESHOW submenu
5. Use the zoom control to set the delay intervals between each displayed images
6. Press **OK** button to start playing the slideshow

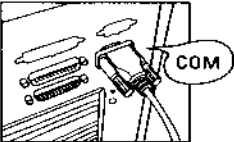
Downloading pictures into your PC

Connecting the camera to your PC

Use the supplied cable to connect the camera to your computer, properly attach one end of the cable to digital port of the digital camera, and the other end of the cable to the back of your computer.

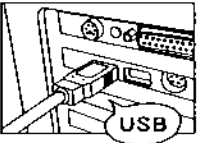
For RS232 interface:

- 1 Plug one end of the serial cable into your computer COM port.
- 2 Connect the other end of the serial cable to the digital port of the camera.
- 3 Set the camera to **PC Mode**
- 4 Turn on your camera.



For USB interface:

- 1 Plug one end of the USB cable into your computer USB port.
- 2 Connect the other end of the USB cable to the digital port of the camera.
- 3 Set the camera to **PC Mode**
- 4 Turn on your camera.



Camera driver and software installation

The appropriate TWAIN driver and software are required in order to download images from the digital camera to your computer. You need to install the TWAIN driver and software which comes with the included CD-ROM . It is implemented with auto-setup program. Once you insert CD-ROM disk into the CD-ROM drive, the installation menu will pop-up. Otherwise, you still can run "setup.exe" file in the root directory of CD-ROM drive.

To install camera driver and application software:

- 1 Insert the software CD-ROM disc into your CD-ROM drive.
- 2 The setup program will begin - simply follow the on-screen instructions to complete both the TWAIN driver and the image application software installation.
- 3 Restart the computer.

NOTE

The TWAIN drivers will only become effective after the system is rebooted.

Downloading and saving images to your hard drive

Once you have the TWAIN driver and image application software installed on your PC, use the following procedures to transfer pictures from the camera to your computer's hard drive and save them.

- 1.Launch the image application
- 2.Select **Digital Camera 1792 X1200 pixels** for the TWAIN device.
- 3 Invoke the TWAIN interface.
- 4.Start downloading pictures from your camera to your hard disk.
- 5 Select the pictures you wish to save by clicking on them (hold Ctrl key for multiple selections). Selected pictures will be surrounded by a red border.

NOTE











The way to select the TWAIN device and invoke the TWAIN driver interface may differ from each other, please refer to its respective software on-line help for more information



You now have two options as to what to do with the downloaded images:

- Save selected pictures directly to your hard drive.
 - 1. Click the Save Photos to Disk Directory to bring up the Save Files to Directory window.
 - 2. Under Save In, select the directory in which you wish to save the pictures
 - 3. Type in a three-letter prefix followed by a number. This will be the filename for the first image. Filenames for all subsequent images in this batch will be consecutive. For example, if you choose "pic001" as the filename for the first image, the second image will be named "pic002", the third "pic003" etc.
- Open the pictures in image application software
 - 1. Click the Transfer Pictures to Application to open the selected pictures in image application software. These images can now be manipulated or enhanced before saving.
 - 2. When you are ready to save an image, select Save As from the File menu.
 - 3. Select which directory in which you wish to store the pictures.
 - 4. Type in the name for the picture to be saved.
 - 5. Select the JPEG option under Save as Type.
 - 6. Click Save.

Appendix 1 : Status LCD Icons

Resolution		Number of Pictures Remaining	
1792x1200	1792X1200 pixels	8888	Digits of remaining pictures at current Resolution/Quality setting
896x600	896X600 pixels		
Quality		Battery Life Indicator	
★	high compression		Full Battery Power
★★	medium compression		Medium Battery Power
★★★	low compression		Low Battery Power
			Empty Battery Power
Flash Mode			Macro Mode
	Auto Flash		Self-Timer
	Red-Eye Reduction		
	Fill-in (flash is always on)		
	Off (Flash is disabled)		

Appendix 2 : Default Settings

Resolution	1792x1200
Quality	★★
Flash Mode	Auto
Macro Mode	Off
Quick View	Off
White Balance	Auto
EV Compensate	+0.0
Slideshow	3 Sec
Sound	Beep Off
Auto Power OFF	1min

Appendix 3 : Digital Camera Specifications

Image Sensor	1/1.75" CCD with 2.3 mega pixels
Image Resolution	1792 x 1200 ; 896 x 600
Color	24 bit (RGB)
File Format	JPEG
Playback Mode	Single image, 9 thumbnail images
External Memory	Compact Flash Card Type 1 Slot
Storage	High Resolution : 7/14/29 images at low / medium / high compression setting per 8 MB Standard Resolution : 29/58/116 images at low / medium / high compression setting per 8 MB
Working Range	Normal: 40cm ~ Infinity; Macro: 8 ~ 40 cm
Zoom	4.6X Zoom(2.3X Optical and 2X Digital)
LCD Display	1.8" color LCD for real time display with 280x220 image
LCD Indicator	Flashy/Resolution/Battery Status/Number of Image
Built-in Flash	Auto/Fill/Off/Red-eye reduction
Self-timer	10 sec delay
Focal Length	8mm-18mm (equivalent to 38mm-90mm in 35mm camera)
Aperture Ratio	1/(2.8/4.2/7/13)
Shutter Speed	1/4 ~ 1/500 sec
Exposure	Auto, Manual: 0.3 EV step, -1.5 ~ +1.5 EV
White Balance	Auto, Daylight, Incandescent, Fluorescent 1, Fluorescent 2
Language	English, German, French, Spanish, Japanese, Portuguese