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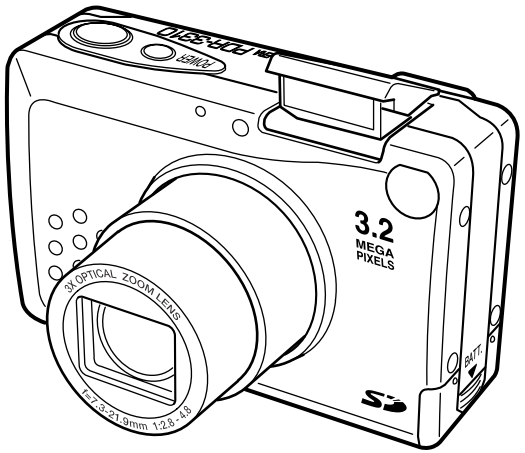
TOSHIBA

Instruction manual • Mode d'emploi

GB/F



TOSHIBA

PDR-3310

3.2 MEGA PIXELS 3.0X OPTICAL ZOOM

Thank you for purchasing this Toshiba product.
The TOSHIBA PDR-3310 is a digital camera equipped with a 3.22 mega-pixel CCD for high quality digital still photography.
Before using the camera, please read this User's Manual carefully and follow its instructions to assure proper use.

Nous vous remercions d'avoir acheté ce produit TOSHIBA.
La TOSHIBA PDR-3310 est un appareil photographique numérique disposant d'un CCD à 3,22 méga-pixels pour des photos numériques de haute qualité.
Afin d'utiliser correctement cet appareil photo, veuillez lire attentivement les explications de ce manuel.

Contents

Please purchase "Secure Digital (SD) Memory Cards" or "Multi-Media Cards*" (MMC) for use with this camera. These cards are referred to in these User's Instructions as "Memory Cards."

* MultiMedia Card is a registered trademark of Infineon Technologies AG (Germany), licensed to MMCA (MultiMediaCard Association).

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Safety Precautions

Read these safety precautions carefully before using the PDR-3310. These instructions contain valuable information on safe and proper use that will prevent harm and damage to the operator and other persons. Make sure that you fully understand the following details (indications) before proceeding to the main descriptions in this manual.

Indication definitions

Indication	Meaning
⚠DANGER	This indicates the existence of a hazard that could result in death or serious bodily injury*1, if the safety instruction is not observed.
⚠WARNING	This indicates the existence of a hazard that could result in bodily injury*1, if the safety instruction is not observed.
⚠CAUTION	This indicates the existence of a hazard that could result in bodily injury*2 or property damage*3. *1: Serious injury includes loss of eyesight, hurts, burns (high temperature/low temperature), electrical shock, bone fracture, or toxication, which leave aftereffects and require patients to be hospitalized and/or to visit a hospital for treatment for long time. *2: "Bodily injury" means injuries, burns, and shock which does not require hospitalization or prolonged treatment. *3: "Physical damage" means extended harm to home, household effects, domesticated animals, and pets.

Graphic symbol definitions

Graphic symbol	Meaning
⃠	Indicates a prohibited action that must not be carried out. The actual prohibited action is indicated in the symbol or nearby graphically or described in text.
●	Indicates a necessary action that must be carried out. The actual necessary action is indicated in the symbol or nearby graphically or described in text.

Exemption Clauses

We disclaim any responsibility and shall be held harmless for any damages or losses incurred by the user in any of the following cases:

- Fire, earthquake or any other act of God; acts by third parties; misuse by the user, whether intentional or accidental; use under extreme operating conditions.
- Malfunction of non-function resulting in indirect, additional or consequential damages, including but not limited to loss of expected income and suspension of business activities.
- Incorrect use not in compliance with instructions in this instruction manual.
- Malfunctions resulting from misconnection to other equipment.
- Repairs or modifications made by the user or caused to be made by the user and carried out by a unauthorized third party.
- Notwithstanding the foregoing, Toshiba's liabilities shall not, in any circumstances, exceed the purchase price of the product.

⚠DANGER	
⃠	**Do not heat, disassemble or throw the battery into fire or water.** Doing might cause it to rupture, ignite or heat up, resulting in fire or major injury.
⃠	**Do not strike the battery with a hammer, or step on, drop or subject the battery to strong impact.** Doing so might cause it to rupture, ignite or heat up, resulting in fire or major injury.
!	**Use only the optional, recommended battery charger. Do not use any other battery charger.** Charging the battery by any other battery charger might cause it to rupture, ignite or heat up, resulting in fire or major injury.
!	**Use the battery only for its originally intended purpose.** Using the battery for any other purpose might cause it to rupture, ignite or heat up, resulting in fire or major injury.
⃠	**Do not carry the battery or store it together with other metallic objects such as a ballpoint pen or necklace.** This might short-circuit the battery's + and – terminals. This might cause the battery to rupture, ignite or heat up, resulting in fire or major injury.

Safety Precautions (continued)

⚠WARNING	
	Should you ever notice smoke, a strange odor or excessive heat coming from the camera, immediately turn OFF the power and remove the battery and AC adapter. Continued use in this state might cause fire, electric shock or burns. For details on repair, consult the store of purchase, or please contact the technical support number.
	If foreign objects or water have entered the camera, immediately turn the power OFF and remove the battery and AC adapter. Continued use in this state might cause fire or electric shock. For details on repair, consult the store of purchase, or please contact the technical support number.
	If the camera has fallen or its case is damaged, immediately turn the power OFF and remove the battery and AC adapter. Continued use in this state might cause fire or electric shock. For details on repair, consult the store of purchase, or please contact the technical support number.
	Do not place the camera on wobbly, inclined or unstable surfaces. This might cause the camera to fall or tilt over.
	Do not use in areas near water. This might cause fire or electric shock. Take special care during rain, snow, on the beach or near the shore.
	Do not use the camera in the bath or shower. This might cause a fire or electric shock.
	Do not allow metallic objects or other flammable foreign matter inside the camera. This might cause a fire or electric shock. Do not open the SD Memory Card cover, and insert or allow such objects to fall inside.

⚠DANGER	
	Do not disassemble, change or repair the camera. This might cause fire or electric shock. For details on repair and internal inspection, consult the store of purchase, or please contact the technical support number.
	Do not touch power or TV antenna cords during a thunderstorm. This might cause electric shock.
	Do not use the camera while you are walking, driving or riding a motorcycle. This might cause you to fall over or result in a traffic accident.
	Use only the specified batteries or the specified AC adapter. Use of a battery or AC adapter other than specified, might cause fire, defects or malfunctions.
	Keep the batteries out of the reach of children. If a child swallows a battery, this might result in poisoning. If a child swallows a battery, immediately consult a physician.
	If battery fluid enters the eyes, immediately rinse with fresh water and consult with a physician to receive treatment. If left untreated, damage to the eye could be permanent.
	Use the AC adapter only with the indicated power supply voltage (100 to 120V, 230V AC) Use with any other power supply voltage might cause fire or electric shock.
	Do not sharply bend, jerk, twist, or extend cords.

Safety Precautions (continued)

⚠CAUTION	
!	**If you want to use the camera on an airplane, consult with the airline and follow their instructions.** Use of this camera is sometimes restricted due to potential radio interference.
⊘	**Do not use the camera in humid, steamy, smoky or dusty places.** This might cause fire or electric shock.
⊘	**Do not leave the camera in places where the temperature may rise significantly, such as inside a car.** This might adversely affect the case or the parts inside, resulting in fire.
⊘	**Do not place or wrap the camera in cloth or blankets.** This might cause heat to build up and deform the case, resulting in fire. Use the camera in a wellventilated place.
!	**Before you move the camera, disconnect cords and cables.** Failure to do this might damage cords and cables, resulting in fire or electric shock.
⊘	**Do not drop or subject the camera to strong impact.** This might cause fire, electric shock or malfunctions.
!	**Before you carry out maintenance on the camera, remove the battery and AC adapter.** Leaving these attached might cause electric shock.
!	**Remove the batteries and AC adapter if you plan not to use the camera for a long time.** This might cause fire.
!	**Insert the battery paying careful attention to the polarity (+ or –) of the terminals.** Inserting the battery with its polarities inverted might cause fire and injury, or damage the surrounding areas.

⚠CAUTION	
⊘	**Do not look at the sun through the camera viewfinder.** This may cause injury of the eyes.
⊘	**Do not use the flash close to anyone's eyes.** This might cause temporary damage to the person's eyesight.
⊘	**Do not walk around with the camera swinging from the shoulder strap.** If you walk around with the camera hanging from your hand through the shoulder strap, the camera might bump into people or other objects, damaging the camera or causing an injury.
!	**Before you store or dispose of used batteries insert them in their battery covers or tape the plus (+) and (–) terminals with insulating tape.** If stored or disposed of without doing this, the batteries may make contact with metal objects, resulting in fire or injury due to leaking of battery fluid, overheating or bursting of the battery.
⊘	**Do not subject the LCD monitor to impact.** If the status display is impacted, the glass on the screen may be broken and internal fluid may leak. If the internal fluid enters your eyes or sticks to your body or clothes, immediately rinse with fresh water. If the internal fluid enters your eyes, immediately consult a physician to receive treatment.
!	**Consult your dealer regarding the internal cleaning of the camera once every two years.** If dust is allowed to accumulate inside the camera for a long time, this might result in fire or defects. Consult your dealer regarding the cleaning costs.
⊘	When connecting or disconnecting the power cord to and from the power outlet or the camera, grasp and pull on the connector plug. Pulling on the cord may cause internal breakage of the wires, resulting in fire or electric shock.

Using Your Camera Correctly

Notes On Handling Your Camera

When you use your camera, carefully read and strictly observe the Safety Precautions from page 4 onwards and the notes described below.

●Avoid using or storing the camera in the following places:

- Places subject to humidity, dust and dirt
- Places subject to direct sunlight
- Places subject to high or low temperature
- Places filled with highly flammable gas
- Places near gasoline, benzene or paint thinner
- Places subject to strong vibrations
- Places subject to smoke or steam
- Places subject to strong magnetic fields (such as near motors, transformers or magnets)
- Places contacting chemicals such as pesticides or next to rubber or vinyl products for long periods

●Do not expose the camera to sand

The PDR-M70 is particularly sensitive to sand. If the camera comes into contact with sand, not only will the camera become damaged, it will also no longer be repairable.
Pay special attention when using the camera at the beach or where sand or sand dust is likely to be present.

●Notes On Condensation

Due to a sudden change in temperature, such as when you move the camera from a cold location to a warm one, water droplets (condensation) may form on the inside of the camera or on the lens. When this occurs, switch the camera OFF, and wait an hour before using the camera.
Condensation may also form on the SD Memory Card. If this happens, remove the SD Memory Card, wipe off any water droplets and wait a short time before using it again.

●Carrying Out Maintenance on Your Camera

- To prevent the lens, surface of the LCD monitor or viewfinder from being scratched, blow off any dust on these parts with a blower brush and lightly wipe with a soft dry cloth.
- Clean the body of the camera with a soft dry cloth. Do not use volatile liquids such as paint thinner, benzene or insecticide, as these may react with the camera body and cause deformation or remove the coating.

●Precautions for Operating the Camera

Do not remove the SD memory card or Multi-Media Card (MMC) while the card access LED is flashing.

●Automatic Reset Function

This camera may fail to operate if exposed to very strong electromagnetic waves or static electricity. In this case, remove the batteries and reinsert them again to reset the camera's circuits.

Notes On Handling Batteries

The PDR-3310 camera uses a lithium-ion battery pack (PDR-BT9). (PDR-BT1 can also be used.) (This manual simply refers to this battery pack as the “battery”) Other batteries cannot be used.
When you use the battery, carefully read and strictly observe the Safety Precautions from page 4 onwards and the notes described below.

* The battery is not fully charged when you buy your camera. Be sure to charge the battery before you use your camera.
* Before you use a battery, be sure to remove the electrode cover.

About Battery Use

- The battery gradually discharges even when not used. Charge the battery one or two days before use.
- To maximize the battery life, switch the camera OFF as often as possible when it is not being used.
- In cold locations, the number of frames that can be taken decreases. Take along a spare fully charged battery. You can also increase the amount of power produced by putting the battery in your pocket or another warm place to heat it and then loading it into the camera just before you take a picture. If you are using a heating pad, do not place the battery directly against the pad.
- Always keep the terminals in a clean state.
- If the battery is used for a long time, the camera body and the battery itself will become warm. This is normal and not a malfunction.
- At normal temperatures, this battery can be recharged at least 300 times for use. If the battery runs out quickly, this indicates that the battery has reached the end of its effective life and should be replaced.

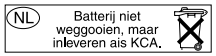
When Not Using the Battery For A Long Time

- If the battery is not to be used for a while, store it after there is no power left. If the battery is stored for a long time in a fully charged state, its performance may be impaired.
- When the battery is to be stored for a long time, fully charge the battery and then use the battery until there is no power left once every year and then store it.
- When the battery is not in use, be sure to remove it from the camera body. If the battery is left attached to the camera body or battery charger, a minute current will flow even if the power is turned OFF. This will result in overdischarge and the battery may no longer be useable.
- Store the battery in a cool place with the battery cover attached. We recommend a dry place with a surrounding temperature of +15°C (+59°F) to +25°C (+77°F). Avoid storing the battery in extremely hot or cold places.

Charging the Battery

- When you use the battery for the first time or when the battery has not been used for a long time, be sure to charge the battery before use.
- The battery can be charged within this camera body using the AC adapter supplied with the AC-71L (page 23). The battery takes about five hours to charge.
- This rechargeable battery does not need to be fully discharged or exhausted before being charged.
- The battery may feel warm after it has been charged or immediately after being used. This is normal and not a malfunction.
- The battery can be charged at temperatures between 0°C (+32°F) and +45°C (+113°F), but should be charged between +10°C (+50°F) and +30°C (+86°F) to obtain maximum battery performance.
- Do not recharge a fully charged battery.

Caution when disposing a battery



Batteries are included with this product. When they are no longer useable, you should not throw them away. Instead, properly dispose of them as small chemical waste.

Notes On Handling the AC Adapter

Be sure to use only the AC adapter provided with your camera. Using a different AC adapter might cause the camera to malfunction.
When you use the AC adapter, carefully read and strictly observe the Safety Precautions from page 4 onwards and the notes described below.

* Be sure that you do not allow the AC adapter to contact any other metal object as this might cause a short circuit.

- To connect the AC adapter, firmly insert the plug on the end of the cable into the DC IN 5V terminal. Do not insert the plug into other terminals. This might cause the camera to malfunction.
- Before you disconnect the connector cable, turn the camera OFF and then disconnect the cable holding it by its plug. Do not disconnect the connector cable by pulling the actual cable.
- Do not drop the AC adapter or subject it to strong impacts.
- Do not use the AC adapter in very hot and humid locations.
- Do not plug in the AC adapter while you are using the battery. Switch the camera OFF first.
- The AC adapter is for indoor use only.
- Use only the specified AC adapter. Do not use other AC adapters.
- The AC adapter may sometimes become warm during use. This is normal and not a malfunction.
- Buzzing or whirring noises may come from inside the camera. This is normal and not a malfunction.
- Do not use the AC adapter near a radio as it could interfere with radio signal reception.
- If you remove the battery or AC adapter while the camera is in operation, the date may be lost from memory. If this happens, reset the date. (Page 26)

NOTES ON COPYRIGHT

Images taken with digital cameras are for personal enjoyment only and should not be used otherwise without the permission of the copyright holder as per copyright laws.
Note that photographing some performances, exhibitions, etc., is restricted, even when photographs are taken for personal enjoyment. In addition, the transfer of memory cards (SD Memory Card, etc.) containing copyrighted images and files is limited to purposes within the range permitted by copyright laws.

IMPORTANT

You should read this first before you use this software.

Notice and Request Regarding Software and Instruction Manual

(1) Copying or duplication of the software and Instruction Manual packaged with this Software Application in part or in whole is not allowed without the prior permission of Toshiba Corporation.

(2) Use of the software and Instruction Manual packaged with this Software Application is allowed only on one personal computer.

(3) Toshiba Corporation is not liable whatsoever for any damages to the user or a third party as a result of use of a device by the software and Instruction Manual packaged with this Software Application.

(4) Every effort has been made in assuring the quality during production of the CD-ROM contained in this package. If for any reason the CD-ROM has been damaged during production and within the warranty , the disk will be replaced free of charge. For all other nonconformities or damages made other than during the production of the CD-ROM, Toshiba Corporation will not be held liable whatsoever.

(5) The contents of the software, Design, Specifications and Instruction Manual packaged with this Software Application are subject to change without notice.

(6) The personal computer screens shown in this Instruction Manual are examples, and may differ from actual screens.

(7) Toshiba Corporation is not liable whatsoever for any compensation arising from errors in descriptions in this Instruction Manual.

(8) Do not play back the CD-ROM packaged with this Software Application on a regular CD player.
Doing so might damage the headphones or speakers, or injure your ears.

Trademark Information

- Windows and Windows NT are registered trademarks of the Microsoft Corporation of the U.S. registered in the USA and other countries.
- Windows is an abbreviated term referring to the Microsoft Windows Operating System.
- Macintosh and QuickTime are trademarks of Apple Computer, Inc.
- Image Expert is a registered trademark of Sierra Imaging Inc.
- Other companies or product names are trademarks or registered trademarks of the respective companies.

Abbreviations Used In This Manual

- Windows 98
  This refers to the MicrosoftR WindowsR 98 operating system.
- Windows 2000
  This refers to the MicrosoftR WindowsR 2000 Professional operating system.
- Windows ME
  This refers to the MicrosoftR WindowsR ME operating system.
- Windows XP
  This refers to the Micorsoft Windows XP operating system.
- Images
  This refers to both still images and movies.

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<Operating Controls>

"🌷/▲" Macro/ Landscape mode button (page 37)
Use this button to select Macro or Landscape mode.

"⚡" Flash mode button (page 35)
Use this button to select flash mode.

Mode select lever
Use this lever to switch between record, playback, and setup modes.

"◁"/"▷"/"△"/"▽" buttons
Use to select items on each menu, and to select forward/ reverse playback modes.

"W" "T" Zoom buttons
Use to control the lens's zoom setting (wide-angle to telephoto) when recording, and to enlarge images during playback.

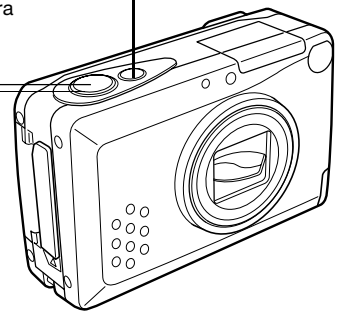
"◢" button
Use this button to adjust LCD screen brightness and to set items on menus.

"DISP" button
In the recording mode (📷), use this button to turn the LCD monitor ON/OFF.

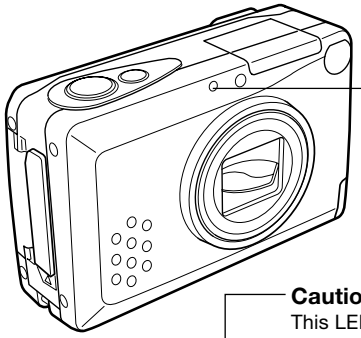
"MENU" button
Use this button to display or turn off the menus in recording or playback mode.

Power button
Use to turn camera power ON/OFF.

Shutter release button



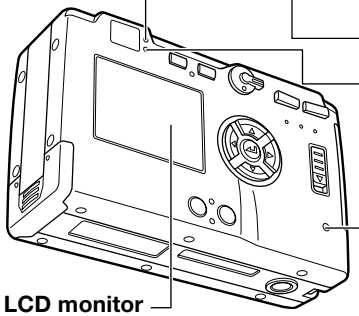
<Displays and Indicators>



Self-timer LED (red) (page 39)
This LED flashes during using the self-timer, and it is on continuously during the recording and playback of moving images or in the setup mode. Also, it flashes rapidly in the PC mode.

Caution LED (red)
This LED is used to signal the charge status of the lithium ion battery, the charging status of the electronic flash, and the camera shake warning.

During Recording	Flash charging	Flashes (about 4 times/sec)
	Camera shake warning	Flashes (about 8 times/sec)
Other	During battery charging	Lights steadily
	Battery charging error	Flashes

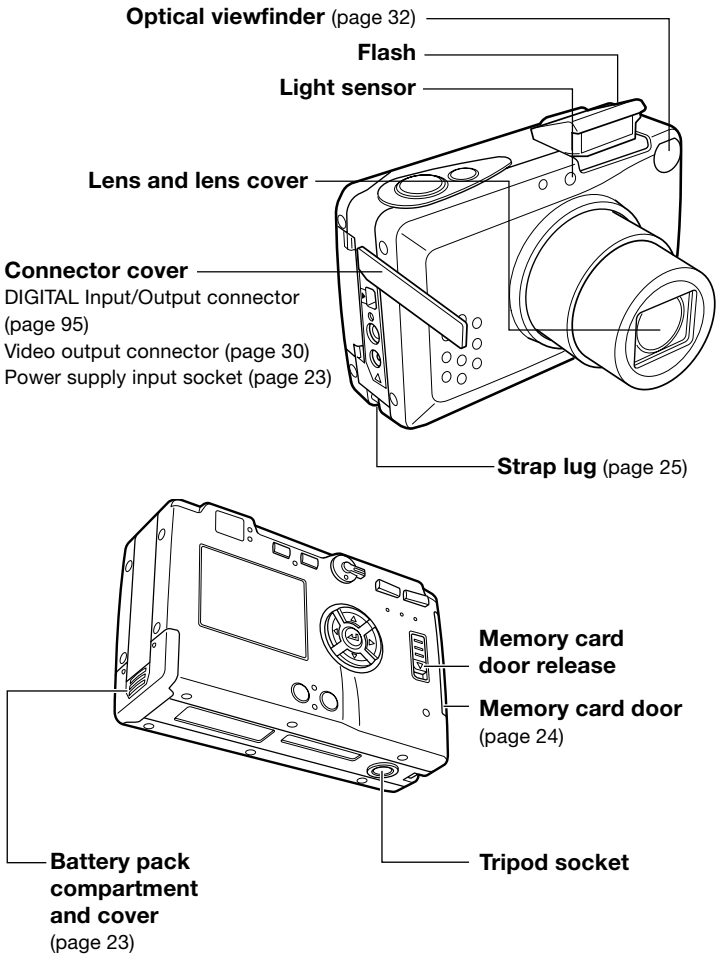


Standby LED (green)
This LED is used to indicate the in-focus status and the completion of battery recharging.

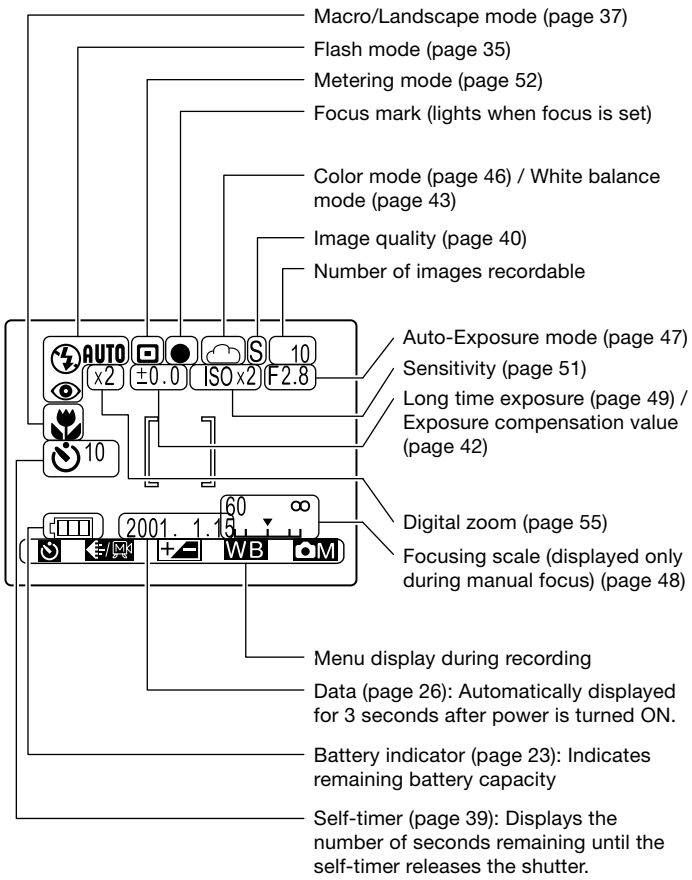
Card access LED (orange)
This LED flashes to indicate that the camera is currently accessing the memory card.
- Do not open the memory card door, or remove the memory card when this LED is flashing.

LCD monitor
Functions as viewfinder during recording, and displays images and menu information during the playback and setup modes.

<Other Parts>



<LCD Monitor Information>



Basic Preparations

Check the Contents

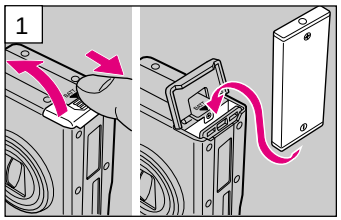
Make sure all the items below are in the box:

- Digital camera "TOSHIBA PDR-3310"
- Memory card
- Lithium-ion battery pack
- AC adapter
- The AC adaptor cable (JAP/USA, EU, or HK/England) which suites for your region will be included in the package.
- Video cable
- USB cable
- CD-ROM which includes driver software
- Hand strap
- User's Guide (this book)
- Warranty Card
- Your Registration Card

* The shape of the plug is different in Great Britain. Make sure of the shape of the plug used in each country before you use the camera.

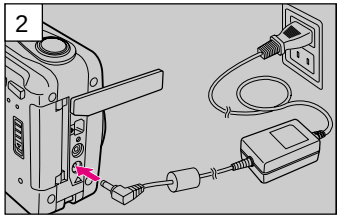
* **Before You Begin...**This camera is an electronic device which uses a high-performance IC. The heat emitted from IC may make the camera hot during use. It is not a failure.

Loading and Recharging the Battery Pack



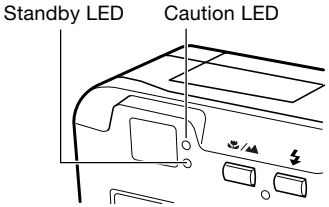
Open the battery compartment cover and insert the supplied battery pack.

- Be sure to insert the battery pack in the correct direction; the camera will not operate if the battery pack is installed incorrectly.



Connect the AC adapter to the camera and plug it into a household outlet to begin recharging.

<Recharging Time>



Full recharging requires approximately 5 hours.

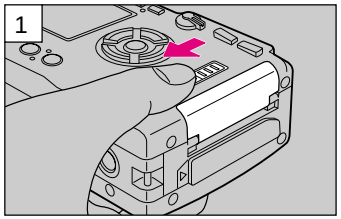
During recharging, the caution LED will light steadily. When recharging is completed, the caution LED will go out and the standby LED will light.

<Recharging Status>

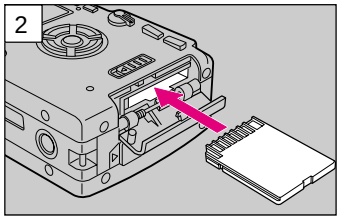
Charge the battery pack in accordance with the battery indicator status shown on the LCD monitor.

Loading and Removing Memory Cards

<Loading>

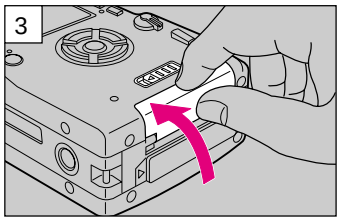


Slide the memory card door release to open the card door.



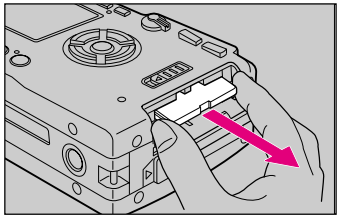
Insert the memory card.

- Slide in the card until it stops with a secure click.
- Be careful to insert the memory card in the correct direction.



Close the memory card door.

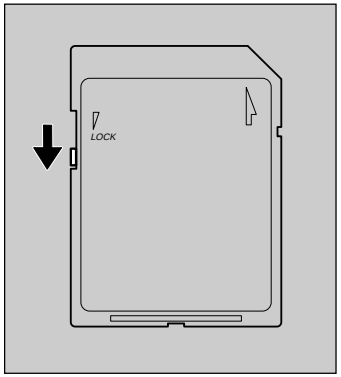
<Removal>



Slide the memory card door release to open the card door, and pull out the memory card.

- Press the edge of the memory card in slightly before pulling out.

Write Protect Switch
(SD Memory Cards only)

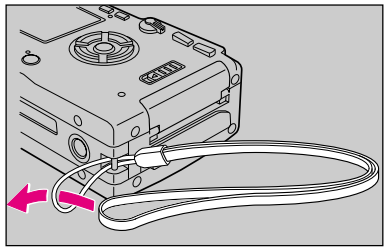


SD Memory Cards are provided with a write-protect switch. When this switch is moved downward, further recording on the card is disabled, to protect any images and data already on the card. When in this status, no further images can be recorded on the card, and images already on the card cannot be erased.

The LCD monitor will display “WRITE PROTECT”.

<Attaching the hand strap>

Attach the supplied hand strap as shown.

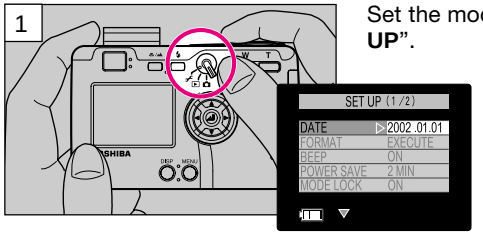


Setting the Date

Follow these instructions to set the date, time, and calendar display mode:

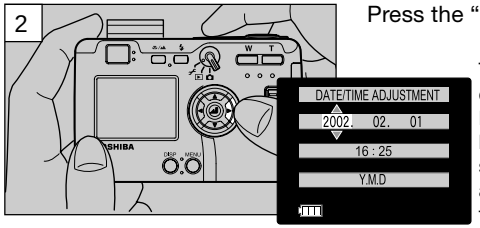
<Operation>

1



Set the mode select lever to "**SET UP**".

2

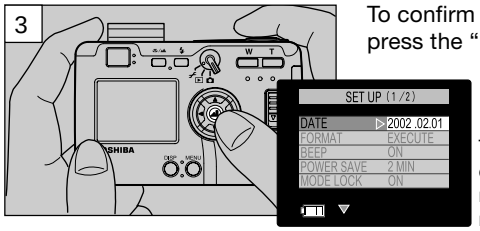


Press the "▷" button.

The monitor will show the date/time setting display. Press the "◁" and "▷" buttons to change the setting item, and the "△" and "▽" buttons to change the numerical values.

To cancel the setting operation: Press the "**MENU**" button; the setting contents will revert to those before the setting operation was begun.

3



To confirm the new setting data, press the "◢" button.

This completes the operation, and the LCD monitor will return to the menu screen.

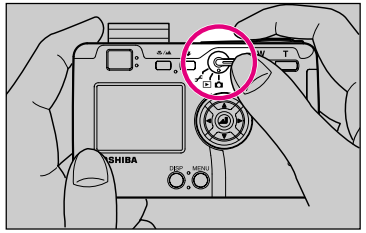
Camera Basics

Using the LCD Monitor to Shoot Still Pictures

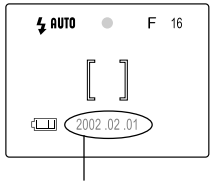
*** Note about the Flash Unit**
The flash will automatically open and close when the camera is turned on and off. Do not force the flash closed when the camera is turn on for use.

* Use the LCD monitor to compose your pictures when particularly accurate composition is needed. The image recorded will be the same as that seen through the monitor.

1. Set the mode select lever to "📷", then press the **Power** button to turn on camera's power.



An electronic beep will be heard for several seconds, followed by the appearance of the LCD monitor.



Automatically displayed for 3 seconds, then turns off.

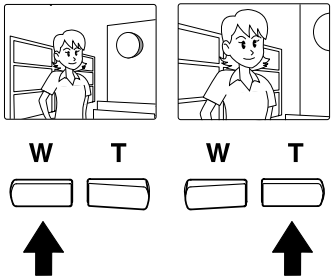
2. Hold the camera steadily with both hands as shown to avoid camera shake.

<Hints for Holding the Camera Steady>
Blurry pictures are most often caused by camera shake. Find the position and stance that is most comfortable for you and allows you to hold the camera steady.

- Rest the right index finger lightly on the shutter release.
- Take care that the flash and lens are not covered by your hand or fingers.
- Press the shutter release button gently, without grasping the camera too tightly,
- Use the left hand to support the camera firmly.
- Hold your elbows close to your body and hold the camera steady.

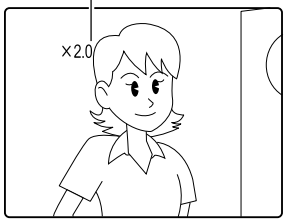
3. Compose your picture while watching through the LCD monitor.

Press the zoom buttons to select between telephoto and wide-angle lens settings, thus enlarging or reducing the size of your subject. Press the "**T**" button to enlarge the subject, and the "**W**" button to reduce the size of the subject.



<Use the Digital Zoom for Even Greater Enlargements>
Press the "**T**" button until the zoom function reaches the maximum telephoto setting; release your finger slightly, then press the button again. The digital zoom will further enlarge the subject in three steps (1.3x, 1.6x and 2x the maximum optical zoom value).

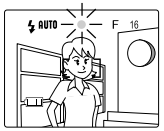
The magnification ratio is displayed on the screen.



- Since electronic circuitry is used to increase the magnification ratio, the results cannot be seen in the optical viewfinder. Always be sure the LCD monitor is turned ON when using the digital zoom function.
- Digital zoom cannot be used when the LCD monitor is not turned ON.
- Digital zoom also cannot be used when image quality is set to [M]. If pictures are taken with digital zoom when image quality is set to [**S**] or [**F**], actual image quality will be equivalent to [**N**].

4. Press the shutter release button to take the picture

① Lightly depress the shutter release button halfway (see page 30) to begin focusing; the focus mark will light and the electronic beep will be heard when focus is locked.



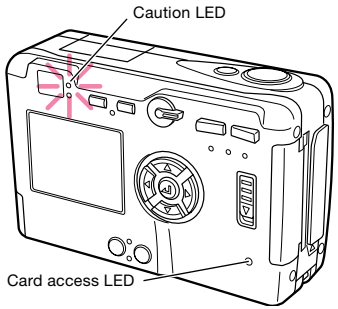
"Beep, beep"

② Press down further on the shutter release button to take the picture; recording of the image begins when the electronic beep sounds.

"Beep"

The LCD monitor will become momentarily dark, then the view finder image will appear again.

③ The card access LED will flash while the camera is writing image data to the memory card.

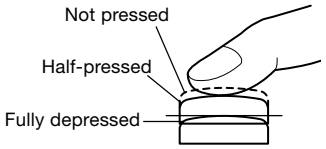


<Precautions when Recording>

- Wait until the caution LED has stopped flashing before taking your next photograph .
- When the camera is in the "📷" mode, setting the auto Power-Save function allows the camera to automatically enter the auto power-off ("power-save") mode if left inactive for a set period of time. From this "sleep" state, the camera can be restored to its normal shooting condition by depressing the shutter button halfway, or by pressing one of the other function buttons. (For details, see page 79).
- Never open the memory card door or remove a memory card while the card access LED is flashing, since the memory card may be damaged and data lost.

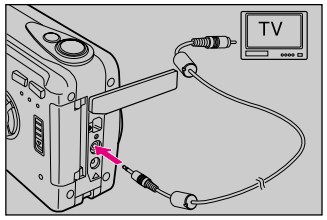
<Shutter Release Button Half-way Down>

When the shutter release button is pressed down lightly, it will stop part way in its travel. In this semi-depressed position, the camera automatically sets focus and exposure. When the shutter release button is pressed further down, the shutter is released and the image is recorded.



<Other Uses>

The camera can be connected to a television monitor to allow use of the screen as a large viewfinder.



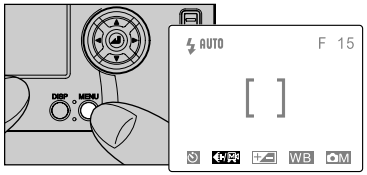
When connected to a television monitor, the camera's own built-in LCD monitor turns off, and the subject is displayed instead on the television screen.

- The camera's built-in LCD monitor turns off whenever a video cable is connected to the camera.
- Use the supplied video cable to connect the camera to a television.

Using the LCD Monitor to Shoot Moving Pictures

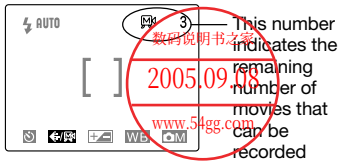
This function allows you to record up to 15 seconds of simple movie images. The monitor display during movie recording is shown below:

① Press the "**MENU**" button.



② Select [ ], then press the "◢" button to set for movie recording [ ].

③ Press the shutter release button to begin recording; fifteen seconds later the recording will end automatically.



This number indicates the remaining number of movies that can be recorded (each movie represents a maximum of 15 seconds of recording time).

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- To stop recording before the 15 seconds have elapsed, press the shutter release button again.

<NOTE>

- The optical zoom can be used, but the digital zoom (page 55) does not function during movie recording.
- To view movies on a computer, installation of QuickTime 4.1 or later version is required.

Turning the LCD monitor off will help conserve battery power.
Turning LCD monitor ON/OFF (page 101)

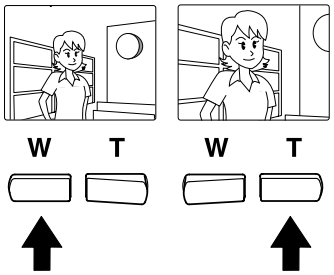
1. Set the mode select lever to "📷", then press the Power button to turn power ON.
2. Press the "**DISPLAY**" button to turn off the LCD monitor.
3. Hold the camera steadily as shown to prevent camera shake.

Using the optical viewfinder to compose your picture.

● See <Hints for Holding the Camera Steady> on page 28.

4. Look through the optical viewfinder while composing your picture.

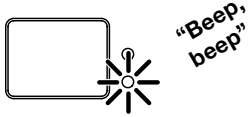
Press the "**T**" button to enlarge the subject, and the "**W**" button to reduce the size of the subject.



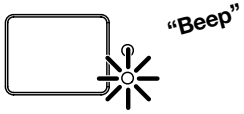
<Precaution when using the optical viewfinder>
When using the optical viewfinder, take note of the distance to your subject. As distance to the subject decreases, parallax (the difference between what you see in the viewfinder and the actual image recorded through the lens) increases. When accurate subject composition is required, use the LCD monitor to take your pictures.
● Parallax: see page 38.

5. Press the shutter release button to take the picture.

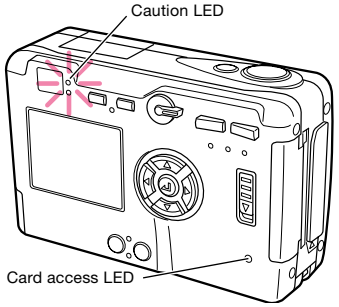
① Lightly depress the shutter button halfway to begin focusing; the focus mark will light and the electronic beep will be heard when focus is locked.



② Press down further on the shutter release button to take the picture; recording of the image begins when the electronic beep sound.



③ The caution LED and card access LED will light while the camera is writing image data to the memory card.



● Your next picture can be taken when the card access LED stops flashing.

Camera Functions

This section introduces various functions available during image recording. Use them to enhance the range of your camera work.

When shooting with the LCD monitor turned OFF:

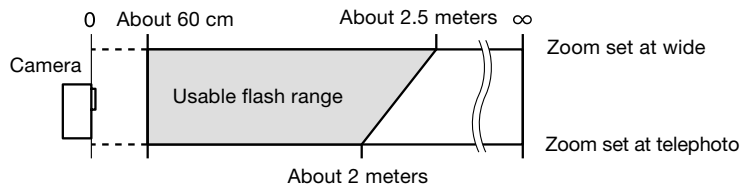
Note that the LCD monitor must be turned ON to set functions or to confirm previous settings.

Shooting a Picture Using the Flash

A variety of flash modes are available for different conditions.

<Usable Flash Range>

When sensitivity is normal



<Flash Modes>

When the "⚡" button is pressed, the display changes as follows:

[⚡ AUTO] Auto flash mode (default): The camera automatically determines lighting conditions and switches between flash and available-light exposure as needed.

[⚡ AUTO] Red-eye reduction auto-flash mode: The flash fires twice to help reduce the "red-eye" phenomenon*.

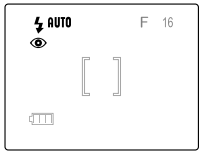
[⚡] Fill-in flash mode: In this mode, the flash fires regardless of surrounding light conditions. This mode provides fill-flash when shooting in a backlight environment or under strong sunlight when shadows are cast on the main subject.

[⚡] Flash-off mode: In this mode the flash does not fire. This mode is effective when shooting an evening sunset or to preserve indoor mood.

* "Red-eye" Phenomenon: This phenomenon may occur when using flash to photograph persons or pets under dark conditions. In some cases, the flash reflects against the retinas of the subject's eyes, causing the pupils to appear red in the photograph.

<Operation>

① Press the "⚡" button to select the desired flash mode.

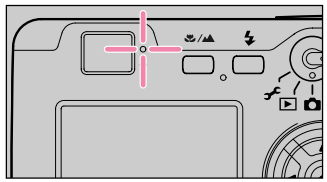


Display appearance when the "red-eye reduction" mode is selected.

② Press the shutter release button to take the picture.

<NOTE>

- If the caution LED flashes when the shutter release button is depressed halfway, it indicates that a slow shutter speed will be selected (low light conditions); in this case, use of a tripod is recommended to prevent camera shake.

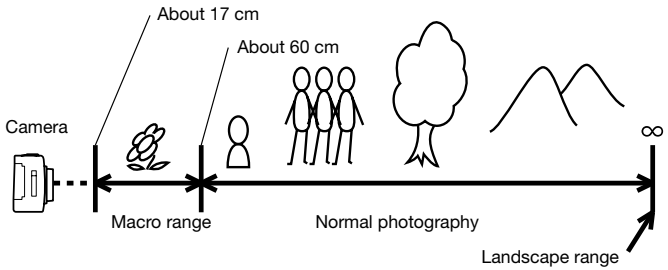


- After taking a picture using the flash, it will be recharged. The caution LED flashes while recharging. In the Flash-off mode, the flash never fire, therefore neither recharging of the flash nor flashing of the caution LED happens.

Macro and Landscape Photography

Use the macro and landscape shooting modes when photographing extremely close and distant subjects.

<Macro/Landscape Selection>



Each time the "🌷/▲" button is pressed, the mode changes alternately as follows:

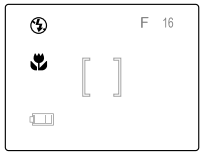
[No display] Normal mode

[⚡🌷] Macro mode — You can take a picture of a subject within an area between 17 cm and 60 cm from the camera.

[⚡▲] Landscape mode — Sharp images are produced of landscapes and other distant subjects.

<Operation>

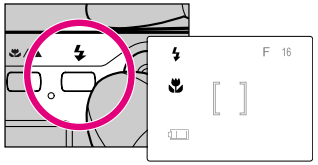
① Press the "/" button and select the desired mode.



Display appearance when the macro mode is selected.

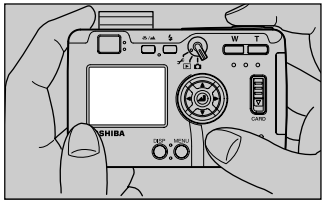
② Press the shutter release button to take the picture.

<Combined Modes>
When shooting in the macro mode, pressing the "" button will permit macro flash photography.



Take care, however, since very close subjects may receive excessive exposure. In this case, use the exposure compensation function to compensate the exposure.

<NOTE>
When shooting with the optical viewfinder (LCD monitor turned OFF), if the macro mode [] is selected, the LCD monitor will automatically turn ON.

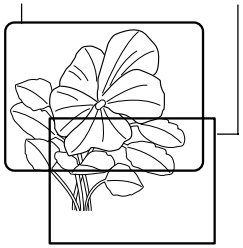


Since parallax occurs when using the optical viewfinder for macro photography, we recommend that you use the LCD monitor to compose your photographs when shooting extreme closeups.

* Parallax refers to the difference between what is seen in the viewfinder and the actual image recorded through the camera's taking lens.

View through optical viewfinder

Image actually recorded by camera



Using the Self-Timer

The self-timer is a convenient function when you wish to include yourself in your pictures, or to avoid camera shake when shooting closeups.

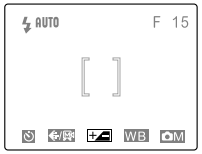
[10] : The shutter is released ten seconds after pressing the shutter release button. Use this setting when you need time to enter the picture composition yourself.

[2] : The shutter is released 2 seconds after pressing the shutter release button. Use this setting with a tripod during macro photography and during lengthy exposures to avoid camera shake.

* To avoid camera shake, mount the camera securely onto a steady tripod.

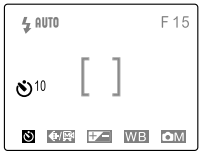
<Operation>

① Press the "**MENU**" button.



② Press the "◁" button to select [].

③ Press the "◢"button and select the desired self-timer delay time [10] or [2].



Display appearance when 10-second delay is selected.

④ Press the "**MENU**" button to turn off the MENU display.

⑤ With camera on tripod, compose your picture and when ready, press the shutter release button.

● Follow the same procedure to return to normal shooting mode.

Setting Image Quality (File Compression)

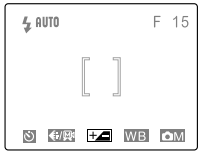
Use this function to change the amount of file compression and thus image quality, and when shooting movies.

Quality	Image Dimensions (Pixels)	File Size
[**N**] Normal	1024 × 768	About 280 KB
[**F**] Fine	2048 × 1536	About 1 MB
[**S**] Super Fine	2048 × 1536	About 2 MB
[ ] Movie	320 × 240	(Maximum 15 seconds)

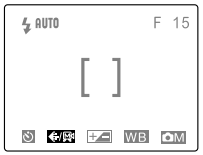
- Capacities are only given as general references. Actual file size will differ depending on the color and other characteristics of the image photographed.

<Operation>

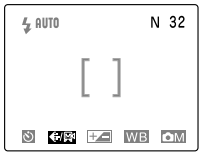
① Press the "**MENU**" button.



② Press the "◁" button to select [/].



③ Press the "◢" button to select the desired image quality or movie mode.



Display appearance when [**N**] (Normal) mode is selected.

④ Press the "**MENU**" button to turn off the menu display.

⑤ Press the shutter release button to take the picture.

<General Guidelines for Selecting Image Quality>

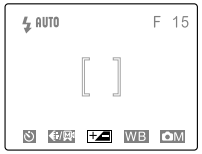
For high image quality, select [**S**] or [**F**] compression; when taking pictures for viewing on a television monitor, select [**F**] or [**N**], and when taking pictures which will be used in small size on the Internet or other computer application, use [**N**]. When images are to be enlarged, or when image quality is particularly important, select [**S**].

Exposure Compensation

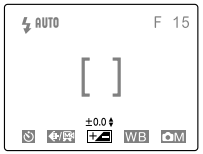
This function provides a range of compensation for exposure.

<Operation>

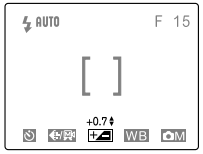
① Press the "**MENU**" button.



② Press the "◁" or "▷" button and select [+◢], then press the "◢" button to confirm the selection.



③ Press "△" or "▽" button to select the desired amount of exposure compensation, then press the "◢" button to confirm the selection.



Display appearance when +0.7 is selected.

④ Press the "**MENU**" button to turn off the menu display.

⑤ Press the shutter release button to take the picture.

+2.0
·
·
·
+0.7
△ ▽
+0.3
△ ▽
±0.0
△ ▽
–0.3
△ ▽
–0.7
△ ▽
–1.0
·
·
·
–2.0

Press the "△" button to increase the amount of exposure (+), and the "▽" button to decrease exposure (–).

- During flash photography, exposure compensation is limited to the range of ± 1.0 step, regardless of the value shown in the display.

White Balance

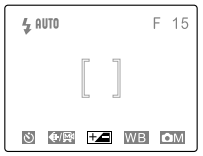
An image's color will change depending on the kind of light source present. Select the white balance as follows to compensate for different light sources.

[**AUTO**] (default)	In this mode, the white balance is set automatically by the camera.
[☀]	Bright sun
[💡]	Incandescent light bulbs (Tungsten)
[☁]	Cloudy weather
[▭]	Fluorescent light
[PS]	Use this setting when you wish to set the white balance manually. Instructions for setting the white balance can be found on page 44.

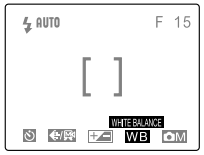
* The default setting is the Bright Sun.

<Operation>

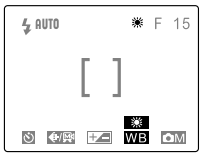
① Press the "**MENU**" button.



② Press the "▷" button and select [WB], then press the "◢" button to confirm the selection.

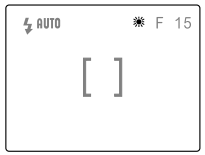


③ Press "◢" and select the mode which meets your purpose from [**AUTO**], [☀], [💡], [▭], or [PS]).



Display appearance when [☀] is selected.

④ Press "**MENU**" button to turn off the menu display.



⑤ Press the shutter release button to take the picture.

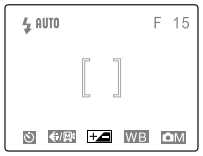
<Adjusting the Preset Value>

Use this function to manually set the white balance value. It allows you to select what part of the subject you wish to serve as the standard for "white" in the final image. For more exacting settings, use of a piece of white paper or cardboard is recommended.

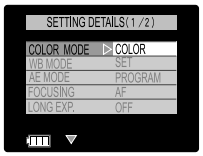
- Electronic zoom must be disabled when setting the preset white balance value.

<Operation>

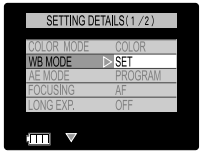
① Press "**MENU**" button.



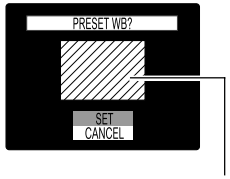
② Press the "▷" button and select [OM], then press the "◢" button to display [**SETTING DETAILS**] menu.



③ Press the "△" or "▽"button to select [**WB PRESET**], then press the "▷" or "◢" button.

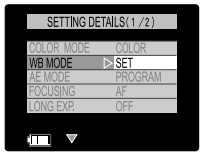


④ Point the camera at the white part of the subject or other material you wish to serve as the white standard in the image.

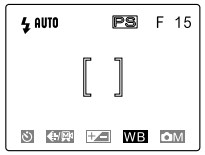


Make sure the white material fills up the entire screen as shown.

⑤ Press "◢" to finish the setting. [**SETTING DETAILS**] menu will appear again.



⑥ Press "**MENU**" button. [**SETTING DETAILS**] menu will disappear.



The screen displayed after preset.

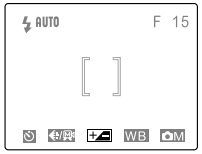
⑦ Following the Operation on pages 43, select [**PRESET**] and then press the shutter release button to take a picture.

Using Color Mode for B&W and Sepia Images

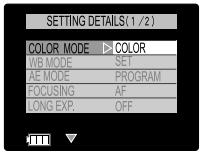
In addition to the normal color picture mode, you can also take pictures in black and white (B/W) or sepia tone (Sepia).

<Operation>

① Press the "**MENU**" button.



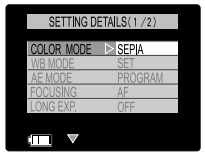
② Press the "▷" button to select [OM], then press the "◢" button to confirm the selection.



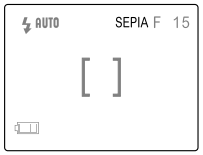
③ Select [**COLOR MODE**], then press the "▷" or "◢" button.

④ Press the "△" or "▽" button to select either [**SEPIA**] or [**B/W**] mode.

⑤ Press the "◁" or "◢" button.



⑥ Press the "**MENU**" button twice to turn off the menu display.



Display appearance when [**SEPIA**] mode is selected.

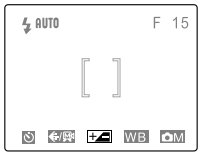
⑦ Press the shutter release button to take the picture.

Selecting the Aperture before Shooting (AE Mode)

By default, the camera uses a programmed automatic exposure mode which automatically sets both aperture and shutter speed in accordance with the available light. In the aperture-priority AE mode, you can manually set the aperture at either F2.8 or F9.6 (values at the wide-angle setting), and the camera will automatically set the shutter speed for the correct exposure at that aperture.

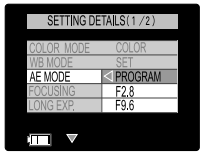
<Operation>

① Press the "**MENU**" button.

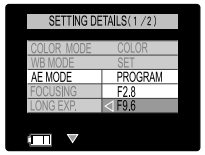


② Press the "▷" button to select [OM], then press the "◢" button to confirm the selection.

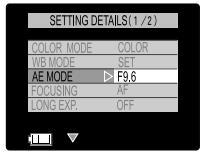
③ Press the "△" or "▽" button to select [**AE MODE**], then press the "▷" or "◢" button.



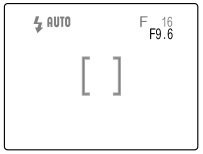
④ Press the "△" or "▽" button to select [**F9.6**] or [**F2.8**].



⑤ Press the "◁" or "◢" button.



⑥ Press the "**MENU**" button twice to turn off the menu display.



Display appearance when [**F9.6**] is selected.

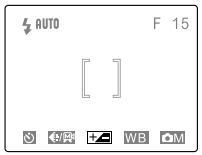
⑦ Press the shutter release button to take the picture.

Selecting the Focus Distance before Shooting

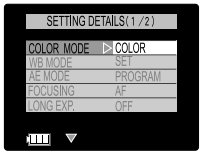
The camera is set by default to automatic focus (AF), but is can also be used with manual focus (MF) if desired. When MF is selected, a focusing scale is displayed on the screen; the user specifies the desired focusing distance.

<Operation>

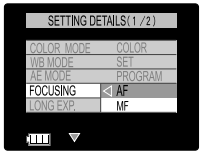
① Press the "**MENU**" button.



② Press the "▷" button to select [OM], then press the "◢" button to confirm the selection.



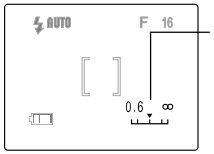
③ Press "△" or "▽" button to select [**FOCUSING**], then press the "▷" or "◢" button.



④ Press the "△" or "▽" button to select [**MF**] or [**AF**].

⑤ Press the "◁" or "◢" button.

⑥ Press the "**MENU**" button twice to turn off the menu display.



Focus gauge

Display appearance when [**MF**] is selected.

⑦ Press the "◁" or "▷" button to specify the desired shooting distance on the focusing scale, then press the shutter release button to take the picture.

- Accurate focusing may not be possible at subject distances of 0.6 m.

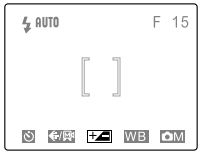
Shooting a Night Scene or the Inside of a Room (Long Exposure Mode)

By extending the shutter speed (the time the shutter remains open during an exposure), you can photograph darker subjects like a night or scene or a moody indoor scene with a special atmosphere. Long shutter speeds of 8, 4, and 2 seconds can be selected.

- To avoid camera shake, use of a tripod is recommended when using time exposures.

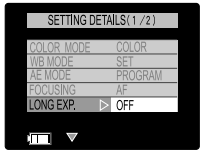
<Operation>

① Press the "**MENU**" button.

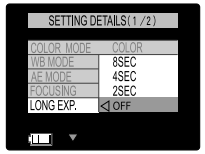


② Press the "▷" button to select [OM], then press the "◢" button to confirm the selection.

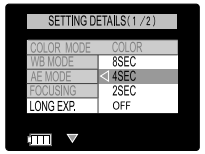
③ Press the "△" or "▽" button to select [**LONG EXP**], then press the "◁" or "◢" button.



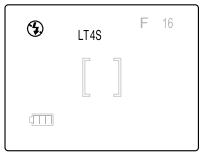
④ Press the "△" or "▽" button to select [**8 SEC**], [**4 SEC**], or [**2 SEC**].



⑤ Press the "◁" or "◢" button.



⑥ Press the "**MENU**" button twice to turn off the menu display.

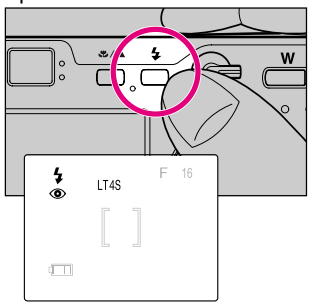


Display appearance when [**4 SEC**] is selected.

⑦ Press the shutter release button to take the picture.

● The exposure compensation [+/−] function is disabled when using long exposures.

<Other Applications>
By pressing the "⚡" button, the red-eye reduction fill-in flash mode can also be selected together with long exposures.



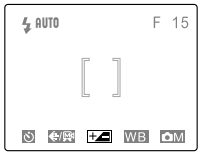
This flash mode is effective when shooting pictures of human subjects against a sunset or night scene.

Increasing Exposure Sensitivity to 2x, 4x

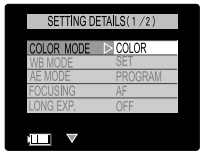
This camera is set by default to a standard sensitivity, but the sensitivity can be increased by a factor of 2x or 4x when desired. This allows you to fine-tune exposure for important scenes, or when lighting is somewhat insufficient.

<Operation>

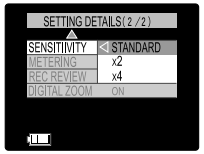
① Press the "**MENU**" button.



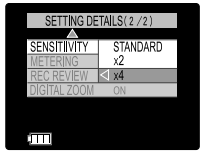
② Press the "▷" button to select [M], then press the "◢" button to confirm the selection.



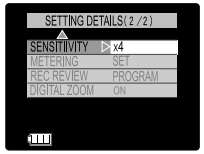
③ Press the "△" or "▽" button to select [**SENSITIVITY**], then press "▷" or "◢" button.



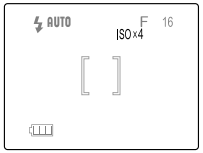
④ Press the "△" or "▽" button to select [**x4**], [**x2**], or [**STANDARD**].



⑤ Press the "◁" or "◢" button.



⑥ Press the "**MENU**" or "◢" button twice to turn off the menu display.



Display appearance when [**x4**] is selected.

⑦ Press the shutter release button to take the picture.

Selecting the Metering Mode

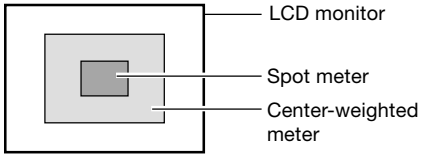
This function allows you to select from three types of light-meter operation. Select the mode that best suits your subject and type of photography.

[**EVALUATION**] Evaluative Metering (default):
The evaluative metering method divides the entire screen area into areas and evaluates the amount of light striking the screen area, setting the optimum exposure for the available lighting conditions. This mode provides correct exposures for general photography and a wide variety of conditions.

[**CENTER**] Center-Weighted Metering:
"□" The center of the screen (□) is given emphasis in calculating correct exposure. This mode is optimum when you wish to emphasize the lighting conditions in the center part of the screen.

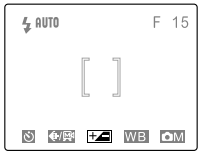
[**SPOT AREA**] Spot Metering:
"⊡" This mode calculates exposure based only on the light striking the small central spot (■). Use this mode when you wish to set the exposure based on the light striking a small part of the subject.

Guideline for Light-Metering

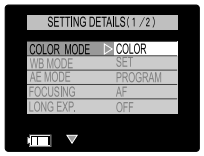


<Operation>

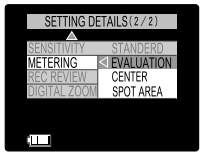
① Press the "**MENU**" button.



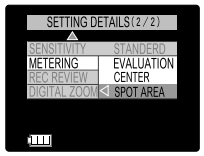
② Press the "▷" button to select [M], then press the "◢" button to confirm the selection.



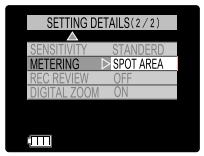
③ Press the "△" or "▽" button to select [**METERING**], then press the "◁" or "◢" button.



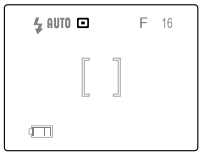
④ Press the "△" or "▽" button to select [**SPOT AREA**], [**CENTER**], or [**EVALUATION**].



⑤ Press the "◁" or "◢" button.



⑥ Press "**MENU**" button to turn off the menu display.



Display appearance when [**SPOT AREA**] is selected.

⑦ Press the shutter release button to take the picture.

Setting the REC Review

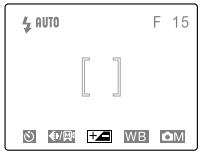
In [**REC REVIEW**] mode, you can display the picture for 2 seconds immediately after you have taken it.

Initial Setting : Press the shutter release button → The LCD monitor becomes dark → The viewfinder screen appears again

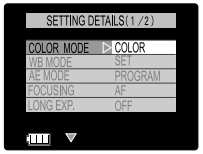
REC review mode : Press the shutter release button → The LCD monitor becomes dark → The picture you have just taken appears → The viewfinder screen appears again

<Operation>

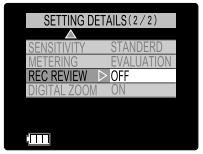
① Press the "**MENU**" button.



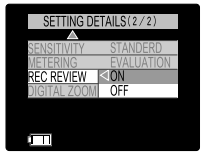
② Press the "▷" button to select [ ], then press the "◢" button.



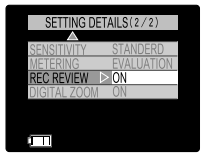
③ Press "△" or "▽" button to select [**REC REVIEW**], then press the "▷" or "◢" button.



④ Select [**OFF**] or [**ON**] using "△" or "▽" button.



⑤ Press "▷" or "◢" to finish the setting.



⑥ Press "**MENU**" button twice. [**SETTING DETALIS**] menu will disappear.

⑦ Press the shutter release button to take a picture.

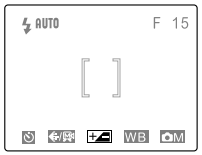
- In [**REC REVIEW**] mode, the interval between the time a picture had been taken and the next time you can take another picture will become longer.

Digital Zoom ON/OFF

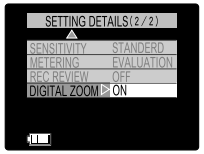
This function allows the digital zoom function to be set to ON or OFF. When ON, pressing the "**T**" button will first cause the lens to zoom to its maximum optical telephoto setting; when pressed again, the digital zoom function will operate to further extend the telephoto range (see page 28). When disabled, only the optical zoom function will operate.

<Operation>

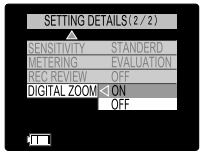
① Press the "**MENU**" button.



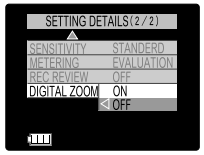
② Press the "△" or "▽" button to select [**DIGITAL ZOOM**].



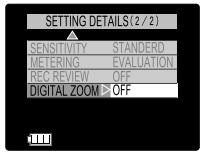
③ Press the "▷" or "◢" button.



④ Use the "△" or "▽" button to select [**OFF**] or [**ON**].



⑤ Press the "◁" button (or "◢" button) to complete the setting.



⑥ Press "**MENU**" button twice to turn off the menu display.

⑦ Press the shutter release button to take a picture.

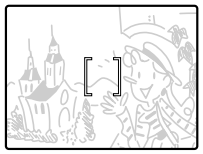
<Focus Lock>

Camera focus and exposure are measured and locked when the shutter is depressed halfway. If you find that your focus is occasionally incorrect, particularly when shooting subjects located at the edge of the screen, use this feature in conjunction with the exposure mode to produce better focus results.

<Operation>

① Point the center focus frame at the subject you wish to be in clear focus and depress the shutter button halfway. The focus will be locked on the central subject.

② While keeping the shutter release button depressed halfway, move the camera to compose the subject as desired, then press the shutter the rest of the way to take the picture.



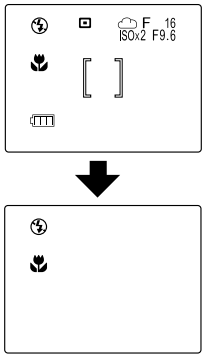
<Turning the Exposure Mode Symbols ON/OFF>

Certain exposure symbols on the LCD monitor can be temporarily turned off if desired to avoid cluttering the screen.

- The flash mode, macro/landscape mode, and self-timer mode symbols cannot be turned off.

<Example>

For example, when the camera is set to the exposure conditions and functions shown in the accompanying illustration, pressing the "△" or "▽" button will cause the symbols to disappear temporarily as shown.

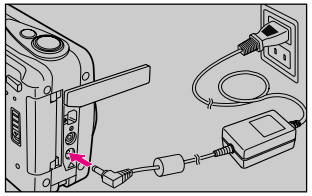


Press the "△" or "▽" button again to restore the symbols to the screen.

Image Playback Basics

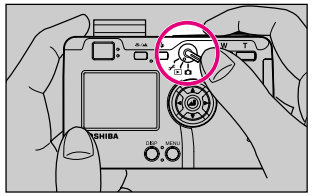
Displaying Images on the LCD Monitor

To prevent depletion of the battery, use the AC adapter when displaying images for an extended time.

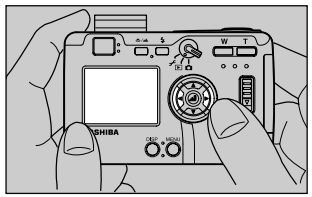


- Confirm that a memory card containing photographic images is loaded in the camera.

Set the mode select lever to "▶" and turn camera power ON.

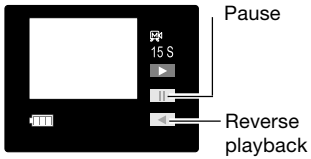


The image will be displayed on the LCD monitor. To display images in the order they were taken, press the "▷" button; to display images in the reverse order, press the "◁" button.

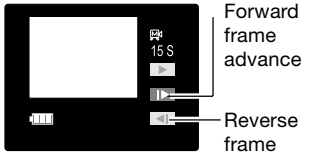


Playing Movies on the LCD Monitor

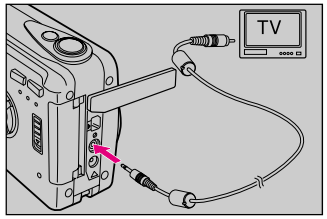
To play movies, press the "△" button and select [►], then begin the movie playback by pressing "◢".



Frame-by-frame playback can be used during the pause mode.



<Other Applications>
A television screen can be used to preview your photographs.



- When connected to a television in this way, the LCD monitor turns off automatically.

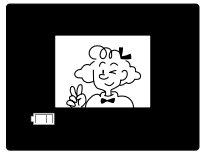
Advanced Image Playback and Delete Functions

"Thumbnail" Picture Review in Forward/Reverse Direction

Thumbnail images of your pictures can be viewed quickly in succession in either the forward or reverse direction.
"Thumbnails" are reduced-size versions of the original images in your camera, and are displayed as follows:

① Set the mode select lever to "▶", then hold the "◁" or "▷" button depressed.

② In a few seconds, thumbnail images of your recorded pictures will begin appearing in succession.



Closeup Image Playback (2x)

Images can be enlarged to twice their original size during playback to focus on certain features when desired.

<Operation>

① Display the image you wish to enlarge.

② Press the "**T**" button.

The central part of the photograph will be enlarged by 2x, and "**x2**" will be displayed on the upper left corner of the screen.

③ Use the "△", "▽", "◁", and "▷" buttons to move the screen to the part of the image you wish to view.

- To change to a different photograph, first press the "**W**" button to return to the original image size.

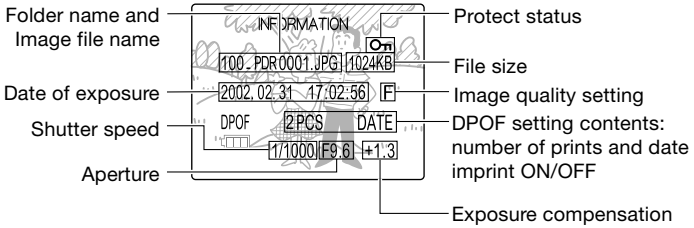
Displaying Exposure Information

Information regarding the exposure conditions and functions set at time of exposure can be displayed.

<Operation>

① Select and display the image whose information you wish to see.

② Press the "△" button.



③ Press the "△" button again to turn off the information display.

- The "▽" button can also be used to select the information display.

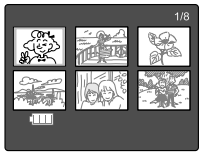
Multiple Image Display (Index Display)

This function allows you to display six small images at a time on the LCD monitor, providing a quick way to find and index your pictures. This feature can be used in conjunction with other functions on the playback menu.

<Operation>

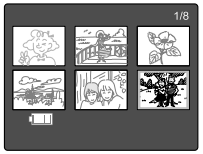
① Press the "**MENU**" button.

② Press the "◢" button.



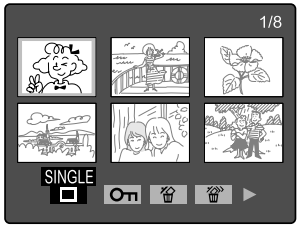
Multiple image playback.

③ Use the "△", "▽", "◁", and "▷" buttons to move to the desired picture.



④ Press the "◢" button to display the selected picture normally.

<Other Applications>
During use of multiple image display, pressing the "**MENU**" button will allow simultaneous use of other playback functions (see page 63-66, 68-73). Use the "▷" and "◁" buttons to select the desired playback function.



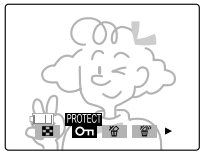
- Individual images cannot be selected when the menu is displayed. To select an image, press the "**MENU**" button to turn off the menu first.
- The image rotation function cannot be used together with multiple image display.

Erasure Prevention (Image Protect Function)

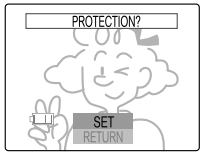
This function can be used to place a protective lock on individual pictures, preventing the inadvertent erasure of important images on your memory cards. This function is particularly convenient when used when erasing multiple images, or using the all-erase function (page 65).

<Operation>

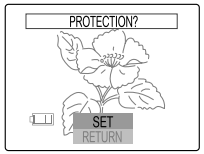
① Press the "**MENU**" button. Press the "▷" or "◁" button to select [**PROTECT**].



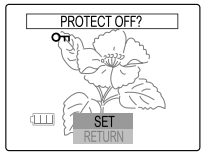
② Press the "◢" button.



③ Press the "◁" or "▷" button to select the picture you wish to protect.



④ Press the "◢" button to confirm the selection and complete the operation. The lock mark [⊶] will be displayed on the screen.



- To unprotect an image, press "◢" again. The lock mark [⊶] will disappear from the screen.

To continue placing protection on other images, repeat steps ③-④.

To cancel or interrupt the function, select [**RETURN**], followed by the "◢" button, or else press the "**MENU**" button.

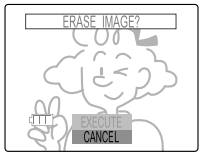
- After setting the protect function, you can confirm your selections by displaying the information screen (page 61), or by using the multiple image display function (page 62) and looking for the lock mark [⊶] on the image.

Erasing Individual Images

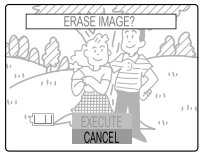
<Operation>

① Press the "**MENU**" button. Press the "▷" or "◁" button to select [**ERASE**].

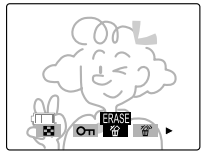
② Press the "◢" button.



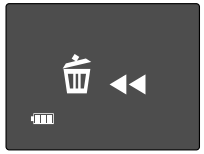
③ Press the "◁" or "▷" button to select the picture you wish to erase.



④ Press the "△" button to select [**EXECUTE**].



⑤ Press the "◢" button to confirm the selection and erase the image.



- When an image is erased, the next image on the card will be displayed automatically.

To erase other images, repeat steps ③-⑤.

To cancel or interrupt the function, select [**CANCEL**], followed by the "◢" button, or else press the "**MENU**" button.

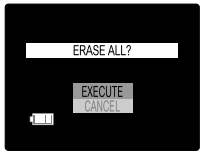
Erasing All Images

<Operation>

① Press the "**MENU**" button. Press the "▷" or "◁" button to select [**ALL ERASE**].

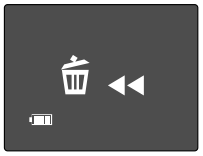
② Press the "◢" button.

③ Press the "△" button to select [**EXECUTE**].



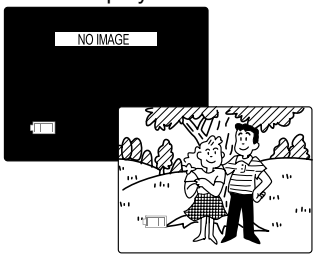
- To cancel the operation, select [**CANCEL**], followed by the "◢" button.

④ Press the "◢" button to confirm the selection and erase all images on the card.



Display during the all-erase operation.

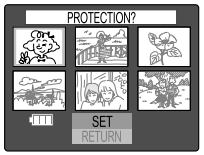
⑤ When all images have been erased, the message [**NO IMAGE**] will be displayed; if a protected image is present, it will be displayed.



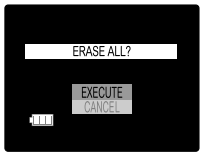
<To erase multiple images>

Simultaneous use of the all-erase function and image protect function is a convenient way to quickly erase multiple images from a memory card, while leaving other images on the card.
Example: Out of 30 images on a memory card, you wish to leave 5 while erasing all the others.

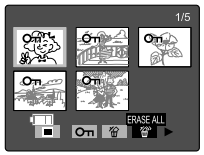
- Multiple image display is shown.



First, use the "image protect" function to prevent the erasure of the five desired images.



Next, use the "all erase" function.



Only the five protected images remain; all others are erased from the memory card.

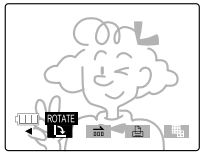
Rotating Images

Images can be rotated 90° to either right or left.

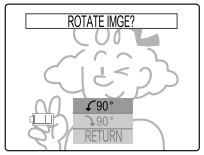
- This function cannot be used during multiple image display.

<Operation>

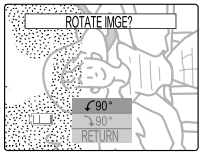
① Press the "**MENU**" button. Press the "▷" or "◁" button to select [**ROTATE**].



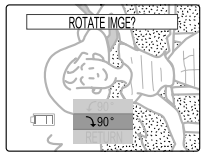
② Press the "⏎" button.



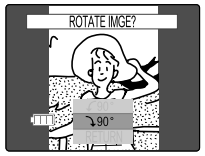
③ Press the "◁" or "▷" button to select the picture you wish to rotate.



④ Press the "△" or "▽" button to select [↷ **90**°] or [↶ **90**°]



⑤ Press the "⏎" button to confirm the selection and rotate the image.



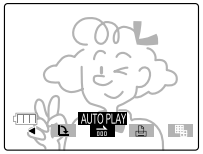
- To cancel or end the operation, select [**RETURN**], followed by "⏎", or press the "**MENU**" button.

Automatic Playback (Slide Show)

This function plays back images automatically at set intervals.

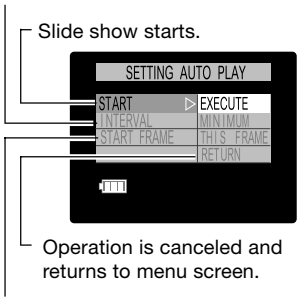
<Operation>

① Press the "**MENU**" button. Press the "▷" or "◁" button to select [**AUTO PLAY**].



② Press the "⏎" button. Use the "△", ▽", ◁", and ▷" buttons to select the interval and start frame.

Select the playback interval from [**MINIMUM**], [**10 SEC**], [**15 SEC**] or [**30 SEC**].



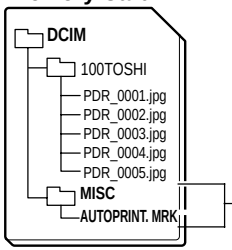
Selects the start frame.
[**THIS FRAME**]: Slide show will begin from the image frame displayed immediately before this operation was begun.
[**FIRST FRAME**]: Slide show will begin from the first image recorded on the memory card.

③ With [**START**] selected, press "▷" or the "⏎" button to begin the slide show playback. Images will be played back in order, beginning with the selected start frame.

④ To end the slide show, press the "**MENU**" button.

Digital Print Order Format (DPOF) Setting

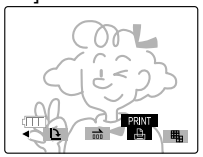
Digital Print Order Format (DPOF) is a standard used when printing out digital photographs on a home printer or by a commercial printing service. The function is a simple way of specifying the number of copies to be printed, the need for date imprinting, and so on. Before using this function, confirm that your home photo printer or commercial photo printing service supports DPOF. When printing on a home printer, be sure to read and follow the operating instructions for your home printer.



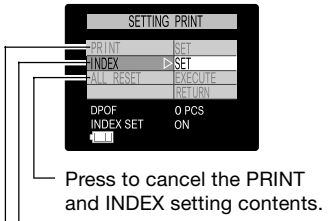
<Operation>

① Display the image you wish to set the DPOF for.

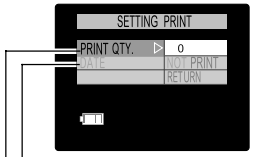
② Press the "**MENU**" button. Use the "▷" button to select [**PRINT**].



③ Press the "⏎" button.



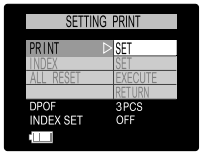
④ Press the "▷" button to display the print submenu.



Select date imprint ON/OFF.

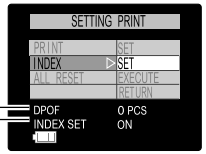
Specify number of prints.

⑤ After completing all settings, select [**RETURN**] and press the "⏎" button.



⑥ To print an index sheet, press [**INDEX**], followed by "▷", [**SET UP INDEX PRINT**], and the "⏎" button.

⑦ Select [**RETURN**] and press the "⏎" button to complete settings.



Index print ON/OFF

Total number of prints selected

- To confirm the number of prints set for each individual picture, use the information screen (page 61).

<NOTE>

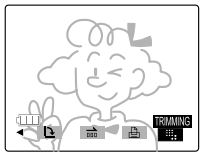
- Since DPOF data is preserved as part of the overall memory of the memory card, setting may not be possible if the memory card has insufficient remaining space.
- Do not use a personal computer to delete or modify DPOF image data on a memory card.
- When submitting a memory card to a commercial photo printing service for printing, first use the information screen (page 61) to confirm the number of prints desired for each image.
- Any pictures taken after setting the DPOF for an index print will not be included on the index print. To include the new pictures, set the index print option once again.

Adjusting the Image Size (Trimming)

You can change the size of the picture you have taken using this camera.

<Operation>

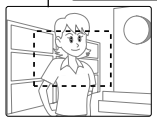
① Select the picture you want to change the size using "◁" or "▷", then press the "**MENU**" button. Then select "▦" using the "◁" or "▷" button and press "⏎."



② Select [**EXECUTE TRIMMING**]. Press "⏎."

③ [**SELECT IMAGE AREA**] screen will be displayed.

The center of the image will be displayed here.

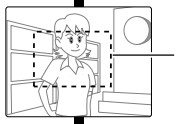


The area to be trimmed.

④ Select the area to be trimmed by pressing "**W**" or "**T**".

The area to be trimmed.

T

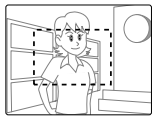


The area to be trimmed.

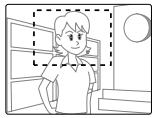
W

Whole area will be trimmed.

⑤ You can move the area using "△/▽/◁/▷" button.



Press the "△" button.



- You can not move the area when you are going to trim the whole area.

⑥ When you finish to select the area, press the "⏎" button.

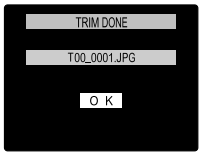
⑦ Set [**IMAGE SIZE**].

The size of a single picture will be approximately between 10 KB and 20 KB.

The size of a single picture will be approximately between 4 KB and 7 KB.

Select the image size using "◁" or "▷" then press "⏎."

⑧ The file name will be displayed.



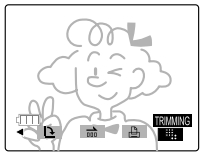
⑨ Press "**MENU**" or "⏎" to go back to the image playback.

Viewing and Erasing the Trimmed Image

You can view or erase the trimmed image.

<Operation>

① Press "**MENU**" button. Select "▦" using the "◁" or "▷" button, then press "⏎."



② Select [**TRIMMED IMAGE PLAYBACK**], then press "⏎."

③ The trimmed image will be displayed.

You can select other pictures using "◁" or "▷."

<To Erase a Picture>

① Select the picture you want to erase using "◁" or "▷," and highlight "🗑" using "△", then press "⏎."

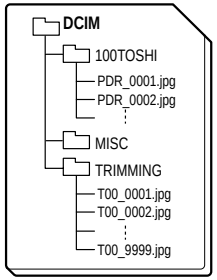
② Press the "**MENU**" button to go back to the playback screen.

You can view the trimmed image on a PC.

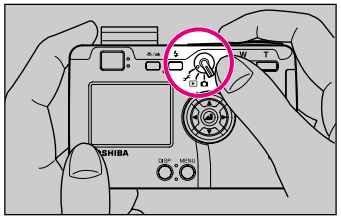
① In Windows, click the "**Removable Disk**" icon in "**My Computer**." In Macintosh, click "**Untitled folder**" icon on **Desktop** (see page 97).

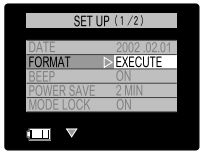
② The trimmed image is recorded in the following location. Open the "**TRIMMING**" folder and double-click the name of the file you want to see.

Memory Card



Camera Setup Options





1. Set the mode select lever to "🔧 **(set up)**", and turn camera power ON.
2. The setup menu will be displayed.

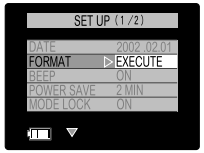
Formatting Memory Cards

Formatting a memory card prepares the card for use, and erases all previously taken images and other data. Care should be taken when using the formatting function, since reformatting a memory card will also result in the loss of "protected" images.

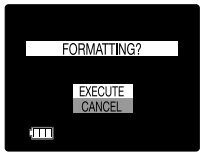
● When SD Memory Cards are set to write protect, formatting is not possible.

<Operation>

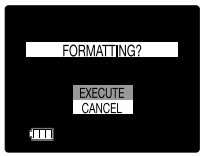
① Press the "▽" button and select [**FORMAT**].



② Press the "▷" or "◢" button.



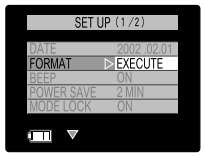
③ Press the "△" button to select [**EXECUTE**].



④ Press the "◢" button to begin formatting.

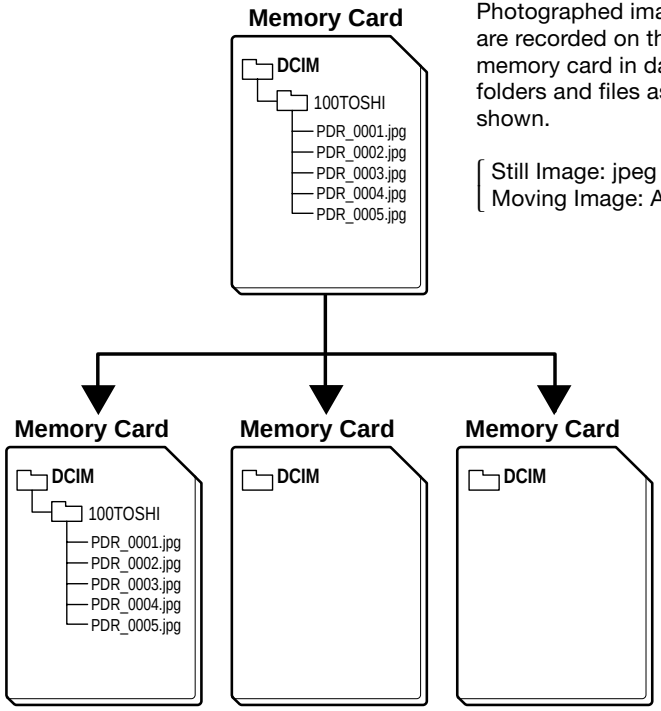
● Formatting cannot be canceled after it begins.

⑤ The setup function menu will appear to indicate completion of formatting.



<The Difference between “Erasing” and “Formatting”>

Image erasing and memory card formatting functions differ in the following ways:



Photographed images are recorded on the memory card in data folders and files as shown.

[Still Image: jpeg
Moving Image: AVI]

Single-Picture Erase

- When the single file PDR_0001.jpg is erased.

All Erase

Format

- All image files and folder structures are erased. New folders must be created.

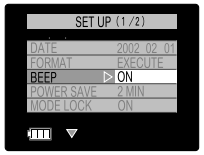
Turning the Electronic Tone ON/OFF

The electronic beeping tone heard when the shutter button is pressed can be set to ON or OFF as desired.

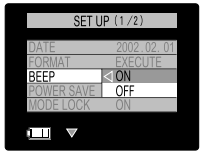
- Warning beeps and the operating sound made when power is turned ON cannot be disabled.

<Operation>

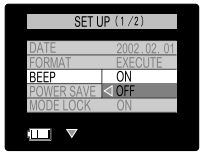
① Press the “△” or “▽” button to select [**BEEP**].



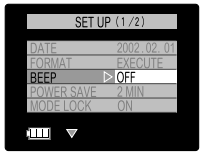
② Press the “▷” or “◢” button.



③ Using the “△” or “▽” button, set the beep to [**OFF**] or [**ON**].



④ Press the “◁” button (or “◢” button) to complete the setting.



Selecting Auto Power-Off (Power-Save Function)

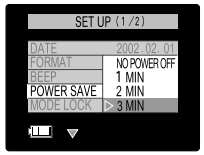
When this function is selected, the camera's power will automatically turn off if the camera is inactive for a set period of time. The auto power-OFF function can be set to turn the camera off after 3 minutes, 2 minutes, or 1 minute of inactivity, or not at all (power stays on indefinitely).

<Operation>

① Press the "△" or "▽" button to select [**POWER SAVE**].

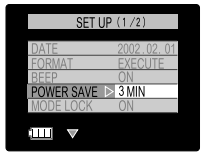
② Press the "▷" or "⏎" button.

③ Using the "△" or "▽" button, select [**3 MIN**], [**2 MIN**], [**1 MIN**] or [**NO PWR OFF**].



- Setting the function to [**NO PWR OFF**] disables the auto-off function, and the camera will not turn off by itself.

④ Press the "◁" button (or "⏎" button) to complete the setting.

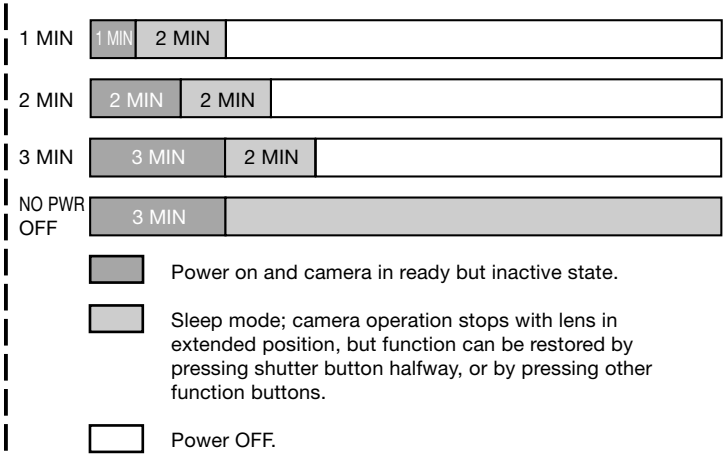


<Note regarding camera use in the "📷" mode:>

When using the camera in the "📷" mode, the auto power-off setting will cause the camera to respond as noted:

1. When [POWER SAVE] is set to [1 MIN], [2 MIN] or [3 MIN]:
With this setting, if the camera is left inactive for more than the specified period of time, it will automatically enter the sleep mode for two minutes, after which the power will turn off.
During the two-minute power-save sleep period, the camera can be quickly restored to its original shooting mode by depressing the shutter button halfway, or by pressing one of the other function buttons. After the two minutes have expired, the camera's power will automatically turn off.

2. When [POWER SAVE] is set to [NO PWR OFF]:
With this setting, when the camera is left inactive for more than six minutes, it automatically enters the sleep mode. (In this case, the camera remains in the sleep mode indefinitely, without the power turning off.) To restore the camera to its normal shooting mode, depress the shutter button halfway, or press one of the other function buttons.

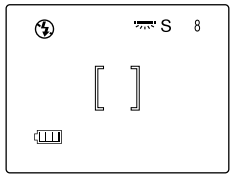


Mode Lock ON/OFF

When enabled, this function preserves the camera mode functions set when the camera power is turned OFF. As a result, the same mode settings are restored when the power is next turned ON. When this function is disabled, any mode functions previously set will be returned to their default values when the power is turned OFF and then turned ON again.

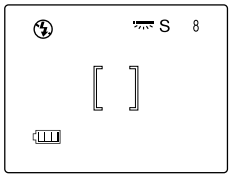
<Difference in Displays when Mode Lock is ON and OFF>

Before power is turned OFF:

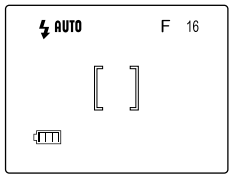


<Setting example>
Flash: No Flash
Image Quality: Super Fine
White Balance mode: Fluorescent

After power is turned ON:



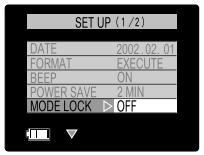
When mode lock is enabled, the function modes set when the camera was turned off are restored when the camera is turned on again.



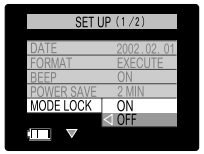
When mode lock is disabled, all function modes are returned to their default values when the power is turned on again. (For default values, see page 87, <Functions and Contents of Default Values>.)

<Operation>

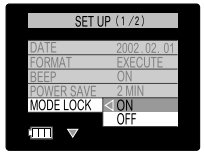
① Press the "▽" button to select [**MODE LOCK**].



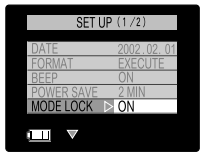
② Press the "▷" or "◢" button.



③ Press the "▽" button and select either [**ON**] or [**OFF**].



④ Press the "◁" button (or "◢" button) to complete the setting.



Selecting the Display Language

The camera's display language can be set to one of the following languages: English, Japanese, French, German, Spanish.

<Operation>

① Press the "△" or "▽" button to select [言語 **LANGUAGE**].

② Press the "▷" (or "◢") button.

③ Select [**ENGLISH**] (or either [日本語] (Japanese), [**FRANÇAIS**], [**DEUTSCH**], or [**ESPAÑOL**]) using "△" or "▽."

④ Press the "◁" button (or "◢" button) to complete the setting.

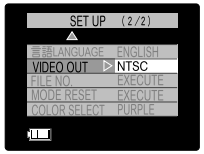
Selecting the Video Output Mode

When traveling overseas, differences in television standards may make it impossible to view pictures normally on local television monitors. In this case, use this function to select the television standard of the locality in which you are using the camera.

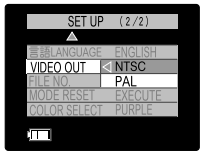
● The camera's default value is NTSC.

<Operation>

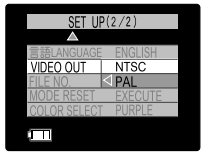
① Press the "△" or "▽" button to select [**VIDEO OUT**].



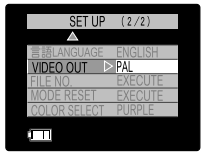
② Press the "▷" (or "◢") button.



③ Use either the "△" or "▽" button to select [**PAL**] or [**NTSC**]



④ Press the "◁" button (or "◢" button) to complete the setting.

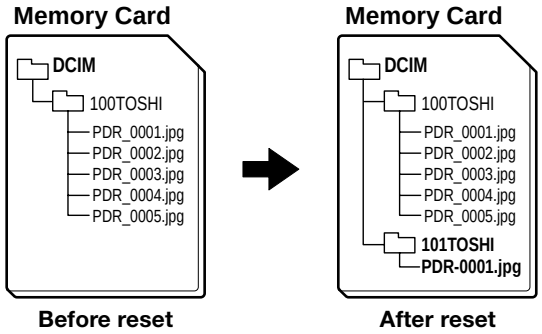


Creating a New Folder on the Memory Card (Resetting File Numbers)

This function is used to create a new folder on the memory card for the storage of new image data. When new images are added to the folder, their file names will begin again from 0001. This is convenient when you wish to keep photographs filed separately for separate shooting scenes, etc.

<Recording Status Before and After Resetting File Numbers>

Before reset:
Images are stored as files named with consecutive numbers.
After reset:
A new folder is created, and subsequent photographs are stored there, beginning again with the file name PDR_0001.jpg.

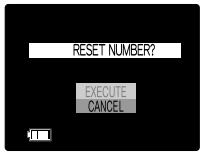


Before reset **After reset**

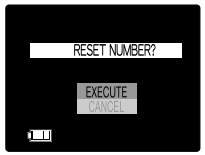
<Operation>

① Press the "△" or "▽" button to select [**FILE NO.**].

② Press the "▷" (or "◢") button.



③ Press the "△" button to select [**EXECUTE**].



④ Press the "◢" button to complete the setting.

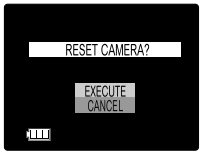
Returning Settings to their Default Values

This function is used to restore the default values of recording mode settings made with mode lock ON, and setup mode values (excluding [**DATE**], [**VIDEO OUT**] and [言語 **LANGUAGE**]).

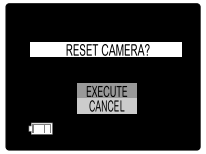
<Operation>

① Press the "△" or "▽" button to select [**MODE RESET**].

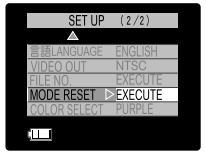
② Press the "▷" (or "◢") button.



③ Press the "△" or "▽" button to select [**EXECUTE**].



④ Press the "◢" button to complete the setting.



<Functions and Contents of Default Values>

"📷" Recording Mode:

Flash:	**Automatic flash**
Macro/Landscape:	**OFF**
Self-Timer:	**OFF**
Image quality:	**F**
Exposure Compensation:	**OFF**
White balance mode:	**AUTO**
Color mode:	**COLOR**
AE mode:	**PROGRAM**
Focusing:	**AF (auto focus)**
Long Exposure:	**OFF**
Sensitivity:	**STANDARD**
Metering:	**EVALUATION**
REC Review:	**OFF**
Digital zoom:	**ON**

"🔧 **(setup)**" Mode:

Beep:	**ON**
Power Save:	**2 MIN**
Mode lock:	**ON**
Display Language:	**ENGLISH**
Color select:	**PURPLE**

"📷"/"▶" Modes:

BRIGHTNESS CONTROL:	**Normal**

Changing the Display Color for the Setting Buttons

In this mode, you can change the color of the active Setting buttons (menus). Choose the color you can easily see from [**PURPLE**], [**RED**], [**YELLOW**], or [**BLUE**].

<Operation>

① Press the "△" or "▽" button to select [**COLOR SELECT**], then press the "▷" (or "◢") button.

② Select [**PURPLE**] (or [**RED**], [**YELLOW**], [**BLUE**]) using "△" or "▽."

③ Press the "◁" or "◢" button to finish the setting.

Transferring Images to a Personal Computer

By installing the PC interface software and drivers to your computer, you will be able to:

- Capture images
  You can capture images photographed by Toshiba Digital Still Camera to your computer. An accessory USB cable is available for connecting the camera with your computer.
- Edit static images
  By using Image Expert, you can edit captured static images and output to a printer connected with your computer.
- Replay movies
  You can replay captured movies.
- Save movies
  You can save captured or edited movies to your computer.

<Software and Hardware Requirements>

Recommended Windows Environment

- Operating System : Microsoft Windows 98, 98SE, ME, 2000 Professional, XP Home Edition, or XP Professional has to be preinstalled.
  If the operating system you are using is one of the above, but is updated from the previous version, the correct behavior is not guaranteed.
- Memory : 64 MB or more
- CPU : MMX Pentium 200 MHz or above
- a USB port required
- a CD-ROM drive required
- Required hard disk space: 20 MB or more

Recommended Macintosh Environment

- Mac OS version 8.6 to 9.1 or OS X (excluding the OS server) have to be preinstalled.
  If the operating system you are using is one of the above, but is updated from the previous version, the correct behavior is not guaranteed.
- a USB port required
- Hard disk space required for installation: 8 MB
- Hard disk space required for operation: 60 MB

CD-ROM Software:

You can install the following software from the attached CD-ROM.

- Image Expert
  Use to edit or print captured images and replay captured movies. For more information, see the manual included with the attached CD-ROM.
- USB driver
  Install this driver for capturing images from the camera via the USB connector on your PC.
- Quick Time
  Necessary to replay captured images. See the attached CD-ROM for more information.
  Install this software following installation of Image Expert.
- Arcsoft PhotoBase for Palm
  Use to view images in a memory card for the camera on Palm OS PDA. For more information, see page 99.

<Caution>

Make sure of the checkpoints below before proceeding:

- your PC has a CD-ROM driver
- your PC has a USB port
- you have an appropriate graphic software.

Installing the USB Driver

You have to install the USB driver to your PC before connecting the camera to it. The USB driver is included in the CD-ROM which is shipped with the camera.

*** Connect the PC and the camera with the USB cable after you have finished to install the USB driver. Otherwise, you cannot install the USB driver correctly.**

When you are using Windows PC:

<To install the driver>

① Turn on the PC and start Windows.

② Insert the CD-ROM shipped with the camera into the CD-ROM drive on your PC.

③ Select “English”.

④ Click “Install drivers”.
Follow the display instructions to proceed with installation.

⑤ When “InstallShield Wizard Completed” message appears, click “Restart now” to restart your computer.

To install the USB driver to Windows XP

- When you connect the USB cable to the USB port just after you have completed the installation of the USB driver, "Found New Hardware Wizard" will open. Click [Next]. "Hardware Installation" screen will open.
  Click [Continue].
  This screen will be shown only after you have connected the USB device to the USB port for the first time; It will never be open after the second time.

When you are using Macintosh:

You need to install the driver only if you are using Mac OS 8.6. When you are using Mac OS 9.0 or later and OS X, you can use the USB feature without installing the driver.

*** Connect the USB cable after you have completed the installation of the USB driver. Otherwise, you cannot install the driver.**

<To install the driver for Mac OS 8.6>

① Turn on the PC and start Macintosh.

② Insert the CD-ROM shipped with the camera into the CD-ROM drive on your PC.

③ Double-click the CD-ROM icon displayed on the screen to open the CD-ROM window.

④ Double-click the [**DRIVER**] folder to open it in a window.

⑤ Double-click the [**UDO (E)**] folder to open it in another window, then copy the following files to the system folder:

- UDO-USB Storage Driver
- UDO-USB Storage Shim (E)

⑥ After the copy completes, reboot the PC.

Now, you have completed the installation of the driver.

- For information about how to connect the USB cable to your computer, see “Connecting the USB cable to your PC.”

Installing the image software

<Installing Image Expert (Windows)>

① Insert the attached CD-ROM into the CD-ROM drive.

② Select “English”.

③ Click “Install Image Expert”.
Follow the display instructions to proceed with setup.
Quick Time will be installed, following completion of Image Expert installation.

● See Page 91 for Quick Time.

<Installing Image Expert (Macintosh)>

① Insert the attached CD-ROM into the CD-ROM drive.

② Click “Install Image Expert”.
Follow the display instructions to proceed with setup.
Quick Time will be installed, following completion of Image Expert installation.

③ Select “English”.

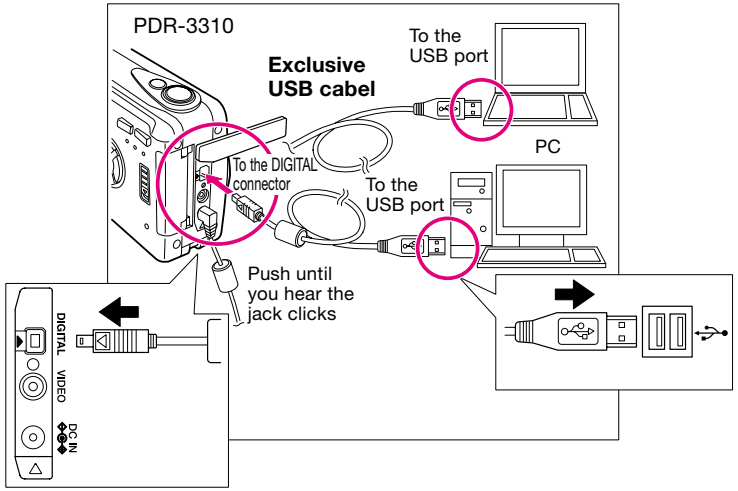
● See Page 91 for Quick Time.

Connecting the USB Cable to your PC

You need to use the exclusive USB cable to connect TOSHIBA PDR-3310 to your PC.

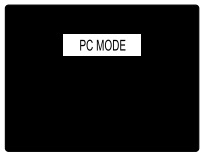
<Caution>

Make sure the sizes of the USB jacks. The smaller jack will be inserted into the camera, and the bigger one will be inserted into the PC.



Once you connect the USB cable to the camera, [**PC MODE**] will appear on the LCD screen; then you will be able to work on your PC.

● At this time, the self-timer LED flashes.



* Install the USB driver correctly. See pages 92 and 93 "Installing the USB Driver" for the instructions how to install the USB driver.

* The card access LED flashes while connecting to the PC and viewing or copying the image. Do not disconnect the USB cable nor turn off the power of the PC while the light flashes.

<How to disconnect the USB cable>

To disconnect the USB cable from the PC, follow the instructions below:

For Windows Me users:
① Double-click the "**Unplug or Eject Hardware**" icon on the task bar at the lower right corner of the desktop.
② Select [**USB Disk**], then click [**Stop**].
③ Select [**USB Disk**], then click [**OK**].
④ Click [**OK**] when a message appears
⑤ Disconnect the USB cable from the PC and the camera.

For Windows 2000/XP users:
① Double-click the "**Unplug or Eject Hardware**" icon on the task bar at the lower right corner of the desktop.
② Select [**Digital Camera USB Device 1**], then click [**Stop**].
③ Select [**Digital Camera USB Device 1**], then click [**OK**].
④ When the message "**Removing Safely**" appears, click [**OK**].
⑤ Disconnect the USB cable from the PC and the camera.

For Windows 98 users:
Turn off the power of the camera, then disconnect the USB cable.

On a Macintosh computer:
Click and drag the [**Untitled folder**] folder to the garbage can. When a message "**Removing safely**" appears, disconnect the USB cable from the computer.

Viewing the Images on your PC

On a Windows computer:

Make sure that:

The software for viewing the images has already been installed on your PC (to replay the moving images, you need to install QuickTime 4.1 or later), and The memory card has already been inserted into the camera.

<Operation>

① Insert the memory card into the camera.
② Connect the camera to AC adaptor, then turn the power on.
③ Connect the camera to the PC using the exclusive USB cable ([**PC MODE**] appears on the LCD monitor).
④ [**Removable Disk**] icon appears in [**My Computer**] window. Double-click the icon to open the [**Removable Disk**] window.
⑤ Open [**XXXTOSHI**] or [**TRIMMING**] folder in DCIM, then select and double-click the image file you want to view.

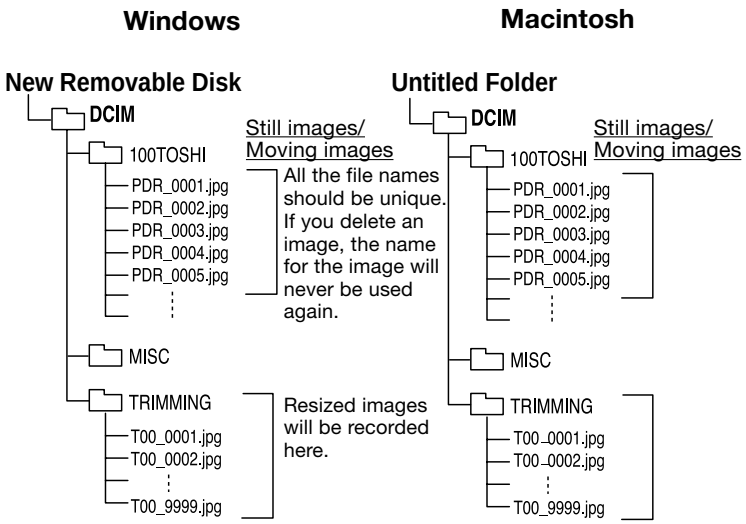
On a Macintosh computer:

Make sure that:

The software for viewing the images has already been installed on your PC (to replay the moving images, you need to install QuickTime 4.1 or later), and The memory card has already been inserted into the camera.

<Operation>

① Insert the memory card into the camera.
② Connect the camera to AC adaptor, then turn the power on.
③ onnect the camera to the PC using the exclusive USB cable ([**PC MODE**] appears on the LCD monitor).
④ [**Untitled folder**] icon appears on the [**Desktop**]. Double-click the icon to open it.
⑤ pen [**XXXTOSHI**] or [**TRIMMING**] folder in DCIM, then select and double-click the image file you want to view.



<Communicating with the PC>

Even though you resume your PC from the suspend or sleep mode, you may not be able to resume the communication.

<Notes>

- When you need to modify an image, such as resizing or rotating, first copy the original image to your PC, then edit the copied image. DO NOT modify the original. Modifying directly the data stored in the memory card will cause a problem that you cannot view the image on the camera.
- DO NOT format the memory card using a PC.
- DO NOT delete or move image data directly from the memory card to a PC. If you want to delete any image data from the memory card, use the DELETE command on the camera.

<You can...>

You can view the still images taken by TOSHIBA PDR-3310 on a PDA with Palm OS 4.0.

÷ To see the still images on your PDA, You need to install Arcsoft PhotoBase for Palm from the CD-ROM came along with the camera to the PDA.

<To install Arcsoft PhotoBase for Palm>

First, make sure that Plam Desktop Desktop has already been installed to your PDA.

For Windows users: Open Palm folder from the CD-ROM and double-click Setup.exe.

The application will be copied into Add-on folder in Palm Desktop. Follow the application install methods for your Palm and install Arcsoft PhotoBase for Palm.

For Macintosh users: Open Palm folder from the CD-ROM and copy [**Photobase.prc**] to [**Extra**] folder in Palm folder on your Macintosh. Follow the application install methods for your Palm and install Arcsoft PhotoBase for Palm.

<To use Arcsoft PhotoBase>

Insert the memory card which contains the data of the still images taken by the camera into the PDA's memory card slot.

Open Arcsoft PhotoBase, select the memory card, then select the image file you want to view from the card.

* The SD logo is a registered trademark.
* Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and/or other countries.
* Macintosh, Mac OS, QuickTime, and the QuickTime logo are registered trademarks of Apple Computer, Inc.
* All brand and product names are the registered trademarks or trademarks of their respective owners.

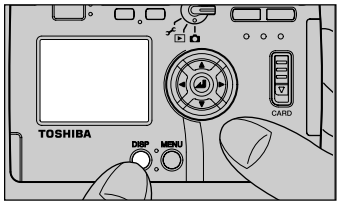
PRINT Image Matching

* PPRINT Image Matching is a term for the print command that is embedded in header file of the image created by Digital Camera. It contains color setting and image parameter information.

Other Information

LCD Monitor Operations

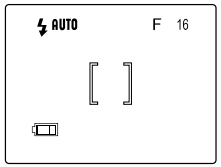
<Turning the LCD Monitor ON/OFF>



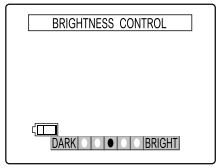
In the recording mode, the LCD monitor can be turned ON/OFF by pressing the "**DISP**" button.

- To conserve power, it is recommended that the monitor be turned off whenever not being used.

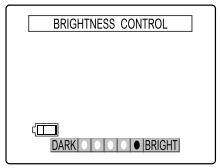
<Adjusting LCD Monitor Brightness>



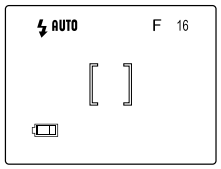
Slide the mode select lever to the "📷" or "▶" position.



Press the "◢" button.



Press the "◁" or "▷" button and adjust the monitor brightness as desired.



Press the "◢" button or wait three seconds for the display to return to its previous status.

- Monitor brightness cannot be adjusted when the camera is connected to a television monitor.

Troubleshooting

Function	Symptom	Cause	Remedy
Record-ing	The LCD monitor displays "Memory Card is full."	The memory card has insufficient free memory available.	Insert a new memory card, or erase unneeded images on the current card.
	The LCD monitor displays “Card has not been inserted”	No memory card is loaded.	Insert a memory card.
	The LCD monitor displays “Card Error”.	The inserted memory card has been formatted on a different camera or information device.	Reformat the memory card on the camera (see page 75).
	The LCD monitor displays "Card Error".	The card connector or the memory card is uncleaned.	Clean the card terminal, then format the memory card using the camera.
	“WRITE PROTECT” appears on the LCD monitor.	The write protect switch is activated (SD memory card).	Release the write protect switch, or insert a different memory card.
	Card access LED flashes.	Image data is being written to the memory card.	Remove your finger from the shutter release button and wait for the flashing to stop.
	Caution LED flashes slowly.	The flash is charging.	
	The LCD monitor displays "⚠ ϟ Close."	The flash is not open.	Make sure that you are not pressing the flash with your finger.
	Caution LED flashes rapidly.	Camera shake warning, indicating that a slow shutter speed has been selected.	Use a tripod or other means to stabilize the camera.
	The number of images recordable does not change when a picture is taken.	The file size of the recorded image was very small.	File size and number of pictures recordable differ depending on the image quality setting and subject conditions; not a malfunction.
	Green LED flashes.	Focus is not locked on subject (shutter will not operate).	Use the focus lock function (page 56) to lock the focus on a part of the subject with higher contrast before final composition of the image.
	Focus mark flashes.		

Function	Symptom	Cause	Remedy
Record-ing	LCD doesn’t appear.	Setting of power-save function may cause camera to enter sleep mode when it is inactive for set period.	Press shutter button halfway, or press other function button to return camera to normal operating condition. Since camera response differs depending on the setting of the Power-Save function, consult p. 78 for details.
Play-back	Images appear with severe visual noise.	A strong magnet or other electromagnetic generator is located too near the camera or television set.	Move the camera away from the magnet or electromagnetic field.
	Images do not appear on the television monitor.	The camera is not correctly connected to the television set.	Confirm your connections are correct.
		The video output mode selected doesn’t match that of the television standard.	Set the video output mode to match the television standard (page 83).
	“Card Error” appears in LCD monitor.	The memory card contains image data of a non-compatible file format.	View the images with a computer.
		The memory card format is non-compatible with the camera.	
		Memory card is not loaded correctly.	Remove the memory card and reload it correctly.
	“No Image” is displayed on LCD monitor.	Nothing is recorded on the memory card.	Insert a memory card with recorded image data.
	“Card has not been inserted” is displayed on LCD monitor.	Memory card is not loaded.	Load memory card into camera.

Function	Symptom	Cause	Remedy
Play-back	Image cannot be rotated or set for DPOF.	The write protect switch is set (SD memory card).	Release the SD memory card's write protect lock (page 25).
Erasing	Image cannot be erased; "O┳" mark appears.	The image is protected.	Release the image protect function (page 63).
	Image cannot be erased	Image data was recorded on a different camera or device.	The image cannot be erased normally by the camera. The card can be reformatted to erase all images.
	The number of images recordable didn't change when an image was erased.	The size of the erased image file was very small.	File size and number of pictures recordable differ depending on the image quality mode and subject conditions; not a malfunction.
Recharg-ing	Can't recharge the camera.	No lithium ion battery pack is loaded.	Insert the battery pack into the camera.
	Can't recharge the camera. Or it is canceled midway through. Caution LED flashes slowly.	Ambient temperature is too high or too low, causing the charger's protect circuits to operate and interrupt the recharging function.	Ambient temperature during recharging should be between +10°C and +30°C. (In practice, a range of +5°C - +40°C is possible, but the recharging time may become somewhat longer).
Other	Nothing appears on the LCD monitor.	Battery power is depleted, or no battery pack is loaded.	Insert the lithium ion battery pack into the camera and recharge if necessary.
	Nothing appears on the LCD monitor.	The auto-off function has operated to turn power off (page 78).	Press the main power switch again to turn power ON.
	The camera feels hot.	Large power consumption occurs during use of the LCD monitor; the camera may feel warm when the LCD monitor is used for a long period of time.	This in itself is not a malfunction, but the camera should be allowed to cool before continuing use.

Function	Symptom	Cause	Remedy
Other	Nothing appears on the LCD monitor.	Battery power is depleted, or no battery pack is loaded.	Replace the battery pack with the charged one.
	The battery runs out too soon.	The camera is used under extremely low temperature.	Warm the battery in your pocket and attach it just when you want to operate the camera.
		The terminal is dirty.	Wipe out the battery terminal with a dry, clean cloth.
		Battery life is over.	Replace the battery pack with a new one.
Play-back	Images cannot be replayed by the PC.	—	Contact the manufacturer of the PC or the software.
Opera-tion	The camera can't be connected to the PC using USB cable.	Battery power is depleted.	Use the AC adapter instead.
		The power of the camera isn't on.	Turn the power on.
		USB cable isn't connected properly.	Pull out the cable once from the camera, then connect it again. Make sure [**PC MODE**] is displayed on the LCD monitor of the camera (see page 95).
		Other USB ports on the PC have been connected to other devices.	Disconnect devices other than the keyboard and mouse from the ports, and try again.
		The USB driver has not been installed yet.	Install the USB driver (see pages 92 and 93).

SD Memory Card Handling Precautions

- Be sure to turn off the power of the main unit before setting up or removing the SD memory card.
- In the following cases, we shall bear no responsibilities for any damage caused, such as losing the recorded data:
  - You or a third party have used the SD memory card incorrectly.
  - The SD memory card was exposed to electrostatic or electric noise.
  - he SD memory card was removed or the main unit power was turned off before completing recording or deleting of data, or formatting the SD memory card.
- It is recommended that any important data be stored in a separate medium (such as floppy disk, hard disk or MO disk).
- Never remove the SD memory card while you are recording or deleting images (formatting). Doing so may destroy the SD memory card.
- Do not use any SD memory cards other than those specified. If you attempt to use such cards, the product may be damaged.
- The SD memory card is a precision electronic equipment. Do not bend, cause excessive shock, or drop it. You should also avoid putting it in the pocket of your pants since it may be damaged when you sit down.
- Avoid using or storing the SD memory card under high electrostatic or electric noise.
- Avoid using or storing the SD memory card in a high temperature and humid, or corrosive environment.
- Do not touch or allow dust or alien substances to make contact with the electrode (colored gold). If the electrode is dirty, wipe it off with a dry, soft cloth.
- When you carry or store the SD memory card, put it in the special case which prevents generation of static electricity.
- If you do not plan to use the SD memory card for a long period of time, remove and store it apart from the main unit.
- If you attach the SD memory card charged with static electricity to the camera, the camera may malfunction. If this happens, turn the power off and back on again.

- After long time usage, the SD memory card may become warm. This does not indicate any trouble.
- The SD memory card life will eventually expire. Please purchase a new one if you cannot record or delete images after using the card for a long time.
- Use the attached index labels. Using other commercially available index labels may damage the product when inserting or removing the SD memory card.

Specifications

Type: Digital still camera with record, playback, and erase modes.
Recording media: SD Memory Card, Multi-Media Card (MMC)
Recording Capacity (Guideline) and Image Dimensions in Pixels:
(when using 16MB SD Memory Card, all pictures taken in the same mode).

Super Fine:	About 7-9	(2048 × 1536)
Fine:	About 15-19	(2048 × 1536)
Normal:	About 54-64	(1024 × 768)
Movies (15 seconds each):	About 3	(320 × 240)

Image Format: Complies with JPEG standard (Exif ver 2.1), DCF Standard (Design rule for Camera File systems), supports DPOF.
Effective pixels: 3.22 mega-pixels
Pickup Device: 1/1.8" square-pixel interlace readout system CCD with 3,340,000 pixels gross.
Lens: f=7.3 mm - 21.9 mm (35 mm camera eqivalent to about 35 - 105 mm) 3x zoom lens, F2.8-4.8
Focusing Range (measured from front lens surface): About 60 cm - infinity ∞
In Macro Mode: About 17 cm - 60 cm (at wide-angle setting)
Exposure Control/Metering Method: CCD multi-area evaluation, center-weighted, and spot metering.
Control Method: Programmed AE, Aperture-Priority AE, Long Exposure modes.
Exposure Compensation: +2.0 EV to -2.0 EV (in 1/3 steps)
Aperture Control: automatic, or manually settable to F2.8 or F9.6.
Automatic Exposure Linkage Range: LV6 to LV16
White Balance: Automatic, Manual (Preset, Bright sun, Incandescent light bulbs, Cloudy weather, Fluorescent light)
Shutter: CCD electronic shutter and programmed electronic shutter with independent aperture control (1 sec-1/2000 sec, 2 sec, 4 sec, 8 sec).
Focusing control: Video feedback auto-focusing, and manual focusing.
Viewfinder: True image zoom viewfinder
Flash: Built-in flash, recycling time about 8 seconds (on full battery charge, at room temperature, based on our testing standards). Flash range about 60 cm - 2.5 meters (zoom set at wide).

Recording Modes: Flash modes (auto flash, red-eye reduction, fill-in flash, flash-off, red-eye reduction forced flash*); macro recording mode, landscape recording mode; color modes (color, B/W, sepia); white balance (Auto, daylight, tungsten, cloudy, fluorescent, preset); AE modes (programmed, F2.8; F9.6); focus (AF/MF); long-exposure (OFF/2 sec/4 sec/8 sec); sensitivity (standard/2×/4×); metering modes (evaluation; center-weighted; spot); Digital zoom ON/OFF, REC Review ON/OFF).
* Settable during long-exposure

Playback modes: (Normal playback) Multiple image display; protect; erase* (single image); all erase* (erases all images in folder \DCIM); image rotation (right/left 90°); slide show; DPOF setting; Trimming.
* Note that files (and folders) recorded on other manufacturer's cameras and devices cannot be erased by this camera.

Setup modes: Date; memory card format; electronic tone ON/OFF; auto power off setting function ON/OFF and time setting (time until camera power turns off automatically); mode lock ON/OFF (preserves mode setting data); display language setting (Japanese, English, French, German, Spanish); video output standard (NTSC/PAL); file number reset; default reset, Select color (Purple, Red, Yellow, Blue).
LCD monitor: Built-in, 1.5" 110,000-pixel polysilicon TFT color LCD monitor; size: 521×218 pixels.

<Display>

LCD monitor display: Remaining battery capacity; recording mode settings (Self-timer mode, flash mode, macro/landscape mode, white-balance mode, AE mode, focus, long-exposure, sensitivity, metering mode); number of images recordable, digital zoom setting (×1.3, ×1.6, ×2.0), date (appears for 3 seconds after power is turned on only), focus frame, SD memory card write protect status (appears only when write protect is enabled); image recorded (still/movie); playback mode setting (multi-image, protect, erase, all-erase, rotate, slide-show, DPOF setting, Trimming); setup mode (date, format, electronic tone, auto-off, mode lock, display language, video output, file number reset, default reset, Select color (Purple, Red, Yellow, Blue)).

Self-timer LED (red): lights to indicate self-timer operation, recording completed, or connected to a PC.
Card access LED (orange): lights while recording the image, processing the alart, writing to the memory card.
Standby LED (green): lights to indicate focus display, or finished recharging the lithium ion battery pack.
Caution LED (red): lights to indicate flash charging, camera-shake warning, lithium ion battery pack recharging and malfunction.

<Input/Output>

Video output mode: NTSC/PAL composite video signal selectable
Input/output connector: video output connector (3.5 mm minijack); external power input connector; DIGITAL Input/Output connector (the exclusive square 8-pin connector).

<Battery/Power>

Power: 3.6V lithium ion battery pack, dedicated AC adapter
Recharging time: about 5 hours (for fully recharging the battery at +10°C - +30°C)
Battery capacity: Number of images recordable: (using 50% flash, Fine Mode):
LCD monitor ON: about 100
LCD monitor OFF: about 150
Continuous playback time: about 50 minutes (using LCD monitor)
(All values assume full battery charge, room temperature, based on our testing standards).

<Other>

Ambient operating temperature: 0°C - 45°C
Dimensions: 91(W)×57(H)×31.5(D) mm (not including protruding parts)
Weight: About 175 g (not including memory card or battery pack)

* All descriptions and specifications are subject to change without notice.

For customers in the U.S.A.

DIGITAL STILL CAMERA PDR-3310

FC Tested To Comply With FCC Standards

FOR HOME OR OFFICE USE

FCC Statement

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.

NOTE

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 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:

- Change the direction of the radio or TV antenna.
  Move the equipment or the radio or TV. For example, if the equipment is to the right of the TV, move it to the left of the TV.
  Or, move the equipment farther away from the radio or TV.
- Plug the equipment into a different outlet. DonÅft plug your radio or TV into the same circuit as your equipment.
- Ensure that all expansion slots (on the back or side of the equipment) are covered.
  Also, ensure that all metal retaining brackets are tightly attached to the equipment.
- If these suggestions donÅft help, consult your equipment dealer or experienced radio/TV technician for help.

CAUTION

If you modify the camera in any way, without getting approval from Toshiba Corporation, your camera may violate FCC regulations. Violation of FCC regulations may cause the FCC to void your right to use the modified camera.

For customers in Canada

CAUTION

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.