

MINOLTA

The essentials of imaging

www.minolta.com



DiMAGE G500

E INSTRUCTION MANUAL

Getting Started

Please be sure to read this manual before use.

- **Test shooting**

Be sure to take some test shots before taking important pictures (such as business or weddings) to make sure that the camera is working properly.

- **Results are not guaranteed**

In the unlikely event that a problem arises in shooting or reproducing pictures due to the camera or memory card used, please understand that no compensation can be made.

- **Be aware of Copyright**

Any pictures that you take of existing images may be used for personal use only. Copyright law prohibits the use of pictures without the permission of the rightful owner. Also, please note that some occasions of the performing arts, demonstrations and exhibitions may restrict photography even for the purpose of personal enjoyment.

Caution for Extended Camera Use:

The camera body may become hot when used for a long period of time, but it doesn't mean that the camera is broken. However, if the camera keeps touching the skin for a long time, this may cause a cryogenic burn. Please be careful with it.

About trademarks

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- Apple, Macintosh, Mac OS, QuickTime and Power PC are trademarks or registered trademarks of Apple Computer in the U.S. and other countries.
- All other brand and product names are trademarks or registered trademarks of their respective owners.
- * The illustrations in this guide are for the purpose of explanation and may differ from the actual design of your camera.
- * You can also order a digital print at a photo lab (except for some labs) such as a traditional photofinishing service. For detailed information, please contact your photo lab.








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Important Safety Precautions

This product has been designed with safety in mind; however, please read the following display marks, warnings and cautions for its correct usage.

The following warning and caution symbols are to prevent damage to the user, other persons and property.

Definitions of the symbols

The following categories explain the degree of danger or damage that may occur if the displayed content is not followed or the product is misused.



Warning

This symbol indicates that misuse may result in serious injury and even death.



Caution

This symbol indicates that misuse may result in bodily injury or physical damage.

The following categories explain the contents to be followed using symbols.



This symbol indicates that the content requires caution when performed.



This symbol indicates that the content is prohibited.



This symbol indicates that the content must always be followed.

Important Safety Precautions (Cont'd)

Warning



Should any of the following occur, stop using the product immediately. Remove the batteries from the unit and disconnect the AC adapter. If using the AC adapter, disconnect the power plug from the wall outlet.

Consult the dealer from whom you bought the product for further assistance.

Continued use of the product may result in fire or electrical shock.

- **If you notice any abnormality such as smoke or an abnormal smell, or if the camera becomes extremely hot.**
- **If liquid gets inside the camera.**
- **If any foreign object gets inside the camera.**



Do not dismantle, modify or repair the camera yourself.

Fire and/or electrical shock may occur as a result.

For repair or internal inspection, consult the dealer from whom you bought the product.



Do not allow the camera to get wet.

Fire, electrical shock and/or malfunction of the unit may occur if internal parts are exposed to water or other liquids.



Do not drop or insert metal objects or combustible items inside the camera.

Fire, electrical shock and/or malfunction of the unit may occur as a result of metal objects, etc. getting inside the camera.



Do not use the camera while driving.

May cause traffic accidents.

When using the camera while walking, pay attention to the road surface, surroundings, etc.



Do not use the camera on unstable ground.

Serious injury and even death may occur as a result especially when falling from high places.

Important Safety Precautions (Cont'd)

Warning



Do not directly look at the sun through the viewfinder.
Loss of or impaired eyesight may result.



Do not touch the metal parts on the camera during thunder and lightning.
Death may occur if lightning strikes the camera.



Do not use AC adapters other than those specified.
Fire may occur as a result of AC adapters other than those specified being used.



Do not dismantle, short-circuit, coat (solder, etc.), apply heat, apply pressure (with nail, etc.) to the battery, or throw into a fire. Furthermore, do not allow metals (wires, necklaces, etc.) to come into contact with batteries.
Fluid leakage, heat, fire and damage may occur as a result.

Caution



Do not point the lens directly at the sun or at a strong light source.
Malfunction of internal parts may occur from concentrated rays of light. Using the camera in such conditions may cause short circuits and breakdown of insulation, resulting in overheating and/or fire.



Take care not to get fingers caught in the battery/card cover.
Personal injury may occur as a result.



When using the camera inside an airplane, follow the directions of the airline company.
Electric waves emitted from the camera may affect airplane cockpit instruments.



Do not use the flash near eyes.
Eye injury may occur as a result.

Important Safety Precautions (Cont'd)

Caution



When taking a picture, wipe off the flash surface and be careful not to cover the flash.

If the flash surface is dirty or you take a shot with the flash covered, it is possible for the flash surface quality or color to change, due to the high temperature of the flash.



Check that the polarity is correct when inserting batteries.

The battery may heat, damage or leak if the polarity is not correct, possibly causing skin burns and/or personal injury as a result.



Do not use batteries which have become soiled with oil or sweat.

If soiled, wipe the contacts with a dry cloth before use.



When cleaning or carrying out non-photographic operations on the camera, disconnect the AC adapter for safety.



Do not leave the camera in locations such as:

- **A location exposed to direct sunlight or inside a car, etc. where the temperature may become extremely high.**

Fire and/or damage to the unit may occur.

- **Within the reach of children.**

The strap may wrap around the neck causing strangulation, or accessories such as batteries, Memory Card, etc. may be swallowed.

- **Unstable surfaces such as on an unstable table or an angled surface.**

Camera dropping on the head or other body parts may not only cause personal injury but malfunction of the unit as well.

- **A location exposed to lampblack, steam, high humidity, dust or vibration.**

If dust or liquid enters the camera or if the internal parts are damaged by strong vibration, overheating, fire or electrical shock may occur as a result.

Important Safety Precautions (Cont'd)

Caution



Remove the batteries when the camera will not be used for an extended period.



Do not use force when operating the camera.

The camera may become damaged, causing personal injury as a result.



Do not rotate the camera when mounting on a tripod.

About battery fluid leakage

- Should battery fluid leaks ever come into contact with hands or clothing, wash immediately with water.
- Loss of eyesight may occur if battery fluid enters the eye. In such case, do not rub the eye. Immediately flush the eye with water and seek medical attention.

About the LCD monitor

- Due to the characteristics of liquid crystals, the brightness of the LCD monitor may appear uneven with changes in temperature, etc.
- The LCD monitor has been developed using high-precision engineering and is superior in sharpness and picture quality. Due to the nature of liquid crystals, however, there may be missing or constantly lit pixels on the monitor. This is not a malfunction of the unit.
- If the LCD monitor becomes damaged for some reason, take care to prevent personal injury from broken glass, etc. Furthermore, take care that liquid crystals do not touch the skin or enter the eyes or mouth.

WARNING: Handling the cord on this product may expose you to lead, a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm.
Wash hands after handling.

Checking the Packing Contents

The following accessories should be packed with your new camera; please make sure all are enclosed after opening the packaging. In the unlikely event that something is missing, please contact the sales outlet.

- Lithium-ion Battery NP-500
- Battery Charger BC-500
- USB Cable USB-800
- Hand Strap HS-DG130
- SD Memory Card
- DiIMAGE Viewer CD-ROM
- Instruction Manual CD-ROM
- Quick Guide
- Warranty Card

Optional Accessories

- AC Adapter AC-8U/AC-8E/AC-8GB
(The AC Adapter unit varies with region. AC-8U is for use in North America, Taiwan, and Japan. AC-8E is for continental Europe, Oceania, and Asia (except Hong Kong). AC-8GB is for the United Kingdom and Hong Kong.)
- Lithium-ion Battery NP-500

This product can be used with the following power supplies:

1) Lithium-ion battery (the packaged item or purchased separately)

- Read the user's guide on the battery and the charger thoroughly, and use them accordingly.
- You cannot charge the battery in the camera.
- When disposing of rechargeable batteries, please support recycling by participating in the recovering system of the store from which you bought the batteries.
- The number of pictures you can take varies with the conditions of use and the performance of the rechargeable batteries.

* Please refer to page 20 for information on battery life.

2) Plugging in at home

- Connect the optional AC adapter.

Necessary Accessories (Cont'd)

Compatible Recording Media

This camera comes with approximately 2 MB of memory installed, but if you would like to use additional memory, the following cards are compatible:

- SD Memory Card
- MultiMedia Card
- Memory Stick

About the SD Memory Card/Multi-Media Card/Memory Stick


Caution

SD Memory Cards, Multi-Media Cards and Memory Stick are manufactured using precision electronic components. Do not perform the following as malfunction or damage may occur as a result.

- Do not touch the terminals with hands or metal objects. Damage to the components may occur as a result of static electricity. Before handling an SD Memory Card, Multi-Media Card or Memory Stick, discharge any static build-up from your body by touching grounded metal, etc.
- Do not bend, drop or apply excessive force.
- Avoid heat, liquid and direct sunlight when using and for storage.
- Do not open the battery/card cover or remove the SD Memory Card/Multi-Media Card/Memory Stick while data is being read or written.
- Do not dismantle or modify.



* The SD logo is a trademark.

* "Memory Stick" and  are trademarks of Sony Corporation.

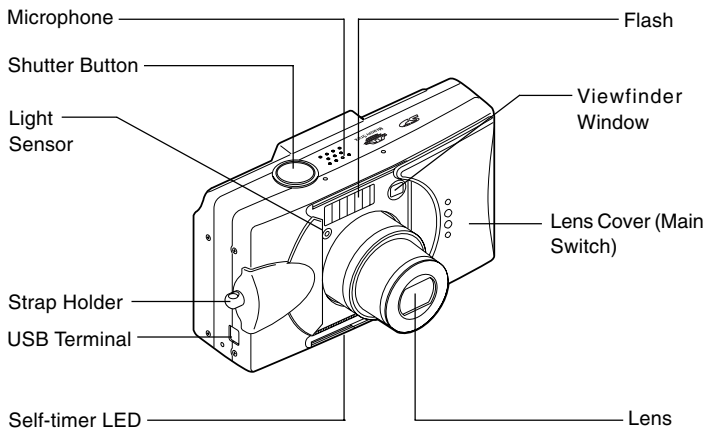
Necessary Accessories (Cont'd)

Important

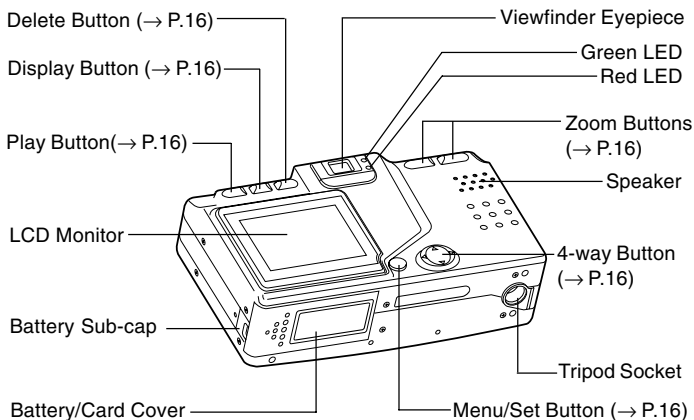
- **In the event of malfunction or damage, it is possible that data may be lost. Minolta can not accept responsibility in any way for such data loss.**
- Always back-up important data.
- When using SD Memory Cards/Multi-Media Cards/Memory Stick on a PC, do not change the attributes(read-only, etc.) of the files (image data) on the card. Doing so may prevent the camera from working properly when deleting images, etc.
- Do not change the file names or the directory name of image data saved on an SD Memory Card/Multi-Media Card/Memory Stick using a PC or save files other than image data taken by this camera. Images that have been changed or added will not only play back on the camera but may cause the camera to malfunction as well.
- Always format SD Memory Cards/Multi-Media Cards/Memory Stick using this camera. A card formatted in a PC may not operate properly.
- The SD Memory Card and Memory Stick includes a write-protect switch.
Sliding this switch downward prevents data from being written to the card and images, etc. saved on the card are protected.
Please note that pictures cannot be taken or deleted when the write-protect switch is on.
- When using a large-capacity card, card check and deletion may take some time.
- When using Multi-Media Cards, the operation response time may be longer during shooting and playback when compared with SD Memory Cards. However, this is due to the specification of the Multi-Media Card and is not a malfunction.

Names of Parts

Camera Body

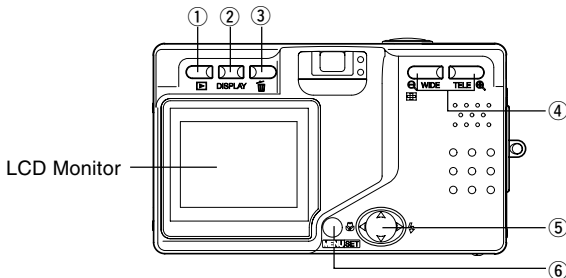


Names of Parts (Cont'd)



Names of Parts (Cont'd)

Operation Buttons



① Play Button (▶)

Use this button for playing back images, or setting up the play menu. This button can be used whether the camera's power is ON or OFF (p.26).

② Display Button

For turning LCD monitor on and off, and switching the picture information display on and off. When the power is ON, the LCD monitor lights, so it should be turned OFF when you are shooting through the viewfinder.

③ Delete Button (🗑️)

For deleting unwanted photos.

④ Zoom Buttons

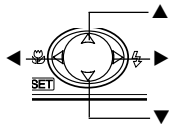
For operating the optical and digital zoom functions.

⑤ 4-way Button (◀▶▲▼)

Use the different buttons ◀, ▶, ▲, and ▼, to select menu items, images, etc. This button is used for the following:

- Selecting shooting mode
- Selecting menus
- Selecting pictures
- Scrolling a picture in an enlarged display
- Customizing the camera

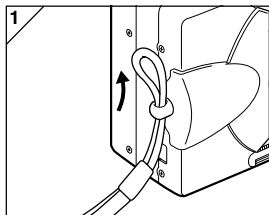
4-way Button



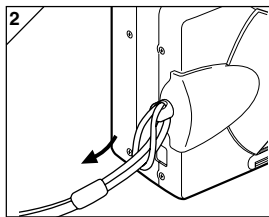
⑥ Menu/Set Button

For displaying the menu screen, selecting the contents and confirming choices.

Attaching the Strap



1. Push the loop on the small end of the strap through the strap holder.



2. Pass the other end of the strap through the loop that is sticking out from the strap holder.



Warning: When using the camera with the strap attached, take care so that it does not wrap around the neck. On no account hang the camera round the neck of small children and infants. Strangulation may occur as a result if the strap wraps around the neck.

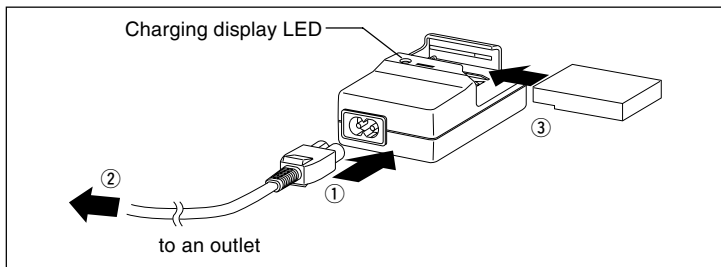


- When carrying the camera hanging from the strap, take care so that it is not accidentally hit nearby objects.
- Place the camera on a stable surface before installing the strap, to avoid the possibility of it being dropped and damaged.

Preparing the Power Supply

Charging the (supplied) Battery Pack

- Charge the battery pack before you use it for the first time and when the LCD monitor indicates, "NO MORE POWER".

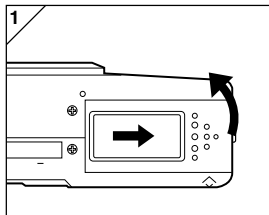


1. Connect the power cord to the charger.
2. Plug the cord into an outlet.
3. Put the battery pack in the charger.
 - While the battery pack is being charged, the charging display LED will be red; when the battery pack is fully charged, the light will turn green.
4. After charging, remove the battery pack from the charger and then the power cord from the outlet and the charger.
 - Normal charging time is about 2.5 hours. Please charge your battery pack in an area with a temperature between 0°C (32°F) and 40°C (104°F).
 - Charging time will vary with the surrounding temperature and the condition of the battery pack.
 - Before using new battery packs or battery packs that have not been used for some time, be absolutely sure to charge them.
 - When a battery pack reaches the end of its useful life, it can be used only for a short time, even when fully charged. When that happens, replace with a new battery pack (sold separately, Lithium-ion Battery NP-500).
 - During charging both the charger and the battery pack get hot; this is normal.
 - If dirt gets on the battery contact points, the battery pack will not be fully charged or charging time will get longer. Please wipe them off with a soft, dry cloth.

Preparing the Power Supply (Cont'd)

Installing the (supplied) Battery Pack

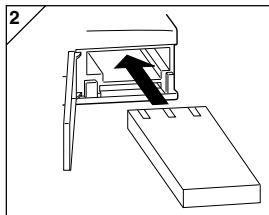
- Before installing or changing battery packs, make sure the power is OFF (p.26), check that the LCD monitor is not lit and turn OFF all switches.



1. Open the battery/card cover by sliding it in the direction of the arrow.



Do not change the battery with wet hands, as there is a danger of electric shock.




2. Install the battery with the terminals facing inside the camera. After making sure the battery pack is properly installed, close the battery/card cover securely.


Make sure that the battery pack is facing the right way. If the battery pack is installed incorrectly, there is a danger of injury or contamination, or the camera may be damaged due to leakage and/or heat.

Battery level indicator

As the battery runs out of power, the battery level indicator displays the power remaining as follows:

(Remaining power is shown on the LCD monitor in two levels)

1.  Fully charged

2.  Power is running out; change (charge) the battery.

Preparing the Power Supply (Cont'd)

Battery life guide (reference)

Number of Pictures		Continuous Playback Time
With LCD Monitor On	With LCD Monitor Off	
About 100	About 200	About 90 Minutes

- * Our test conditions: Normal humidity and temperature, flash intensity 50%, shot every 30 sec. Zoomed one direction, once, 2592 × 1944 pixels.
- * The Battery life will vary depending on the environment, shooting mode, and shooting conditions.
- * The above values are for reference only and are not guaranteed.
- * Power is consumed by the following operations even when not recording and these will reduce the number of images that can be recorded.
 - Repeated focus operations by pressing the shutter button halfway.
 - Repeated zoom operations.
 - Extensive use of the LCD monitor in the Playback mode.
 - Communication with a PC.



Warning

- **When you continue using the camera for a long time, the batteries become hot. Contact with the batteries can lead to burns.**
- **Never open the battery/card cover while the camera is accessing the card or processing images (p.32).**
- **To recharge the battery (NP-500), do not use any charger other than the supplied charger (BC-500). Also, do not use the supplied charger (BC-500) to recharge batteries other than our special battery (NP-500).**
- **Do not leave the battery anywhere where the temperature may reach 60°C^o (140°F), such as inside a car, in the sun, near a heater, etc.**
- **Do not get the battery wet, drop it or subject it to violent shocks.**

• Battery Charger BC-500 Main Specifications

- Input voltage : AC100-240V (50/60Hz)
- Rated Input : 8VA (100V) 12 VA (240V)
- Rated Output : DC4.2V/600mA
- Recharge time : Approx. 2.5hr
- Temperature for use: 0°-40°C (32°-104°F)
- Storage temperature: -20°-60°C (-4°-76°F)
- External dimensions:
 - 55(W) × 30(H) × 90(D) mm
 - 2¹/₄"(W) × 1¹/₄"(H) × 3⁵/₈"(D)
- Weight : Approx. 70g (2oz)

• Lithium-ion Battery NP-500 Main Specifications

- Nominal voltage : 3.7 V
- Nominal capacity: 820mAh
- Temperature for use: 0°-40°C (32°-104°F)
- External dimensions :
 - 31.8(W) × 9(H) × 49.8(D) mm
 - 1⁵/₁₆"(W) × 3/₈"(H) × 2"(D)
- Weight : Approx. 25g (1oz)

Preparing the Power Supply (Cont'd)

Please co-operate in recycling the lithium battery.

- This product uses a lithium battery.
- This battery is recyclable and a valuable resource.
- For recycling exhausted batteries or batteries removed from a used product, as a precaution against a short circuit, that could result in smoke or fire, please tape the terminals to insulate them or put them in a plastic bag and take them to a retailer participating in a recycling program, where you can deposit them in a recycling box for rechargeable batteries.

Warnings about recycling

- ⊗ Do not short circuit the battery. This may cause a fire or electrical shock.
- ⊗ Do not peel off the outer cover (insulation cover, tube, etc.) This may cause the battery to leak, get hot, catch fire, or explode.
- ⊗ Do not dismantle the battery. This may cause it to leak, get hot, catch fire, or explode.

FCC Compliance Statement:

Digital Camera: DiIMAGE G500



Tested To Comply
With FCC Standards

FOR HOME OR OFFICE USE

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. Changes or modifications not approved by the party responsible for compliance could void the user's authority to operate the equipment. 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:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Tested by the Minolta Corporation 101 Williams Drive, Ramsey, New Jersey 07446, U.S.A.
Do not remove the ferrite cores from the cables.

Industry Canada's Compliance Statement:

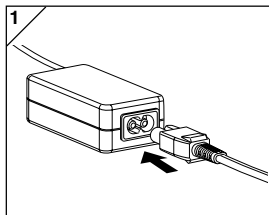
This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

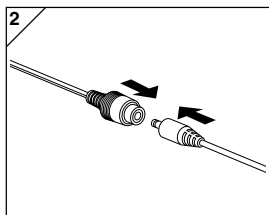
Preparing the Power Supply (Cont'd)

Connecting the AC Adapter (sold separately)

- If you do not want to worry about battery consumption, we recommend using the specified AC adapter (sold separately, AC-8U/AC-8E/AC-8GB; see P.11 for details) when shooting pictures, during playback, or when transferring data (USB connection).
- Only use the AC adapter (sold separately) specified for your camera as use of any other device may result in a breakdown, fire or electrical shock.
- Make sure the camera is OFF, check that the LCD monitor is not lit and turn OFF all power.
- After reading the "Important Safety Precautions" (pp.7-10) in this manual and the warnings supplied with the AC adapter, connect the adapter as instructed.

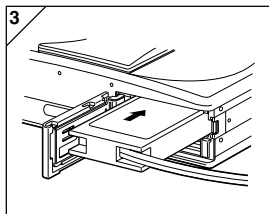


1. Connect the AC adapter to the power supply cord, and plug in the power supply plug.



2. Insert the connecting plug of the battery type adapter to the AC adapter plug.

Preparing the Power Supply (Cont'd)

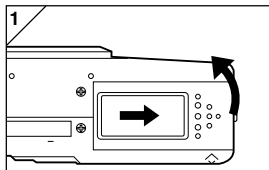


3. After opening the battery/card cover, remove the battery sub-cap. Insert the battery adapter in the battery compartment, and close the battery/card cover.
- When finished using the camera, turn OFF the power supply to the camera, and then disconnect the connecting plug of the battery-type plug from the AC adapter.
- ⚠ Never handle the adapter with wet hands. It may result in electric shock.

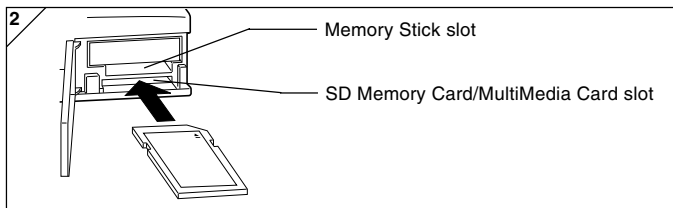
Inserting/Removing Cards

- About 2 MB of memory are built into this camera as recording media for image data, and other information, such as date and time, so even without a card inserted, the camera can record in an emergency. If you wish to use an aftermarket card, any of the following are appropriate: SD Memory Card, Multi-Media Card, Memory Stick. (All three will be called “card” hereafter.)
- First, turn OFF the main switch (lens cover closed), make sure the LCD monitor is OFF and turn OFF all power. If power is ON, damage may occur to the card or to the camera itself.

Inserting a Card



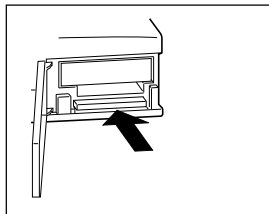
1. Open the battery/card cover.



2. With the camera and the label of the card facing up, insert the card with the knocked out part first into the slot and push in until a click is heard.
 - Take care that the card is inserted facing the right way. If the card is forcefully inserted facing the wrong way, it will damage the connector.
 - There are two card slots. When a SD Memory card or MultiMedia Card are used, insert them in the slot at the back of the camera, and if a Memory Stick is used, insert it in the slot toward the front.
3. Close the battery/card cover.

Inserting/Removing Cards (Cont'd)

Card Removal



1. Open the battery/card cover.
2. If you gently push in on the card, the lock will release and the card will come out a little. Then carefully draw the card out.
3. Again, close the battery/card cover.

Warning! Insert or remove cards only after making sure that absolutely all power is OFF as indicated by the viewfinder LED being off.

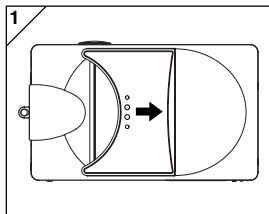
While the card is being accessed, or an image is being processed, the LCD monitor will show "Now COPY...", etc., and the red LED will come on.

If you open the battery/card cover while the red LED is flashing, image processing may be interrupted or hindered.

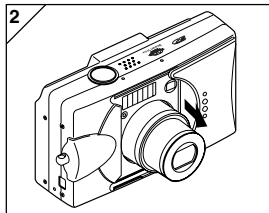
While the red LED is still lit, make sure that you DO NOT open the battery/card cover.

- When a card is inserted, it is recorded on first. (When a card is not inserted, internal memory is used for recording. However, in this case the recording image size is limited to only 640 × 480 pixels.)
- Also, it is possible to insert and use two cards simultaneously, such as an SD memory card (or multi-media card) and a Memory Stick. In this case the card being used will be recorded on first. By using the Setup menu, you can select which to record to first (p.105).

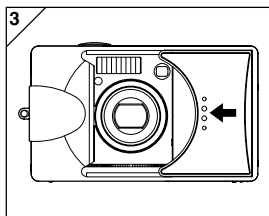
Turning the Power ON/OFF



1. Gently slide the lens cover (main switch) in the direction indicated by the arrow until it stops.



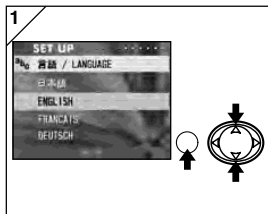
2. Once the lens extends to the shooting position (wide-angle side), the power will come on.
 - With the power ON it is possible to shoot pictures. Also, the LCD display will be lit.



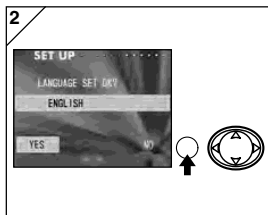
3. When you wish to turn the power OFF, slide the lens cover just a little in the direction indicated by the arrow. The power will turn OFF and the lens will retract. After you are sure the lens has fully retracted, you can close the lens cover to its fully closed position.

Setting the Menu Language/Date and Time

- The first time that you use your camera, a screen will automatically appear and prompt you to set the time, date and language. To make those settings, please follow the steps below.
- You can select from among four languages, Japanese, English, French, and German.
- Make sure that either the AC adapter is connected or that there is enough battery power.



1. Turn the power on by either opening the lens cover or pressing the PLAY button. The language selection screen will automatically appear on the LCD monitor. By pressing ▼ or ▲, select the desired language and push the MENU/SET button.



2. You will be prompted to confirm your language selection; confirm the selected "YES" by pressing the MENU/SET button.
 - If you select "NO" with ► and press the MENU/SET button, the current setting is invalidated and you will return to the first screen.

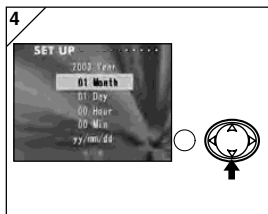
* Once you have finished language selection, the next screen "DATE SET" will appear.



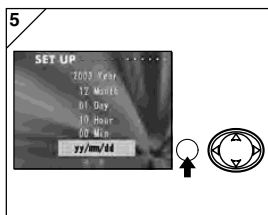
3. With "YEAR" selected, use ◀ or ▶ to adjust to the appropriate year.

The date may be adjusted up to Dec. 31, 2050.

Setting the Menu Language/Date and Time (Cont'd)



- (1) Once the “YEAR” has been adjusted, press ▼ to move to the “MONTH” setting mode.
 - (2) Use ◀ or ▶ to adjust the month in the same way as Step 3 on page 27.
- By repeating procedures (1) and (2) above, adjust the date-and-time setting, and set the date format.
 - The date format can be selected from among three patterns: yy/mm/dd, dd/mm/yy, and mm/dd/yy.
 - By using ▲, you can return to the previous screen and make corrections.



5. Once you have finished making all of the settings, press the MENU/SET button.

6. After finishing the settings...

- If you turned the power ON with the main switch (by opening the lens cover), you can take pictures once the lens has reached its extended position.
 - If you made the settings after pressing the PLAY button, the LCD monitor will display playback images.
- * The internal clock is maintained by a back-up battery. Without a battery in the camera, the information will be maintained for about 24 hours. If the battery is removed for some time, you may have to reset the information (p.103).
- * Do not remove the battery from the camera for at least three hours after making new date-and-time settings. They will be lost if the back-up battery is not fully charged.

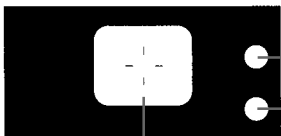
Holding Your Camera



- Hold the camera securely with both hands and your elbows against your body for a stable position.
- To take a vertical picture, hold the camera so that the flash is at the top.

Please be careful that your fingers, hair, or the strap do not cover the lens, flash, or the light sensor.

Viewfinder and Indicator LEDs



Viewfinder LEDs (→ p.30)

Green LED

Red LED

Auto-focus Mark

Align the crosshairs on the subject of your picture.

- In the macro-photo mode (p.42), we recommend that you use the LCD monitor for composing your pictures (p.35). If you use the viewfinder, what you can see and what the camera records may be different.

Taking Pictures (Cont'd)

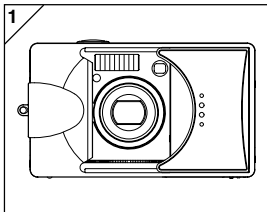
Viewfinder LED Indicators

When the LED Indicators light, they mean the following:

- Green LED: (On) Camera ready to shoot (Flash does not fire)
(Flashing) Warning that the camera cannot auto-focus (AF)
- Red LED: (On) Flash charging, Formatting the card
(Flashing) Warning that your hands are shaking
- Both Red and Green LEDs:
(On) Camera ready to shoot (Flash fires)
USB cable is being connected
(Flashing) System error; Card has insufficient memory, is faulty,
not formatted; Insufficient battery warning
(Green LED flashing/Red LED on)
Card being accessed, images being processed,
compressed/expanded, other processing

Taking Pictures (Cont'd)

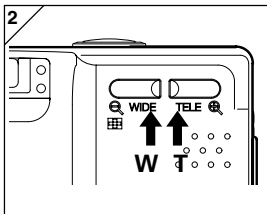
Taking Pictures using the Viewfinder



1. Opening the lens cover turns ON the power.

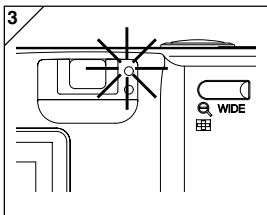
When the power comes ON, the LCD monitor will be on. If you will be using the viewfinder, to conserve your battery, press the DISPLAY button and the LCD monitor will turn off.

- If the surface of the lens is dirty, gently wipe it clean with a soft, dry cloth.



2. Looking through the viewfinder, compose the photo you wish to take and determine the size of the subject using the zoom buttons. Also, put the auto focus mark on the subject you wish to bring into focus.

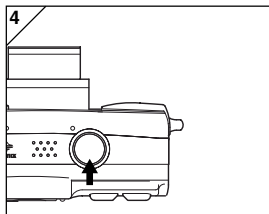
- If you press the TELE (Telephoto) Zoom button, the camera zooms in, while if you press the WIDE (Wide-angle) button, it zooms out.
- If the subject you wish to focus on is not in the screen center, use "Shooting with Focus Lock" (p.34).



3. Press the shutter button half way and the green LED will light, indicating that the focus and exposure are locked.


- If it is difficult to focus, the green LED will flash. See page 33.
- If the camera senses your shaking, the red viewfinder LED will flash.

Taking Pictures (Cont'd)



4. Take a picture by pressing the shutter button further. When it makes a sound, the shot has been taken, and the image will be recorded on the card (or built-in memory).
 - The beep will not sound if the beeper setting is turned off (p.102).

5. During recording to the card, the red LED and the self-timer LED on the front of the camera will come on, and the green LED will flash.
 - If you set the beep sound to off (p.102), the self-timer LED will not be lit.
 - While the card is processing image data, you cannot operate the camera.Once the red and green LEDs disappear, the recording has finished.

 **Do not open the battery/card cover while the red and green LEDs are flashing.**

6. When you are finished taking pictures, close the lens cover and turn OFF the power supply.

Daytime (normal) shooting distances

Focal Length	Shooting Distance
Wide-angle*	0.5m (1.6ft) to ∞
Telephoto**	0.8m (2.6ft) to ∞

* Equivalent to 39mm in 35mm camera conversion

**Equivalent to 117mm in 35mm camera conversion

- If you wish to take a picture of a subject closer than the above ranges, use the macro-photo mode (pp.39, 42).

Taking Pictures (Cont'd)

When you press the shutter halfway and the green LED flashes...

This may suggest that the focusing on the subject is difficult, and/or the subject is too dark. Should this be the case, please take the following steps.

- Make sure that the camera is not too close to the subject, then align the subject to the auto-focus mark in the center of the viewfinder. (For the shooting distance, see page 32.)
- If the subject is too dark (such as a person in the shade), use the flash (pp.38, 40, 41).
- Use a similar subject, at the same distance and with the same brightness, to adjust the auto focus and exposure. After the focus lock is set, aim at your original subject and shoot your picture (p.34).

Taking Pictures (Cont'd)

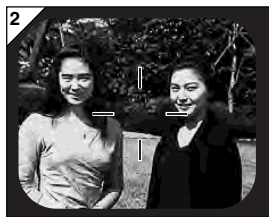
Shooting with Focus Lock

- If the subject you wish to focus on is not in the center of the screen, use the focus lock photography.



1. Align the auto focus mark on the subject, and push the shutter button half-way. The green LED light will come on, locking the focus position.

- The exposure is fixed at the same time the focus is locked.
- If you release your finger from the half-pushed shutter button, the focus lock will be released and you can repeat the procedure.



2. With the shutter button pressed half-way, re-compose your photo and press the shutter button all the way to take the picture.

- When re-composing the photo, do not change the shooting distance. If the distance has changed, repeat the procedure.

The following subjects may be difficult to bring into focus:

- Subjects with no contrast (variance in brightness, e.g., the sky, a white wall, the hood of a car)
- Subjects with only horizontal lines and no surface texture
- Quickly moving subjects
- Poorly lit subjects (in a dark place)
- Subjects with a strong light or reflected light behind them
- Subjects in a flickering light, such as a fluorescent light

In the above circumstances, take your picture after the focus lock is set to the same distance and brightness as the subject.

Taking Pictures (Cont'd)

Taking Pictures using the LCD Monitor

- You can take a picture while looking at the LCD monitor as through the viewfinder.
- Using the LCD monitor consumes battery power at a high rate, so it is recommended to have a spare charged battery on hand (sold separately, Lithium-ion Battery NP-500), or to use the AC adapter (sold separately, AC-8U/AC-8E/AC-8GB; see P.11 for details).



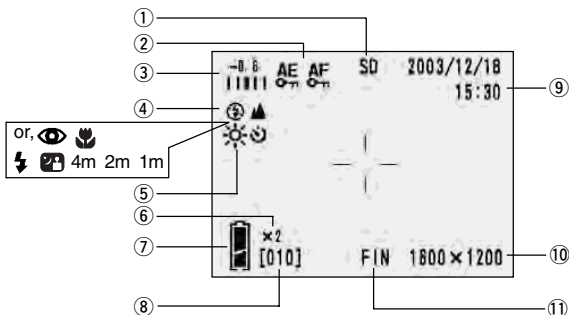
1. Once the power supply is turned on by opening the lens cover, the LCD monitor will come on, and a through image (the image taken through the lens) will be projected.
 - Date and time displayed will go off in approx. 5 seconds.
2. While looking at the LCD monitor, compose and take your photo.
 - The shooting procedures are the same as "Taking a picture using the viewfinder" (pp.31-32).
 - Focus value and shutter speed will be displayed by half depressing the shutter button on through image.
 - When the writing process to the card is completed, the through image will reappear.

Taking Pictures (Cont'd)

Image Display

Shooting with the LCD monitor displays the picture and the following other information:

- You can set the camera so information is not displayed (p.101).



① Recording Media Display

This shows the media type.

- SD Memory Card or MultiMedia Card : SD*
 - Memory Stick : MS
 - Built-in Memory : IN
- * Even when a Multi Media Card is used, the type will be displayed as SD.

② AF/AE Lock Display

This will be displayed when the AF/AE Lock functions are used (pp.107-108).

③ Exposure Compensation

The compensation value will be displayed. For details of how to adjust the exposure, see pages 51 and 107.

④ Shooting Mode

The selected shooting mode** will be displayed.

**For details on each shooting mode, see pages 38 to 43.

⑤ White Balance

White balance icon will be displayed. For details of how to select the white balance, see page 52 and 107.

⑥ Digital Zoom Magnification

This will be displayed when the digital zoom function is used (p.56).

⑦ Battery Remaining Display

If the battery is being used, the remaining battery power will be displayed in two levels (p.19).

Taking Pictures (Cont'd)

⑧ Counter

The remaining number of pictures you can take will be displayed.

⑨ Date and time/focus value/shutter speed


- 1) The date and time will be displayed when turning the power on and when REC menu screen (p.44) or playback image (p.70) is changed back to through image. Date and time displayed will go off in approx. 5 seconds.
- 2) Focus value and shutter speed will be displayed by half depressing the shutter button.

- 3) Focus value and shutter speed will be displayed all the time when setting up manual exposure (p.62).

⑩ Picture Size

The picture size of the photo being taken will be displayed.

⑪ Picture Quality Mode

- 1) Normally the photo quality of the picture being taken is displayed.
- 2) When shooting a movie,  is displayed.

About Auto Power Off Function

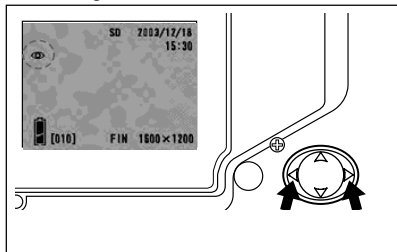
If you do not operate for a certain period of time with the camera power on and the lens cover open, the auto power off function (pause status) will be activated and power will be turned off (with the lens still out).

By pressing the shutter button, zoom button, or another button, the camera will return to the shooting mode.

- When finished shooting, or if you are not going to take a picture for a long time, close the lens cover.
- The default auto power off time is set at three minutes. This can be changed in the set-up menu (p.104).
- When using an AC adapter, the auto power off function will be activated.





Selecting the Shooting Mode

- Selecting different shooting modes enables you to create the best shooting condition for your subject.
- Once a mode is set (apart from the self-timer), you can shoot continuously. It is recommended that the mode should be returned to AUTO mode (no display) after shooting.
- You can set the self-timer for a 3- or a 10-second delay (factory setting), although the 10-second setting is effective for the next shot only. The 3-second setting remains in effect until you change it again.
- Also, when you turn the camera OFF, the shooting mode you set is canceled and the camera automatically returns to AUTO-mode shooting operation (no display). But the flash-mode setting remains in effect even if you switch the power OFF and back ON.
- Using the custom function (p.107) enables you to set up your favorite shooting modes.



1. Turn the power on so that the LCD monitor is lit.
2. By pressing ◀ or ▶, bring up the desired shooting mode symbol on the LCD monitor.






Pressing ▶ enables the selection of the following modes.

- 1) AUTO (Automatic Flash) (p.40)
- 2)  Red Eye Reduction (p.40)
- 3)  Fill-In (p.41)
- 4)  Slow Sync (p.41)
- 5)  Off (Flash Override) (p.41)

• Every time ▶ is pressed, the mode symbol will be displayed one by one, through the list.

Selecting the Shooting Mode (Cont'd)

Pressing ◀ enables the selection of the following modes.

- 1) AUTO mode (no display)
 - 2)  Macro-photo mode (p.42)
 - 3)  Distant View mode (p.42)
 - 4)  Self-Timer mode (p.43)
 - 5)  Self-Timer + Macro-photo mode
 - 6)  Self-Timer + Distant View mode
 - 7) 4m Fixed focus mode (p.43)
 - 8) 2m Fixed focus mode (p.43)
 - 9) 1m Fixed focus mode (p.43)
- Every time ◀ is pressed, the mode symbol will be displayed one by one, through the list.

Selecting the Shooting Mode (Cont'd)

Switching the Flash Mode

AUTO (Auto Flash)

- This is the normal mode. When the camera is turned ON, it is set at Auto (Auto Flash). No symbol will be displayed on the LCD monitor.
- The flash will operate automatically when it is dark.
 - The red light after the flash indicates charging; while it is lit, you cannot take a picture.
 - The shutter speed is slower than 1/60 second at wide angle and 1/90 second at telephoto. Keep in mind that the picture will be blurry due to camera shake.
 - It is best to use the red-eye reduction when using a flash with people.

Flash Shooting Distances

Focus Distance	Shooting Distance
Wide-Angle *	0.5m (1.6ft) to 3.5m (9.9ft)
Telephoto **	0.5m (1.6ft) to 2.0m (6.6ft)

* Equivalent to 39 mm in 35mm camera conversion

**Equivalent to 117mm in 35mm camera conversion

- If the shooting range is not in the above range, the picture may appear too bright when it is too close, and the picture may appear dark without enough lighting when it is too far. It is recommended you check the photo with the LCD monitor after shooting.

Red-Eye Reduction

- Using this mode can reduce the “red-eye phenomenon”, which is people with red glaring eyes caused by the flash.
- When you press the shutter button, the pre-flash comes on, followed by the real flash which finishes the shot.
 - Until the real flash comes on, do not move the camera or let the subject move.
 - If the subject is not facing the pre-flash or final flash, or the distance to the subject is too far, the red-eye reduction effect may not be apparent.
 - The flash is in the AUTO flash mode and will not come on in a bright place.

Selecting the Shooting Mode (Cont'd)

Fill-In

- Use this mode when a shadow falls on the subject's face due to shade or artificial lighting, or when taking a picture against the light.
- Regardless of the brightness of the surroundings, the flash will always come on.

Slow-Sync

- Use this mode when shooting a subject with a background of a night or evening view.
- Shooting with a flash is possible with a slow shutter speed.
 - Shutter speeds will be slower, so use a tripod to prevent shaking.
 - If the subject is moving, the picture will be blurred.

Off (Flash Override)

- Use this mode for places (such as museum) where flash is prohibited, or when taking a picture of a night view, or taking a picture using indoor lighting.
- The flash will not come on even when it is dark.
 - Use a tripod to prevent shaking as shutter speeds are slower in the dark.
 - If the red LED comes on when the shutter button pressed half-way, this is a warning that the lighting is not sufficient and the resulting picture will be dark.

Selecting the Shooting Mode (Cont'd)

Shooting Close Up/Long Range

Macro-photo Mode

- Use this mode when you want to be close to the subject.
- If the distance between the camera and the subject is close, there will be a difference between the image in the viewfinder and the picture that is actually taken. It is recommended that the LCD monitor be used.
 - Use a tripod to prevent shaking as shutter speeds are slower when taking close-ups.
 - The self-timer function can be used in conjunction with this function for shooting.
 - If you use the flash when shooting very close to the subject, the image may come out too bright. For information about the flash shooting distance, see page 40.

Macro-photo Mode Shooting Distances

Focus Distance	Shooting Distance
Wide-Angle	6cm (2.4in.) to ∞
Telephoto	0.5m (1.6ft) to ∞

Distant View Mode

- Use this mode when shooting a distant subject, such as scenery or buildings.
 - Always use a tripod.
 - The flash will not come on.
 - The self-timer function can be used in conjunction with this function for shooting.

Selecting the Shooting Mode (Cont'd)

Using the Self-Timer

Self-Timer Mode

- Use a tripod.
- When the shutter button is pressed, the self-timer LED comes on, and after 10 seconds, a picture will be shot.
 - If you wish to cancel the self-timer function, close the lens cover.
 - After a picture is taken, the self-timer mode (10-second delay) will be cancelled. If you wish to use the self-timer repeatedly, set the mode every time you take a picture.
 - The activation time for the self-timer can be also set at “3-second delay” by using the set-up menu (p. 103). If you set the self-timer for a 3-second delay, the setting is effective even after shooting so that you can continue to take a picture using the self-timer.

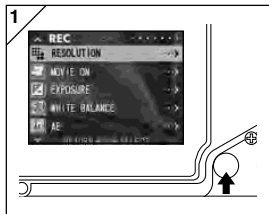
Taking photographs by fixing focus

Fixed focus mode

- Use this mode if you want to take photographs using fixed focus.
- Distance can be set to 4m, 2m or 1m.
 - This mode is set to OFF as a default. In order to use this mode, select “MACRO” in custom mode menu and then set the mode setting to ON (p.109,3).

- By using the REC menu, you can take pictures with your desired settings. You can set the camera using the “REC (DETAILS) menu” (default setting), or “REC (BASIC)” (p.67).
- The settings made with each menu will be maintained, even when power is turned off, until the settings are changed, unless otherwise described.

Setting with the REC (DETAILS) Menu



1. Turn the power ON, with the LCD monitor on (through image display). Pressing the MENU/SET button will display the REC menu screen.

2. Select the menu you wish to set by pressing ▼ or ▲. Every time the button is pressed, the menu mode changes as follows;

↓	RESOLUTION	↑	(→ p.46)
	MOVIE ON		(→ p.49)
	EXPOSURE		(→ p.51)
	WHITE BALANCE		(→ p.52)
	AE		(→ p.54)
	MONOCHROME		(→ p.55)
▼	DIGITAL ZOOM	▲	(→ p.56)
	MONITOR ADJ.		(→ p.57)
	VOICE		(→ p.58)
	ADD REC		(→ p.59)
	SLOW SHUTTER		(→ p.61)
	MAN EXPOSURE ON		(→ p.62)
	QUALITY		(→ p.64)
	SETUP		(→ p.66)
↓	RETURN		

Using the REC Menu (Cont'd)



3. After selecting the menu, pressing **▶** will display the set-up screen (screen 3) of the menu. After selecting the desired content with **▼** or **▲**, pressing **▶** or the MENU/SET button will complete the set-up and will return you to screen 1.

4. You can cancel the REC Menu mode at Step 1 (REC Menu screen) on the left page by pressing **◀**, or pressing **▶** or the MENU/SET button after selecting "RETURN". This will close the menu and return you to the through image (picture shooting image).
- For details of each set-up menu, refer to the pages hereafter.
 - If you press the shutter button half-way even when you are setting the menu, the display returns to the through image (picture shooting mode).

Using the REC Menu (Cont'd)

Selecting a Combination of Image Sizes and Compression Ratios

- You can select a combination of four image sizes and two compression ratios.
- While using the same card, you can change the picture resolution settings for every photo. Every time you change the picture resolution, the number of images remaining will change and be displayed on the LCD monitor.
- When quality is the priority, select "FINE"; when the number of photos is more important, select "NORMAL".



1. Select "RESOLUTION" and press ►.



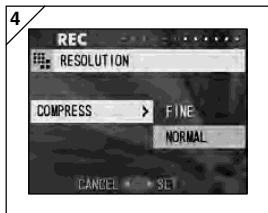
2. Use ▼ or ▲ to select image size or compressions ratio, then press ►.



3. **Select the picture size**

Use ▼ or ▲ to select the desired image size, then press either ► or the MENU/SET button. You will return to screen 2 with your chosen size displayed.

- If you press ◀, the setting is invalidated and you will return to screen 2.



4. Selecting the compression ratio

Use ▼ or ▲ to select the desired compression ratio, then press either ► or the MENU/SET button. You will return to screen 2 with your chosen compression ratio displayed.

- If you press ◀, the setting is invalidated and you will return to screen 2.

Using the REC Menu (Cont'd)

Image size and pixel count (width) × (height)

1) 2592 × 1944 pixels (approximately 5,040,000 pixels)

This is the highest quality image. Use this mode for important pictures you want to keep, for images you want to edit on your computer, etc. As it is the largest, it is also ideal for printing out your enlarged photos.

2) 2048 × 1536 pixels (approximately 3,140,000 pixels)

This mode is a good standard setting when you want to view memorable photos on your computer screen, or for printing them out.

3) 1600 × 1200 pixels (approximately 1,920,000 pixels)

You can shoot pictures in high quality resolution with low memory requirements. This mode is suitable if you wish to take more shots and the memory does not have enough space.

4) 640 × 480 pixels (approximately 300,000 pixels)

As this mode produces the smallest file size, it is best for sending via email, for use in home pages, etc.

Standard number of pictures you can take in each resolution mode (without sound or motion)

Image Size	Compression Ratio	64 MB SD Memory Card	Internal Memory
2592 × 1944	FINE	About 30 Photos	—
	NORMAL	About 51 Photos	—
2048 × 1536	FINE	About 53 Photos	—
	NORMAL	About 85 Photos	—
1600 × 1200	FINE	About 91 Photos	—
	NORMAL	About 160 Photos	—
640 × 480	FINE	About 320 Photos	About 10 Photos
	NORMAL	About 640 Photos	About 20 Photos

- The number of photos you can take may vary depending on the subject.
- When there are files other than images, or when the resolution and/or recording mode have been changed, the number of photos you can take is not limited to the table above. Please use the table as a guide for the number of photos you can take.

Using the REC Menu (Cont'd)

Shooting Movies

- Set your camera to this mode to shoot movies.
- You can take a movie with sound for approximately 30 seconds. Your camera records an image with a 320×240 pixel count.
- While you are shooting a movie, the LCD monitor stays on. Even if you press the DISPLAY button, the LCD monitor will not turn off. Please view the LCD monitor while shooting your movies.

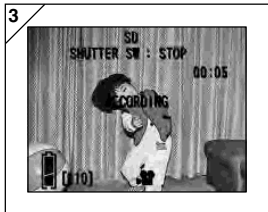


1. Select "MOVIE ON" and press ►.



2. The display returns to the through image, with movie information displayed as in screen 2. In this screen you can start taking a movie.
 - When you are not recording a movie, press the MENU/SET button, select "MOVIE OFF" and then press ► button.

Using the REC Menu (Cont'd)



3. When you press the shutter button, your movie will start recording. You can record for about 30 seconds.

- You need not hold the shutter button down.
- When the remaining time runs out, the camera stops recording automatically. If you wish to stop while the camera is recording, simply press the shutter button again.
- The elapsed time is displayed on the upper right of the screen.

- NOTE:
- 1) While recording a movie, the sound is also being recorded, so take care not to cover the microphone on the top of the camera with your fingers, etc.
 - 2) As long as the camera's power is ON, you can continue to take movies, but if you turn the power off, it exits the movie mode. If you turn the power back ON and wish to shoot another movie, reset the camera to the movie mode.
 - 3) Once you have pushed the shutter button, and started taking a movie, you cannot use the optical zoom.
 - 4) The digital zoom is also inoperable.
 - 5) While shooting a movie, the sound is always recorded with built-in microphone. Therefore, you cannot take the movie without sound.

Using the REC Menu (Cont'd)

Adjusting Exposure Compensation

- If you wish to brighten or darken an entire image, use the exposure adjustment function.
- The exposure can be corrected ± 1.5 EV in adjustment steps of 0.3 EV.
- The compensation value is displayed on the monitor.



1. Select "EXPOSURE" and press ►.



2. The through image mode is entered, and the adjusting exposure compensation bar is displayed. If you press ►, the cursor moves toward the plus side while pressing ◀ moves it toward the minus. Select the desired compensation level (brightness) and press the MENU/SET button. The setting is completed and you will return to screen 1.

- Even after a correction, there are times when the change is not apparent, such as when the subject is in a semi-dark place.
- When flash is used, the compensation effect may not be sufficient.

Using the REC Menu (Cont'd)

Adjusting White Balance

- The color tone of your photos will change according to the kind of light source. While the “AUTO” mode can be used in almost all instances, you can alter the white balance settings to suit the environment and lighting when you take a picture.
- The mode you set is displayed with icon on the monitor.







1. Select “WHITE BALANCE” and press ►.



2. Use ▼ or ▲ to select the desired mode, then press either ► or the MENU/SET button. The setting is completed and you will return to screen 1.
 - If you press ◀, the selection is invalidated and you will return to screen 1.
 - To return to normal still-image shooting, set the mode to “AUTO”.

Using the REC Menu (Cont'd)

Available Modes

- AUTO (Default) : The camera adjusts the white balance automatically.
-  DAY LIGHT : Ideal for taking photos in strong sunlight.
-  CLOUDY : Ideal for taking photos in the shade or when it is cloudy.
-  FLUO : Ideal for taking photos indoors with fluorescent lighting.
-  TUNGSTEN : Ideal for taking photos indoors with normal incandescent lighting.

About White Balance

The human eye has the ability to compensate so that it sees white subjects as white, whatever the light source. Digital cameras and similar devices can also “see” white subjects as white by first adjusting the color balance of the ambient light to match the photo subject. This adjustment is called the White Balance.

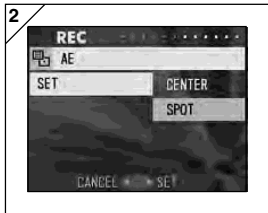
Using the REC Menu (Cont'd)

Changing Auto-Exposure (AE) Modes

- Your camera uses center-weighted metering as the default, but it can be changed to spot metering.
- Spot metering is used to ensure matching the exposure to a targeted part of your subject.



1. Select “AE” and press ►.



2. Use ▼ or ▲ to select “SPOT”, then press either ► or the MENU/SET button. When the setting is completed, you will return to screen 1.
 - If you press ◀, the selection is invalidated and you will return to screen 1.

Center-weighted metering

In this mode the camera sets the exposure according to the metering for the central part of the whole frame. It is ideal for taking photos where the brightness of the subject in the center of the frame is desired.

Spot metering

In spot metering the camera measures the light of just the subject in the center of the frame, and sets the exposure to it. This mode is ideal when the background of the picture is brighter than the subject, or there is a great deal of contrast between the two, as the camera allows you to take the photo with the exposure set to the brightness of your desired subject.

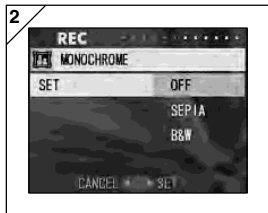
Using the REC Menu (Cont'd)

Taking Monochrome Pictures

- You can take monochrome images, such as black and white or sepia tone.



1. Select "MONOCHROME" and press ►.



2. Use ▼ or ▲ to select "SEPIA" or "B&W", then press either ► or the MENU/SET button. When the setting is completed, you will return to screen 1.

- If you press ◀, the selection is invalidated and you will return to screen 1.
- To return the normal color mode, select "OFF" in screen 2, and then press either ► or the MENU/SET button.

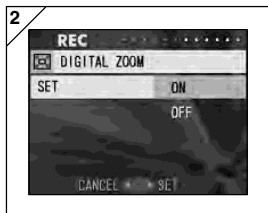
Using the REC Menu (Cont'd)

Using the Digital Zoom

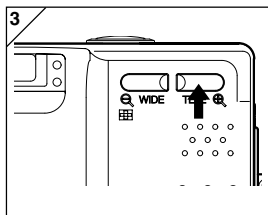
- Digital zoom can double or triple the zoom ratio achieved by the optical zoom.
- When using the digital zoom, view the field through the LCD monitor. Because the zoom effect is accomplished electronically, it is not possible to use the viewfinder.
- When shooting movies, the digital zoom function is not available.



1. Select "DIGITAL ZOOM" and press ►.



2. Use ▼ or ▲ to select "ON", then press either ► or the MENU/SET button. The setting is completed and you will return to screen 1.
 - If you press ◀, the selection is invalidated and you will return to screen 1.



3. From screen 1, when you press ◀, you will return to the through image mode. To take a picture, press the TELE zoom button until it reaches the end of the optical range, then release the button for a moment, then press and hold the TELE zoom button and the digital zoom is engaged. Use the LCD monitor to compose your photo, and take your photos.
 - The LCD monitor will display the digital zoom ratio (x2, x3).
 - To return to normal mode, press the WIDE zoom button.

Using the REC Menu (Cont'd)

Adjusting the Brightness and color of the LCD Monitor

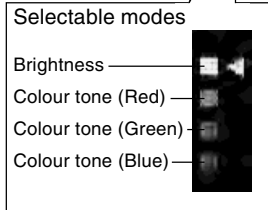
- You can adjust the brightness of the LCD monitor to suit your shooting location. The color of the LCD monitor (red, green, blue) can also be adjusted.



1. Select "MONITOR ADJ." and press ►.



2. It will turn to the through image and the monitor adjustment screen will be displayed. Select the mode (brightness or color) you want to adjust by moving the cursor ◀ within the selecting mode using ▼ or ▲ button. Move the cursor on adjustment bar at the bottom of the screen by pressing ◀ or ► button. To make screen brighter (to make color deeper.), move the cursor to the "+" with ► button. To make the screen darker (to make color lighter.), move the cursor to the "-" with ◀ button. Adjust to the best brightness and color setting you prefer and press the MENU/SET button. You will then return to screen 1.



- Color is set up as a relative value.
For example, to emphasize red most, green and blue need to be set up to the furthest left as well as setting up red to the furthest right.

Using the REC Menu (Cont'd)

Making Voice Memos

- The longest voice only memo you can record at one time is approximately 30 seconds.
- Take care not to cover the microphone on the top of the camera.



1. Select "VOICE" and press ►.



2. Screen 2 will appear and the camera enters in the voice recording mode. Press the shutter button and recording begins.
 - If you do not press the shutter button, you can return to screen 1 without making a recording by pressing the MENU/SET button.

- When the available recording time runs out, recording will end automatically. If you wish to stop recording, simply press the shutter button again.
- While recording, the elapsed time is displayed on the upper right of the screen.
- To play back the recording, see page 73.
- Recording a voice memo reduces the number of photos you can take.

Using the REC Menu (Cont'd)

Using After Recording

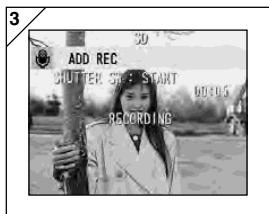
- You can add voice comments (After Recording) to photos you have already taken. You can also erase previous voice comments, as well as re-write them.
- The maximum length of time per photo you can record is about 30 seconds.



1. Select "ADD REC" and press ►.



2. Previously recorded photos are displayed. By pressing ◀ or ▶, select the still photo to which you wish to attach a voice comment.
 - Sound cannot be recorded to a photo displayed in the movie (MOVIE) mode.
 - If you press the MENU/SET button, the selection is invalidated and you will return to screen 1.




3. Press the shutter button to start recording. Record your comments facing the microphone on top of the camera.
 - When remaining time runs out, the camera stops recording automatically. You can stop recording at any time by simply pressing the shutter button again.
 - While recording, the elapsed time is displayed on the side of the screen.

Using the REC Menu (Cont'd)

Erasing recorded voice comments



1. When you are on screen 2 on page 59, select the picture with the recording you wish to erase and press the DELETE button.
 - Photos with voice comments have a  displayed on them.



2. If you wish to erase only the voice comments, select “THIS”, and if to erase all the voice comments attached to the pictures in one go, select “ALL”. Use ◀ or ▶ to select the appropriate setting, and then press the MENU/SET button.
 - If you decide not to erase, select “CANCEL” or press the DELETE button again.

3. When the “THIS DELETE...” sign disappears, erasing has finished and you will return to the REC menu screen.

- To re-record, erase the recorded voice comments once using Step 1 to 2 on page 60, and then repeat the procedures again in Step 1 to 3 on page 59.
- It is not possible to record to a protected photo or when either a card or internal memory doesn't have enough space.
- Making recording with After Recording reduces the number of pictures you can take.

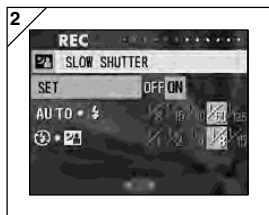
Using the REC Menu (Cont'd)

Changing slow shutter speed

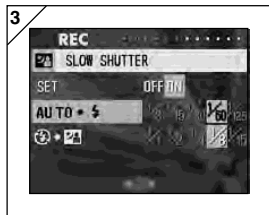
- Slow shutter speed can be changed according to the flash mode.
- Shutter speed will become slow when taking photographs in dark places, so please use a tripod to prevent movement during exposure.



1. Select "SLOW SHUTTER" and press ► button.



2. Select "ON" with ► button.



3. Select flash mode with ▲ or ▼ button and press ◀ or ▶ button to set up shutter speed. Press MENU/SET button to finish set up and go back to the screen in 1.
 - Change the slow shutter settings to "OFF" to go back to the normal shutter speed (default setting). When the slow speed setting is "OFF" and if flash mode is AUTO or ⚡ (Fill-In), the shutter speed will be 1/60 seconds. When the slow speed setting is "OFF" and if flash mode is ☀ (OFF) or Ⓜ (Slow Sync), shutter speed will be 1/8 seconds.

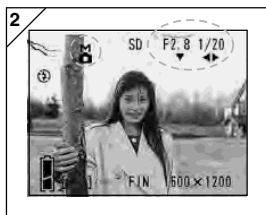
Using the REC Menu (Cont'd)

Taking photographs in manual exposure mode

- Shutter speed and focus value can be set according to conditions and purpose.
- Shutter speed can be set between 15 and 1/1000 seconds. Focus value differs with zoom magnifications and can be switched to 2 levels according to magnification.



1. Select "MAN EXPOSURE ON" and press **▶** button.



2. It will turn to through image and M mark, focus value and shutter speed will be displayed in blue. Set up becomes available. Set up focus value with **▼** button and shutter speed with **◀** or **▶** button.
 - Please use a tripod to prevent movement during slow shutter speed exposure.

Using the REC Menu (Cont'd)

- When setting up manual exposure mode, the function of ▼, ◀ and ▶ button can be changed every time ▲ button is pressed.
Manual exposure can be set up when focus value and shutter speed is displayed in blue. Press ▲ button to switch over the function of ▼, ◀ and ▶ button. Each mode of “flash ▶ (p.38)”, “shooting ◀ (p.39)” and “white balance ▼ (p.107)” can be set up.
- M mark, focus value and shutter speed will be displayed on the LCD monitor all the time when setting up manual exposure mode.
Exposure value (exposure difference to brightness) will be displayed by half depressing shutter button. (Displays in 0.3EV steps within ± 2.0 .)
Even if brightness around changes, the exposure value can be confirmed whenever the shutter button is half depressed.
- In manual exposure mode, if shutter mode is set slower than 1/2 second, it will take longer for processing due to the noise reduction function.
- Some of the functions will be restricted on manual exposure mode.
 - “Exposure correction” mode (p.50) in the REC menu cannot be set.
 - ISO sensitivity (p.64) will be fixed to “ISO50” when it is set to “AUTO”.
 - Flash AUTO mode and portrait night view mode cannot be selected.
 - When flash emits light on red eye reduction mode, set up shutter speed will be used.
- When taking a photograph using a flash in manual exposure mode, the intensity may not be appropriate according to conditions. In such a case, please use flash intensity mode in image quality setting (p.64).
- To go back to auto mode, press MENU/SET button, select “manual exposure OFF” and press ▶ button. It will revert to the through image.
In auto mode, shutter speed is between slow shutter speed (setting value) and 1/2000 second. Focus value can be changed to F2.8/F4.7 for a wide lens and to F4.9/F8.3 for a telephoto lens.
- Settings for manual exposure will not be available when taking a movie.

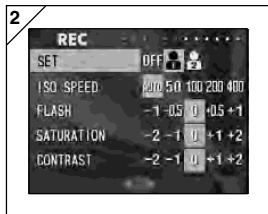
Using the REC Menu (Cont'd)

Setting up image quality

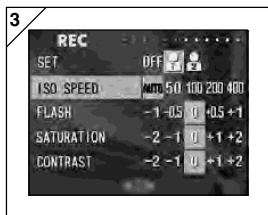
- Image quality including sensitivity, flash intensity, contrast and color of images can be set to meet your taste.
- 2 different settings are available for image quality.



1. Select "QUALITY" and press ► button.



2. Select "1" (or 2) in "SET" pressing ► button.
 - Image quality can be set up to "1" as well as "2" . (2 different settings are available.)



3. Select mode with ▼ or ▲ button and select setting value with ◀ or ▶ button. Press the MENU/SET button to finish setting up and go back to through image.
 - To take photographs in normal settings (default settings), select "OFF" and press the MENU/SET button. To take photograph in image quality you set up, select "1" or "2".

Using the REC Menu (Cont'd)

Modes you can set up

ISO

Sensitivity can be switched over.

AUTO; Normal sensitivity is equivalent to ISO100. Sensitivity can be changed automatically to adjust to the condition of an object.

50/100/200/400; High sensitivity is suitable for an object with quick motion or for dark places. However, the higher the sensitivity is, the more noise image will have. Low sensitivity is suitable for bright place or slow shutter speed.

Flash intensity

Flash intensity can be adjusted.

If you want to reduce the flash intensity, so as to take photograph of a close object, adjust the volume to the “-”.

If you want to increase the flash intensity, such as when the background of an object is far away, adjust to the “+”.

Flash intensity may be restricted by hardware depending on the conditions (focusing distance, focus value, distance to an object, sensitivity etc.)

Clearness

Color clearness of images can be adjusted.

Adjust to the “+” to increase color clearness and adjust to the “-” to reduce color clearness.

Contrast

Contrast of images (gap between bright and dark) can be adjusted.

Adjust to the “+” to increase the gap between brightness and darkness for sharp images and adjust to the “-” to decrease the gap for soft images.

Sharpness

Sharpness of images (sharpness of outline) can be adjusted.

Adjust to the “+” to make the image outline sharper and adjust to the “-” to make it softer.

Color

Color of images can be adjusted. (Specified color can be emphasized.)

Color (red, green, blue) is set up as a relative value.

0, 0, 0 and -2, -2, -2 are regarded as the same. For example, to emphasize the red most, colors need to be set up to +2 (red), -2 (green), -2 (blue) not +2 (red), 0 (green), 0 (blue).

- When taking photographs in sepia, clearness, sharpness and color settings cannot be reflected.
- When taking photographs in black and white, color settings cannot be reflected.
- When taking movies, only color settings can be reflected.

Using the REC Menu (Cont'd)

Selecting the Set-up Menu

- By setting each item on the set-up menu to your preferences, you can customize your camera to suit you.



1. Select "SETUP" and press ►.

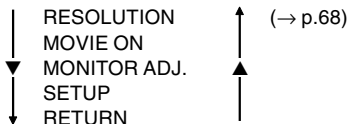


2. You will enter the SET UP Menu mode. For details, see "Using the Set-up Menu" on page 98.
 - Version of current camera can be displayed by pressing DISPLAY button on screen 2.

Using the REC Menu (Cont'd)

Setting with the REC (BASIC) Menu

- It allows you for the quick access to the basic operation. For information about how to set REC (BASIC) menu mode, see page 100.
- Similarly, to learn how to enter the REC menu screens and how to select menus, refer to “Setting with the REC (DETAILS) Menu” on page 44.
- In the REC (BASIC) menu mode, every time you press the ▼ or ▲ button the menu cycles through the following screens:



- When you are on REC Menu screen, you can cancel the REC Menu mode by pressing ◀, or pressing ▶ or the MENU/SET button after selecting “RETURN”. This will close the menu and return you to the through image (picture shooting image).
- If you press the shutter button half-way even when you are setting the menu, the display returns to the through image (picture shooting mode).
- The following menus are explained in the same way under “Setting with the REC (DETAILS) Menu”. (See the pages below for the appropriate explanation.)
 - MOVIE ON (→ p.49)
 - MONITOR ADJ. (→ p.57)
 - SETUP (→ p.66)

Note: When REC menu is changed from “DETAILS” to “BASIC”, the following mode will be changed to the default settings.

- Resolution, exposure compensation, white balance, AE, monochrome, digital zoom, manual exposure
- Also, settings for slow shutter and image quality will become invalid.

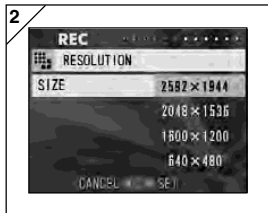
Using the REC Menu (Cont'd)

Selecting the Image Size

- You can select from among four image sizes.
- All on the same card, you can choose a different image size for every picture. Every time you change the image size, the number of remaining photos also changes, which is displayed on the LCD monitor.



1. Select "RESOLUTION" and press ►.



2. Choose the desired picture size using ▼ or ▲ and enter your selection with ► or by pressing the MENU/SET button. After selecting the size, you will return to screen 1.
 - If you press ◀, the selection is invalidated and you will return to screen 1.

Using the REC Menu (Cont'd)

Standard number of pictures you can take of each size (without sound or movie)

Image Size	Using a 64 MB SD Memory Card	Internal Memory
2592 × 1944	About 51 photos	–
2048 × 1536	About 85 photos	–
1600 × 1200	About 160 photos	–
640 × 480	About 640 photos	About 20 photos

- The number of photos you can take varies depending on the subject .
- When there are files other than images, or when the image size and/or recording mode have been changed, the number of photos you can take is not limited to the table above. Please use the table as a guide for the number of photos you can take.
- You can also mix the different image sizes and the 2 compression rates (p. 46).

Playing Back Pre-recorded Images

- You can play back pre-recorded images on the LCD monitor.
- When you play back images, it doesn't matter whether the camera's power is OFF or ON.
- Just in case battery power runs low, have a spare charged battery pack (sold separately, Lithium-ion Battery NP-500) on hand. Alternatively, using the AC adapter is recommended. (sold separately, AC-8U/AC-8E/AC-8GB; see P.11 for details)



1. Press the PLAY button and the last recorded photo will be played back on the LCD monitor.

When the camera's power is OFF (with the lens cover closed), you can play back images by holding down the PLAY button for more than 2 seconds.

- If there isn't any image data recorded, the message "NO DISPLAY DATA" will be displayed.

2. Every time you press ◀ or ▶, the previous or next photo will be played back.

- If you press the W side on the zoom button, Index Playback will start.

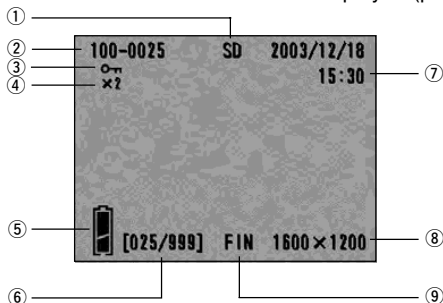
For operation after play back please refer to page 78, Items 2 and 3.

- Half depress shutter button when power is ON and when playing back in normal image size. It will turn to through image and photographing will become available again.
- When you have finished playing back photos, turn off the LCD monitor by pressing the PLAY button again to prevent battery consumption. Also, if you will not be taking any photos, close the lens cover, turning OFF the power.

The Playback Image Display

In addition to the images you've taken, the following information is displayed.

- You can set the camera so information is not displayed (p.101).



① Recording Media Display

The type of media in use is displayed.

- The SD Memory Card or Multi-media Card* :SD
- Memory Stick :MS
- Internal Memory :IN

* Even if a Multi-media Card is used, "SD" will be displayed.

② File Number

The file and directory numbers recorded in the card are displayed.

③ Protected Display

If an image is protected, the Protected symbol is displayed.

④ Digital Zoom Magnification

The magnification ratio is displayed when images are enlarged and played back.

⑤ Remaining Battery Power Display

When the battery is in use, the remaining power is displayed in two levels (p.19).



⑥ Image No. (Playback Frame No./ Total Frame No.)

Your camera is capable of playing back up to 999 frames. If there are more than 999 frames on a card, it is not possible to use playback.

⑦ Date & Time Recorded

- 1) Normally the time & date an image was recorded are displayed.
- 2) When movie images or still images with sound are played back, the playback time is displayed.

⑧ Image Size

- 1) Image size is displayed.
- 2)  is displayed in movie images.
- 3)  is displayed in still images with sound.


⑨ Picture quality mode

The picture quality mode when the picture was shot is shown. (This is not displayed during movie's playback.)

Playing Back Movies

1



1. After pressing the PLAY button, use ◀ or ▶ to select the movie you wish to see.
 -  is displayed on the movie image.

2

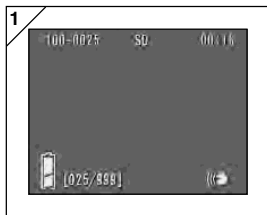


2. If you press the shutter button, the movie images will be played back. When playback is finished, the display returns to screen 1.
 - Symbols displayed when a movie is played back are recording media, file number, image number, and elapsed playback time only.
 - If you want to stop during playback, press the shutter button again.

Playback (Cont'd)

Playing Back Voice Memos

- Play back the contents of your voice memos (p. 58).



1. After pressing the PLAY button, use ◀ or ▶ to select a voice memo image.
 - The voice memo time is displayed in the upper right of the screen.
2. Press the shutter button and the voice memo is played back. When the memo finishes, the display returns to screen 1.
 - The playback time (elapsed) is displayed in the upper right of the screen.

Playing back the sound of After Recording image

- Playing back the sound of After Recording image (p.59).



1. Press PLAY button and then select After Recording image with ◀ or ▶ button.
 - When playing back After Recording image, a screen will be displayed as in 1. Recording time will be displayed at the upper-right of the screen.
2. Press shutter button to play back sound. It will revert back to image 1 when playback finishes.
 - Playback time will be displayed in the upper-right of the screen.

- Playing back voice memo and sound for After Recording image.
 - Take care not to cover the speaker on the back of the camera (p.15).
 - Press the shutter button again if you want to stop during playback.

Playing Back Enlarged Images (Digital Zoom)

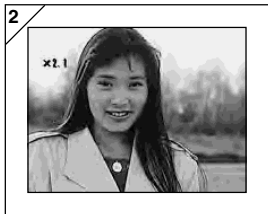
- You can play back your images as enlargements.



1. After pressing the PLAY button, use ◀ or ▶ to select the image you wish to see.

Then use the TELE zoom button to zoom in; every time you press the TELE button, the image is enlarged further.

- The zoom ratio is displayed on the LCD monitor.
- To zoom back out, press the WIDE zoom button. Also, half depress shutter button to display the image in the normal size.



2. Use ◀, ▶, ▲, or ▼ to scroll around the photo to the part you want to see.

- To conserve your battery once you've finished viewing, press the PLAY button again to turn off the LCD monitor.

Using the Quick-view Function

- If you pre-set the camera to the Quick-view mode (p. 100), you can review pictures on the LCD monitor right after you've taken them.



When using the viewfinder to shoot images, with the LCD monitor off:

After the LCD monitor displays the last image that you have taken, it will automatically turn back to off.

When using the LCD monitor for shooting images:

- 1) After you take a picture, the LCD monitor automatically displays it.
- 2) After about three seconds, the LCD monitor returns to the through image.

Erasing the Playback Image

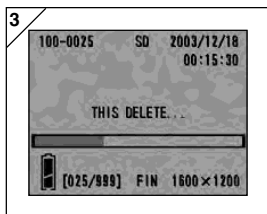
- You can erase playback images (one frame or all).
- You cannot erase protected images.
- Once an image is erased, it cannot be restored.



1. After pressing the PLAY button, use ◀ or ▶ to select the image you wish to erase.
 - If you wish to erase all frames, it doesn't matter which image is displayed.



2. Press the DELETE button and a screen appears indicating the media type to be erased and prompting you to select the frame range. Press ◀ or ▶ to select "THIS" (the selected image) or "ALL", and press the MENU/SET button.
 - If you decide not to erase a frame, select "CANCEL" or press the DELETE button again, then you will return to screen 1.



3. Once erasing starts, the "THIS DELETE..." screen is displayed. When the process is finished, the display returns to the playback image.
 - If there isn't any image data, "NO DISPLAY DATA" is displayed.
 - Once an image is erased, it cannot be restored.

- By using the PLAY menu, you can play back images, erase unwanted pictures and edit images. It does not matter whether the camera's power is OFF or ON.



1. After pressing the PLAY button, press the MENU/SET button and the PLAY menu screen will be displayed.

2. Using ▼ or ▲, select the desired settings menu. Every time you press the button, the menu mode screen changes as follows:

↓	INDEX	↑	(→ p.78)
	COPY		(→ p.79)
	DELETE		(→ p.82)
	MONITOR ADJ.		(→ p.85)
	DPOF		(→ p.86)
	RESIZE		(→ p.90)
▼	PROTECT	▲	(→ p.91)
	MOVE		(→ p.94)
	SLIDE SHOW		(→ p.97)
	ADD REC		(→ p.97)
	SET UP		(→ p.97)
↓	RETURN		

3. After selecting the menu, press ► and in the same way as the REC menu (p.44), the setting screen of the selected menu will be displayed. After selecting the desired contents with ▼ or ▲, press either ► or the MENU/SET button, completing the setting, and you will return to screen 1.
4. When you are in screen 1 (PLAY menu screen), to exit the PLAY menu mode, press either ◀ or the MENU/SET button after selecting "RETURN". You will return to either the Playback mode. Press the PLAY button to turn off the LCD monitor.
 - If you press the shutter button half-way even when you are setting the menu, the display returns to the playback image.
 - For details on making settings for each menu, refer to the following pages.

Using the PLAY Menu (Cont'd)

Viewing Multiple Pages at Once (Index Playback)

- Up to nine frames can be displayed on the LCD monitor simultaneously. You can quickly access the images you want displayed. You can also erase unwanted images.

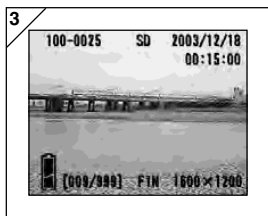


1. Select "INDEX" and press ►.



2. The 9-frame index are displayed at the same time. The image selected when you entered the menu will be surrounded by a red frame. Use ◀, ▶, ▲, or ▼ to move the frame and select the image you wish to display (or erase).

- Pressing ◀ when the first frame is selected or ▶ on the last frame will switch the screen to the next nine images.



3. Press the TELE zoom button or the MENU/SET button and the selected image will be displayed in the normal size.

If you wish to delete the selected image, press the DELETE button. After pressing the DELETE button, the procedures are the same as explained at Step 2 to 3 on page 76.

- If you wish to delete all the images on a card, it doesn't matter which image is displayed.

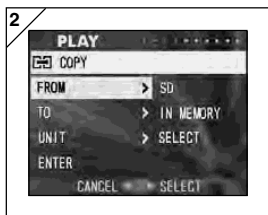
Using the PLAY Menu (Cont'd)

Copying an Image

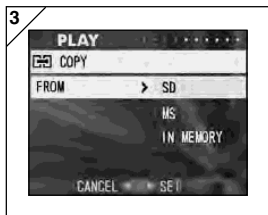
- You can copy a previously recorded still photo or movie onto another memory media. (You can select one frame, multiple frames or all frames.)



1. Select "COPY" and press ►.

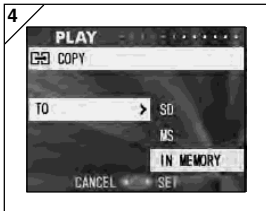


2. A screen with each setting item will appear. At first "FROM" is selected, so press ►.
 - To select a different item, press ▼ or ▲.

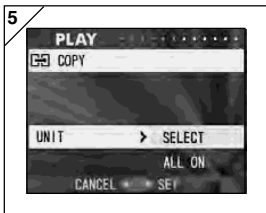


3. The media types will be displayed. Using ▼ or ▲, select the media on which the image you wish to copy is recorded, then press ► or the MENU/SET button. The setting is completed and you will return to screen 2.
 - If you press ◀, the setting is invalidated and you return to screen 2.
 - If there are no images on the media selected, or if a card is not inserted in the camera, you return to screen 3.

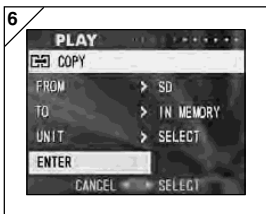
Using the PLAY Menu (Cont'd)



4. Returning to screen 2, select "TO". Then the screen shown left (screen 4) appears. After pressing ►, use ▼ or ▲ to select the destination media by pressing either ► or the MENU/SET button. The setting is completed and you will return to screen 2.
- If you press ◀, the setting is invalidated and you return to screen 2.
 - If the selected media doesn't have enough free space, an error message will appear, then you will return to screen 4.



5. Returning to screen 2, select "UNIT". Then the screen shown left (screen 5) appears. After pressing ►, use ▼ or ▲ to choose "SELECT" (if one or multiple frames are to be selected) or "ALL ON". Then press either ► or the MENU/SET button, and the settings are completed, returning you to screen 2.
- If you press ◀, the setting is invalidated and you return to screen 2.



6. After you have made all the settings, select "ENTER" and press either ► or the MENU/SET button.
- If you chose "SELECT" on screen 5, go to Step 7; if you chose "ALL ON", go to Step 9.
 - If you press ◀, the setting is invalidated and you return to screen 1 on page 79.

Using the PLAY Menu (Cont'd)



7. The 8-frame index appears. Using ◀, ▶, ▲, or ▼, move the red frame to an image you wish to select and press the MENU/SET button.

- Pressing ◀ when the first frame is selected or ▶ on the last frame will switch the screen to the next eight images.



8. Images selected at Step 7 are surrounded by a yellow frame. When you have finished selecting images, use ◀, ▶, ▲, or ▼ to select "END", and then press the MENU/SET button. (Go to Step 9)

To select other images, repeat the selection procedure. (Return to Step 7)

- To select multiple images, repeat the procedures Steps 7 and 8.



9. A confirmation screen appears. To carry out copying, select "YES" with ◀ or ▶, then press the MENU/SET button.

- If you select "NO" and press the MENU/SET button, you will return to screen 1 without making a copy.

10. Once copying starts, "Now COPY..." is displayed. Once copying is completed, the display returns to screen 1.

Using the PLAY Menu (Cont'd)

Erasing Unwanted Images

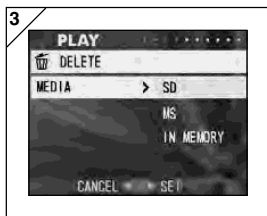
- You can erase unwanted still pictures, movie images etc. (you can select one frame, multiple frames or all frames.)
- Once images are erased, they cannot be recovered.
- Protected images cannot be erased unless the protection is removed.



1. Select "DELETE" and press ►.



2. A screen with each setting item will appear. At first "MEDIA" is selected, so press ►.
 - To select a different item, press ▼ or ▲.



3. Using ▼ or ▲, select the media on which the image you wish to erase is recorded, then press ► or the MENU/SET button. The setting is completed and you will return to screen 2.
 - If you press ◀, the setting is invalidated and you return to screen 2.
 - If there are no images on the media selected, or if a card is not inserted in the camera, you return to screen 3.

Using the PLAY Menu (Cont'd)



4. Returning to screen 2, select "UNIT". Then the screen shown left (screen 4) appears. After pressing **▶**, use **▼** or **▲** to choose "SELECT" (If one or multiple frames are to be selected) or "ALL ON". Then press either **▶** or the MENU/SET button. The settings are completed and you will return to screen 2.
- If you press **◀**, the setting will be invalidated and you will return to screen 2.



5. After you have made all the settings, select "ENTER" and press either **▶** or the MENU/SET button.
- If you chose "SELECT" on screen 4, go to Step 6; if you chose "ALL ON", go to Step 8 on page 84.
 - If you press **◀**, the setting is invalidated and you return to screen 1.



6. The 8-frame index appears. Using **◀**, **▶**, **▲**, or **▼**, move the red frame to an image you wish to erase and press the MENU/SET button.
- Pressing **◀** when the first frame is selected or **▶** on the last frame will switch the screen to the next eight images.

Using the PLAY Menu (Cont'd)



7. Images selected at Step 6 on page 83 are surrounded by a yellow frame. When you have finished selecting images, use ◀, ▶, ▲, or ▼ to select “END”, and then press the MENU/SET button. (Go to Step 8)

To select other images, repeat the selection procedure. (Return to Step 6)

- To select multiple images, repeat Steps 6 and 7.



8. A confirmation screen appears. To carry out erasing, select “YES” with ◀ or ▶, then press the MENU/SET button.

- If you select “NO” and press the MENU/SET button, you will return to screen 1 without erasing anything.

9. Once erasing starts, “THIS DELETE...” is displayed. Once erasing is completed, the display returns to screen 1.

Using the PLAY Menu (Cont'd)

Adjusting LCD Monitor Brightness and Color

- You can adjust the brightness of your LCD monitor as needed to suit the lighting where you are viewing images. Color of LCD monitor (red, green, blue) can also be adjusted.
- Brightness and color settings are not altered by turning the power ON/OFF and are saved until changed again.



1. Select "MONITOR ADJ." and press ►.



2. It will go to display screen for playback image and monitor adjustment.
See p.57-2 for selectable mode and adjustment method.
Adjust the best brightness and color setting for you and press the MENU/SET button.
You will then return to screen 1.

Using the PLAY Menu (Cont'd)

Selecting/Deselecting Images to Print (DPOF)

- DPOF is short for Digital Print Order Format. DPOF is a format for recording information on memory cards, etc. so they can be used by DPOF compatible digital printers and lab print services for printing out images you've taken with your camera.
- You can select the frames (one frame, multiple frames or all frames) you want to print from all the still images you've taken. You can also deselect the settings. However, you cannot print movie images.
- When you print a photo you took previously, you can imprint the date (the date taken) onto the image. (You can also select not to imprint the date.)



1. Select "DPOF" and press ►.



2. A screen with each setting item will appear. At first "MEDIA" is selected, so press ►.
 - To select a different item, press ▼ or ▲.



3. Using ▼ or ▲, select the media on which the image you wish to print (or deselect) is recorded, then press ► or the MENU/SET button. The setting is completed and you will return to screen 2.
 - If you press ◀, the setting is invalidated and you return to screen 2.
 - If there are no images on the media selected, or if a card is not inserted in the camera, you return to screen 3.

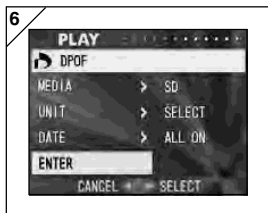
Using the PLAY Menu (Cont'd)



4. Returning to screen 2, select "UNIT". Then the screen shown left (screen 4) appears. After pressing ►, if you want to print (or deselect) one or multiple frames, use ▼ or ▲ to choose "SELECT". To print all frames, choose "ALL ON", or to deselect all frames from printing, choose "ALL OFF". After making your selection, press ► or the MENU/SET button. The settings are complete and you will return to screen 2.
- If you press ◀, the settings will be invalidated and you will return to screen 2.

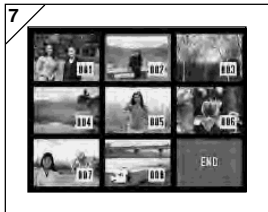


5. Select "DATE" on screen 2, and then press ►. If you wish to print the date, select "ALL ON" with ▼ or ▲, or if not, select "ALL OFF". After making your choice, press either ► or the MENU/SET button. The settings are complete and you return to screen 2.
- If you press ◀, the setting will be invalidated and you will return to screen 2.



6. After you have made all the settings, select "ENTER" and press either ► or the MENU/SET button.
- If you chose "SELECT" for "UNIT" at on screen, go to Step 7; if you chose "ALL ON" or "ALL OFF" go to Step 9 on page 89.

Using the PLAY Menu (Cont'd)



7. The 8-frame index appears. Using ◀, ▶, ▲, or ▼, move the red frame to an image you wish to print (or deselect) and press the MENU/SET button.

- Pressing ◀ when the first frame is selected or ▶ on the last frame will switch the screen to the next eight images.



8. Images selected at Step 7 are surrounded by a yellow frame. For auto mode, specify the number of prints using zoom button (T, W). The number of prints will be displayed in the upper left of the screen.

When you have finished selecting images, use ◀, ▶, ▲, or ▼ to select “END”, and then press the MENU/SET button. (Go to Step 9)

To select other images, repeat the selection procedure. (Return to Step 7)

- To select multiple images, repeat the procedures Steps 7 and 8.
- Number of prints can be set up to 999.

Using the PLAY Menu (Cont'd)



9. A confirmation screen appears.

If you choose “SELECT”: select “YES” with ◀ or ▶ button and press MENU/SET button.

If you chose “ALL ON”: Set the number of prints using ▲ or ▼, or zoom button (T or W). Next, select “YES” with ◀ or ▶ and press the MENU/SET button.

- You can print from 1 to 999 photos.
- If you select “NO” and press the MENU/SET button, your settings will be invalidated and you will return to screen 1.

If you chose “ALL OFF”: select “YES” and press the MENU/SET button.

- If you select “NO” and press the MENU/SET button, you will return to screen 1 without deselecting anything.



10. The “Now DPOF SET...” (or “Now DPOF OFF...”) screen is displayed. Once settings (or deselection) are completed, the display returns to screen 1.

- You can also order a digital print at a photo lab

(except for some labs) such as a traditional photofinishing service. For detailed information, please contact your photo lab.

Using the PLAY Menu (Cont'd)

Reducing Image Size (Resizing)

- You can reduce the size of images you have taken. When you resize an image, a new, smaller file is created.
- Use this function when you send images as e-mail attachments or when you otherwise need a smaller image.
- The resize function is not available for movie images.



1. Select "RESIZE" and press ►.



2. Select the desired size with ▼ or ▲ and press ► or the MENU/SET button.
VGA records at 640 × 480 pixels and QVGA at 320 × 240.



3. As you are in the playback mode, press ◀ or ▶ to select an image you want to resize. Then press the MENU/SET button and after the newly resized image is recorded, the display returns to screen 1.
 - If you do not want to resize, select "RETURN" with ▼ or ▲ and press the MENU/SET button.
 - If there is not enough memory to save the image, an error message "MEMORY FULL" is displayed.

Using the PLAY Menu (Cont'd)

Setting/Canceling Protection for Your Important Images

- You can protect your important still and moving images from being erased. (You can select some or all images to be protected). You can also cancel the protection.
- If you format a card (p.99), even protected images will be erased.



1. Select "PROTECT" and press ►.



2. A screen with each setting item will appear. At first "MEDIA" is selected, so press ►.
 - To select a different item, press ▼ or ▲.



3. Using ▼ or ▲, select the media on which the image to protect (or cancel protect) is recorded, then press ► or the MENU/SET button. The setting is completed and you will return to screen 2.
 - If you press ◀, the setting will be invalidated and you return to screen 2.
 - If there are no images on the media selected, or if a card is not inserted in the camera, you return to screen 3.

Using the PLAY Menu (Cont'd)



4. Returning to screen 2, select "UNIT". Then the screen shown left (screen 4) appears. After pressing **▶**, if you want to protect (or cancel protect) one or multiple frames, use **▼** or **▲** to choose "SELECT". To protect all frames, choose "ALL ON".

Further, to cancel protection of all frames, choose "ALL OFF". After making your selection, press **▶** or the MENU/SET button. The settings are complete and you will return to screen 2.

- If you press **◀**, the settings will be invalidated and you will return to screen 2.



5. After you have made all the settings, select "ENTER" and press either **▶** or the MENU/SET button.

- If you chose "SELECT" for the "UNIT" setting, go to step 6; if you chose "ALL ON" or "ALL OFF", go to Step 8.



6. The 8-frame index appears. Using **◀**, **▶**, **▲**, or **▼**, move the red frame to an image you wish to protect (or cancel protect) and press the MENU/SET button.

- Pressing **◀** when the first frame is selected or pressing **▶** on the last frame will switch the display to the next eight images.

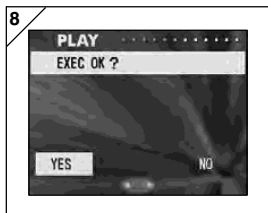
Using the PLAY Menu (Cont'd)



7. Images selected at Step 6 are surrounded by a yellow frame. When you have finished selecting images, use ◀, ▶, ▲, or ▼ to select “END”, and then press the MENU/SET button. (Go to Step 8)

To select other images, repeat the selection procedure. (Return to Step 6)

- To select multiple images, repeat the procedures Steps 6 and 7.



8. The confirmation screen appears with “YES” selected.

If you chose “SELECT” or “ALL ON”: leave “YES” as is and press the MENU/SET button.

- If you select “NO” with ◀ or ▶ and press the MENU/SET button, your settings will be invalidated and you return to screen 1.

If you chose “ALL OFF”: select “YES” with ◀ or ▶ and press the MENU/SET button.

- If you select “NO” and press the MENU/SET button, you will return to screen 1 without canceling any settings.

9. The “Now EXEC...” (or “Now PROTECT OFF”) screen is displayed. Once settings (or cancel protect) are completed, the display returns to screen 1.

Using the PLAY Menu (Cont'd)

Moving the Image Data to Another Memory Card

- You can move previously recorded still or movie image data to another memory card.
- For protected images, you must cancel their protection before you can move them.



1. Select "MOVE" and press ►.



2. A screen with each setting item will appear. At first "FROM" is selected, so press ►.
 - To select a different item, press ▼ or ▲.



3. Using ▼ or ▲, select the media on which the image you wish to move is recorded, then press ► or the MENU/SET button. The setting is completed and you will return to screen 2.
 - If you press ◀, the setting is invalidated and you return to screen 2.
 - If there are no images on the media selected, or if a card is not inserted in the camera, you return to screen 3.

Using the PLAY Menu (Cont'd)



4. Returning to screen 2, select “TO”. Then the screen shown left (screen 4) appears. After pressing ►, use ▼ or ▲ to select the destination media, then press ► or the MENU/SET button.

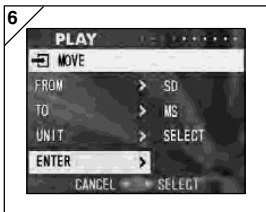
- If you press ◀, the settings will be invalidated and you return to screen 2.
- If the selected media doesn't have enough free space, or if a card is not inserted, after which you will return to screen 4.



5. Returning to screen 2, select “UNIT”. Then the screen shown left (screen 5) appears. After pressing ►, use ▼ or ▲ to choose “SELECT” (if you are moving one or multiple images), or “ALL” and then press the MENU/SET button.

The settings are complete and you will return to screen 2.

- If you press ◀, the setting is invalidated and you return to screen 2.



6. After you have made all the settings, select “ENTER” and press either ► or the MENU/SET button.

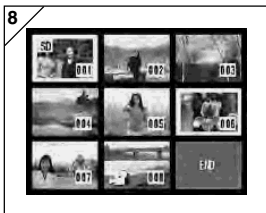
- If you chose “SELECT” in screen 5, go to Step 7; if you chose “ALL”, go to Step 9.
- If you press ◀, the settings will be invalidated and you return to screen 1.

Using the PLAY Menu (Cont'd)



7. The 8-frame index appears. Use ◀, ▶, ▲, or ▼ to move the red frame to an image you wish to transfer and then press the MENU/SET button.

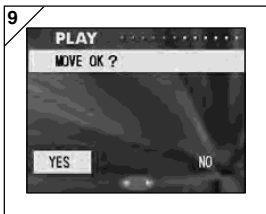
- Pressing ◀ when the first frame is selected or ▶ on the last frame will switch the screen to the next eight images.



8. Images selected at Step 7 are surrounded by a yellow frame. When you have finished selecting images, use ◀, ▶, ▲, or ▼ to select “END”, and then press the MENU/SET button. (Go to Step 9)

To select other images, repeat the selection procedure. (Return to Step 7)

- To select multiple images, repeat the procedures Steps 7 and 8.



9. A confirmation screen appears. To move the image(s), select “YES” with ◀ or ▶, then press the MENU/SET button.

- If you select “NO” and press the MENU/SET button, you will return to screen 1 without moving anything.

10. The “Now MOVE...” screen is displayed. Once moving is completed, the display returns to screen 1.

Using the PLAY Menu (Cont'd)

Playing a Slide Show

- The slide show will proceed in order from the first image at a set interval.



1. Select "SLIDE SHOW" and press ►.
2. Slides will be displayed in order, starting with the 1st slide at about 2 second intervals. The slide show will finish with the last frame displayed.

If you wish to stop during a slide show, press the MENU/SET button.

- If stopped, the current frame will be displayed.

Using the After Recording Function



1. Select "ADD REC" and press ►.

For details on the function and how to make settings, see page 59 to 60.

Selecting the Set-up Menu



1. Select "SETUP" and press ►.
2. The set-up menu mode screen appears. For details on set-up menu settings, see page 98.

- By setting each item on the set-up menu to your preferences, you can customize your camera to suit you.
- It does not matter whether the main power is ON or OFF, as the settings are saved by the camera until they are changed.

1. To display the “SET UP” menu screen, select SETUP menu from either the REC menu (p.66) or the PLAY menu (p.97).
2. Using ▼ or ▲, select the menu settings; every time the button is pressed, the menu scrolls through the items one by one.

	FORMAT	↑	(→ p.99)
	REC MENU		(→ p.100)
	QUICK VIEW		(→ p.100)
	INFO DISP		(→ p.101)
	SOUND		(→ p.102)
	DATE SET		(→ p.103)
	SELF TIMER		(→ p.103)
▼	AUTO POWER OFF	▲	(→ p.104)
	NUMBER RESET		(→ p.104)
	MEMORY PRIORITY		(→ p.105)
	LANGUAGES		(→ p.105)
	ADD REC SET		(→ p.106)
	CUSTOM		(→ p.107)
	DEFAULT		(→ p.110)
↓	RETURN		

You can close the Set-up menu screen by pressing ◀ or selecting “RETURN” and then pressing the MENU/SET button.

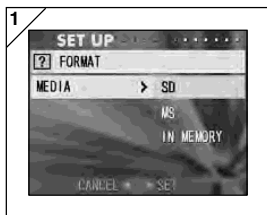
When you close the set-up menu mode, the LCD monitor will display as follows:

- 1) If you entered the Set-up menu from the REC menu, the display returns to the REC menu.
- 2) If you entered the Set-up menu from the PLAY menu, the display returns to the PLAY menu.
 - If you press the shutter button half-way even when you are setting the menu, the display returns to the through image (picture shooting mode) or playback image.
 - Refer to the following pages for details on making settings for each menu.

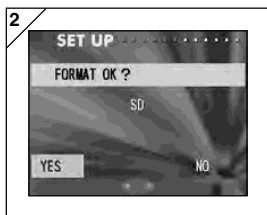
Using the Set-up Menu (Cont'd)

Formatting a Memory Card

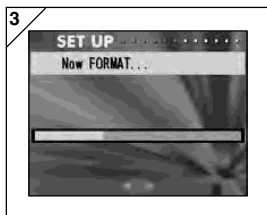
- Formatting a card returns it to the initial state (when it was purchased).
- Caution: Formatting erases all data, even images that are protected (p.91).
- Always format cards inside the camera. If a card is formatted by a computer it may not perform normally.



1. Select "FORMAT" and press **▶**; you will be prompted to select the media type. Use **▼** or **▲** to choose which media type to format and then press either **▶** or the MENU/SET button.
 - If you press **◀**, the setting is invalidated and you return to the Set-up menu.



2. You will be asked for confirmation. To execute formatting, select "YES" with **◀** or **▶** and press the MENU/SET button.
 - If you decide not to format, select "NO" and press the MENU/SET button.



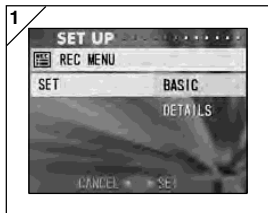
3. Once formatting starts, the message "Now FORMAT..." will appear. When formatting is complete, the camera returns to the Set-up menu mode.

⊘ During formatting be sure not to open the battery/card cover as damage to the card may result.

Using the Set-up Menu (Cont'd)

REC Menu Settings

- You can change the contents of REC menu from “DETAILS” (default settings) to “BASIC”.
- See pages 44 and 67 for details on this function.



1. Select “REC MENU”, press ► and the settings screen appears. Use ▼ or ▲ to select “BASIC”, and then press either ► or the MENU/SET button. The setting is completed and you return to the set-up menu.
 - If you press ◀, the setting is invalidated and you return to the set-up menu.

Quick View Settings

- Turn this mode “ON” if you want to be able to check your images on the LCD monitor immediately after you have taken them.
- See page 75 for details on this function.

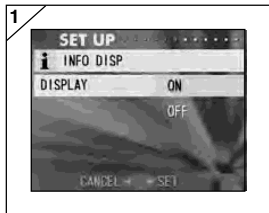


1. Select “QUICK VIEW”, press ► and the settings screen appears. Using ▼ or ▲, select “ON” and press either ► or the MENU/SET button. The setting is completed and you return to the Set-up menu.
 - If you press ◀, the setting is invalidated and you return to the Set-up menu.

Using the Set-up Menu (Cont'd)

Make so the Image Information is not displayed

- You can set the camera not to display information (p.36, 71) during shooting or play back.
- The default setting is “ON” (display).



1. Select “INFO DISP” and press ►.
Use ▼ or ▲ to select “OFF”, and press ► or the MENU/SET button. The setting is completed and the screen will return to the set-up menu.
 - If you press ◀, the setting is invalidated and you return to the Set-up menu.

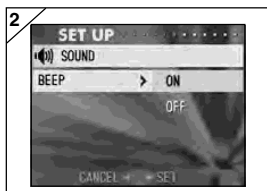
Using the Set-up Menu (Cont'd)

Setting the Operation Sounds

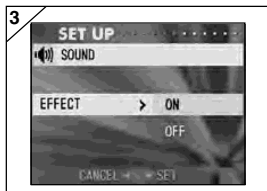
- You can turn on and off the beeps (sounds made for each type of operation and warnings), the shutter sound, or the sound effects.
- The default setting is turned "ON" (set to sound).



1. Select "SOUND", press **▶** and the settings screen appears. "BEEP" is selected, so press **▶**.



2. Using **▼** or **▲**, select "OFF" or "ON" and press either **▶** or the MENU/SET button. You will return to screen 1.
 - If you press **◀**, the setting is invalidated and you return to screen 1.



3. Returning to screen 1, select "EFFECT". Then the shown left (screen 3) appears. After pressing **▶**, use **▼** or **▲** to select "OFF" or "ON". Then press either **▶** or the MENU/SET button and you will return to screen 1.
 - If you press **◀**, the setting is invalidated and you return to screen 1.



4. Select "SHUTTER" on screen 1 and then press **▶**. Use **▼** or **▲** to select "ON" or "OFF", and then press **▶** or the MENU/SET button. The settings are complete and you return to screen 1.
 - If you press **◀**, the setting will be invalidated and you will return to screen 1.

Using the Set-up Menu (Cont'd)

Adjusting the Date and Time

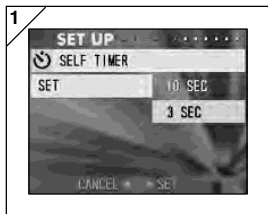
- If the battery is removed for approximately 24 hours or more, the date and time settings will be lost. In this case, please reset the date and time.



1. Select "DATE SET", press ► and the date and time settings screen appears. See Steps 3 to 6 on pages 27 and 28 about how to make the settings.
 - Once settings are completed, you will return to the set-up menu.

Setting the Self-timer Delay Time

- You can change the length of time the self-timer delays before shooting from 10 seconds (default) to 3 seconds.
- The self-timer mode for a 10-second delay (default setting) will be cancelled after a picture is taken. However, if you set the self-timer for a 3-second delay, the setting is effective even after shooting so that you can continue to take a picture using the self-timer.

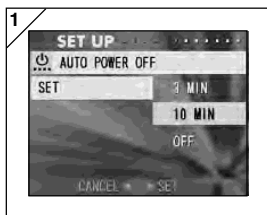


1. Select "SELF TIMER", press ► and the settings screen appears. Using ▼ or ▲, select "3 sec" and press either ► or the MENU/SET button. The setting is completed and you return to the set-up menu.
 - If you press ◀, the setting is invalidated and you return to the set-up menu.

Using the Set-up Menu (Cont'd)

Setting the Auto Power-OFF Time

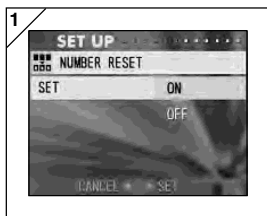
- You can change the Auto Power-OFF not-in-use interval starting at 3 minutes (default).



1. Select "AUTO POWER OFF", press ► and the settings screen appears. Use ▼ or ▲ to select "10 min" or "OFF" and then press either ► or the MENU/SET button. The setting is completed and you return to the Set-up menu.
 - If you press ◀, the setting is invalidated and you return to the Set-up menu.

Resetting the File Numbers

- You can reset your file numbers.



1. Select "NUMBER RESET", press ► and the settings screen appears. Using ▼ or ▲, select "ON" and press either ► or the MENU/SET button. The setting is completed.
 - If you press ◀, the setting is invalidated and you return to the Set-up menu.

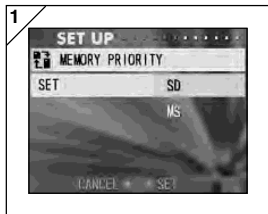
Reference:

- At initial setting, "NUMBER RESET" is turned "OFF", and it will assign consecutive file numbers as follows.
XXXXX1.jpg, XXXXX2.jpg, XXXXX3.jpg...
- If there are no images shot on the card when "NUMBER RESET" is turned "ON", it will attach numbers starting with XXXXX1.jpg. If pictures exist, the number following already existing file numbers will be given.

Using the Set-up Menu (Cont'd)

Setting Memory Priority

- When you have 2 cards in the camera at once, an SD memory card (or Multi-Media card) and a Memory Stick, you can decide which to record to first.



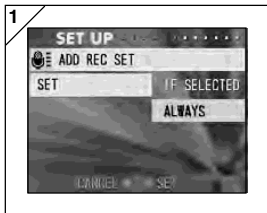
1. Select "MEMORY PRIORITY", press ► and the settings screen appears.
Using ▼ or ▲, select the media type to have priority and press either ► or the MENU/SET button. The setting is completed and you will return to the Set-up menu.
 - If you press ◀, the setting is invalidated and you return to the Set-up menu.

Changing Languages



1. Select "LANGUAGE", press ► and the language settings screen appears.
See page 27 for instructions on making the settings.
 - When the setting is completed, you will return to the Set-up menu. If you press ◀, the setting is invalidated and you return to the Set-up menu.

Taking Still Images with Sound



1. Select “ADD REC SET”, press ► and the settings screen will appear. Using ▼ or ▲, select the desired setting and press either ► or the MENU/SET button. The setting is completed and you will return to the set-up menu.
 - If you press ◀, the setting is invalidated and you return to the Set-up menu.

For the Choose-to-Record Setting (“IF SELECTED”)

This is the normal (default) mode. By using the REC menu (p.59) or the PLAY menu (p.97) to select “ADD REC”, you can add sound to still images after they’ve been taken.

For the Always-ON Setting (“ALWAYS”)

You can add sound to every still image you take. Every time an image is taken, once recording finishes, the After Recording screen is displayed, as Step 2 on page 59, so by simply pressing the shutter, you can record sound. The maximum recording time is about 30 seconds. During recording, the elapsed time is displayed on the upper right corner of the image. When time runs out, the recording stops automatically. If you wish to stop during a recording, press the shutter button again.

Using the Set-up Menu (Cont'd)

Customizing the camera

- 1) The shooting and flash mode settings (see page 38-39) assigned to each **▶** and **◀** can be set to on or off respectively.
 - * You cannot set all settings to off. If you try to turn all settings to off, the camera automatically turns "ON" the "AUTO" setting in the flash and shooting modes.
- 2) You may assign part of the exposure-adjustment to **▲**, and part of white balance switch function to **▼**.

Setting the exposure compensation to "ON"

If **▲** button is pressed when taking a photograph, the exposure correction adjustment bar will be displayed. Exposure can be corrected with **◀** or **▶** button. Press **▲** button again to make settings effective. Exposure compensation can be corrected in the range of ± 0.6 EV in 0.3 EV steps. The compensation setting can be corrected in the range of ± 1.5 EV by combining with "EXPOSURE" in the REC menu.

When the compensation setting of REC Menu (p.51) is + 0.9 EV, you can adjust compensation between + 0.3 EV and + 1.5 EV.

Setting the white balance switch function to "ON"

You can select the white balance mode by pressing **▼**. Each time you press **▼**, the mode alters, and the selected mode is displayed on the LCD monitor. For information on displayed icons and white balance modes, see page 53.

- 3) You can engage AF/AE lock function in this feature.

Setting the AF-Lock to "ON"

If you press **◀** while activating focus lock (pressing the shutter button half-way on page 34), the focus setting locks and the AF-lock icon appears on the LCD monitor. The setting becomes effective even after you take a shot.

* To cancel the AF-lock, turn the camera's power OFF or press the Zoom, MENU/SET, **◀**, or PLAY button.

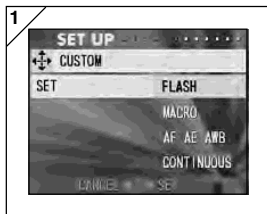
Using the Set-up Menu (Cont'd)

Setting the AE-Lock to "ON"

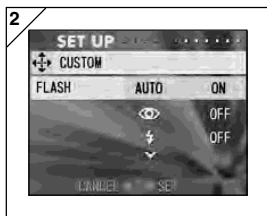
If you press **▲** while activating focus lock (pressing the shutter button half-way on page 34), the exposure setting locks and the AE lock icon appears on the LCD monitor. The setting becomes effective even after you take a shot.

* To cancel the AE-lock, turn the camera's power OFF, press the Zoom, MENU/SET, or PLAY button, or change the white balance setting.

- 4) You can also set the sequence shooting to on or off. If you set it to on, this feature lets you take a sequence shot by holding down the shutter button.
- * If you are taking photos with the flash, make sure that the flash is fully charged before taking next photo.

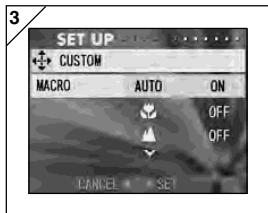


1. Select "CUSTOM" and press **▶**. The settings screen appears. Select the desired setting with **▼** or **▲**, and press either **▶** or the MENU/SET button.

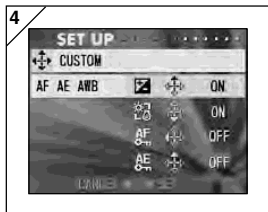


2. In screen 1, select "FLASH" and press **▶**. The flash mode settings screen appears. Select the desired mode with **▼** or **▲**, and press either **▶** or the MENU/SET button to change the setting. When the setting is completed, press **◀** to return to screen 1.

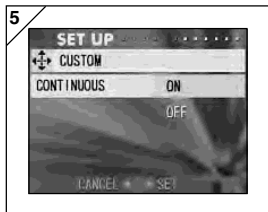
Using the Set-up Menu (Cont'd)



3. In Screen 1, select “MACRO” and press ►. The shooting mode settings screen appears. Select the desired mode with ▼ or ▲, and press either ► or the MENU/SET button to change the setting. When the setting is completed, press ◀ to return to screen 1.



4. In Screen 1, select “AF AE AWB” and press ►. The settings screen for each item appears. Select the desired mode with ▼ or ▲, and press either ► or the MENU/SET button to change the setting. When the setting is completed, press ◀ to return to screen 1.

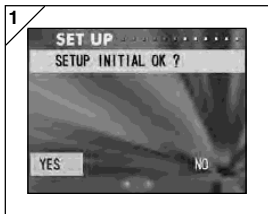


5. In Screen 1, select “CONTINUOUS” and press ►. The settings screen appears. Press ▼ or ▲ to select “ON” or “OFF”, and press either ► or the MENU/SET button to return to screen 1. If you press ◀, your settings will be invalidated and you return to screen 1.

Using the Set-up Menu (Cont'd)

Restoring the Default Settings

- You can change the various settings made in the REC menu and the SET UP menu back to their default settings all at one time.



1. Select "DEFAULT", press **▶** and a confirmation screen will appear. Using **◀** or **▶**, select "YES" and press the MENU/SET button.

The setting is completed and you return to the set-up menu.

- If you select "NO" and press the MENU/SET button, the setting is invalidated and you return to the set-up menu.

Operating Environments

- Images recorded with the camera can be transferred to a PC using the USB cable supplied.

1. Windows

OS: Preinstalled versions of Microsoft Windows 98, Windows 98 SE, Windows XP, Windows 2000 Professional or Windows Me

Memory: 16MB or more of available RAM (32MB or more recommended)

Display: 32,000 colors or more, resolution of 640 × 480 pixels or more

Others: CD-ROM drive, USB port (standard equipped)

2. Macintosh

OS: Mac OS 9.0-9.2/Mac OS X v 10.0.4-10.2

CPU: PowerPC or more

Memory: 16MB or more of available RAM (32MB or more recommended)

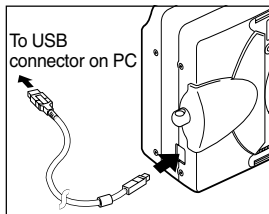
Display: 32,000 colors or more, resolution of 640 × 480 pixels or higher

Others: CD-ROM drive, USB port (standard equipped)

Connecting to your PC (Cont'd)

Connecting with a USB cable

- Turn OFF the power supply to the camera.
- There is no need to turn off your PC power supply when connecting or disconnecting the USB cable to the camera.



1. Turn on the power supply to your PC, and start up the Windows or Mac OS.
2. When Mac OS or Windows desktop screen appears, connect the camera and PC using the USB cable.

- Please use only the USB cable supplied with the camera.
- While the camera is connected to your PC, the camera is inoperable.
- While connected to your PC, do not detach the USB cable or open the battery/card cover.
- Turn the power supply to the camera OFF when detaching the USB cable.
- When communicating with your PC, we recommend using the AC adapter (sold separately). Attach/detach the AC adapter when the camera power supply is OFF and your PC and the camera are not connected.

Installing software and downloading images

Installing USB Driver Software

- Installing from attached DiMAGE Viewer CD-ROM.
- Install the software only if you are using Windows 98 or Windows 98SE. If you are using another OS, you do not need to install this.
- Turn OFF the power supply to the camera.
- To conserve the battery, using the AC adapter (sold separately, AC-8U/AC-8E/AC-8GB; see P.11 for details) is recommended.

- 1) Turn on the PC power and start Windows.
- 2) After connecting your camera and PC with USB cable (p.112), turn ON the power supply to the camera.
- 3) The “Add New Hardware Wizard” screen will appear.



- 4) Insert the DiMAGE Viewer CD-ROM supplied into the CD-ROM drive.
- 5) Click “Search for the best driver for your device (Recommended).” and then click “Next”.



Installing software and downloading images (Cont'd)

- 6) Click “Specify a location:” and input “D:\”.
Click “Next”.



- Here, the CD-ROM drive is assumed to be drive D.
Use a different letter if appropriate.
- The INF file necessary for the install is located in “D:\”.
- When searching a different location, click “Browse”.

- 7) Click “Next”.



- 8) Click “Finish”.
The USB device driver is now installed.



Downloading (transferring) Images

- To conserve the battery, using the AC adapter (sold separately, AC-8U/AC-8E/AC-8GB; see P.11 for details) is recommended.
 - If you are using Windows 98 or Windows 98SE, first install the “USB device driver software” (attached DiIMAGE Viewer CD-ROM) (pp.113-114).
1. Turn on the power supply to your PC, and start up Windows or Mac OS, and connect your camera and PC with USB cable (p.112).
 2. If you are using Windows, open “My Computer” and double-click the newly created icon “removable device”. If you are using Mac, an “Undefined Name” icon will be displayed on the desktop.
 3. Double-click the “DCIM” folder.
 4. If you double-click “100MLT35”, the image file icon will be displayed.
 - The first 3-digit number of “100MLT35” differs depending on the directory in the card.
 5. If you double-click the file, the image will be displayed. When saving the file, copy it to where you want to save it.

Notes

- The camera cannot be connected to your PC if no image data is recorded on the built-in memory of the camera, or a card with an image data record is not in the camera.
- When 2 memory cards are inserted in the camera, the Memory Priority will be displayed (p.25, p.105).
- Image files can be copied to a hard disk or other media and deleted as necessary. For details, refer to the instruction manual operating system in use.
Please note that Minolta will not be responsible for any loss resulting from such operations.
- Always back up important data.
- The protect setting set with this camera is equivalent to the read-only attribute of a file.
Please note that, if the attribute of a file is changed using a PC the protect setting set with the camera will be disabled.
- Do not change the file name of image data saved on an SD Memory Card/Multi-Media Card/Memory Stick using a PC or save files other than image data taken by this camera. Images that have been altered or newly saved on an SD Memory Card/Multi-Media Card/Memory Stick using a device other than this camera will not only play back on the camera but may cause the camera to malfunction when inserted.
- Do not format the SD Memory Card or Multi-Media Card or Memory Stick using a PC. Data may become damaged.
- Before editing the image files, copy them to your PC hard disk.

Using Windows

Installing the included software (CD-ROM) and Instruction Manual



- 1) Turn on the PC power and start Windows.
- 2) Set the included INSTRUCTION MANUAL CD-ROM in the CD-ROM drive.
- 3) Click the Start button and select "Run..."

4) Enter "D:\install.exe" and click "OK".



- The above assumes that your CD-ROM is D. To check the CD-ROM drive letter of your PC, open "My Computer" and check the letter displayed on the CD-ROM drive icon.

Installing software and downloading images (Cont'd)

- 5) Check to see that “Adobe Acrobat Reader” and “DiIMAGE G500, DiIMAGE Viewer INSTRUCTION MANUAL” in the “MINOLTA DiIMAGE G500 setup menu” are checked and click “OK”.
- Be sure to install “Adobe Acrobat Reader” and “DiIMAGE G500, DiIMAGE Viewer INSTRUCTION MANUAL”.

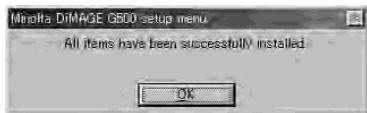


- 6) Software checked in 5) will be installed in order. Follow the onscreen guidance to continue the installation.

Note: Clicking “Cancel” during the installation process will cancel installation. In this case, perform the installation again.

However, do not restart the PC until all the installations have been completed.

- 7) When all of the software checked in 5) have been installed, the “MINOLTA DiIMAGE G500 Setup Menu” screen will appear. Click “OK” to finish the installation process.



Viewing the DiIMAGE G500, DiIMAGE Viewer INSTRUCTION MANUAL

- 1) Double click the “DiIMAGE G500, DiIMAGE Viewer INSTRUCTION MANUAL” icon on the desktop.
- 2) The DiIMAGE G500, DiIMAGE Viewer INSTRUCTION MANUAL will be displayed.


Using Macintosh


Installing the Adobe Acrobat Reader


QuickTime installation is not necessary.


- Be sure to install if Adobe Acrobat Reader is not already installed in your Macintosh. And it is not necessary to install the Adobe Acrobat Reader for Mac OS X users.

- 1) Turn on the power of your Macintosh, and set the included Instruction Manual CD-ROM in the CD-ROM drive.

- 2)  Double click the "Minolta" icon.

- 3)  Double click the "Adobe" icon.

- 4)  Double click the "English" icon.

- 5)  Double click the "Acrobat Reader Installer" icon.


- 6) Follow the instructions shown on the screen.

Installing the DiIMAGE G500, DiIMAGE Viewer INSTRUCTION MANUAL

- Be sure to install.

- 1) Set the included CD-ROM in the CD-ROM drive.

- 2)  Double click the "Minolta" icon.

- 3)  Double click the "Manual" folder.

- 4)  Copy "G500_EG.PDF" to a location of your choice.

- 5) Double click the copied "G500_EG.PDF" to display the "DiIMAGE G500, DiIMAGE Viewer INSTRUCTION MANUAL".

Using the dedicated AC adapter (AC-8U, AC-8E, or AC-8GB)

- Please do not use the AC adapter where the voltage is outside the displayed power supply voltage (AC 100V to AC240V).

Using the Attached Charger (BC-500)

- Please do not use the charger where the voltage is outside the displayed power supply voltage (AC 100V to AC240V).

Care and Storage

Cleaning the camera

When cleaning the camera, do not use solvents such as benzene or paint thinner.

- Before cleaning, remove the batteries from the camera, or disconnect the power plug of the AC adapter from the wall outlet.
- The exterior casing surface consists of paint and printing. Wiping the casing with benzene or paint thinner may cause discoloration, or the paint or printing to be removed.
- When the camera becomes dirty, wipe off the dust with a soft, dry cloth. For stubborn dirt, dampen a cloth in diluted neutral detergent (kitchen detergent), wring thoroughly and wipe. When finished, wipe the camera with a dry cloth.
- When using a chemical cloth, follow the safety precautions of the product.

After using the camera

If the camera is not to be used for a long period, remove the batteries and ensure that the power plug of the AC adapter is disconnected from the wall outlet.

- Leaving the batteries inside the camera for a long time may cause the battery fluid to leak, resulting in malfunction of the unit.
- When storing, keep both camera and batteries in cool place with low humidity and under constant temperature as much as possible.

Recommended temperature: 15° – 25°C (59° – 77°F)

Recommended humidity: 40% – 60%

About the SD Memory Card/Multi-Media Card/Memory Stick

Handling

- Do not bend or apply excessive force.
- Do not store the card in places with high humidity, dusty places or where static electricity or electromagnetic fields are likely to occur.
- Keep dust, water and foreign objects away from the terminal section.

About image data

- Use a PC to delete images and files recorded with other models.
- The recorded data may be lost when you or a third part misuses the SD Memory Card/Multi-Media Card/Memory Stick, if the card is affected by strong static electricity or electrical shock, or during card repair or malfunction.
Minolta will not be responsible in any way for the loss of recorded data or the consequences of such loss.

About the LCD monitor

- The LCD monitor has been developed using high-precision engineering. Although the percentage of active pixels is more than 99.98%, there may be missing or constantly lit pixels.
- When using the LCD monitor in a cold location, the screen may appear darker than normal immediately after starting use. The screen will return to normal brightness as the internal temperature of the camera rises.
- When the LCD monitor becomes dirty with finger prints or dust, wipe with a soft, dry cloth.

Questions and service

- If you have questions about your camera, contact your local camera dealer or write to the Minolta distributor in your area.
- Before shipping your camera for repair, please contact a Minolta Service Facility.

Troubleshooting

- If the following does not solve your problem, please contact the point of purchase.

	Symptom	Check this:	Page
Power Supply	Power will not turn ON	<ul style="list-style-type: none">• Battery level too low• Battery inserted incorrectly• AC Adaptor attached incorrectly	19 19 22
	Power turns OFF right after turning on	<ul style="list-style-type: none">• Battery level too low• Low ambient temperature	19 126
Shooting the pictures	Can't take a picture even if pressing the shutter button	• Power supply not on.	26
		• SD Memory Card or Memory Stick's write protected.	13
		• Pictures taken have reached the maximum number. → Erase unwanted pictures.	76,82
		• Set to the Self-Timer mode.	43
	Can't focus	• Flash being charged.	40
		• Subject not in the center	34
• Subject hard to focus		34	
LCD monitor display and images are not clear	• Dirty lens	31	
	• Incorrect distance from the subject	32	
Doesn't Flash	• LCD brightness adjusted incorrectly	57,85	
	• Finger prints or dirt on the monitor	122	

Troubleshooting (Cont'd)

	Symptom	Check this:	Page
Play back	Won't play back	• PLAY button not ON	70
		• No image data	70
		• All image data is erased	76,82,99
	Image with no natural color	• White balance incorrect	52
	Image appears dark	• Distance too great, the flash didn't reach the subject	40
• Not enough light		33	
Image too bright	• Exposure correction is not adjusted properly	51, 107	
	• Flash used with subject too close	40	
Other	Can't transfer to your PC	• Exposure correction is not adjusted properly	51, 107
		• Not connected to your PC correctly	112
	Incorrect date and time	• No image data inserted in the camera	115
		• Left without battery over 24 hours	103

Main Specifications

Model	: Digital Still Camera with zoom lens
Effective picture resolution	: 5.0 mega pixels
Recording media	: Internal recording media; approx. 2MB flash memory built-in External recording media; SD Memory Card, Multi Media Card, Memory Stick
Image recording capacity	: 2592 × 1944 pixels (About 51 frames/SD Memory Card at 64MB) 2048 × 1536 pixels (About 85 frames/SD Memory Card at 64 MB) 1600 × 1200 pixels (About 160 frames/SD Memory Card at 64 MB) 640 × 480 pixels (About 640 frames/SD Memory Card at 64 MB)
Recording method	: Still picture; JPEG (DCF compatible ¹⁾) / DPOF compatible ²⁾ Still picture sound voice; WAV Compatible Movie; DCF Compatible (AVI style Motion JPEG compatible)
Image pickup	: 1/1.8 inch CCD Total resolution 2690 × 1994 pixels (5,360,000 pixels)
Sensitivity	: equivalent to ISO 100, changeable sensitivity (AUTO, 50, 100, 200, 400)
Lens	: F 2.8-4.9, f=8-24mm (7 elements in 6 groups) Equivalent to 35mm camera conversion of 39 to 117mm
Focus adjustment/Photometric	: TTL center-weighted metering using a CCD image surface luminance signal, spot metering
Focal Range	: Normal; wide angle 0.5m to ∞ (1.6" to ∞), telephoto 0.8m to ∞ (2.6" to ∞) Macro-photo mode; wide angle 6cm to ∞infinity, telephoto 0.5m to ∞infinity
Aperture	: Wide angle; F2.8/F4.7, Telephoto; F4.9/F8.3
Shutter speed	: Still picture; about 1 to 1/2000sec. (Manual exposure mode : approx. 15 – 1/1000 seconds) Movie; about 1/30 to 1/5000sec
Exposure control	: Program AE (ISO100; 3EV-15.5EV)
White balance	: Auto correct, manual setting (daylight, cloudy, tungsten, fluorescent)
Viewfinder	: True-image zoom viewfinder

Main Specifications (Cont'd)

Flash	: Built-in auto adjust lighting flash, flash interval about 5 sec. Flash working range (ISO100); wide angle about 0.5m to 3.5m (1.6" – 9.9") telephoto about 0.5m to 2.0m (1.6" – 6.6") Viewfinder red LED on while charging
Shooting modes	: Single shooting/ red eye reduction/ forced flash/ portrait night view/ no flash/ macro-photo/ distant view/ self-timer (10 sec, 3 sec.)/ digital zoom (×2, ×3)/ movie (320 × 240, with maximum length of sound voice 30 sec.) / monochrome (B&W, sepia)/ continuous
LCD monitor	: 1.5 inch low temperature poly-silicon TFT with back light LCD color monitor
Playback	: Single frame/ index playback/ slide show playback/ digital zoom playback
Erase function	: Single frame/ designated frames/ all frames/ format
LED display	: Self-timer LED, viewfinder LED
Buzzer	: When shooting, as a warning
Auto-date function	: Year, month, date and time up to 2050 ³¹
Power supply	: Lithium battery, dedicated AC adapter (sold separately)
I/O terminals	: USB terminal
Operating temperature	: 0°(32°)-50°C(122°F) (humidity 20%-80%)
Dimensions	: 94(W) × 56(H) × 29.5 (D)mm (3 ³ / ₄ "(W) × 2 ¹ / ₄ "(H) × 1 ³ / ₁₆ "(D)) (except parts that stick out)
Weight	: 200 g (7.1oz) excluding battery, card
Attachments	: Lithium-ion Battery NP-500 Battery Charger BC-500 USB Cable USB-800 Hand Strap HS-DG130 SD Memory Card DiMAGE Viewer CD-ROM Instruction Manual CD-ROM Quick Guide Warranty Card

Main Specifications (Cont'd)

- The performance of the items above is according to the conditions used in our test.
 - The specifications and/or appearance of the product may be altered without notification.
- ¹⁾ DCF (Design rule for Camera File system) is a standard by JEITA mainly for the purpose of simplifying the use of image files taken by digital cameras with other related devices.
 - ²⁾ DPOF (Digital Print Order Format) specified by Canon, Inc., Kodak Co., Ltd., Fuji Photo Film Co., Ltd., and Matsushita Electric Industrial Co., Ltd. is a standard for recording specified information such as the images or quantity to print from the images taken by a digital camera on a recording medium.
 - ³⁾ Manganese lithium silicon battery is in use as back-up battery for calendar system (Refer to p.28). It is recommended to replace with new ones at least once three to five years. (Additional charge is required at the time of replacement.)

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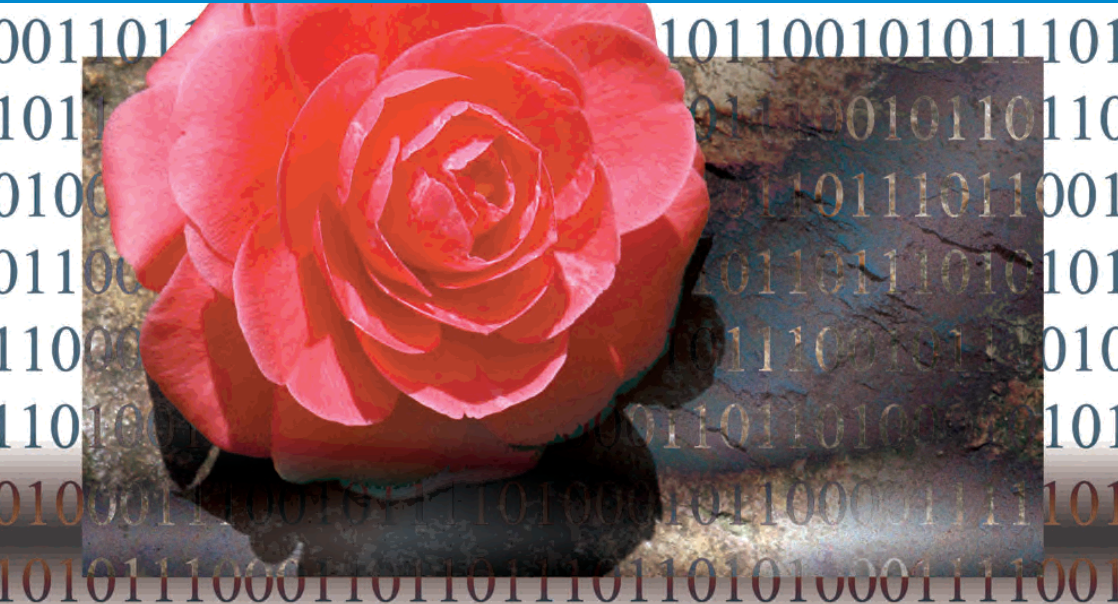
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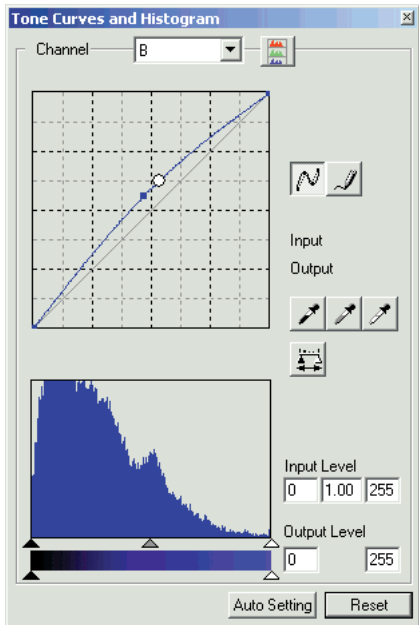


DiMAGE Viewer

E INSTRUCTION MANUAL

TONE-CURVE CORRECTIONS

By selecting individual color channels on the tone curve, adjustments to the overall color of an image can be made. If the image is too red, green, or blue, simply drag the corresponding color-channel curve down until the color appears natural. If the color cast is predominantly one of the secondary colors, cyan, magenta, or yellow, move the curve of the complementary color up. In this example, the image is too yellow. By moving the blue curve up, the image looks more neutral. For more on tone-curve corrections, see page 50.



BEFORE YOU BEGIN

Before installing the DiIMAGE Viewer software, read the data-transfer section in the camera manual. This section details how to connect the camera to a computer using the supplied USB cable. The examples in this manual assume the camera is connected to the computer with a USB cable as described in the camera manual.

This instruction manual does not provide instruction in the basic operation of the personal computers, or the basic operation of Windows or Macintosh operating systems; refer to the manuals supplied with the computer.

The examples in this manual use Windows software. The appearance of the screens may differ from the examples when using Macintosh or other Windows operating systems.

Every precaution has been taken to ensure the accuracy of this material. Contact Minolta if you have any questions. Minolta is not responsible for any loss or damage caused by the use of this software.

This instruction manual may not be copied either in part or in its entirety without the prior permission of Minolta.

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DiMAGE VIEWER SYSTEM REQUIREMENTS

IBM PC/AT compatible computers	Apple Macintosh series computers
133MHz Pentium processor or higher	PowerPC 100MHz or higher
64MB or more of RAM (128MB or more with Windows XP)	128MB or more of available RAM
200MB or more of available hard-disk space	200MB or more of available hard-disk space
A True Color (24 bit) or greater monitor with a minimum resolution of 800 X 600. 1024 X 768 (XGA) or higher is recommended.	A 24-bit color or greater monitor with a minimum resolution of 800 X 600. 1024 X 768 or higher is recommended.
CD-ROM drive	
QuickTime 5 or later	QuickTime 4 or later

Refer to the DiMAGE Viewer CD-ROM for Windows and Macintosh operating system requirements. The requirements are printed on the CD-ROM disk. Compatibility with Windows XP is with the Home or Professional editions only.

Computers with Windows 98 operating systems require Microsoft Internet Explorer 5.0 or later.

QUICKTIME SYSTEM REQUIREMENTS

IBM PC / AT Compatible
Pentium-based computer
Windows 95, 98, 98SE, NT, Me, 2000 Professional, or XP.
32MB or more of RAM
Sound Blaster or compatible sound card
DirectX 3.0 or later recommended

To install QuickTime, follow the instructions in the installer. In the window to choose the type of installation, select the recommended option; the minimum or custom options may prevent the DiMAGE Viewer from operating properly.

Macintosh users can download the latest version of QuickTime free of charge from the Apple Computer web site: www.apple.com.

BEFORE INSTALLING THE DiMAGE VIEWER

RAM-stationed programs such as anti-virus or installation-monitoring software may cause the installer to fail. Remove or disable these programs before installing the DiMAGE Viewer. Reinstall or enable the software when the installation is complete.

If you are upgrading the DiMAGE Viewer from a version earlier than 2.2, see page 88 on how to save any Job file which may have been created. The procedure must be completed before installing the new Viewer version.

INSTALLING THE DiIMAGE VIEWER - WINDOWS

In the example below, the hard disk drive is drive F. The letters designating the drives will vary between computers. With Windows 2000 or XP, the software should be installed with the Administrator privilege.



Turn on the computer to start Windows.

Insert the DiIMAGE Viewer CD-ROM into the CD-ROM drive. The DiIMAGE Viewer Installer window will open automatically. The installer window varies with the camera model.

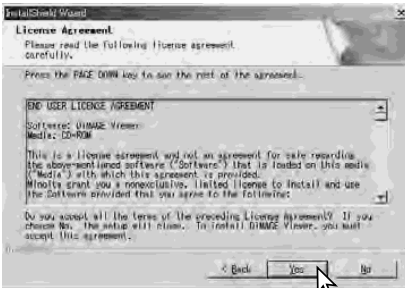
Click the “Starting up the DiIMAGE Viewer installer” button to begin installation.

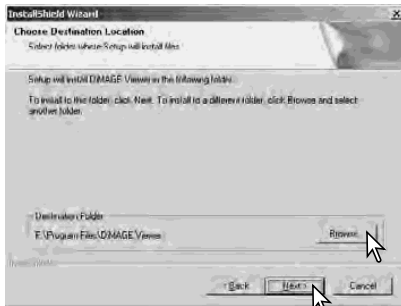
The welcome window will open. Click “Next>” to continue.



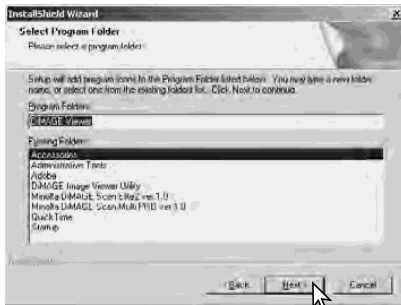
The license agreement appears. If you accept the agreement, click “Yes” to continue the installation routine.

Read the entire license agreement carefully before continuing. If you do not agree to the terms, click “No” to exit the installation program.





To install the software in the default location - F:\Program Files\DiIMAGE Viewer, click “Next >.” To install the software in a different location, click browse button to display the folder selection window. Specify the directory in which to install the software.



The name of the default program folder is displayed. To install the software icons in this folder, click “Next >.” Installation will begin.

To install the software icons in another folder, select one of the folders listed in the existing-folders box below. Click “Next >” to begin installation.



When the software installation has been completed, a message will be displayed. Click “Finish.”



The DiIMAGE Viewer installer window will be displayed. Click “Finish” to close the window.

INSTALLING THE DIMAGE VIEWER - MACINTOSH

Turn on the computer to start the operating system. When the desktop appears, insert the DIMAGE Viewer CD-ROM into the CD-ROM drive. The contents of the CD-ROM appear automatically. If the contents do not appear, double-click the CD-ROM icon to open it.



Open the utility folder, and then open the appropriate operating system and language folder.



Double-click on the installer icon to start the Installation program.

When the installation screen appears click “Next>” to begin the setup.

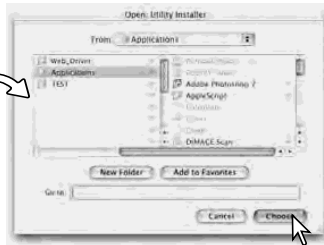


The license agreement appears. If you accept the agreement, click “Yes” to continue the installation routine.

Read the entire license agreement carefully before continuing. If you do not agree to the terms, click “No” to exit the installation program.



The location for the DiMAGE Viewer files must be specified. Click the reference button.



Using the folder-selection dialog box, select the location where the software should be installed. Click “Choose.”

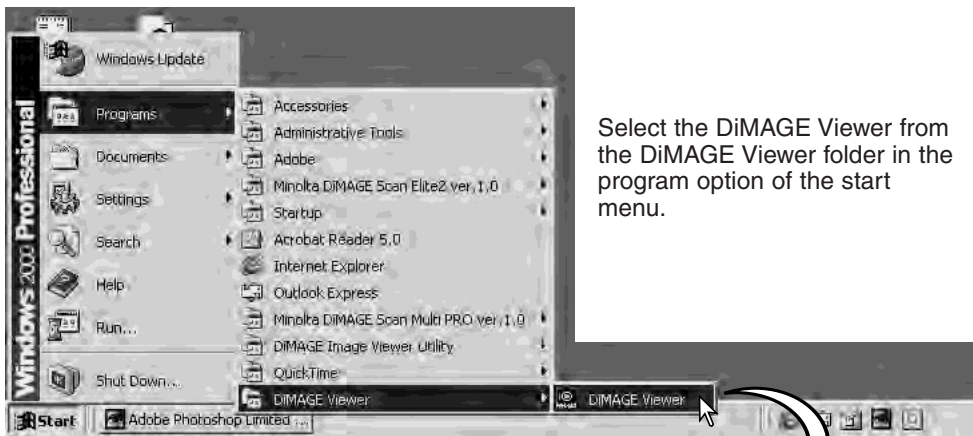


Confirm the installation location on the installer screen. Click “Next >>” to install the DiMAGE Viewer.

A window will appear when the software has been installed. Click “Finish” to exit the installer.

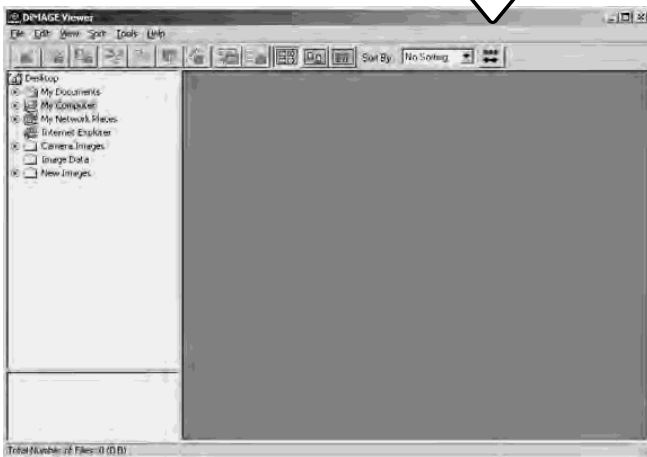


STARTING UP THE VIEWER - WINDOWS



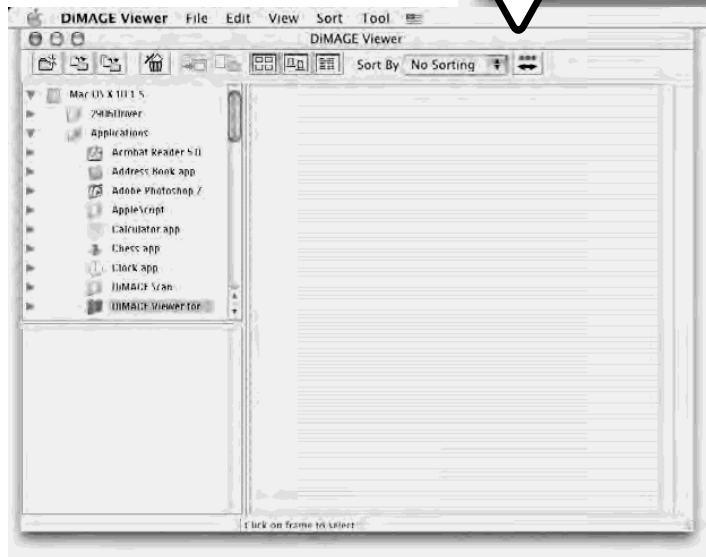
Select the DiMAGE Viewer from the DiMAGE Viewer folder in the program option of the start menu.

The utility will start up and the thumbnail window will be displayed.



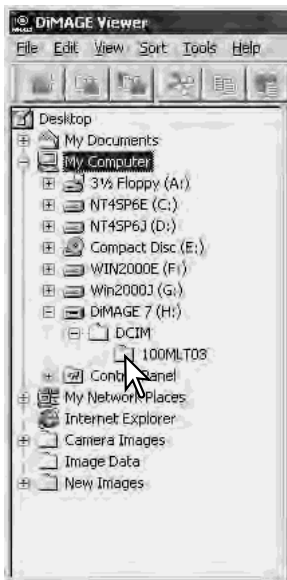
STARTING UP THE VIEWER - MACINTOSH

Open the DiIMAGE Viewer folder. Double-click the DiIMAGE Viewer icon to start up the application. The main window of the utility will be displayed.



IMPORTING AND EDITING IMAGES

LOADING IMAGE FILES



Images can be loaded directly from a digital camera or from image folders saved in the computer. Simply use the folder tree to select the file containing the images. For information on the camera's folder organization, and connecting the camera to the computer, refer to the camera's instruction manual.

Click on the positive (+) nodes to display the contents of a folder. Click on a negative (-) node to hide the folder contents.

Click on the image folder to load the images. All still-image, audio, and movie files in the folder will be loaded.

UPDATING THE THUMBNAIL WINDOW

If any changes are made to the folder tree or thumbnail display, for example, the camera is disconnected from the computer, the window can be updated. Select the update option from the view menu to update the DiIMAGE Viewer.



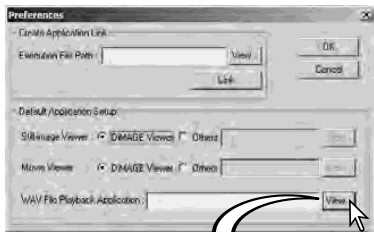
OPENING AUDIO FILES

Voice memos, audio captions, and audio recordings made with the camera can be played back with the DiMAGE Viewer. To confirm if your camera can make audio recordings, refer to the instruction manual. After setting up the preferences box (see below), simply click on the note button or double click on the audio file to play back the recordings.



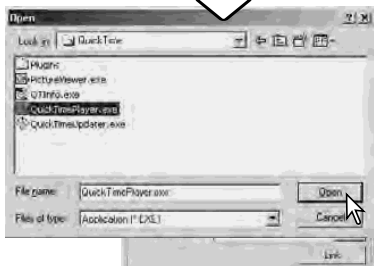
Voice memo / Audio caption

Audio recording



To set up the Viewer to play back audio files, select the preferences option from the file menu to open the dialog box.

Click on the view button next to the WAV file playback application text box to display the open dialog box.



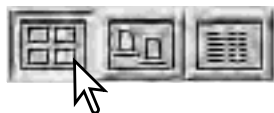
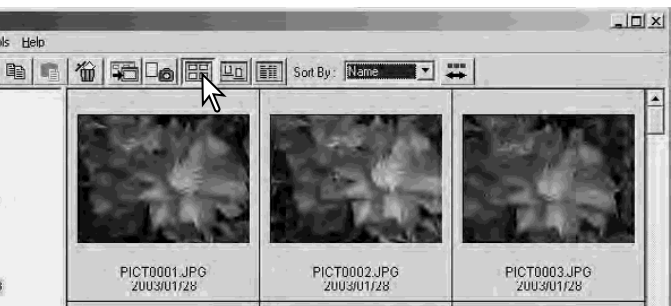
Locate the application to play back audio files; QuickTime or the Windows Media Player can be used for playback. Click the open button; the execution path will be displayed in the preferences window.



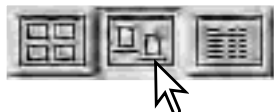
Click the OK button in the preferences window to complete the operation.

CHANGING THE DISPLAY FORMAT

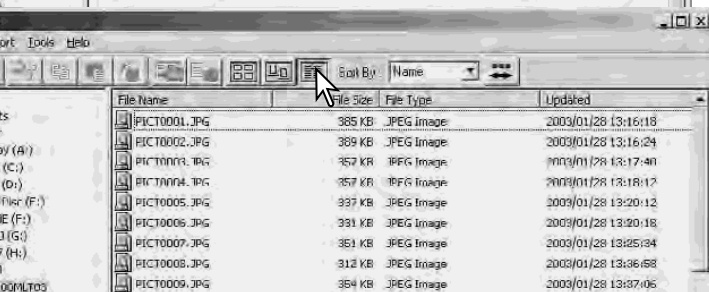
The contents of a folder can be displayed as thumbnail images, icons, or in a list with file data. To change the display format, simply press the appropriate button located on the tool bar.



Thumbnail display button



Icon display button

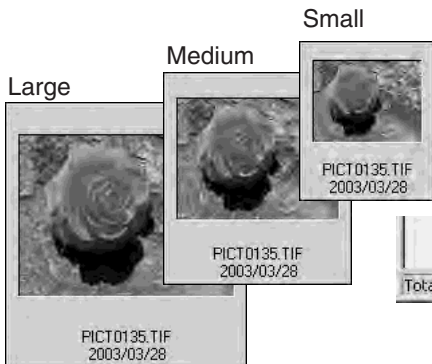
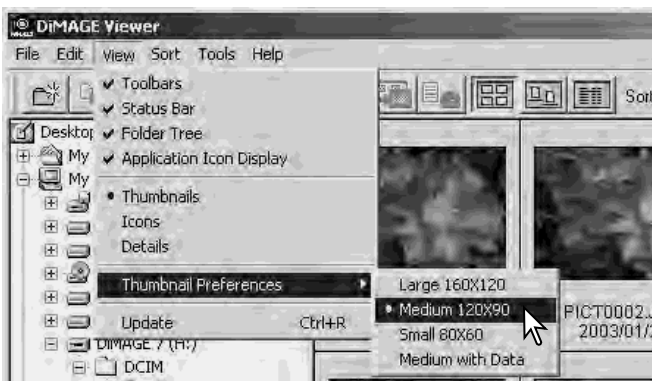


List display button

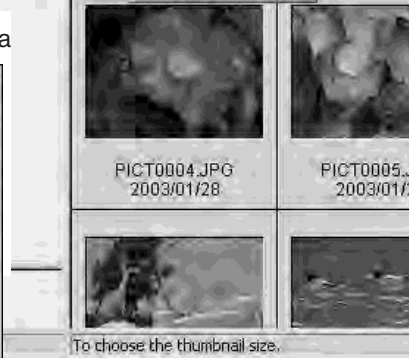
CHANGING THE THUMBNAIL FORMAT

The thumbnail format can be changed. Four format are available: large, medium, small, and medium with data.

To change the format, highlight the Thumbnail Preferences option on the view menu to display the format options. Highlight and click the desired thumbnail format; the thumbnail display will change accordingly.



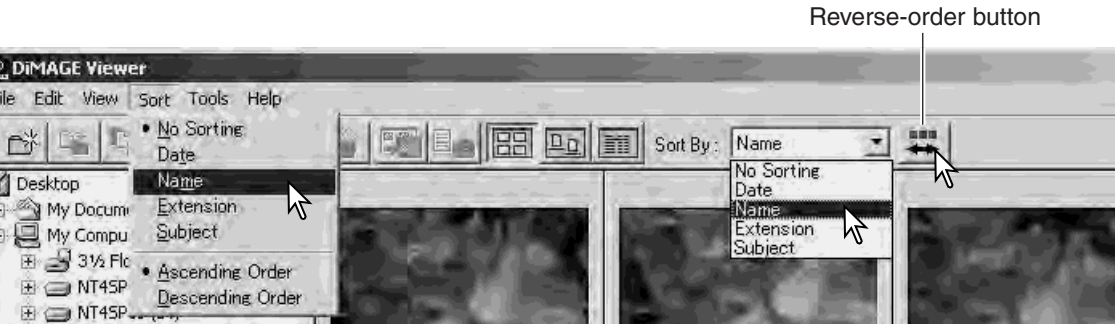
Medium with data



To edit or add a subject line in the data display see page 25.

SORTING IMAGE FILES

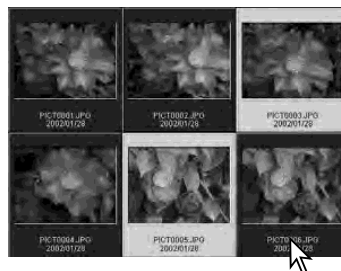
Image files can be sorted by name, date, extension, or subject line in ascending or descending order. This function works with the thumbnail, icon, or list displays (p. 16). To sort the displayed images, use the sort menu or the sort-by drop-down menu on the toolbar. Simply highlight the sorting category with the mouse.



The sort menu can also be used to change the display between ascending and descending order. The reverse-order button on the toolbar will also change the display order.

SELECTING THUMBNAILS

Click on the thumbnail borders or file icon to select a single image. To select multiple images, press and hold the control key (Windows) or command key (Macintosh) and then click on each image; the selected frames will have a dark border. To deselect an image, click on the thumbnail or icon a second time while holding the control key (Windows) or command key (Macintosh). To select consecutive images, press and hold the shift key and then click on the first and last image of the series. Press the control key (Windows) or command key (Macintosh) and "A" key at the same time to select all images.

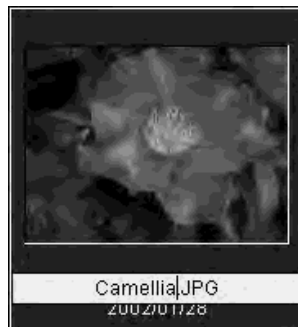


RENAMING SINGLE FILES

Single files can be renamed in the thumbnail, icon, or list displays (p. 16). When rewriting file names, always include the original file extension.

Click on the thumbnail, icon, or file name to highlight it.

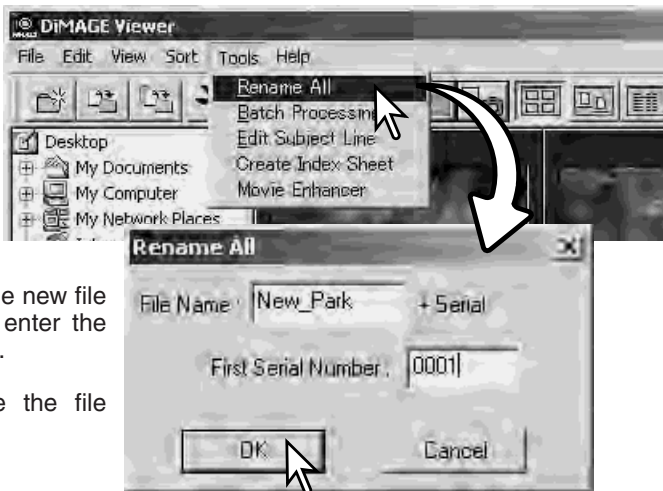
Click on the file name to activate the cursor or select rename from the edit menu. Use the keyboard to change the file name.



RENAMING MULTIPLE FILES

Multiple files can be renamed in the thumbnail, icon, or list displays (p. 16). Click on the thumbnail borders or file icon to select the images to be renamed (p. 18).

From the tool menu, select the rename-all option. The rename-all window will open.



In the rename-all window, enter the new file name up to ten characters, and enter the first serial number up to five digits.

Click the OK button to change the file names of the selected images.

CREATING FOLDERS



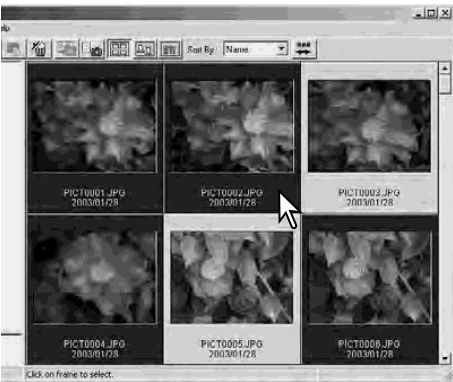
New folders can be created to store images. Click on the desired location for the new folder. In this example the new folder will be placed in Camera Images.

Click on the new-folder button on the tool bar or select new folder from the file menu. The new folder will be created in the specified location.

The folder name can be changed with the keyboard.



MOVING IMAGES TO ANOTHER FOLDER



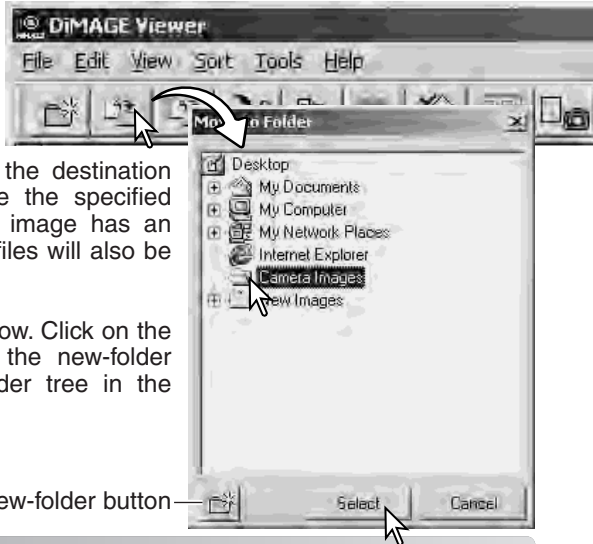
Multiple files can be moved from one folder to another. Click on the thumbnail borders or file icon to select the images to be moved.

- To select multiple images, press and hold the control key (Windows) or command key (Macintosh) and then click on each image to be moved; the selected frames will have a dark border. To deselect an image, click on the thumbnail or icon a second time while holding the control key (Windows) or command key (Macintosh). To select consecutive images, press and hold the shift key and then click on the first and last image of the series. Press the control key (Windows) or command key (Macintosh) and “A” key at the same time to select all images.

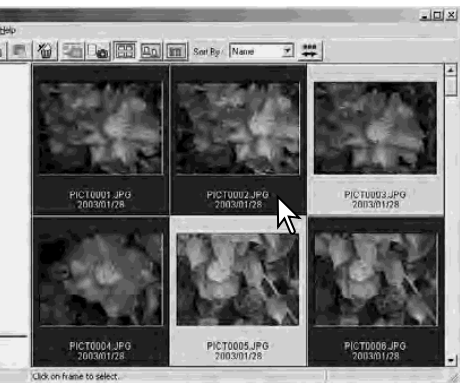
Click on the move-to-folder button on the tool bar or select the move-to-folder option from the edit menu. The move-to-folder window will open.

In the move-to-folder window, click on the destination folder. Click the select button to move the specified images to the designated folder. If an image has an attached audio, or thumbnail file, those files will also be copied.

A new folder can be created in this window. Click on the location for the new folder and click the new-folder button; a folder will appear in the folder tree in the window. The folder can be renamed.



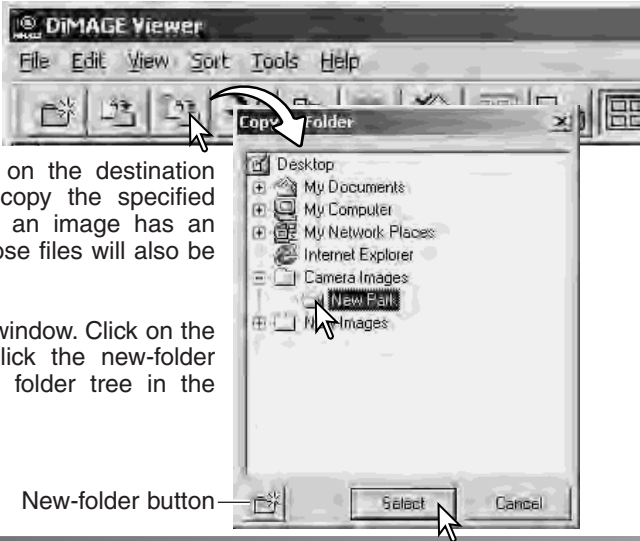
COPYING IMAGES TO ANOTHER FOLDER



Multiple files can be copied from one folder to another. Click on the thumbnail borders or file icon to select the images to be copied.

- To select multiple images, press and hold the control key (Windows) or command key (Macintosh) and then click on each image to be copied; the selected frames will have a dark border. To deselect an image, click on the thumbnail or icon a second time while holding the control key (Windows) or command key (Macintosh). To select consecutive images, press and hold the shift key and then click on the first and last image of the series. Press the control key (Windows) or command key (Macintosh) and "A" key at the same time to select all images.

Click on the copy-to-folder button on the tool bar or select the copy-to-folder option from the edit menu. The copy-to-folder window will open.



In the copy-to-folder window, click on the destination folder. Click the select button to copy the specified images to the designated folder. If an image has an attached audio, or thumbnail file, those files will also be copied.

A new folder can be created in this window. Click on the location for the new folder and click the new-folder button; a folder will appear in the folder tree in the window. The folder can be renamed.

New-folder button

CUT, COPY, PASTE, AND DELETE - WINDOWS

The tool bar and edit menu can be used to cut, copy, paste, and delete folders and single or multiple images. These functions affect any audio or thumbnail files attached to an image. The delete key on the keyboard will also delete folders and images.



Cut



Copy



Paste



Delete

Select the folder or images to be moved. Click the cut or copy button. The display will not change when a cut is made until the paste has been completed. Click on the new location for the folder or images. Click the paste button to complete the operation.

When a delete command is given, a confirmation screen will appear. Clicking the yes button will execute the command and delete the data, clicking the no button will cancel the delete command.



CUT, COPY, PASTE, AND DELETE - MACINTOSH

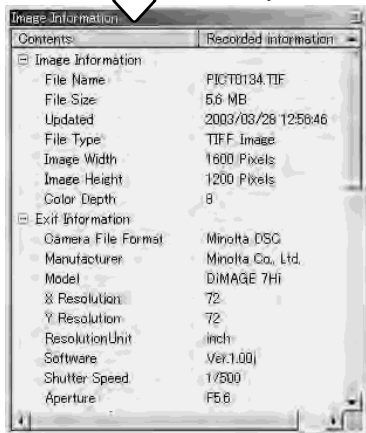
The cut, copy, and paste functions are located in the edit menu. They can be used for editing file and folder names, but they cannot be used to cut, copy, or paste files and folders.

The delete button on the tool bar or pressing the command and delete button on the keyboard will erase files and folders. When a delete command is given, a confirmation screen will appear. Clicking the yes button will execute the command and delete the data, clicking the no button will cancel the delete command.

DISPLAYING AND SAVING IMAGE INFORMATION



With an image selected in the thumbnail window, click the image-information button. If more than one thumbnail image is selected, one window for each image will open.



To close the window, click the close button in the top right corner. The information displayed in the window may vary between camera models.

Recording data is contained in an exif tag attached to the image file. If an image is opened in a image-processing application that does not support exif tag data, and then the image is saved overwriting the original data, the exif tag information will be erased. When using software other than the DiIMAGE Viewer, always rename the image file to protect the exif tag data.

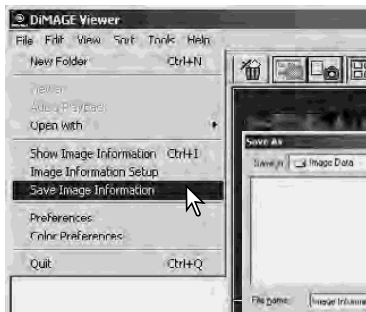


Image information can be saved as a special text file. Simply select single or multiple thumbnails and then select the save-image-information option from the file menu; the save-as dialog box will open.



The image-information file can be opened in spreadsheet software such as Microsoft Excel or with word processing application like Simple Text.

IMAGE INFORMATION SETUP

The Exif information displayed in the image information window can be edited. Select the image-information-setup option from the file menu to open the setup window.

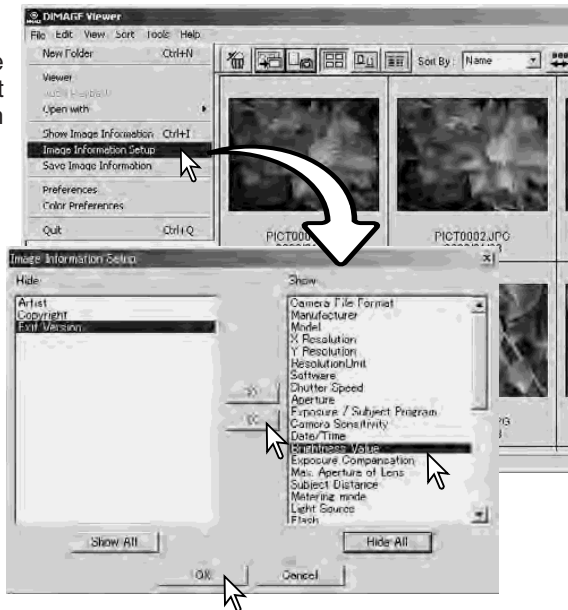
Click on the item to be added to or removed from the image information display and click the appropriate move button.

>>: to move to the show list.

<<: to move to the hide list.

The show-all and hide-all buttons adds or removes all Exif information in the image-information display.

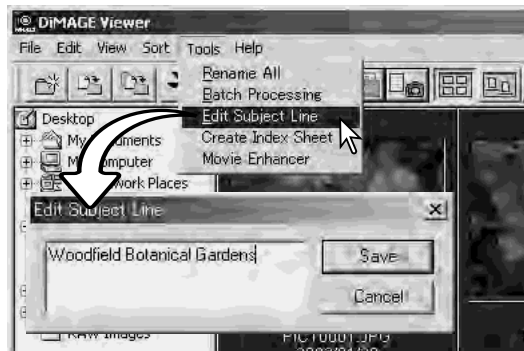
Click “OK” to save the setup.



EDITING THE SUBJECT LINE

Cameras like the DiMAGE A1 can attach text to an image's Exif data. This is shown in the subject field in the image-information display. Exif 2.1 or later format images can have a subject line added or edited.

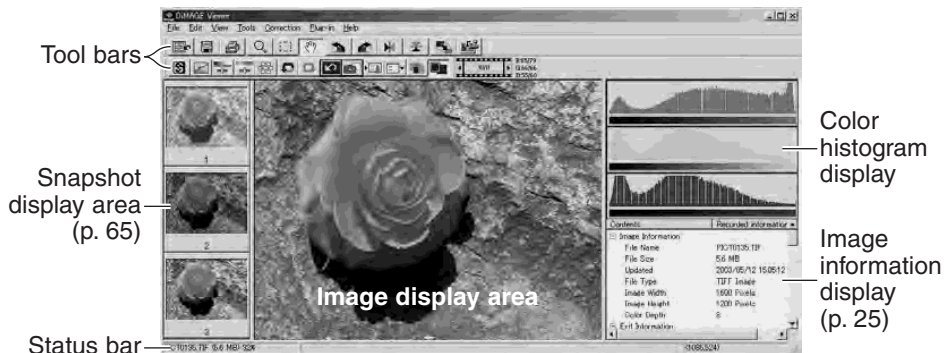
Select the image(s) to be edited. Choose the edit-subject-line option from the tool menu to open the edit window. Enter the subject line and click the save button to complete the operation.



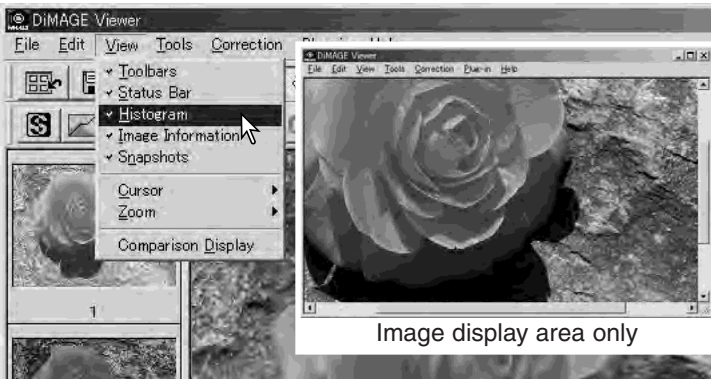
BASIC IMAGE PROCESSING

IMAGE-CORRECTION WINDOW

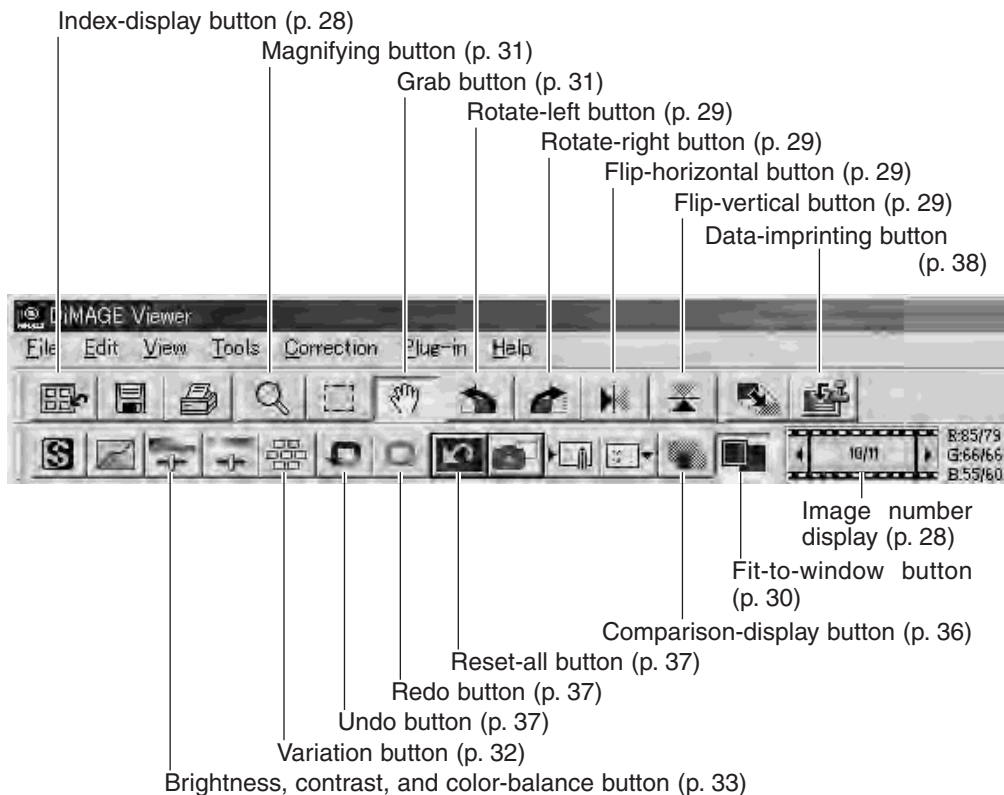
The image-correction window displays the utility's image-processing tools. Adjustments to color, contrast, brightness, and saturation can be made. This section contains details on the basic image-processing tools. For descriptions of the advanced tools, see pages 46 through 73.



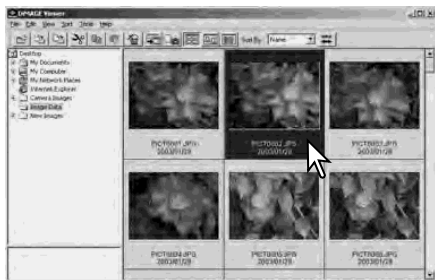
The view menu can turn the tool bars, snapshot display area, status bar, image information display, and color histograms on and off. Simply choose the menu option to show or hide the display.



Tool bars



DISPLAYING IMAGES IN THE IMAGE-CORRECTION WINDOW



In the index display, an image can automatically be loaded into the image-correction window. Simply double-click on a thumbnail or icon to display the image in the image-correction window.

To return to the index display, click the index-display button.



The color-correction window will display the image number and the total number of images loaded. Clicking on the arrows on each side of the display will load the previous or next image.

Image number of the image currently displayed

Total number of images loaded in the utility



Click to display the previous image

Click to display the next image

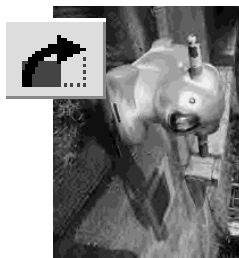
FLIP AND ROTATE IMAGES



The orientation of the displayed image can be changed with the flip and rotate buttons on the tool bar or with the tool menu. Any changes to image orientation will be applied to the thumbnail image in the index display.



Rotate - the rotate-right button rotates the thumbnail 90° clockwise and the rotate-left button rotates the thumbnail 90° counterclockwise each time the buttons are clicked.



Original image



Flip - when an image is flipped, it will create a mirror image.

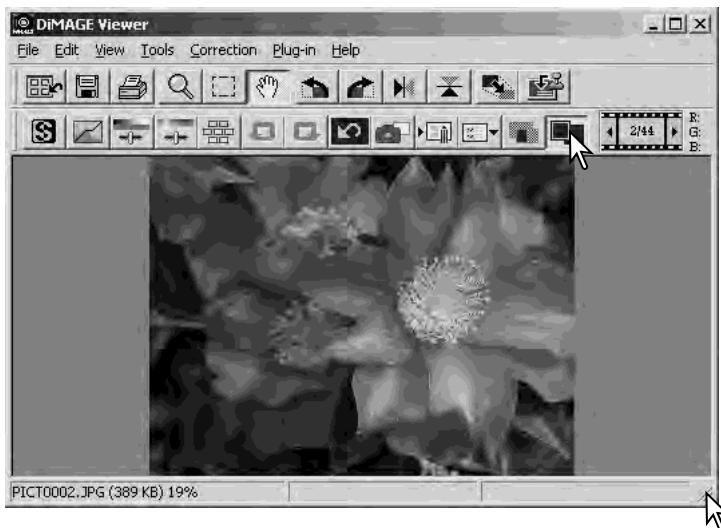


CONTROLLING THE IMAGE DISPLAY

Fit-to-window button



Normally, an image is displayed based on its size and resolution. When the image is too large for the display area, clicking the fit-to-window button will automatically resize the image to fit the display area. Clicking the button again displays the image at its original size. The grab and zoom tool cannot be used with the fit-to-window function.



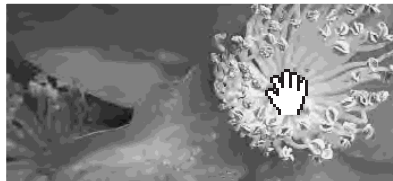
Resizing the viewer window

The utility window can be resized by clicking and dragging the bottom right corner. If the fit-to-window function is active, the displayed image will automatically adjust to fit the display area.

Grab tool



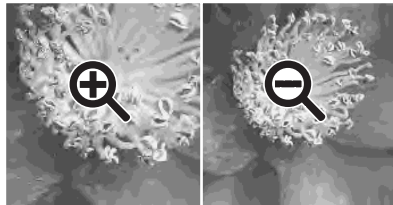
When an image is larger than the display area, the grab tool can be used to scroll the image. Click the grab button on the tool bar or select Grab Tool from the cursor option on the view menu. Click and drag on the image to scroll.



Magnifying tool



The display image can be enlarged or reduced. Click the magnifying button on the tool bar or select Magnifying Tool from the cursor option on the view menu. Click on the image to enlarge. To reduce, hold down the shift (Windows) or option key (Macintosh) and click on the image. When the image has reached the magnification limit, the plus or minus sign in the magnifying icon will disappear.

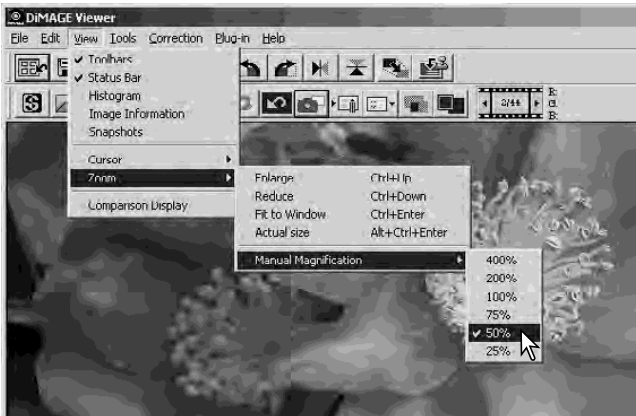


Enlarge

Reduce

Menu options

The zoom option on the view menu controls the size of the display image. As well as the magnifying tool's enlarge and reduce functions and fit-to-window function, the menu can display the image at actual size or at preset magnifications. The tool bar, status bar, histogram, image information, and snapshot display areas can be hidden or shown by selecting the appropriate option on the menu.



VARIATION PALETTE

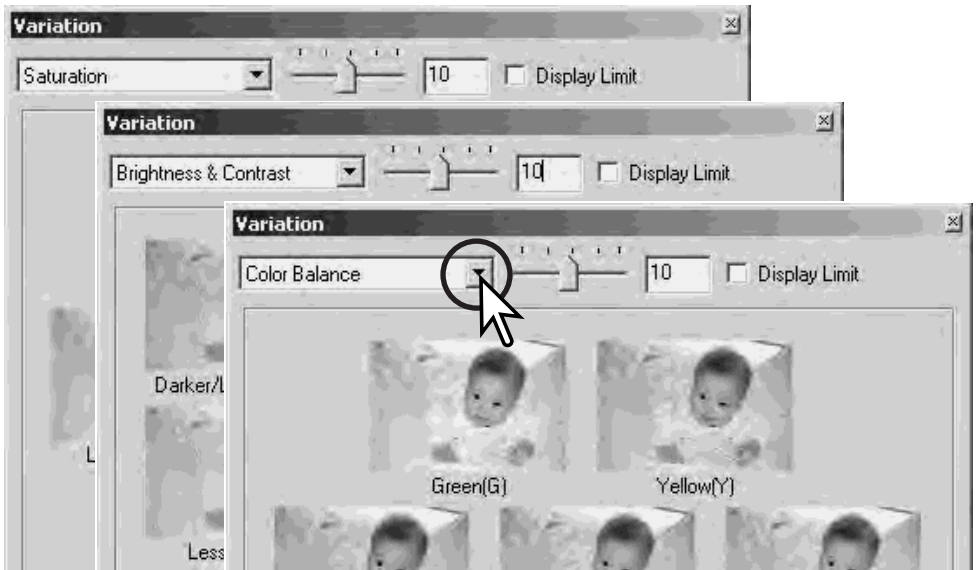
The variation palette allows an image to be corrected by comparing it to other slightly corrected images surrounding it. This is an easy method to correct images for individuals who are inexperienced in image processing or photofinishing.

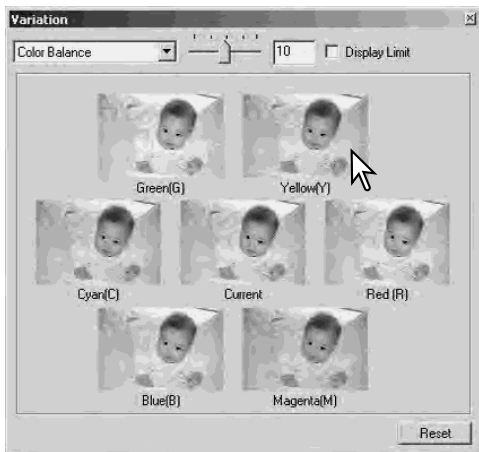


Click the variation button or select Variation from the image-correction option on the correction menu to display the palette.



Click the arrow next to the variation list box to select the image quality to be corrected: color balance, brightness and contrast, or saturation. Each variation palette shows the current image in the center with corrected samples displayed around it.





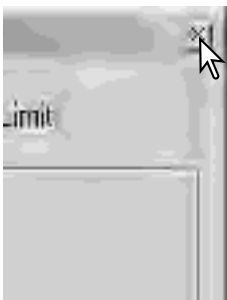
Click the best image among the frames. The selected image becomes the new center surrounded by a set of new images and the change is applied to the prescan image. This procedure can be repeated until the desired correction is obtained. Click the reset button to cancel all changes.



The difference between the samples can be changed. Drag the variation-step slider, or enter a value into the text box to set the degree of correction. The initial setting is 10. The correction step can be set between 1 and 20.



Checking the display-limit check box will indicate when any of the image values exceed 0 (black limit) or 255 (white limit) with the complementary color. For example, if the blue area of the image exceeds those values, the limit is displayed with the complementary color, yellow.

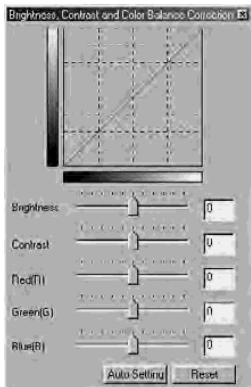


Click the close button to close the palette to apply any image corrections.

BRIGHTNESS, CONTRAST, AND COLOR-BALANCE PALETTE



Click the brightness, contrast, color-balance button or select Brightness, Contrast, Color Balance from the image-correction option on the correction menu to display the palette.



Drag the brightness, contrast, or color sliders, or enter specific values in the corresponding text box to make corrections. Dragging each slider to the right or inputting a positive number in the text box increases the brightness, contrast, and color.

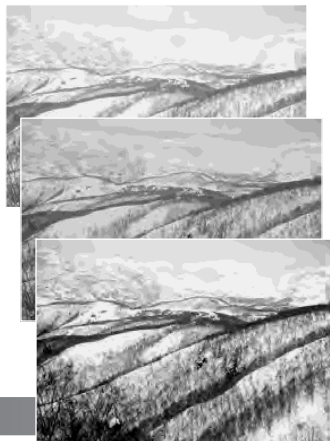
Changes will be reflected in the displayed image and in the graph at the top of the palette. The horizontal axis of the chart indicates the original image values and the vertical axis the new values. Click the reset button to cancel all changes.

Clicking the auto-setting button corrects the brightness and contrast automatically without affecting the color balance. Click the reset button to cancel the changes.

Is this picture too light? Adjusting brightness and contrast can be more difficult than it looks. The top image looks too bright, especially the mountains in the background.

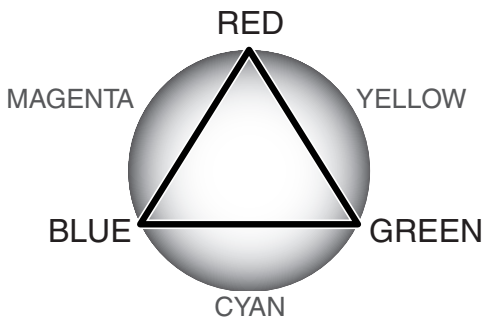
Simply making everything darker with the brightness control creates a muddy image - the snow and sky are a dull gray and there are no strong blacks.

By adding contrast to the image, the snow is brightened while the darker trees are accentuated. The extra contrast also gives the image the appearance of being sharper as well as revealing fine details.



AN INTRODUCTION TO COLOR

In photography, red, green, and blue are the primary colors. The secondary colors, cyan, magenta, and yellow, are made from combining the primary colors: cyan = blue + green, magenta = blue + red, and yellow = red + green. The primary and secondary colors are grouped in complementary pairs: red and cyan, green and magenta, and blue and yellow.



Knowing the complementary colors is very important in color balancing. If the image has a specific color cast, either subtracting the color or adding its complementary color will create a natural looking image. For example, if the image is too red, decrease the amount of red; if the image is too yellow, increase the amount of blue.

Adding or subtracting equal parts of red, green, and blue will have no effect on the color balance. However, it can change the overall image brightness and contrast. Usually, no more than two color channels are needed to color balance an image.

Color balancing is a skill that develops with practice. While the human eye is extremely sensitive in making comparative judgements, it is a poor tool when making absolute measurements of color. Initially, it can be very difficult to distinguish between blue and cyan, and red and magenta. However, adjusting the wrong color channel never improves an image; subtracting blue from an image that is too cyan will give a green cast to the image.

COMPARING PRE AND POST CORRECTION IMAGES



Clicking the comparison display button divides the image display area in two. The original image is on the left and the corrected image is on the right. To display the corrected image only, click the comparison display button again.



Original image

Corrected image

Changes made with the magnifying tool, grab tool, or scroll bars on one image will be applied to the other. Using the fit-to-window button automatically resizes both images to fit the display area.

UNDOING AND REDOING AN IMAGE CORRECTION



Click the undo button to cancel the last image correction applied to the image. Image corrections can continue to be undone as far as the computer memory capacity allows.



Click the redo button to reapply the last image correction canceled with the undo button.



Click the reset-all button to cancel all image corrections applied to the image.

PROCESSING IMAGES TEXT AND LINE ART

Images of black text or line art on white backgrounds can be processed to sharpen detail and reduce uneven illumination. Only images with horizontal and vertical dimensions between 240 pixels and 3072 pixels can be processed.



Simply display the image in the correction window and select the text-image-processing option from the plug-in menu. To reset the correction, select the text-image-processing option again from the plug-in menu.

DATA IMPRINTING

The date and time of recording, file name, and the subject line can be imprinted into the image. To add a subject line to an image, see page 25.

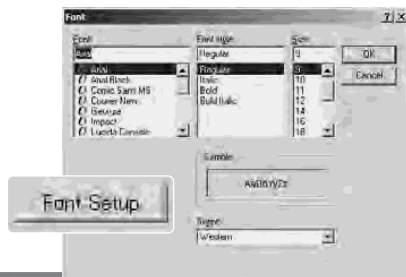
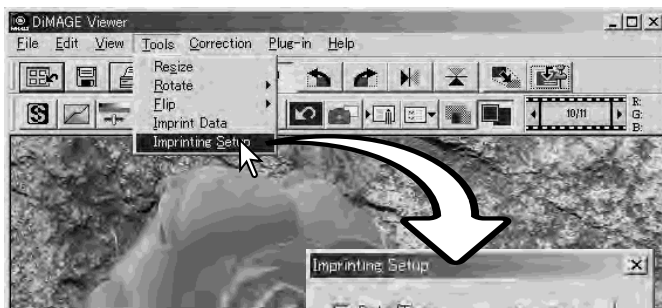
Select the imprinting-setup option from the tool menu to open the setup dialog box.



Select the information to be imprinted by checking the appropriate boxes.

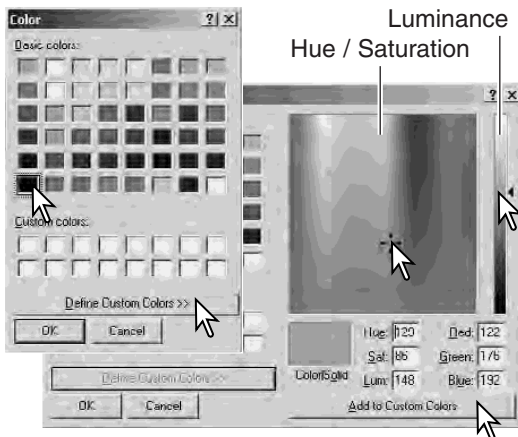
Click the appropriate button to select the corner to imprint the data. If the within-area-marquee check box is selected, the data will appear inside the area marquee in the position selected. For more about the area marquee, see page 64.

The font, font style, and point size can be specified. Simply click the font-setup button to open the font dialog box. The sample area will reflect the settings. The script can be selected from the drop-down menu at the bottom of the window. The fonts and scripts available vary with the computer system.



The font color can be specified. Click the font-color button to open the color dialog box. 48 colors are available. Click on the color sample to select it.

Custom samples can be created; click the define-custom-colors button to open the palette. Values can be entered into the text boxes or a color can be created by clicking on the hue/saturation and luminance fields. Click the add-to-custom-colors button to add the color to the custom palette. Click the custom sample and then the OK button.



Click the OK button in the data-imprinting dialog box to complete the operation. Select the data-imprint option from the tool menu or click the data-imprinting button to apply the settings.



The relative size of the imprinted data varies with image size. To cancel the imprinting function, select the data-imprint option from the tool menu or click the data-imprinting button again.

When the image is saved, the data will be embedded into the image. Always rename the file to protect the original image.

SAVING IMAGES

RESIZING AN IMAGE TO BE SAVED

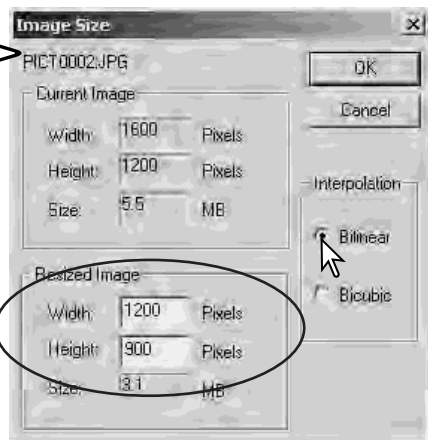


To resize the displayed image, click the image-size button. The image size window will open.

Enter the new width or height value in the text boxes. Only one value needs to be entered, the other value will adjust automatically to keep the image proportions unchanged. The dimensions cannot exceed 5120 X 3840 pixels.

Select bilinear or bicubic interpolation.

Click the OK button to set the new dimensions. The image is resized when it is saved or printed.



SAVING AN IMAGE

Click the save button on the tool bar or select the save option on the file menu. The image will be saved in its original location overwriting the current file. If a JPEG image is saved, the save-as dialog box will open; the location and compression rate must be specified, see next page.

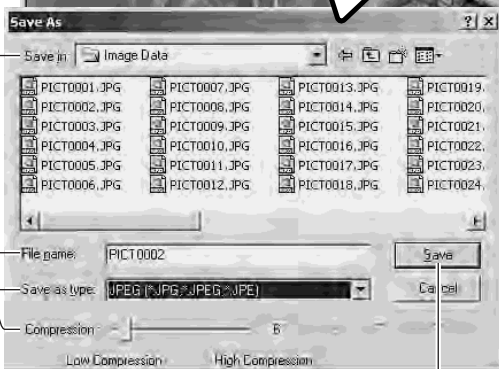


CHANGING THE IMAGE NAME OR FORMAT

To save an image file under a new name or in a new file format, select the save-as option from the file menu. The save-as dialog box will open.



Specify the location to save the file.



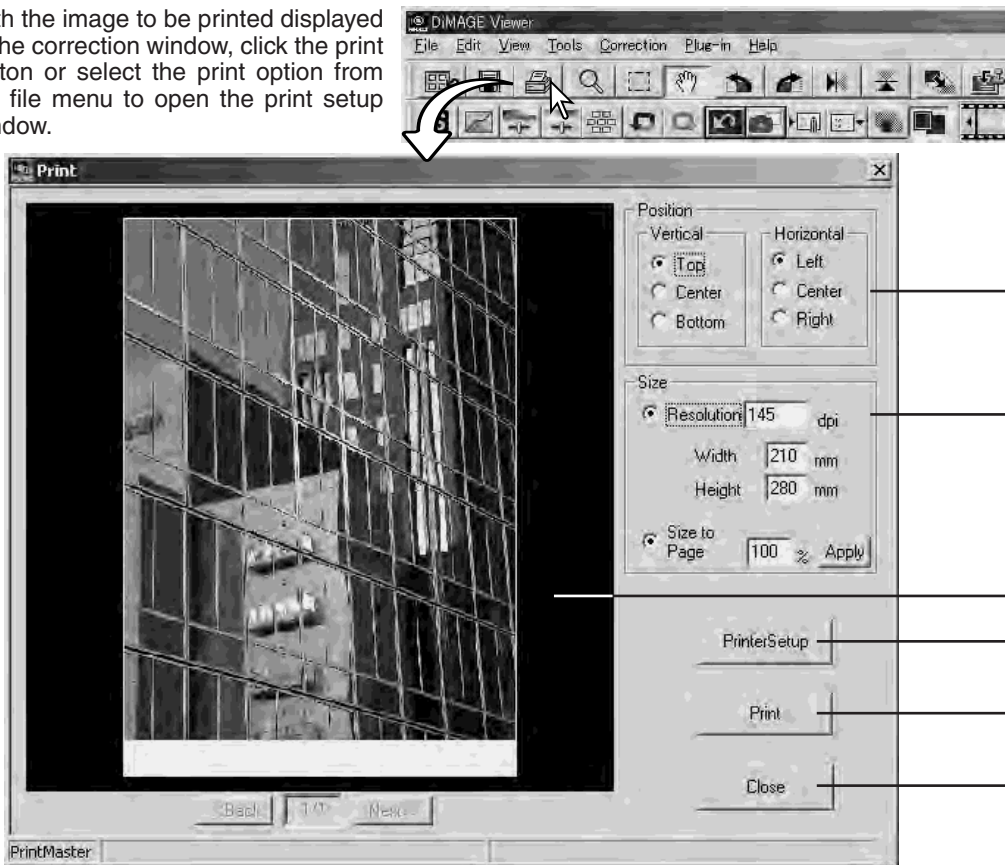
Enter the file name without an extension.

Specify the file format of the image from the drop-down menu. The file does not need to be saved in the original file format. If JPEG is selected, the compression rate must be fixed using the slide bar at the bottom of the dialog box. The higher the compression rate, the smaller the file size, and the lower the image quality.

Click the save button to save the image.

PRINTING

With the image to be printed displayed in the correction window, click the print button or select the print option from the file menu to open the print setup window.



Position

The image can be positioned within the printing area. Simply click on the appropriate radio buttons. Changes are immediately displayed in the preview area.

Size

Clicking the top radio button allows manual adjustments based on printing resolution or dimensions. Enter the print resolution or one of the dimensions in the text box and click the apply button; the other two values and the preview display change accordingly. With manual adjustments the print image can be made bleed to the edge of the printing area by setting the dimensions larger than the area.

Click the size-to-page radio button to automatically size the image to the printing area. The print size can be adjusted between 1% and 100% of the printing area in integers. Click the apply button each time the percentage of reproduction is change to see the result in the preview area.

Preview area

To preview the affect of the printing parameters. When the any of the size settings are changed, the apply button must be used to view the change.

Printer setup

To access the setup dialog box of the printer.

Print

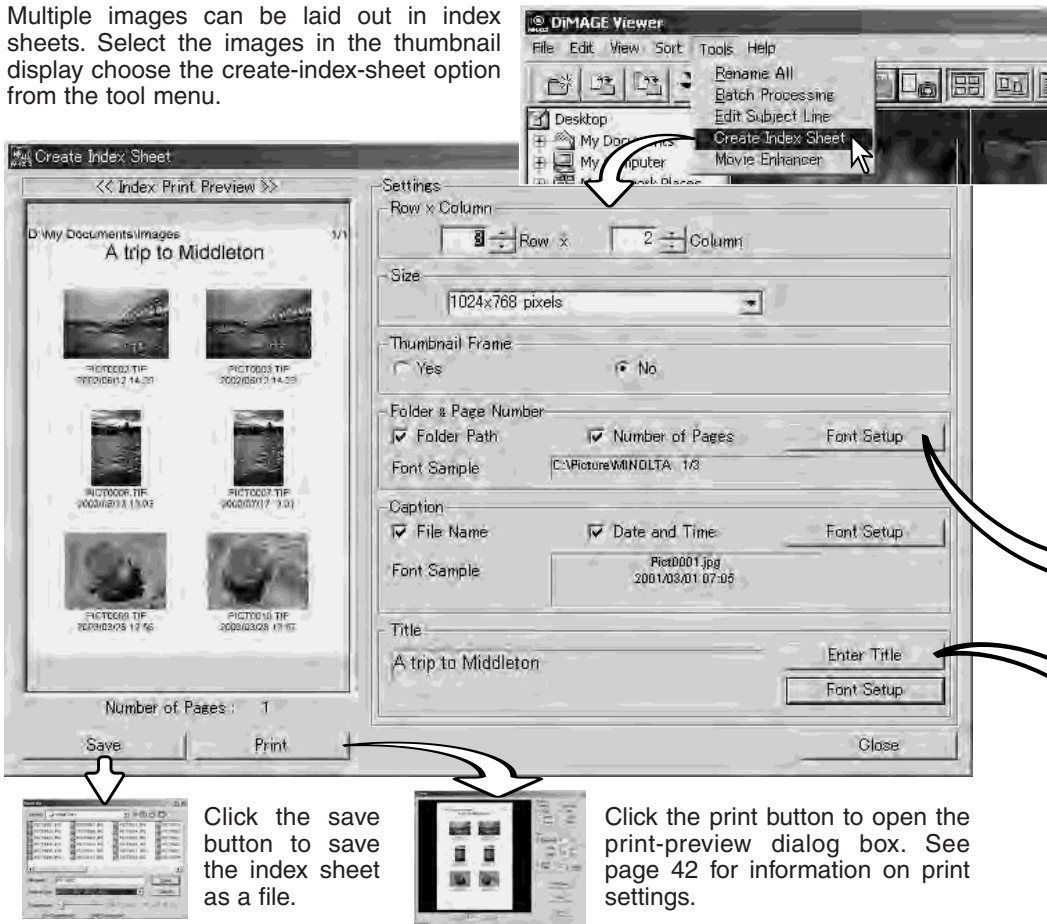
To print the image.

Close

To close the print window without printing the image.

CREATING AN INDEX SHEET

Multiple images can be laid out in index sheets. Select the images in the thumbnail display choose the create-index-sheet option from the tool menu.



The screenshot shows the DIMAGE Viewer application with the 'Create Index Sheet' dialog box open. The dialog box is divided into several sections:

- Settings:** Includes 'Row x Column' (3 rows, 2 columns), 'Size' (1024x768 pixels), and 'Thumbnail Frame' (No).
- Folder & Page Number:** Includes 'Folder Path' (checked), 'Number of Pages' (checked), and 'Font Setup'.
- Caption:** Includes 'File Name' (checked), 'Date and Time' (checked), and 'Font Setup'.
- Title:** Includes 'Enter Title' and 'Font Setup'.

At the bottom of the dialog box, there are 'Save' and 'Print' buttons. An arrow points from the 'Save' button to a file explorer window, and another arrow points from the 'Print' button to a print preview dialog box.

Select from the following setting to lay out the index sheets. All changes are reflected in the preview display.

Rows x Column - to lay out the images in a specified number of horizontal rows and vertical columns.

Size - to select the pixel dimensions of the index sheet. The greater the number of pixels, the finer the image resolution and the larger the file size.

Thumbnail frame - to print a black frame around each image. The frame can indicate the extent of an image that has a large area of white near the edges such as a cloudy sky.

Folder & Page Number - to print the folder name and location of the images and the page number and total number of pages of the index sheets.

Caption - to print the file name, and date and time of recording under each image.

Title - to print a title at the top of each sheet.



The font, font style, and point size can be specified for the folder path and page number, caption, and title. Simply click the font-setup button to open the font dialog box. The sample area will reflect the settings. The script can be selected from the drop-down menu at the bottom of the window. The fonts and scripts available vary with the computer system.



Enter the title of the index sheets in the dialog box. Click the OK button; the title will appear in the title field as well as at the top of the preview display.

ADVANCED IMAGE PROCESSING

This section covers the advanced image-processing tools in the DiIMAGE Viewer. Adjustments to color, contrast, brightness, hue, and saturation can be made. Functions to view and save image corrections are also available. The basic image-processing section on pages 26 through 39 should be read before continuing.

Sharpness button (p. 62)

Tone curve/histogram button (p. 47)

Hue, saturation, and lightness button (p. 60)

Area-marquee (p. 64)

Snapshot button (p. 65)

Save image-correction

Job button (p. 66)

Load image-correction

Job button (p. 67)

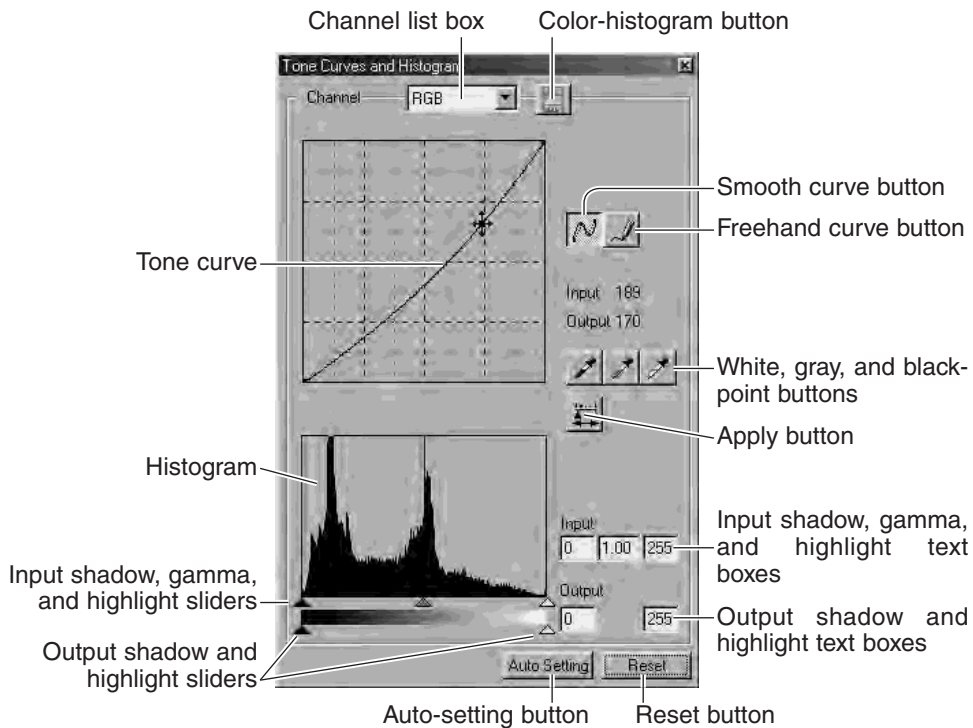
RGB value display



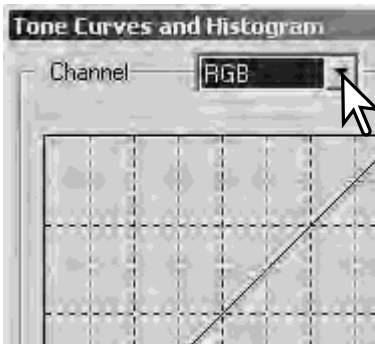
The RGB display will show the color values for any point on the image. The first number are the values for the original image before corrections are applied followed by the current values. Simply place the mouse pointer on the image area to see the RGB values of that point. Pressing the shift key (Windows) or command key (Macintosh) will display the CMY values.

THE TONE-CURVE / HISTOGRAM PALETTE

Click the tone-curve/histogram button to display the palette.

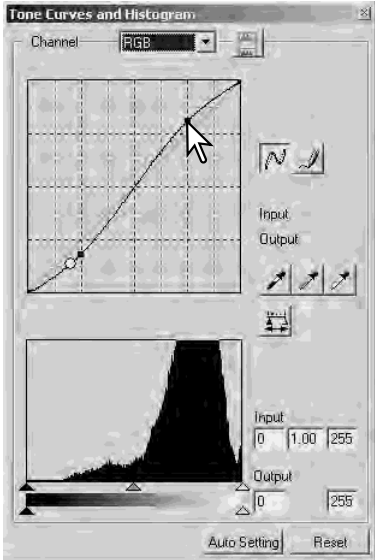


USING THE TONE CURVE



Click the arrow next to the channel box to select the channel from the drop-down menu. To make adjustments to the color balance of the image, select the appropriate color channel. To adjust the contrast or brightness of the image without affecting the color, select the RGB channel.

The tone curves can be displayed with keyboard shortcuts. While holding the control key (Windows) or command key (Macintosh), press “1” to display the red channel, “2” to display the green channel, “3” to display the blue channel, or “0” (zero) to display the RGB channel.



Place the mouse pointer over the tone curve. Click and drag the curve.

Each time the tone curve is clicked, a new node will be attached to the curve. The nodes can be moved by clicking and dragging. The input and output levels of the node are displayed as it is moved. The input level (horizontal axis) refers to the original image, and the output level (vertical axis) refers to the correction applied to the image.

Any corrections made on the tone curve are immediately applied to the displayed image. By placing the mouse pointer on the displayed image, the grey or color level of that point will be indicated on the tone curve by a white circle.

The reset button cancels all corrections in all channels.

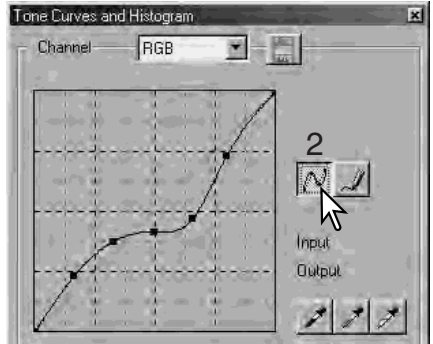
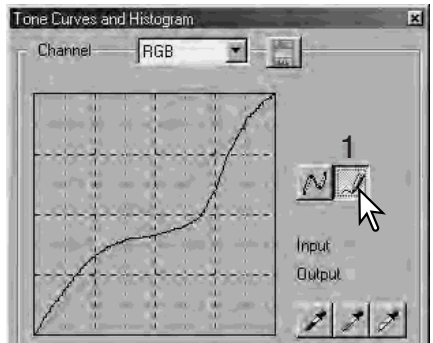
DRAWING TONE CURVES BY FREEHAND

Click the freehand-curve button (1). The mouse pointer changes to the pencil tool when placed in the tone-curve box.

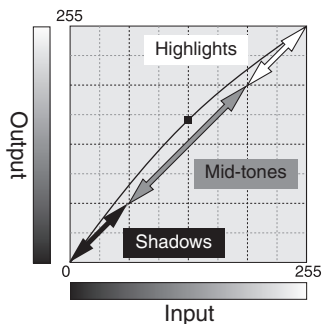
Click and drag the pointer to draw a new curve. Extreme image manipulations are possible with the freehand curve tool.

To smooth a rough freehand curve, click the smooth-curve button (2). Nodes will be automatically placed on the curve and can be adjusted with the mouse.

With extreme freehand curves, the smooth curve button may significantly change the shape of the curve. Click the undo button to return to the original freehand curve.



A SHORT GUIDE TO TONE-CURVE CORRECTIONS



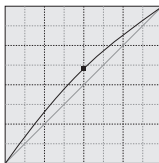
The tone curve is a graphic representation of the brightness and color levels of the image. The bottom axis is the 256 levels of the original image (input data) from black to white. The vertical axis is the corrected image (output data) with the same scale from top to bottom.

The bottom left portion of the graph represents the dark colors and shadow areas of the image. The middle section represents the mid-tones: skin, grass, blue sky. The top right section is the highlights: clouds, lights. Changing the tone curve can affect the brightness, contrast, and color of the image.

Bring out detail in the shadows



This is a simple technique to make a subject hidden in the shadows brighter. Unlike the brightness level control (page 33), this method of correction will not lose details in the highlight areas of the image.

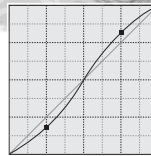
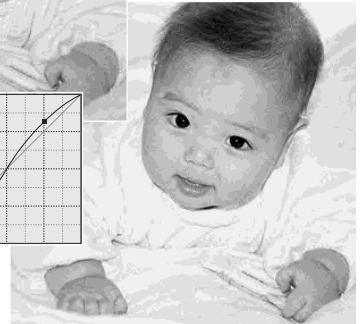
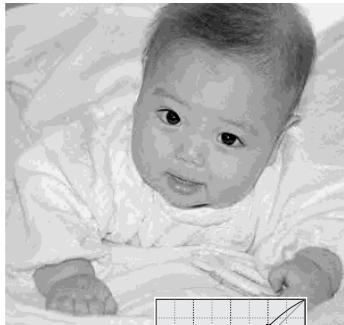


With the RGB channel selected, place the smooth-curve cursor on the center of the curve. Click and drag the curve up. Look at the displayed image to judge the result. The adjustment can be very small and still have a significant impact on the image. Moving the tone curve down will make the image darker.



Increasing contrast

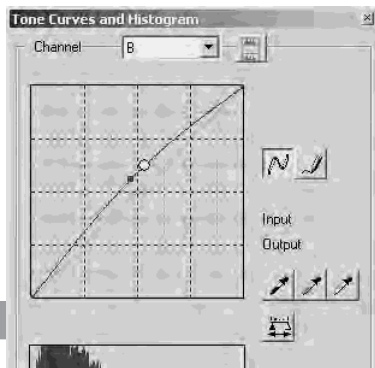
The contrast of an image can be changed. The light blue 45° line on the tone-curve graph represents the original contrast of the image. Making the angle of the tone curve greater than 45° will increase the contrast of the image. Making the angle less than 45° will reduce the contrast.



With the RGB channel selected, click on the tone curve near the top and bottom to add two nodes. Slightly move the top node up and the bottom node down. This will increase the angle of the central portion of the tone curve and increase the contrast of the image without making an overall change in image brightness.

Correcting color

By selecting individual color channels on the tone curve, adjustments to the overall color of an image can be made. This can be used to eliminate unnatural color casts or add warmth to a picture.



If the image is too red, green, or blue, simply drag the corresponding color-channel curve down until the color appears natural. If the color cast is predominantly one of the secondary colors, cyan, magenta, or yellow, move the curve of the complementary color up. For example, if the image is too yellow, move the blue curve up, see the color example on page 2. For more on color, see page 35.

WHITE, BLACK, AND GRAY-POINT CORRECTIONS

On the tone-curve / histogram palette, corrections can be made by specifying a white, black, and gray point within the image. Locating an appropriate neutral area within the image is critical to correctly calibrate the software. When the dropper tool is selected, the RGB display is active and can be used to evaluate the image area. All changes are immediately reflected in the displayed image.



Click the white-point button; the mouse pointer changes to the white dropper tool.



With the dropper tool, click on the brightest neutral area of the image to define it as the white point. The values of the image will be adjusted based on the selected point. The default level for the white point is 255 for each RGB channel.



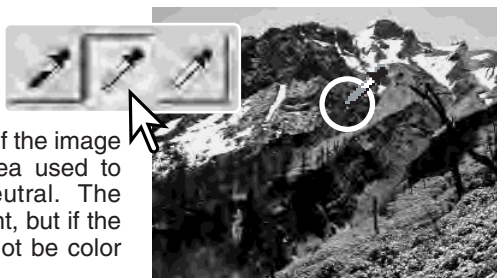
Click the black-point button.



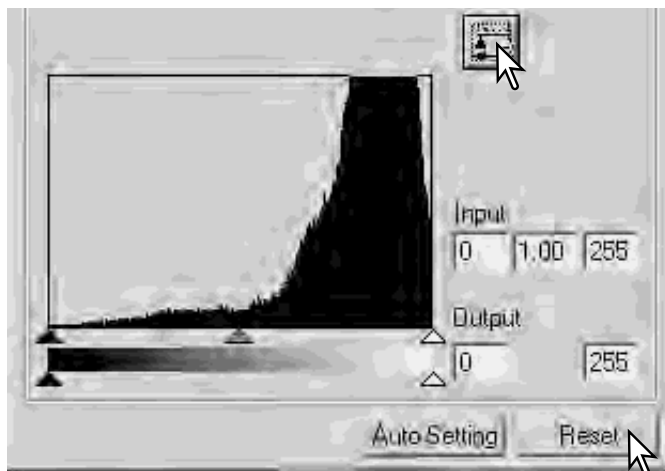
With the dropper tool, click on the darkest neutral area of the image to define it as the black point. The values of the image will be adjusted based on the selected point. The default level for the black point is 0 for each RGB channel.



Click the gray-point button. The gray point controls the color of the image.



With the dropper tool, click a neutral area of the image to be defined as the gray point. The area used to calibrate the gray point must be neutral. The brightness level of the area is not important, but if the area has a definite color, the image will not be color balanced correctly.



Click and hold the apply button to show the change on the histogram.

Click the reset button to cancel all corrections.

SETTING THE WHITE AND BLACK-POINT VALUES

The white and black-point values are set to 255 and 0 for each RGB level. Changing these values allow the calibration of an image with no true white or black. This is an advanced image-processing tool.

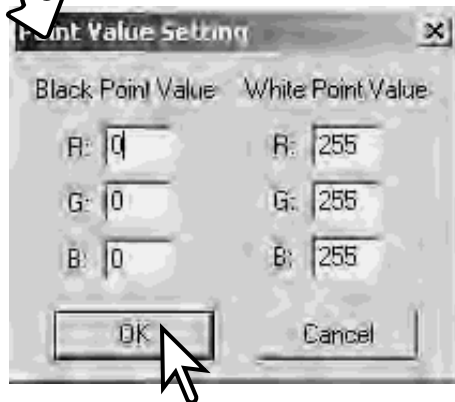
Double-click on either the white-point or black-point button to activate the point-value-setting dialog box.



Input the new white-point or black-point values. Click [OK].

With the point-value-setting dialog box open, the mouse pointer can be used to measure the color of any point on the displayed image. Press the shift key (Windows) or command key (Macintosh) to display the CMY levels in the RGB display. The RGB display shows the original values for the image on the left and the current values for the image on the right.

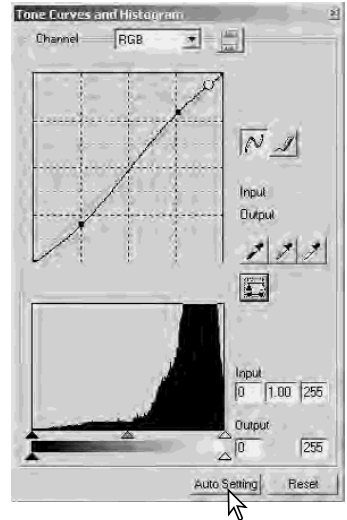
Calibrate the image following the steps in white, black, and gray point corrections section.



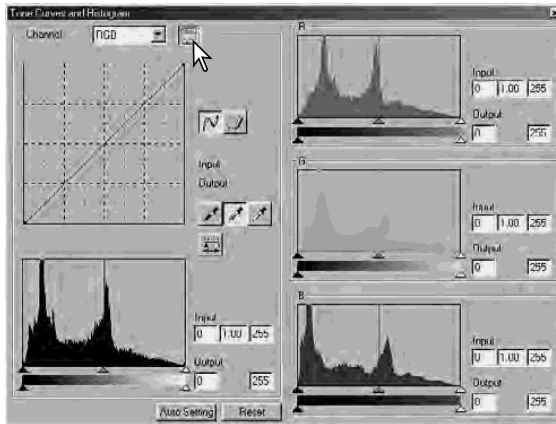
TONE-CURVE / HISTOGRAM AUTO SETTING

Click the auto-setting button. The change is immediately reflected in the displayed image.

The auto-setting function automatically adjusts the tone curve and histogram to maximize image data. The darkest pixels in the image are set to a black level for 0, the brightest pixels are set to a white level of 255, and the rest of the pixels are distributed between them equally. To view the change in the histogram, press the apply button. Click the reset button to cancel the auto setting.



DISPLAYING THE COLOR HISTOGRAMS

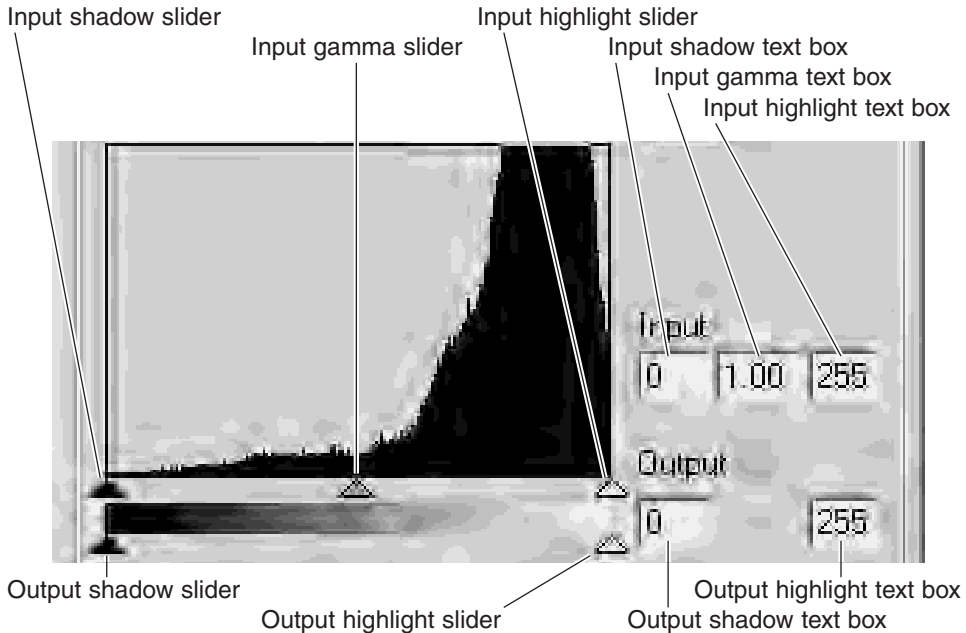


Click the color-histogram button to view the red, green, and blue histograms.

Click the histogram RGB display button again to close the color histogram display.

HISTOGRAM CORRECTIONS

The histogram indicates the distribution of pixels with specific brightness and color values of the displayed image. Using the histogram can maximize the output of the image data. Changes made with the histogram are also displayed on the tone curve.



The color histograms can be displayed with the channel list box or with keyboard shortcuts. While holding the shift key (Windows) or command key (Macintosh), press “1” to display the red channel, “2” to display the green channel, “3” to display the blue channel, or “0” (zero) to display the RGB channel.

The highlight level, shadow level, and gamma can be set manually. The histogram can be used to maximize the distribution of the pixels in the image. All the levels on the histogram are displayed numerically to the right of the sliders. These numbers can be changed with the keyboard.

The gamma slider defines the mid-tones of the image. Dragging the gamma slider to the right will darken the image, and dragging it to the left will brighten it. Similar to the tone-curve correction described on page 50, the gamma slider allows the brightness of the image to be adjusted without losing image information.

The input highlight slider sets the white level. As the slider is moved to the left, an apparent increase in contrast can be seen in the displayed image. All pixels to the right of the slider are set to 255 and any image detail they may contain will be lost. This can be an important tool for improving copy images of text on a white background. Uneven illumination, or faded or stained paper can be distracting when copying text or line art. By adjusting the white level, the imperfections of the white background can be eliminated leaving only the darker text visible.

The input shadow slider sets the black level. As the slider is moved to the right, an apparent increase in contrast can be seen in the displayed image. All pixels to the left of the slider are set to 0 and any image detail they may contain will be lost.

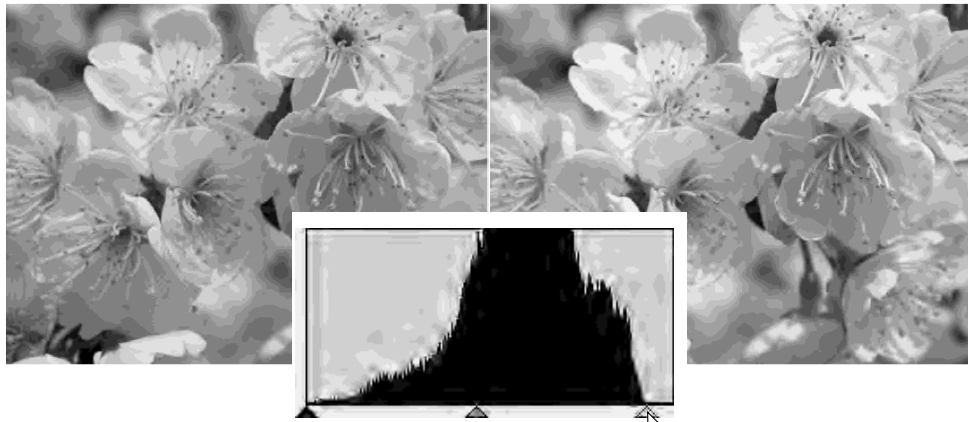
The black and white output levels can be adjusted. By moving the output highlight and shadow sliders, the contrast of the image can be reduced.

For examples of histogram corrections, see the following section.

A SHORT GUIDE TO HISTOGRAM CORRECTIONS

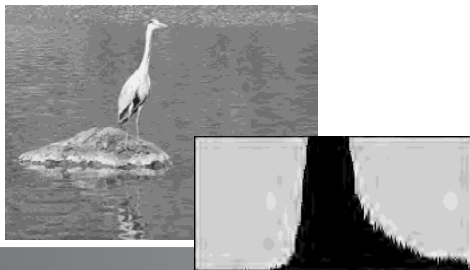
This guide shows simple corrections that can be made with a histogram. Unlike the tone curve, the histogram provides information on a specific image. This can be used to evaluate the image and make adjustments accordingly.

The histogram of the cherry blossoms shows a gap at the right and the flowers look a little grey. This is caused by slight underexposure when the image was captured.



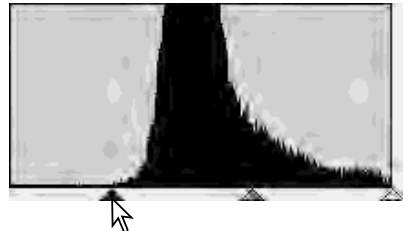
By moving the highlight slider to the left to set the white point to where the pixel distribution ends, the whites become more brilliant and the contrast increases.

This image is flat. The pixel distribution in the histogram reflects the low-contrast scene. The lack of any strong shadows or dark tones is indicated by the absence of pixels on the left of the histogram. Most of the detail is concentrated in a narrow range in the mid-tones.

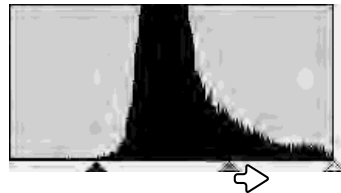
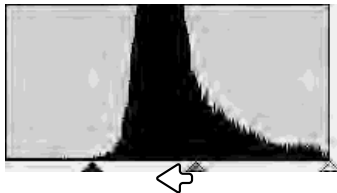




By moving the shadow slider to the right to set the black level to where the pixel distribution begins, image contrast is improved.



The gamma slider can be used to change the relative distribution of the tones in the image. By moving the gamma slider to the left toward the shadows, the image becomes lighter. By moving the gamma slider in the opposite direction, the image becomes darker. However, unlike the brightness control in the brightness, contrast, and color-balance palette (p. 33), details are not lost in the shadows or highlights.



HUE, SATURATION, AND LIGHTNESS PALETTE

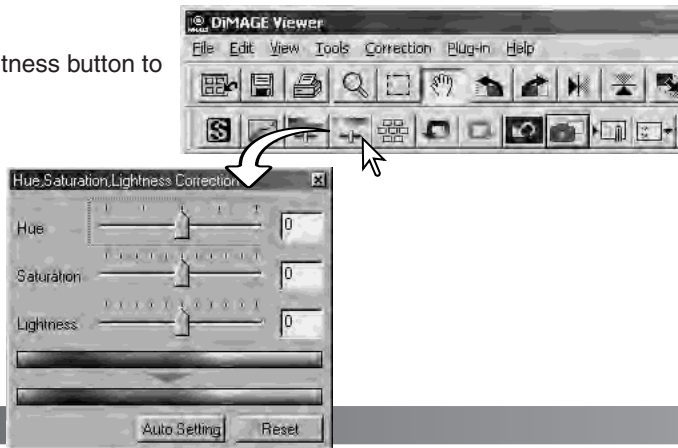
This palette adjusts the image in reference to the HSB color model. These controls can be used to manipulate the color image rather than producing a realistic representation.

The HSB color model defines color based upon human perception rather than photographic processes. Hue refers to each separate color in the model. Saturation is how vivid each colors is. Lightness describes how bright or dark a color is in the color space.

The hue control is not a color balancing tool. It is a creative tool. When changing hue in the palette, each color is assigned a new hue depending on the degree of rotation through the color space. For example, a very simple color space could have three colors: red, green, and blue. I have a red barn next to a green tree with a blue sky. Now I rotate the my image in the color space; the colors are reassigned a new hue based on the position - the barn is green, the tree is blue, and the sky is red. The HSB color space is similar, but with many more hues; see the color example on page 91.

Unlike the brightness control in the brightness, contrast, color balance palette, the lightness control does not change the apparent density of the colors equally. For example, with an extreme increase in lightness, blue will not appear as light as yellow.

Click the hue, saturation, and lightness button to open the palette.





Original color space

New color space

Drag the hue, saturation, or lightness slider, or enter specific values in the corresponding text box to make corrections.

Dragging each slider to the right or inputting a positive number in the text box increases the saturation, and lightness. The hue slider rotates the colors in the image through the color space; the maximum position to the right (180°) is the same as the maximum position to the left (-180°).

Two color spaces are displayed at the bottom of the palette. The top bar indicates the color space of the original image. The bottom bar displays the relative changes to the color space.

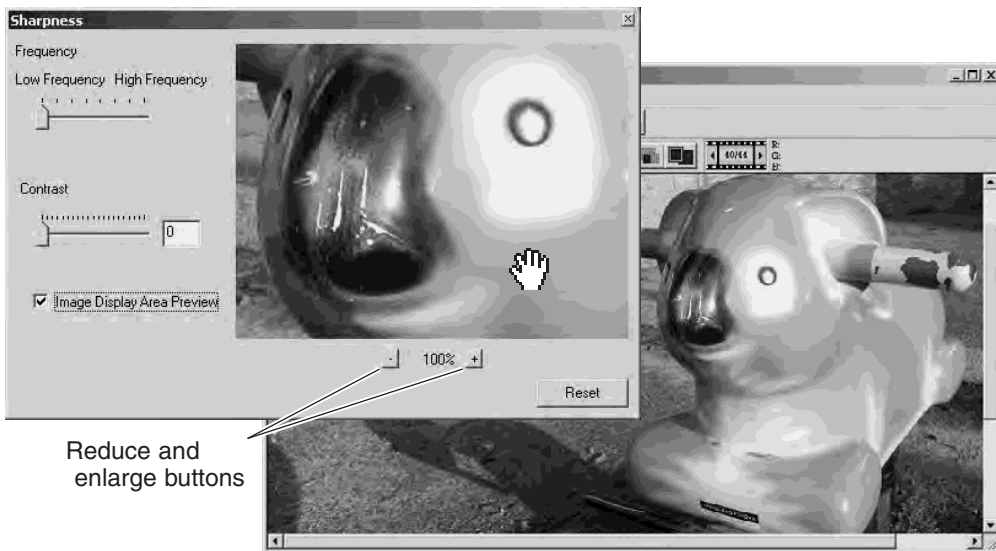
Changes will be reflected in the displayed image. Click the reset button to cancel any changes.

Auto-setting button

Clicking the auto-setting button adjusts the saturation automatically without affecting the hue or lightness. Click the reset button to cancel any changes.

SHARPNESS

The apparent sharpness of the image can be increased. Sharpness is a very subtle, but can have a powerful affect on overall image quality. Click the sharpness button or select Sharpness from the image-correction option in the correction menu to open the palette.



The preview image can be scrolled using the mouse. Place the mouse pointer over the image area; it will change to the grab tool. Click and drag the image to scroll. Click the display-area-preview check box to view the effects of the sharpness controls on the image displayed in the main window.

Frequency slider - affects the sharpness of image details. The high frequency setting maximizes resolution, and the low-frequency setting maximizes acutance. The optimal frequency setting will vary from image to image. It is recommended to view the image at various magnifications to judge the results.



High-frequency setting

Low-frequency setting

Contrast slider - controls the contrast of the set frequency. The degree of sharpness can be set between 0 and 2 in 0.1 increments. The higher the value, the greater the contrast; compare the examples above, which are at the maximum setting, with the original image on the facing page. The degree of sharpness can also be entered in the text box next to the slider. Like frequency, the optimal contrast setting will vary from image to image.

Reduce and enlarge button - to adjust the size of the preview image in the sharpness window. The preview image can be displayed at 25%, 50%, 100%, and 200%.

Reset button - resets all changes made to the image.

AREA MARQUEE - SAVING OR PRINTING A PORTION OF AN IMAGE

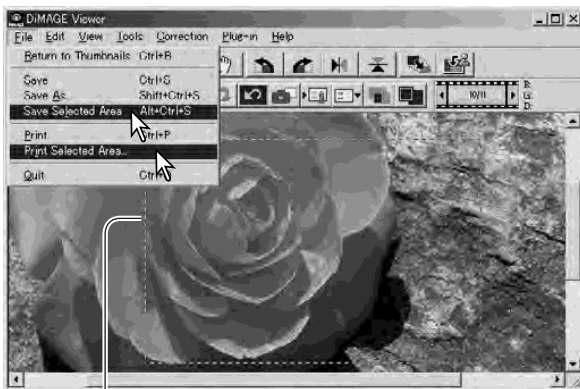


An area of an image can be selected and saved as a separate image file or printed. The marquee can also be used to specify the area used for data imprinting (p. 38). Click on the area-marquee button on the tool bar or select the area marquee from the cursor option of the view menu.

Click and drag over the area of the image to be selected. The area-marquee tool will create a rectangle with a dashed border.

The marquee can be moved by placing the cursor within the area and clicking and dragging. It can be resized by clicking and dragging on the borders.

Select the save-selected-area option or the print-selected-area option from the view menu.



Area marquee

When the print-selected-area option is chosen, the print dialog box open. The selected area will be seen in the preview display. See page 42 on how to make print settings.

When the save-selected-area option is chosen, the save-as dialog box will open. Enter the file name for the selected area, choose the file format, specify the location to which to save the file, and save the image (p. 40).

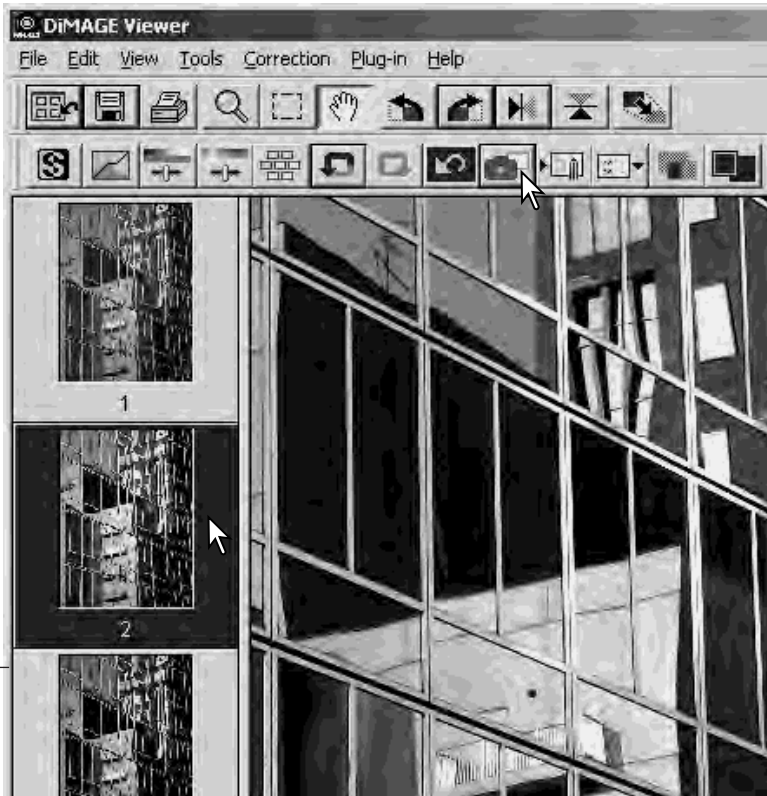


TRACKING IMAGE CORRECTIONS - SNAPSHOT BUTTON



Image corrections can be stored temporarily as a thumbnail next to the displayed image. Simply click the snapshot button on the tool bar or select the snapshot option from the correction menu to create a thumbnail with the current image corrections.

To return to a previous image correction, click on the corresponding thumbnail. The thumbnail image will replace the displayed image. The number of snapshots that can be made is only limited by the computer memory. To delete a snapshot, click on the thumbnail and press the keyboard delete key.



Snapshot display area

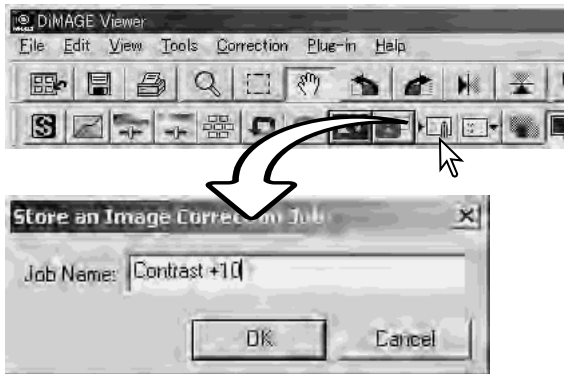
SAVING IMAGE CORRECTIONS

All corrections applied to an image can be saved as an image-correction Job. The Job can be loaded into the utility at any time and applied to different images. This is a time-saving function when a large number of images need to be processed with the same correction settings.



Click the save image-correction Job button or select the save-image-correction-Job option from the correction menu to save the current image-correction settings.

Enter the Job name. Click the OK button to save the settings.



LOADING IMAGE-CORRECTION JOBS

Display the image to be corrected in the image-correction window. Click the load image-correction Job button or select the load-image-correction-Job option from the correction menu to load a saved image-correction setting.

Click on an image-correction Job thumbnail to select it. Click the OK button to apply the Job to the displayed image.

Jobs are loaded into the snapshot display area. Multiple Jobs can be loaded.



PROCESSING RAW IMAGES

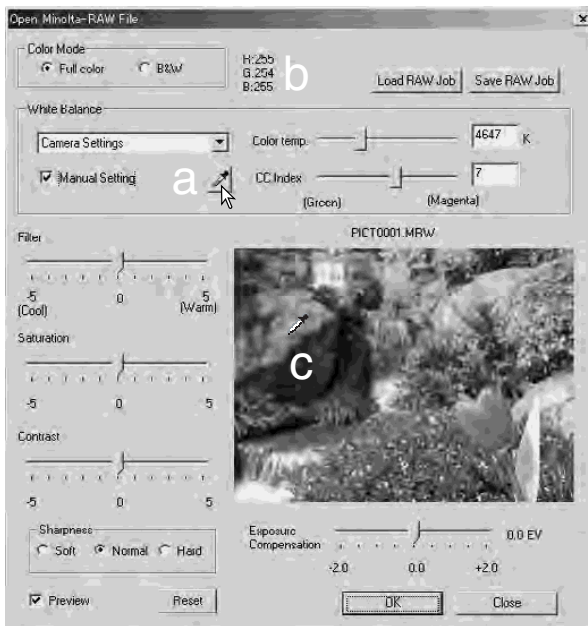
Certain digital cameras, such as the DiMAGE 7Hi, or DiMAGE A1, use a special file format called Minolta-RAW. This file can only be read and processed by the DiMAGE Viewer software. To open a RAW file, simply double click on it in the thumbnail display

The open dialog box is used to define the parameters for the image. First the color mode of the image should be selected; if black and white is chosen, the white-balance and filter controls are not available.

White balance controls the overall color of the image. The drop-down menu automatically applies the camera setting used when the image was captured or balances it to a specific light source. The preset white-balance settings vary between camera model.

Click on the manual-setting check box for fine control over white balance. The grey-point dropper tool can be used to balance the image in reference to a neutral point within the image area. The color-temperature and CC index slider and text box can be used to enter the color temperature of the scene when the image was recorded.

Before adjusting white balance, set the filter and saturation sliders to zero (0) so that image color can be judged accurately.



Click on the gray-point button (a) to calibrate the white balance to a point within the image; the cursor will change to the gray-point dropper tool. When the dropper is placed in the image area, the RGB values of that point are displayed at the top of the window (b). Click on a neutral point within the image to make the calibration (c). The point chosen can be at any brightness level, but it must have no definite color. Although the filter and saturation setting in the dialog box will not affect the calibration, the sliders should be set to zero so that the results can be judged.

A Minolta color meter can be used to measure the approximate color temperature of a scene when the RAW image is captured. The recorded color temperature and CC index value from the meter can be entered in the text boxes to set the white balance. A green CC value should be entered as a negative integer and a magenta value as a positive integer. When making the reading, both the color temperature and the CC value must be recorded. See page 90 for information on color measurement.

If the camera's filter, saturation, contrast, or sharpness controls were used when the picture was taken, the settings will be displayed in the dialog box. Changes to these settings are reflected in the preview image. The cursor can be used to measure the RGB values of any point within the image. When a Vivid color image is opened, the saturation level will be set to zero (0), but the high saturation level of the color mode will be applied to the image. If color matching is on (p. 82), except when using the original color space, any changes to the contrast will not be applied when the file is opened.

The image brightness can be adjusted by $\pm 2.0\text{Ev}$ with the exposure-compensation slider. The slider will not reflect the degree of exposure compensation used when the image was captured. Like the brightness control in the brightness, contrast, and color-balance palette, detail can be lost in the highlights and shadows. To preserve these details, it is recommended to open the image without compensating the exposure and adjust the image brightness with the tone-curve / histogram palette (p. 47).

The reset button returns all settings to their initial position. The close button cancels any settings made and closes the window without processing the RAW image. To apply the settings to the image data and open the file, click the OK button.

SAVING RAW IMAGES

Click the save button on the tool bar or select the save option from the file menu to save the displayed image. In the save-as window, specify the location to save the file (1). Enter the file name without an extension (2).

Specify the file type of the image (3). If saved as a TIFF file, the bit length must be selected (4): 24 bit or 48 bit. Once saved as 24 bit, the image cannot be saved as a 48-bit file. If the data imprinting function is used (p. 38), the file can only be saved as 24 bit. If saved as a JPEG file, the compression rate should also be set (5). The higher the compression rate the smaller the file size and the lower the image quality.

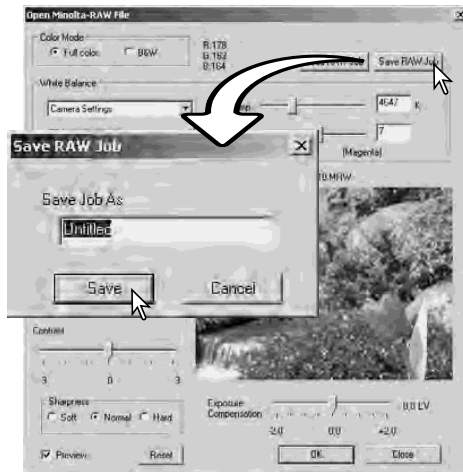
Click the save button to complete the operation.



SAVING RAW JOBS

RAW processing settings can be saved and applied to other images.

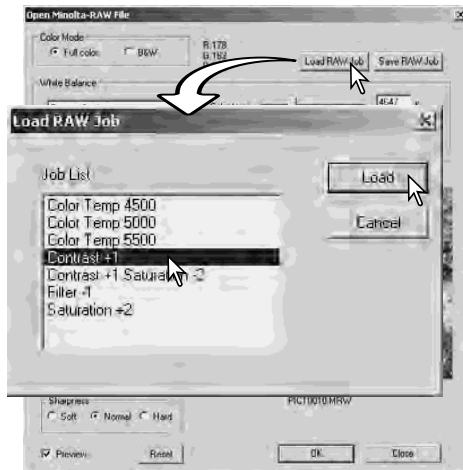
After all settings have been made on the open-Minolta-RAW-file dialog box, click the save-RAW-Job button. Enter the name of the Job in the save-RAW-Job window and click save.



LOADING RAW JOBS

To apply a RAW Job to another image, click on the load-RAW-Job button in the open-Minolta-RAW-file dialog box.

Select the Job in the load-RAW-Job window and click the load button to apply the settings to the image.



BATCH PROCESSING

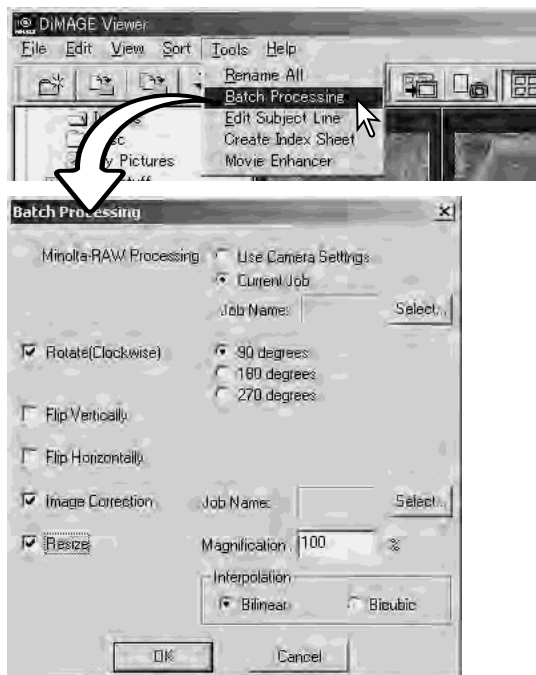
Multiple images can be processed and saved at one time. Highlight the images to be processed on the thumbnail display and then select the batch-processing option from the tools menu. The batch-processing dialog box will open.

Except for RAW processing, the settings in the dialog box are applied equally to all images. If RAW images are included in the batch, they can be processed with the camera settings used when they were recorded, or a RAW Job can be used (p. 71). Click the select button to open the load-RAW Job window and select the Job.

Images can be rotated or flipped.

To apply an image-correction Job click the image-correction check box. The select button opens the load-image-correction-Job window (p. 67). Select the Job to be applied to the images in the batch and click “OK.” If a RAW Job and image-correction Job are selected for batch processing, RAW images will have both Jobs applied to them.

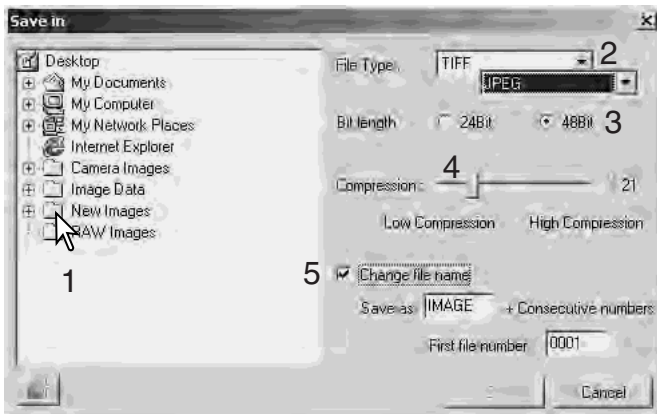
Images can be resized between 10% and 200%. If the result of the resizing exceeds the maximum pixel size of 5120 X 3840, an alert message will be displayed. Reenter a new magnification. When resizing images, select either bilinear or bicubic interpolation.



Click the OK button to begin processing. The save-in dialog box will open.

Select the location to save the images on the folder tree (1).

Specify the file type of the images (2). If saved in the TIFF format, the bit length must be selected (3): 24 bit or 48 bit. Once saved as 24 bit, images cannot be resaved as a 48-bit file. If saved in the JPEG format, the compression rate should also be set (4). The higher the compression rate the smaller the file size and the lower the image quality.



Click the change-file-name check box (5) to rename the image files. Enter the file name up to ten characters and enter the first serial number up to five digits.

Click the OK button to begin batch processing.

MOVIE ENHANCER



QuickTime must be installed on the computer system for the Movie Enhancer to be used. For QuickTime system requirements, see page 7.

To open a movie file in this application, simply double click on the thumbnail in the DiIMAGE Viewer thumbnail display. To play the movie clip back, use the controls at the bottom of the screen. Only MOV or AVI format images can be opened.



When the resize button is clicked and dragged, there is a maximum limit to how large the screen area can be. The jog slider is used in editing (p. 76).

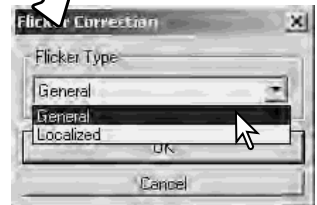
FLICKER CORRECTION

The Movie Enhancer can minimize flicker in 640 X 480 (VGA) or smaller movie files. General flicker effects the overall image area evenly. Localized flicker is isolated to only a portion of the image area; a scene with natural light and fluorescent lighting may only show flicker in the area illuminated by the fluorescent lights.

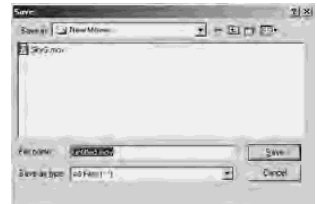
With the movie displayed in the main window, select the flicker-correction option from the correction menu.



Choose the type of flicker to be corrected on the drop-down menu in the flicker-correction window. Click the OK button to process the movie file.



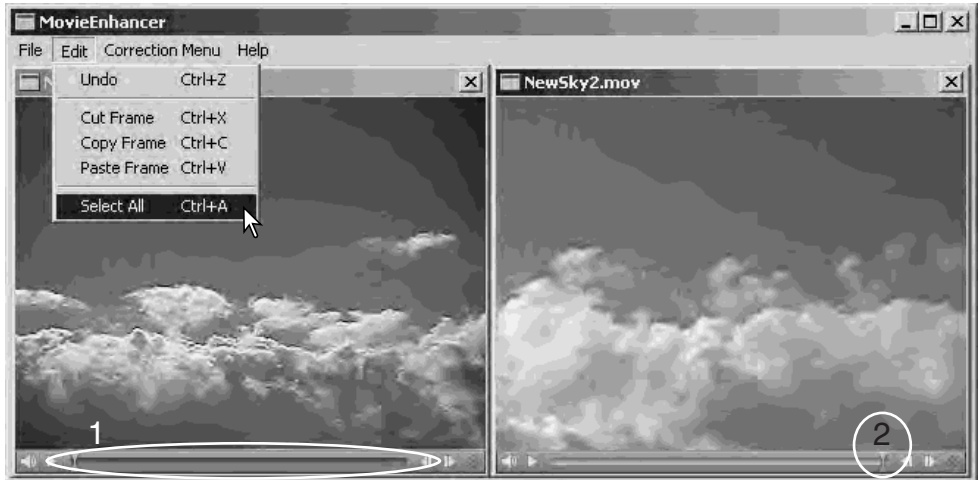
The save dialog box will open; enter a new file name and specify the location to save the file. The file can only be saved in the MOV format.



EDITING MOVIE FILES

The Movie Enhancer can join movie clips together, cut sections from a clip, or copy sections from one clip to another with the edit menu. Open the necessary movie files in the main window with the file menu.

Splicing two movie clips



Click on the first movie clip to select it; the slider bar should be dark (1). If not, choose the select-all option from the edit menu to darken the bar and indicate the selection.

Select the copy-frame option from the edit menu.

Click on the second clip. Position the jog slider all the way to the left to attach the first clip to the beginning of the second or all the way to the right to attach it to the end (2).

Select the paste-frame option from the edit menu to complete the operation.

Copying sections from one movie to another



In the first movie file, use the jog slider to locate the beginning of the section to be pasted.

While pressing the shift key, drag the jog slider to mark the frames in the section (1); the slider bar darkens to indicate the selected section. To deselect the section, click on a gray area on the slider bar.

Select the copy-frame option from the edit menu.

On the second movie clip, use the jog slider to locate the point to paste the copied section (2).

Select the paste-frame option from the menu to complete the operation.

CORRECTING MOVIE IMAGES

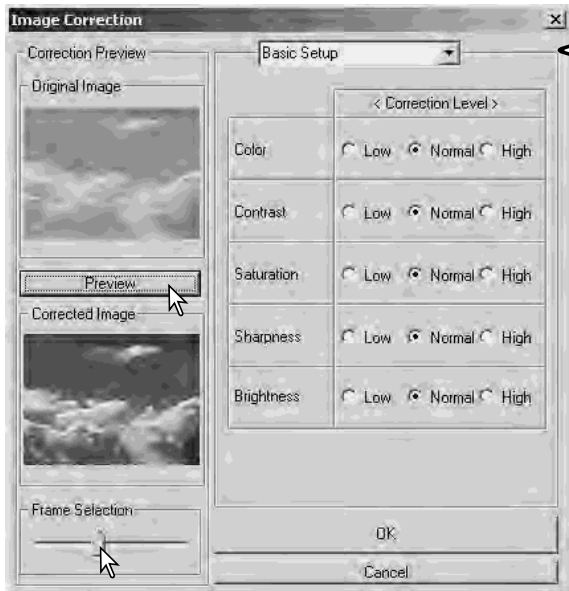
The image quality of a 640 X 480 (VGA) or smaller movie clip can be adjusted. If both flicker correction and image correction is applied to the same movie clip, the flicker correction processing should be done first. With the movie displayed in the movie enhancer, select the image-correction option from the correction menu to open the palette.



The drop-down menu at the top of the window switches between the the basic and advance setup palettes. Both palettes control the same image qualities, but the advance setup palette allows finer adjustments.

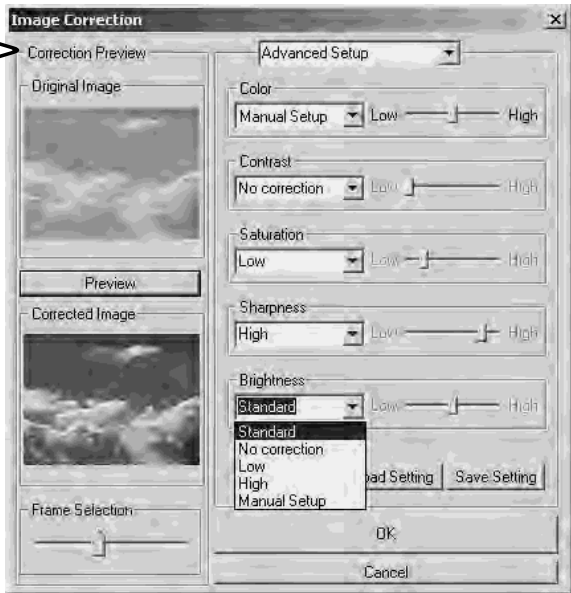
The correction-preview display shows the original image and the corrected image. To initially display the corrected image, press the preview button. Use the preview button to update the image display every time a setting is changed. The frame-selection slider can display any frame in the movie clip.

The basic setup palette allows corrections to color, contrast, saturation, sharpness, and brightness in three degrees. "Low" makes a slight adjustment to the quality, whereas "High" makes a large change.



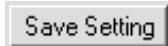
Color corrects the overall color cast of an image. The higher the level, the greater the color balance is shifted toward neutral. Contrast controls the relative brightness levels. The higher the level, the brighter the highlights and the darker the shadows. Saturation controls the vividness of colors. Sharpness controls the sharpness of image details. Brightness controls how bright the image is.

The advanced setup palette has five correction settings for color, contrast, saturation, sharpness, and brightness. Selected with the drop-down menu for each of the five image qualities, low, standard, and high are preset levels, manual setup activates the slider for manual adjustments, and no correction turns off the correction function.

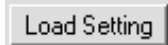


When all settings have been made, press the preview button to confirm the effect on the image.

Click the OK button to begin processing. The save dialog box will open; rename the file and specify the location to save it. The file can only be saved in the MOV format.



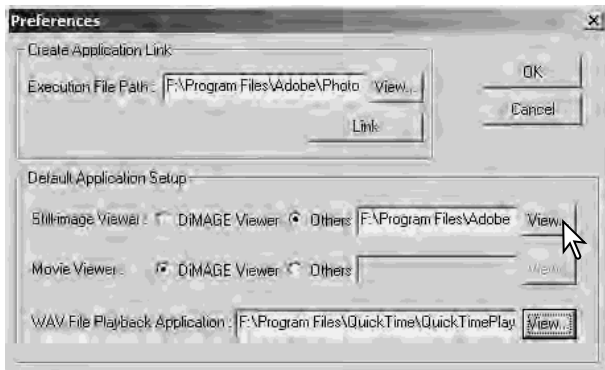
To save the current settings. Only one set of settings can be saved. Each time the function is used, the previous setting are replaced with the new ones.



To apply the last set of settings saved.

ADVANCED SETUP

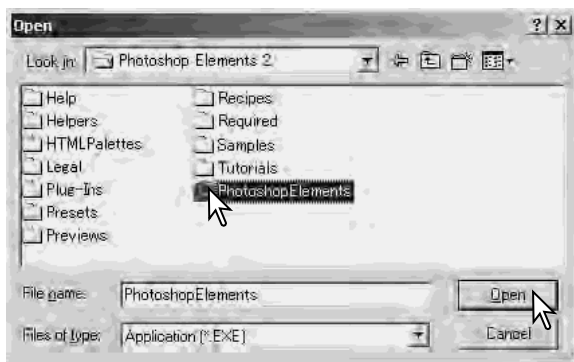
CUSTOMIZING THE VIEWER - PREFERENCES



The application software to open still images, movie clips, and audio files can be specified in the preferences dialog box. To open the dialog box, select the preferences option from the file menu.

The default application setup specifies the software used to open certain files. When a thumbnail is double clicked in the DiIMAGE Viewer, it will be opened in the specified application.

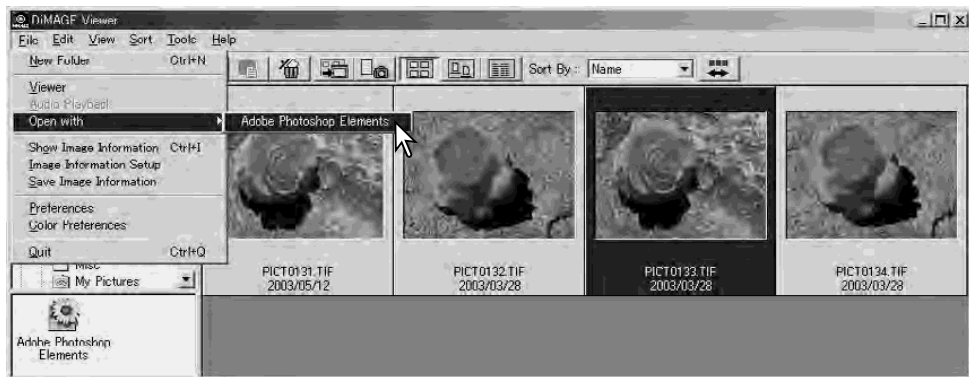
The radio button indicates the application used to open still images and movie clips. To link a new application, click the others radio button and then the view button; the open dialog box will be displayed. Select the new application and click the open button. The file path will be displayed in the preference window. Click OK to complete the setup.



The create-application-link function links another image-processing application to the DiMAGE Viewer. When the link is made, the application icon is displayed in the thumbnail window.

To create the link, click the view button; the open dialog box will be displayed. Select the new application and click the open button. The file path will be displayed in the preference window. Click the link button.

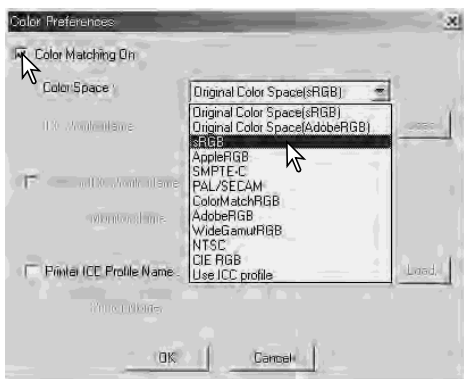
Click OK to complete the operation. The application icon will be displayed in an area below the folder tree.



To open a file in the application, drag and drop the file onto the icon or highlight the file and select the application from the open-with option on the file menu.

To remove the application from the display, click on the icon and then use the delete button on the tool bar or keyboard to delete it. This also resets the preference box.

COLOR MATCHING - COLOR PREFERENCES



Each output device (monitor or printer) defines color and contrast differently. To ensure accurate reproduction, the output color space must be defined. Color matching is used for professional color management. It is not needed for normal personal use.

Select the color-preferences option from the file menu to open the dialog box.

In the dialog box, click the color-matching-on check box.

Select a color space from the drop-down list. The following color spaces are available:

Original Color Space (sRGB) - the color space of the camera image is not converted to a standard color space. This color space is recommended for images captured with a Minolta DiMAGE digital camera. The DiMAGE Viewer, monitor, and printer interprets the color as sRGB for reproduction purposes, but does not convert the original camera color space.

Original Color Space (Adobe RGB) - Adobe-RGB color-mode images captured with a Minolta digital camera such as the DiMAGE 7Hi or DiMAGE A1 must be opened with this color space unless the color profile has been embedded; see the embedded camera profiles section on page 90. As with Original Color Space (sRGB), the color space of the camera image is not converted to a standard color space. The DiMAGE Viewer, monitor, and printer interprets the color as Adobe RGB for reproduction purposes, but does not convert the original camera color space.

sRGB - the color space promoted by Hewlett Packard and Microsoft. Since it reflects the average PC monitor characteristics, it is widely used around the world, and is considered to be the standard for multi-media and Internet usage. sRGB is not suitable for professional prepress applications because of its narrow reproduction range.

Apple RGB - widely used in DTP. It is the standard color space in many common graphic arts and design applications: Adobe Illustrator, Photoshop, etc.

SMPTE-C - the current television broadcasting standard used in the United States.

PAL/SECAM - the current television broadcasting standard used in Europe.

ColorMatch RGB - this standard has a wide color space and is ideal for use with Radius Press View monitors, which are commonly used in prepress production.

Adobe RGB - this color space is wider than ColorMatch RGB. The extensive color range makes it ideal for prepress use. However, the range is so great that it includes many colors that cannot be reproduced with a four-color printing process.

Wide-gamut RGB - utilizing the color coordinates of the spectrum, this standard offers an extreme range of colors. Many of the colors that can be generated cannot be reproduced on standard computer monitors or by printing technology.

NTSC - the current television broadcasting standard used in Japan.

CIE RGB - this color space is defined by the CIE.

Use ICC Profile - to employ a specific ICC profile.



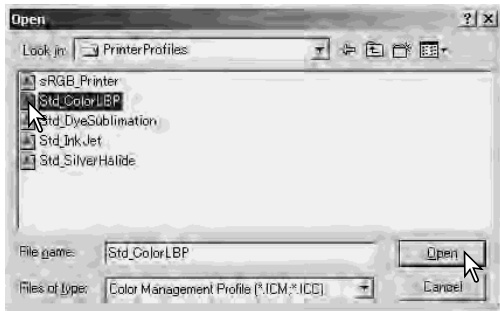
To use a specific profile, select the use-ICC-profile option. Click the load button and use the open window to open the profile; the profile name will appear in the color-preferences window. Click the OK button to set the color space and close the color-preferences window.

USING PRINTER ICC PROFILES

Specific printer ICC profiles can be used with the DiIMAGE Viewer. Select the color-preferences option from the file menu to open the dialog box.

In the dialog box, click the color-matching-on and printer-ICC-profile check boxes.

Click on the printer ICC profile load button to display the open window.



Locate the ICC profile for the specific device; for profile locations, see page 86. Click the open button to complete the operation.

CMY or CMYK printer profiles are not compatible with the DiIMAGE Viewer software.

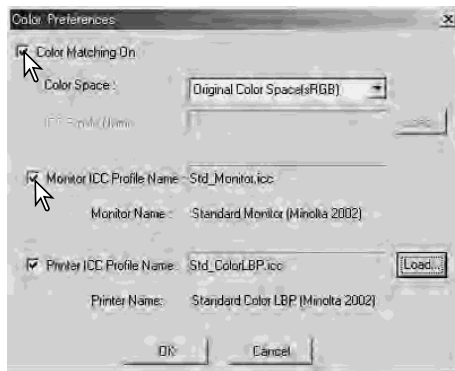
When loaded correctly, the ICC profile will be displayed in the color preference window. The profile can be temporarily disabled by clicking on the printer-ICC-profile check box.



USING MONITOR ICC PROFILES

The computer system's monitor ICC profiles can be used with the DiIMAGE Viewer. Select the color-preferences option from the file menu to open the dialog box. In the dialog box, click the color-matching-on and monitor-ICC-profile check boxes.

If the monitor ICC profile fields are gray, the monitor profile has not been specified with the operating system. Refer to your operating system's manual or help on how to install monitor ICC profiles. For profile locations, see page 86.



ABOUT DiIMAGE VIEWER ICC PROFILES

Generic monitor and printer profiles are supplied with the DiIMAGE Viewer. In Windows, the profiles folder is located in the DiIMAGE Viewer application folder. The profiles are in the following location in a Macintosh: [System]>[Preferences]>[7300]>[Profiles]; or for Mac OS X: [Library]>[Preferences]>[7300]>[Profiles].

Monitor profiles

Std_Monitor.icc For average monitors.

sRGB_Monitor.icc For Windows sRGB monitors.

Apple_Monitor.icc For Apple monitors.

Printer profiles

Std_ColorLBP.icc For color laser printers.

Std_DyeSublimation.icc For dye-sublimation printers.

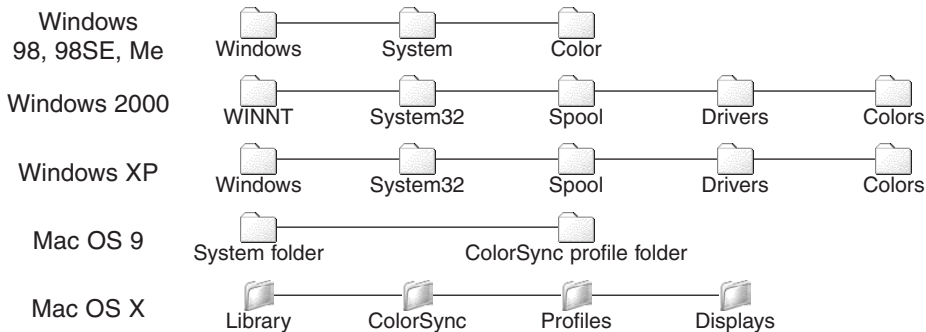
Std_InkJet.icc For inkjet printers.

Std_SilverHalide.icc For silver-halide dye-transfer printers.

sRGB_Printer.icc For printers which use sRGB color space.

ICC PROFILE LOCATIONS

ICC profiles can be found in the following locations:



ICC profiles for a specific monitors or printers are available from the manufacturer. These may be downloaded from the manufacturer's web site. See the instruction manual of the specific device on how to install the ICC profile.

VIEWER NOTES

UNINSTALLING THE DiIMAGE VIEWER

Windows

Uninstall the the DiIMAGE Viewer using the add/remove programs or add/remove applications (XP) routine in the control panel. Afterwards, place the 7300 folder in the trash and empty it to complete the operation. The folder contains the Job files.

Windows 2000
and XP



Windows 98,
98SE, and Me

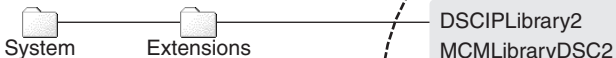
Windows



Macintosh

As well as the DiIMAGE Viewer application folder, the following files and folders should also be deleted:

Mac OS 9



Mac OS X



COPYING JOB FILES

If you are upgrading the DiIMAGE Viewer from a version earlier than 2.2, the following procedure can be used to copy Job files from the old application to the new one. This is not necessary for Macintosh OS 9 operating systems.

Windows

1. Log on to your computer as an administrator. Open the DiIMAGE Viewer application folder. If the standard installation was used, it will be located in C:\Program Files\DiIMAGE Viewer. Letters designating the hard drive can vary between computers.
2. Copy the Prefs folder into another folder in a different location. Example, C:\Job_Move.
3. Uninstall the old version of the DiIMAGE Viewer using the add/remove programs or add/remove applications (XP) routine in the control panel.
4. Install the new DiIMAGE Viewer. See page 8.
5. While logging on as a user, launch the DiIMAGE Viewer once and close it to create the necessary folders.
6. Open the Prefs folder that was copied from the old DiIMAGE Viewer application to show the ImageCorrectJob and MRWCorrectJob folders.
7. Copy all the files in the ImageCorrectJob folder with an .icj extension to the following location:

Windows XP/2000: C:\Document and Settings \ (Logon user name) \ ApplicationData \ DiIMAGE \ 7300 \ Prefs \ ImageCorrectJob.

Windows 98/98SE/Me: C:\ Windows \ ApplicationData \ DiIMAGE \ 7300 \ Prefs \ ImageCorrectJob.

8. Copy the MRWCorrectJob folder to the following location:

Windows XP/2000: C:\Document and Settings \ (Logon user name) \ ApplicationData \ DiMAGE \ 7300 \ Prefs.

Windows 98/98SE/Me: C:\ Windows \ ApplicationData \ DiMAGE \ 7300 \ Prefs.

9. Open the DiMAGE Viewer to confirm the Jobs can be loaded.

Macintosh OS X

1. Log on to your computer as an administrator. Open the 7300 folder: /Library/Preferences/7300.
2. Copy the Prefs folder into another folder in a different location. Example, /Job_Move.
3. Delete the old DiMAGE Viewer application folder.
4. Install the new DiMAGE Viewer. See page 10.
5. While logging on as a user, launch the DiMAGE Viewer once and close it to create the necessary folders.
6. Open the Prefs folder that was copied from the old DiMAGE Viewer application. Copy all the files with an .icj and .mrj extension to the following location: /Users/(logon user name)/Library/Preferences/7300/Prefs.
7. Open the DiMAGE Viewer to confirm the Jobs can be loaded.

EMBEDDED CAMERA COLOR PROFILES

Certain Minolta digital cameras, such as the DiIMAGE 7Hi or DiIMAGE A1, can embed the camera's color profile into the image data for color matching. The color mode on the camera determines the profile: sRGB, used with Natural and Vivid Color, or Adobe RGB. By setting the color space to either Original Color Space (sRGB) or Original Color Space (Adobe RGB) in the color preference window, the DiIMAGE Viewer can determine the color space embedded in the image and adjust accordingly. If the color space is not embedded in the image, the color space must be set manually for both color spaces, see color matching on page 82.

NOTES ON COLOR MEASUREMENT

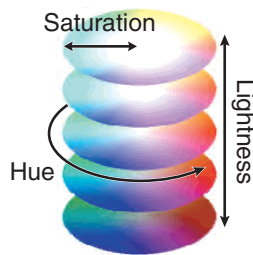
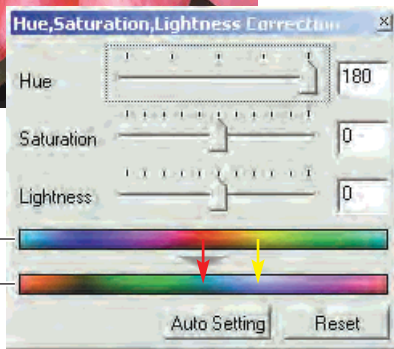
When opening a Minolta-RAW image (p. 68), color information recorded on location with a Minolta color meter can be used to set the white balance of the image. If the image is captured under a continuous source like the sun or tungsten lighting, the corresponding measurement can be very effective in balancing the color of the image. However, because the spectral response of the camera's CCD and the color meter are not the same, if images are captured under lighting with a discontinuous line spectrum like fluorescent or mercury vapor, the values recorded with the color meter may not result in an accurate reproduction.

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HUE CORRECTION EXAMPLE



Changes in hue rotate the original color values through a color space and reassigns a new hue depending on the new position in the color space. In this example, the original image was rotated 180° through the color space. For more on the hue, saturation, and brightness palette, see page 60.



Two color spaces are displayed at the bottom of the palette. The top bar indicates the color space of the original image. The bottom bar displays the relative shift to the color space. In the example, the reds have been shifted to cyan and the yellows to lavender.





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