Chapter 5. Advanced Features and Other Topics

Exchanging Image Files with a Computer

The optional DU-4 software is required to exchange files between the RDC-4200 and a computer.

Important Note:
- For instructions on how to use the DU-4 software, please refer the Readme file and help menu of the software.

■ Preparations

Item	Platform Windows	Macintosh	Comments
Software	DU-4		Software programs for RDC-4200
PC Interface cable[*]	PC Connection Cable	PC Connection Cable + Mac Adapter	Specialized interface cables for connecting digital cameras to PCs
PC Card Adapter[*]	FS-B53		A card adapter used to insert a SmartMedia memory card directly into a PC card slot
Floppy Disk Adapter[*]	FS-A10	---	A floppy disk adapter used to insert a SmartMedia memory card directly into a computer's floppy disk drive

[*] Only one of the marked items is required to exchange data with the computer.

■ System Requirements

Windows® 95

System Software:	Microsoft® Windows® 95
CPU:	486 DX+ (Pentium+ recommended)
RAM:	16 MB+ (32 MB+ recommended)
Disk Requirements When Installed:	6 MB+
Display Resolution:	640 x 480 pixels+
	(800 x 600 pixels+ recommended)
Colors:	256+ (32,000+ recommended)
CD-ROM Drive:	Required for software installation

Note:
- Software may not operate correctly with Windows® NT 4.0.
- Software not compatible with Windows® 3.1 or Windows® NT 3.51.
- Software is confirmed to run on Windows® 98 under our testing environment.
- Software may not run properly on Windows® 98 under certain user configurations.

Macintosh

System Software:	Apple Macintosh® System Software 7.6+ or 8
CPU:	68030 or Power PC
RAM:	16 MB+ (32 MB+ recommended)
Disk Requirements When Installed:	6 MB+
Display Resolution:	640 x 480 pixels+
	(800 x 600 pixels+ recommended)
Colors:	256+ (32,000+ recommended)
CD-ROM Drive:	Required for software installation
QuickTime™:	Version 2.5+

■ Processing Files on a Computer

Windows® 95 users may find that files erased off a SmartMedia memory card by a computer or files that are placed in the Recycle Bin do not actually erase from the card. If this occurs, open the [Properties] dialog for the Recycle Bin and click the [Options] tab. Select the [Configure drives independently] option, select the drive containing the SmartMedia memory card and place a check in the [Do not move files to the Recycle Bin. Remove files immediately on delete] option. Re-delete the files in question.

Important Note:
- If you select the [Use one setting for all drives] option in the [Options] tab, files on all the drives (including the hard disk and floppy disks) will be immediately deleted with the delete command and can not be recovered. Be particularly careful with the use of this setting.

Note:
- A selected file may also be deleted by simultaneously pressing the [shift] + [delete] keys or by holding the [shift] key while dragging and dropping the file into the Recycle Bin.

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Changing Camera Settings

The following can be adjusted on the RDC-4200 to suit user requirements: power saving mode, auto power off mode, beep mode and save settings mode.

Power Saving Mode Settings

The LCD monitor can be programmed to automatically go into sleep mode after a certain period of time to preserve battery power (although slight, it still consumes power). When power saving mode is active, the LCD monitor will go to sleep if a camera operation is not performed during the set time period (0, 10 or 30 seconds or 1, 2, 3 or 4 minutes) following activation of the power switch or operation of another function. When the power saving mode is set to continuous, the LCD monitor will display continuously (except when shut off by the auto power off mode).
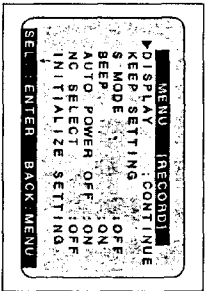
❶ Turn the mode dial to [REC] and press the menu button.
The record menu will display.

Note:
• *To cancel the operation, press the menu button a second time.*
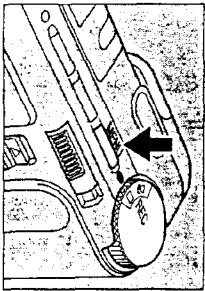
❷ Slide the zoom button to select the [Display] option and press the enter button.
The settings menu will display.

Note:
• *To cancel the operation and return to the record menu, press the menu button a second time.*

❸ Slide the zoom button to select a time option and press the menu button.
The power saving mode is now set and the record menu will display. Press the menu button a second time to clear the record menu.

The AF indication LED will flash intermittently when the power saving mode has automatically put the LCD monitor to sleep.
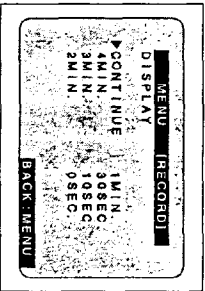
How to Reactivate the LCD Monitor

Pushing any button or switch will reactivate the LCD monitor from sleep mode.

Important Note:
• *In environments over 40° Celsius (104° Fahrenheit), use of the power saving mode may cause irregularities in the LCD monitor display. The LCD monitor will operate normally when returned to an environment with lower temperatures.*

Note:
• *Although the results will vary between operating environments and settings, use of the power saving mode can extend the recordable images approximately 1.2 times the standard values. (Results based on Ricoh's Testing Standards).*

How to Turn Power Saving Off

Repeat the steps above, changing the option in step ❸ to [Continuous].

Auto Power Off Settings

The camera will automatically power down (auto power off) in the recording and play modes to conserve the battery if left untouched (no buttons or switches manipulated) for approximately 5 minutes. The auto power off mode can be disabled by setting it to off in either the record or play menu.

❶ Turn the mode dial to [REC] or [Play] and press the menu button.
The record or play menu, respectively, will display. The examples shown here illustrate the recording menu.
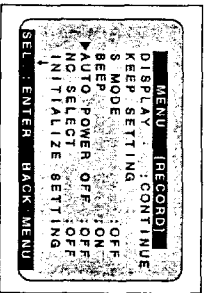
Note:
• *To cancel the operation, press the menu button a second time.*
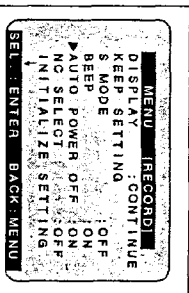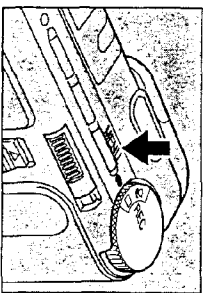
❷ Slide the zoom button to select [Auto Power Off].

Note:
• *To cancel the operation, press the menu button a second time.*

❸ Press the enter button to change the setting to [Off] and press the menu button.
The auto power off mode is now disabled.

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Note:
- To disable the auto power off mode for the camera in play mode, change the corresponding play menu setting to [Off].
- Slide the power switch to reactivate the camera if it shuts off in auto power off mode.
- The auto power off function is automatically disabled while the camera is powered by an AC adapter (optional).

How to Enable the Auto Power Off Mode

Follow the procedures above, changing the setting to [On] in step ❸. Auto power off will become effective again.

Beep Settings

The camera emits a beep for confirmation when it starts to record. The beep can be disabled with the following procedures.

❶ **Turn the mode dial to [REC] and press the menu button.**
The record menu will display.

Note:
- To cancel the operation, press the menu button a second time.

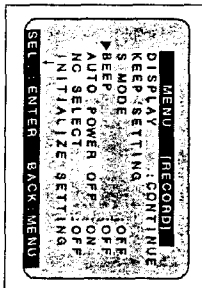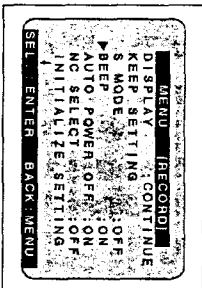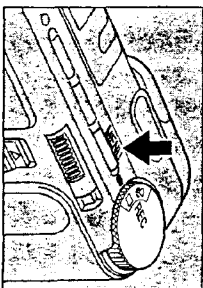❷ **Slide the zoom button to select the [Beep] option.**

Note:
- To cancel the operation, press the menu button a second time.

❸ **Press the enter button to change the setting to [Off] and press the menu button.**
The beep is now disabled.

Note:
- The long beeping sounds produced as a notice of an error, are not disabled or affected by any change to this setting.

How to Restore the Beep

Follow the procedures above, changing the option in step ❸ to [On]. The beep will now sound.

Adding PIC Mode Options (NC Mode)

There are six standard PIC modes (□ SF, □ SN, □ SE, □ F, □ N, □ E) that compress the image data when recording. If you wish to have the option of recording non-compressed data, add the NC mode to the picture mode options, this will allow you to record images without compression.

Important Note:
- This mode records extremely clear pictures because they are uncompressed. However, each image requires approximately 2.4 MB at the time of recording. Accordingly, recording and data transfers require several tens of seconds to complete.
- Ricoh's proprietary DU-4 utility software is required to use files recorded in this mode on a computer.

❶ **Turn the mode dial to [REC] and press the menu button.**
The record menu will display.

Note:
- To cancel the operation, press the menu button a second time.

❷ **Slide the zoom button to select the [NC Select] option.**

❸ **Press the enter button to change the setting to [On] and press the menu button.**
The NC select option is now available.

❹ **Press the PIC button and select a PIC mode.**
The NC option will display in the settings menu. Selecting this option switches the camera to non-compression recording mode. Press the PIC button to select this option. The selection takes effect approximately 2 seconds after the button is pressed and the display updates the number of recordable pictures available at that setting.
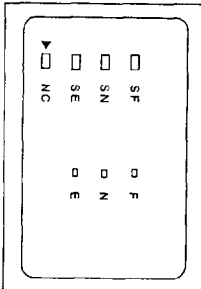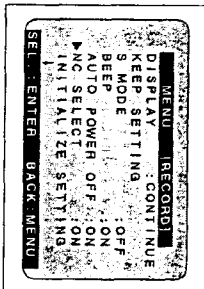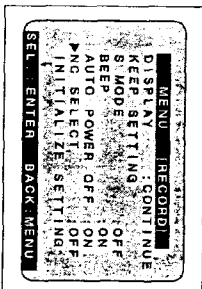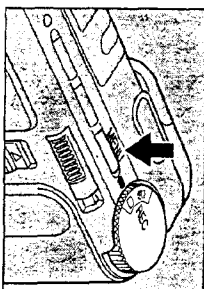
How to Use the Remote Control Unit

The DR-3 remote control unit (optional) makes it possible to record and replay files from a remote location.

Important Note:
- The remote control reception is located just below the enter button on the LCD monitor side of the camera. Operate the remote control unit with it pointed toward the sensor.

Note:
- Please read the manual accompanying the remote control unit for instructions on how to change the batteries and maintain it.
- Some procedures performed with the remote control unit differ from those performed directly on the camera itself. Follow the instructions below to operate the remote control unit.

Shooting

The remote control can be used to trigger the camera's shutter. It is particularly convenient for operating the camera from a remote position or placing the camera in a fixed position.

❶ Turn the camera's mode dial to [REC].
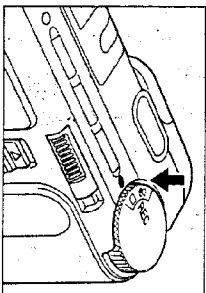
❷ Frame your composition and press the release button on the remote control unit.
The self-timer LED will light and recording will start approximately 2 seconds later.

Note:
- You can change the zoom setting with the zoom button on the remote control unit. The [▲] button zooms in (telephoto) while the [▼] button zooms out (wide angle).

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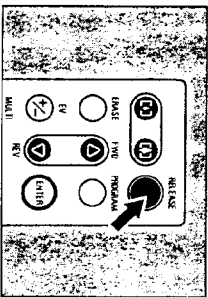
Remote Adjustment of the Exposure Compensation Setting

- Entering the Mode
  Press the EV(+/-) button on the remote control unit to activate the mode.
- Changing the Setting
  Press the [▲]FWD or [▼]REV button to change the value and press the enter button. Press the release button to take the picture.
- Reversing the Setting
  Set the exposure compensation value to zero (0).

Remote Shooting in Manual Focus

- Entering the Mode
  Press the erase button on the remote control unit.
- Focusing
  Press the [▲]FWD or [▼]REV button to adjust the focus. Press the release button to take the picture.
- Reversing the Setting
  Press the erase button a second time.

Playback

You can control the replay of recorded files with the remote control unit.

❶ Turn the camera's mode dial to [Play].
The last recorded file will play.

Note:
- See Explaining the Playback Screen (p. 70)
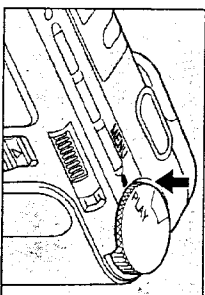
❷ Press the remote control unit's FWD or REV button to select an image.

Note:
- The remote control unit's buttons have the same effect as the buttons on the camera body for these operations.

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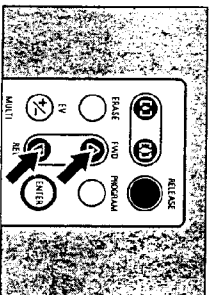
trol Unit (Zoom Playback)

- Entering the Mode
  Press the remote control unit's program button.
- Moving the Display
  Press the remote control unit's [▲]FWD or [▼]REV button to move the display to different portions of the image.
- Exiting the Mode
  Press the remote control unit's enter button. The LCD monitor will return to the normal display setting.

Multi Image Playback with the Remote Control Unit

- Entering the Mode
  Press the remote control unit's multi button.
- Moving the Selection
  Press the remote control unit's [▲]FWD or [▼]REV button to move the file selection.
- Exiting the Mode
  Press the remote control unit's enter button. The selected file will display on the LCD monitor at the single image display setting.

Erasing

You can control the erasure of single files with the remote control unit.

Important Note:
- *Please note that erased files cannot be recovered. Check each file's contents before deleting.*

❶ Turn the camera's mode dial to [Erase].
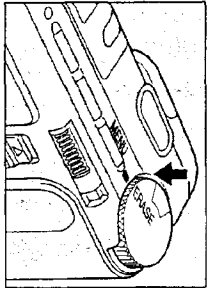
❷ Press the remote control unit's erase button.
ton.
The erase menu will display.
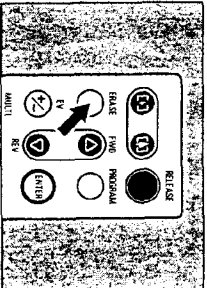
❸ Press the remote control unit's [▲]FWD or [▼]REV button to select a file.
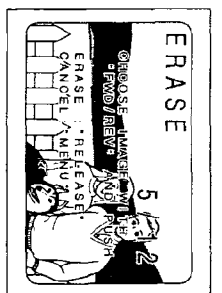
❹ Press the remote control unit's release button.
ton.
The file will erase. To continue erasing other files, repeat steps 3 and 4.

When finished erasing, switch the mode dial to another mode.

Advanced Features and Other Topics

System Configuration

Recording

• SmartMedia Memory Card
• Use 2 MB, 4 MB, 8 MB or 16 MB SmartMedia memory cards running on 3.3 volts.

Remote Operation

• Remote Control Unit (DR-3)

Power Supply

• AC Adapters:

AC-2 (100-240 V)

AC-2100 (100 V)

Allowable Batteries
• AA alkaline cells • AA NiCad rechargeable cells • AA NiMH rechargeable cells

Computer

Exchange of Image Files with a PC

• Utility Software DU-4
PC interface cable, PC card adapter or floppy disk adapter required.

• PC Connection Cable for Windows® and Macintosh Adapter for Macintosh

• PC Card Adapter (FS-B53)
A card adapter used to insert a SmartMedia memory card directly into a PC card slot.

• Floppy Disk Adapter (FS-A10)
A floppy disk adapter used to insert a SmartMedia memory card directly into a computer's floppy disk drive.

Playback
• LCD monitor
• TV/Video Printer (connect with supplied video interface cable)

Output
• Color Printer
• Color Copier

Other
• Hard Case (SC-4)

Power Supply
Use four generic AA alkaline batteries as the main power and a CR2025 lithium button battery for the date and time functions. Rechargeable AA NiCad or NiMH batteries can also be substituted for alkaline cells. For longer periods of use, AC adapters are available.

Recording
Files are recorded to SmartMedia memory cards. In standard picture mode (SN mode), approximately 12 pictures can be recorded on a 4 MB card.

Playback
Pictures can be verified immediately with the LCD monitor. TV sets connected with the supplied video interface cable can also be used to view images.

Exchanging Image Files with a Computer
Using Ricoh utility software compatible with the RDC-4200, image files can be exchanged with a PC. A PC connection cable or PC card adapter or floppy disk adapter is required.

Output
Files loaded onto a PC can be output on a color printer or color copier.
* A controller is required for the color copier.

Accessories

Item	Model	Comments
AC Adapter	AC-2 AC-2100	For drawing power directly from a household electrical outlet. See Using an AC Power Source (p. 28). Note: AC-2100 is only for 110V AC areas.
Hard Case	SC-4	For safely transporting the camera.
Remote Control Unit	DR-3	For remote operation of the camera's recording and playback functions.
SmartMedia Memory Cards		A postage stamp sized storage media with a thickness of 0.76 millimeters.
4 MB	FS-4	Capable of storing a maximum of 12 images recorded in SN mode.
8 MB	FS-8	Capable of storing a maximum of 24 images recorded in SN mode.
16 MB	FS-16	Capable of storing a maximum of 249 images recorded in SN mode.
PC Card Adapter	FS-B53	A card adapter used to insert a SmartMedia memory card directly into a PC card slot.
Floppy Disk Adapter	FS-A10	A floppy disk adapter used to insert a SmartMedia memory card directly into a computer's floppy disk drive

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- All trademarked company and product names mentioned in this manual are the property of their respective owners.

Handling Precautions

- This camera is not waterproof. Be careful around water, rain and beverages. Consult the closest available Ricoh service office if a liquid enters the camera.
- Be careful not to drop the camera or subject it to strong impacts.
- Do not use the flash more than necessary in continuous, consecutive shots to avoid overheating.
- Exercise caution to prevent sand and dust from contacting the camera in such environments as beaches or work sites.
- Do not leave the camera for any length of time in particularly hot or humid places, such as an automobile with the windows closed, beaches or bathrooms.
- Verify that the camera power is off before you attach the AC adapter.
- Direct sunlight and strong light striking the LCD monitor will reflect white light, making it difficult to view.
- The LCD monitor may contain some pixels that always or never illuminate and the brightness of some areas of the monitor may appear uneven. These are typical LCD performance characteristics and do not constitute malfunctions.
- Do not force any of the external moving parts, such as the card door, terminal cover or lens unit.
- Do not pick up or carry the camera by the card door, terminal cover or lens unit.
- Do not impede movement of the lens cover while turning on the power.
- Be careful not to hit the lens unit while carrying the camera around.
- Extreme temperature differentials may cause condensation to form inside the camera body and lens unit, reducing performance. To avoid this, place the camera in a plastic bag and let it slowly acclimatize to the new temperature before exposing it.

Potential Causes of Condensation

Transporting the camera from a cold place to a warm place.
Storing or using the camera in places subject to high humidity.
Bringing the camera into a recently heated room or leaving it directly in the path of air conditioning.

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Care and Storage

■ Care

- Fingerprints and dirt on the lens will reduce performance so take extra care not to get it dirty.
- Do not wipe dust or smears off the lens with your fingers. Use a lens blower, readily available at most photographic suppliers, to blow it off, or a very soft cloth to wipe it lightly.
- Be particularly diligent in cleaning the lens after use at the beach or around chemicals.
- If your camera should malfunction, take it to the nearest Ricoh service office. This product generates high voltages and disassembly is hazardous. Under no circumstances should you attempt to dissemble it yourself.
- Never use solvents, benzine, insecticides or other volatile substances on the equipment that may deform or dissolve it.
- Be careful not to let objects rub against the LCD monitor, which is readily susceptible to scratching.
- To clean the LCD monitor, wipe it gently with a soft cloth that has been moistened in diluted detergent and well-wrung. Wipe off any moisture with a soft, dry cloth.
- **Remove the batteries and AC adapter from the camera before commencing any of the above.**

■ Storage

- Do not store the camera in a drawers or other areas containing insecticides, which may cause malfunctions.

Trouble-Shooting

Refer to the pointers below before submitting the equipment for repairs. If the problem persists after trying the suggestions below, contact the nearest Ricoh service office listed at the back of this manual.

■ Power Source

Problem	Cause	Solution
Power will not come on	Batteries dead, improperly installed or missing	Place the batteries in correctly or replace them. (P.23)
	AC adapter not attached correctly	Plug the cord securely at both ends. (P.28)
Power cuts out	Card door open	Close the card door and retry starting. (P.31)
	No buttons touched so auto power off function shut camera down	Restart camera. (P.41)
	Dead batteries	Replace with fresh batteries. (P.23)
Battery charge quickly consumed	Camera operated in extremely high or low temperature location	---
	Camera operated in dark area requiring frequent use of the flash	---

■ Recording and Playback

Problem	Cause	Solution
Shutter release button pressed but no image recorded	Batteries dead, improperly installed or missing	Replace or reposition batteries. (P.23)
	No power or mode dial not set to [REC]	Slide power on and set mode dial to [REC]. (P.41)
	Shutter release button only pressed halfway	Press shutter release button all the way. (P.46)
	SmartMedia memory card not installed	Check SmartMedia memory card for proper insertion. (P.31)
	SmartMedia memory card not formatted (initialized)	Format SmartMedia memory card. (P.32)
	No space on SmartMedia memory card	Erase unimportant files or replace SmartMedia memory card. (P.31)
	SmartMedia memory card not working (service life exceeded)	Replace SmartMedia memory card. (P.31,78)
	Card door open	Ensure that card door is securely closed. (P.31)
	Self-timer on	Turn the self-timer off in the record menu. (P.61)
	Flash is charging	Wait until flash LED ceases flashing. (P.50)
	SmartMedia memory card contacts dirty	Clean contacts with soft dry cloth. (P.30)

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Problem	Cause	Solution
Autofocus is on but camera not focusing	Dirty lens	Clean lens with blower or soft dry cloth. (P.98)
	Subject not in autofocus field (subject to one side in frame)	Use focus lock (aim directly at subject, press shutter release button halfway, hold and re-aim) (P.64)
	Subject not readily focused	Use focus lock or switch to manual focus. (P.64,66)
Flash won't fire, or won't charge	Camera set to flash off mode	Change flash mode with flash button. (P.51)
	White balance mode set to setting other than auto / B&W / Sepia	Use record menu to set the white balance to auto / B&W / Sepia. (P.56)
	Batteries dead	Replace batteries. (P.23)
Image dark even with flash	Lens unit is facing operator	Reposition lens unit. (P.37)
	Subject farther than 2.5 meters with the zoom on telephoto or 3.0 meters with the zoom on wide angle	Come closer to subject.
	Flash used on subject positioned 35 centimeters or less away	Retake picture without flash. (P.51)
Image is too bright	Over-exposed	Use record menu to adjust exposure compensation. (P.54)
	Brightness setting of LCD monitor maladjusted	Adjust brightness adjustment dial on camera bottom. (P.35)
Image is too dark	Shot in low light area attempted with camera set to flash off mode	Use flash button to set flash mode to another setting. (P.51)
	Under-exposed	Use record menu to adjust exposure compensation. (P.54)
	Brightness setting of LCD monitor maladjusted	Adjust brightness adjustment dial on camera bottom. (P.35)
Unnatural coloration in image	Shooting conditions difficult for white balance in auto mode	Place a white object near the subject, use the flash or select one of the manual white balance modes. (P.56)
Date and other recording data will not display	Screen display set to off	Press the enter button to switch between screen display modes. (P.48)
Can't playback or image won't display	Camera not set to play mode	Set mode dial to [Play]. (P.73)
	SmartMedia memory card not installed or doesn't contain any files	Insert a SmartMedia memory card with recorded images. (P.31)
	Incorrectly formatted SmartMedia memory card	Use a SmartMedia memory card that has been formatted and recorded by your camera. (P.31,32)
	SmartMedia memory card contains incorrectly recorded files	Insert a SmartMedia memory card containing pictures properly recorded by the camera. (P.31)
	SmartMedia memory card contains files in a format not read by the camera	---

Problem	Cause	Solution
Can't playback or image won't appear	Card door open	Ensure that card door is securely closed. (P.31)
	Video interface cable poorly connected	Check connection. (P.71)
	Source of interference, such as electric motor, nearby	Relocate camera away from source.
	SmartMedia memory card contacts dirty	Clean contacts with soft dry cloth. (P.30)
	Error with SmartMedia memory card	Test camera with another SmartMedia memory card. If second card displays well, problem is with card not camera.
Replay is not clear	Dead batteries	Replace batteries. (P.23)
Display shut off	Auto power off activated	Slide power on again. (P.41)
Remote control will not work	Obstruction between the remote control unit and camera sensor	Remove the obstruction. (Sensor is on the LCD monitor side of camera.)
	Dirty remote control transmitter or camera sensor	Clean with a soft dry cloth. (P.98)
	Dead remote control batteries	Replace CR2032 lithium batteries. (P.26)
Vertical lines appear on image	Area captured by autofocus field and the surrounding area have contrasting light levels or the entire subject is dark	There is no malfunction.
LCD monitor brightness changes during autofocus operation	Phenomenon occurring with pictures of bright subjects, known as the smudge phenomenon	There is no malfunction.

■ Miscellaneous

Problem	Cause	Solution
SmartMedia memory card will not fit into slot	Wrong type of SmartMedia memory card	Use a SmartMedia memory card specified for the camera. (P.30)
	SmartMedia memory card incorrectly oriented	Insert the SmartMedia memory card the correct way. (P.31)
Camera will not operate even when buttons and switches are manipulated	Dead batteries	Replace batteries. (P.23)
	Camera malfunction	Slide the power off and on once. Turn the mode dial to [REC] or [Play]. If the problem persists, (1) reset the camera by sliding the power switch after removing the main and date batteries, and (2) reinstall the batteries and try to operate the camera again. (P.41,44)
Date and time are wrong	Date and time setting is incorrect	Reset the date and time. (P.34)

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Symptom	Cause	Solution
Date and time were set but disappeared	Dead date battery	Replace date battery and reset date and time. (P.26,34)
	Camera was reset to the default settings or the date and time display setting was altered	Reset the date and time settings. (P.34)
File won't erase or SmartMedia memory card won't format	Camera not set to erase mode	Turn the mode dial to [Erase]. (P.78)
	Write protect pad on SmartMedia memory card	Remove pad from SmartMedia memory card. (P.30)
	File protected	Use the play menu to reset the file's protection setting. (P.77)
Mode settings have changed	Power switch off or auto power off activated.	Slide power on and retry.
	Batteries have been removed with save mode active	Reset mode.
Auto power off will not activate	Auto power off setting is disabled	Enable setting. (P.85)
	Camera powered by AC adapter (auto power off is automatically disabled when powered by an AC adapter)	---
Beep will not sound	Beep disabled	Use record menu to enable beep. (P.86)

Using Your Digital Camera in Other Countries

Ricoh AC-2 AC adapter (optional)

- The AC-2 AC adapter adjusts automatically to voltages ranging from 100V to 240V AC and frequencies of 50Hz to 60 Hz.
- Some countries use electrical outlets which have different shapes. Before leaving on a trip, obtain the necessary plug adapter from a travel agent or electric store.

Ricoh AC-2100 AC adapter (optional)

- The AC-2100 AC adapter can only be used in locations where 120V AC is used.

About the warranty

- A wide range of power supplies can be used from 100V to 240V and 50 Hz or 60 Hz.
- In countries where the power connector type is different from the electrical plug equipped with the camera, be sure to check with the local service representative before using a conversion adapter.

Viewing the Image on a TV set

- Make sure to check that the TV set operates in the NTSC format with a image input terminal.
- The included video connection cable is required.

● **The NTSC format is used in the following countries.**

American Samoa	Dominican Republic	Nicaragua
Barbados	El Salvador	Panama
Bermuda	Ecuador	Peru
Bolivia	Guam	Philippines
Canada	Guatemala	Puerto Rico
Chile	Haiti	Surinam
Columbia	Honduras	Taiwan
Costa Rica	Japan	Trinidad and Tobago
Cuba	Mexico	USA
Democratic People's Republic of Korea	Micronesia	Venezuela
	Myanmar	

Advanced Features and Other Topics **5**

About the Warranty and Servicing

1. The Ricoh RDC-4200 camera is backed by a one-year limited warranty. During the warranty period, which starts from the date of purchase, any defective parts will be repaired free of charge. In the event of a camera malfunction, contact the dealer from which you purchased the camera or contact the nearest Ricoh service office. Please note that you will be charged for the cost of shipping the camera from the Ricoh service office to your residence. Call the Ricoh service office before shipment to receive amount that needs to be included. (U.S.A. only)

2. This warranty does not cover any damage resulting from:
   i   Failure to follow the instructions in this instruction manual;
   ii Repair, modification or overhaul not conducted by an authorized service station specified in this instruction manual;
   iii Fires or natural disaster;
   iv Improper storage, such as exposing the camera to high temperatures, humidity, or insect repellents; storing it with leaking batteries; storing the camera in a dirty condition so that it becomes moldy, or otherwise insufficiently caring for the camera.
   v   Submergence; exposure to floods or spilled alcoholic or other beverages; allowing sand or mud to enter the camera, exposure to physical shocks; or dropping of the camera.

3. After a full year has passed from the purchase date, you will become responsible for all repair fees, including those incurred at an authorized service station.

4. You will be responsible for all repair fees, even within the warranty period, if the warranty card is not attached or if the distributor's name or the purchase date have been changed or are not indicated on the card.

5. Expenses for overhauls and thorough inspections as a result of a customer's special request will be charged to the customer, whether or not they are incurred during the warranty period.

6. This warranty only applies to the camera and not to the accessories, such as the hard case and wrist strap, nor does it apply to the consumables provided, such as batteries.

7. Any consequential damage arising from the failure of this camera, such as expenses for taking pictures or loss of expected profit, will not be reimbursed whether they occur during the warranty period or not.

8. The above provisions refer to repairs offered free of charge, and do not limit your legal rights. The intention of the above provisions are also described in the warranty card provided with this camera.

9. Parts essential to the servicing of this camera - that is, components required to maintain the functions and quality of this camera - will be available for a period of seven years after the camera is discontinued. However, as some of those parts are kept for a longer period, do not hesitate to contact your distributor or the nearest Ricoh service representative even after the seven-year period.

10. Please note that, if the camera is seriously damaged from flooding, submergence, infiltration of sand or mud, violent shocks or dropping, the camera may not be repairable, and restoration to its original condition may be determined to be impossible.

Note:
* *Before sending the camera in for repair, check the batteries and read this instruction manual again to ensure proper operation.*
* *Some repairs require a significant amount of time to be completed. Please allow sufficient time for repairs.*
* *When sending the camera to a service representative, please include a note which describes the defective part and the problem as precisely as possible.*
* *Remove all accessories not related to the problem before sending the camera to a service representative.*
* *Before taking any important pictures (such as at weddings, on trips abroad, etc.) test the camera to check its operation and ensure proper functioning. We recommended that you keep this manual and fresh batteries on hand.*

Advanced Features and Other Topics **5**

Specifications

■ General

Video Signal Protocol : NTSC

Power Source and Voltage : Batteries: 6 volts
AC: 5 volts

Dimensions (W x H x D) : 136.5 x 64 x 34 mm (5.37" x 2.52" x 1.34")
(excluding grips)

Weight : approximately 285 g (10.05 oz.) (excluding batteries)

Operating Range - Temperature : 0° to 40° C (32° to 104° F)
Operating Range - Relative Humidity : 85% or less
Storage : -20° to 60° C (-4° to 140° F)

■ Camera

CCD : 1/3" 1.32 million square pixels (effective: 1.22 million), RGB filter

Lens : Zoom lens F=2.8 - 4.8
• Focal length : f=5.6-16.8 mm (equivalent to 35-105 mm on 35mm camera format)

• Minimum shooting range : Approximately 8 cm (3.2") (macro), 40 cm (15.8") (non-macro)

Monitor
• Display Size : 1.8"
• Drive System : TFT Active Matrix System
• Picture Elements : Approximately 60,000 pixels
White Balance : Auto/Preset (Daylight, Fluorescent Light, Tungsten Light, B&W and Sepia)

Exposure Compensation
• Light Metering System : Centerweighted
• Exposure Value Memory System : Auto backlighting detection Manual compensation, ±2.0 EV (in 0.5 EV increments)

• Metering : TTL-CCD method
• Flash Automatic Exposure : Yes (daylight synchro)
• Shutter Speed : 1-1/500
• Aperture : F 2.8-F 14
• ISO Sensitivity : Approximately equivalent to 80 - 100
Distance Adjustment
• Autofocus Method : TTL-CCD AF
• Autofocus Range : 8 cm (3.2") to infinity / macro: 8 to 35 cm (3.2"-13.8")

Built-in Flash
• Type : Auto
• Range : 0.55 - 3.8 m (1.8 - 12.47)(telephoto), 0.55 - 4.5 m (1.8 - 14.76) (wide angle)
• Modes : Off/On/Auto

■ Image Data Recording and Playback

Image Resolution : 1280 x 960, 640 x 480 pixels
File Format : JPEG (Exif2.0) NC: YCbCr Non-compressed TIFF (Exif2.0)
Compression Format : JPEG baseline method
Approximate File Sizes : SF mode: 616 KB, SN mode: 312 KB, SE mode: 168 KB, F mode: 168 KB, N mode: 88 KB, E mode: 56 KB, NC: 2.4 MB

■ Body

Tripod Screw Hole : Tapped (1/4-20 UNC) Length: less than 5.7 millimeters (0.22")

■ Power Supply

Main Batteries
• Type : AA alkaline cells AA NiMH cells AA NiCad cells
• Voltage : 6 volts (1.5 volts x 4 cells)
Date Battery
• Type : CR2025 lithium cells
• Voltage : 3 volts, 160 mAh
• Service Life : Approximately 8 months
Auto Power Off : Activates after more than 5 minutes

■ Compatible Memory Cards for Recording and Playback

• Type of Memory : SmartMedia memory card
• Capacity : 2, 4, 8 and 16 MB
• Operating Voltage : 3.3 volts

How to Connect to a Computer

A connection cable is required to connect the RDC-4200 to a computer.

1 Shut down and turn off the computer if it is running.

2 Check that the camera power is off. Connect the connection cable to the camera's RS-232C/AUX terminal and the other end to the computer, using the RS-232C port on computers using the Windows platform and the printer/modem port on Macintosh computers.

- Windows Platform
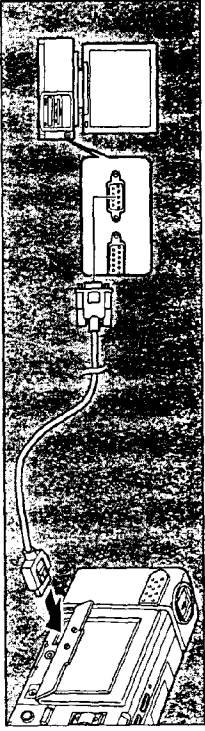
- Macintosh
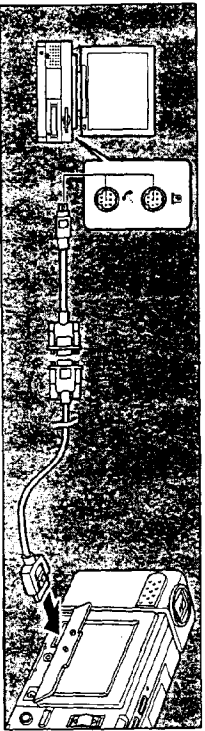
3 Slide the camera power switch on.

4 Turn the camera's mode dial to [PC].

5 Turn on the computer and start the DU-4 software program.

Note:
- *Avoid running the camera on batteries when connecting to a computer to prevent battery failure from interrupting operations and requiring you to start over again.*
- *Turn the camera off before connecting or disconnecting the AC adapter.*

Recording Capacity

The following are the maximum number of images per SmartMedia memory card by card capacity and PIC mode.

2 MB	SF	3
	SN	6
	SE	11
	F	11
	N	22
	E	35
	NC	-
4 MB	SF	6
	SN	12
	SE	23
	F	23
	N	45
	E	70
	NC	1
8 MB	SF	12
	SN	25
	SE	47
	F	47
	N	90
	E	142
	NC	3
16 MB	SF	25
	SN	49
	SE	90
	F	90
	N	166
	E	249
	NC	6