

APPENDIX

Accessories	110
Handling Precautions	111
Care and Storage	112
Troubleshooting	113
Using Your Digital Camera in Other Countries	117
About the Warranty and Servicing	118
Specifications	120
Recording Capacities	122

Accessories

Item	Model	Remarks	
AC Adapter	AC-3	For drawing power directly from a household electrical outlet. See "Using an AC Adapter" (p.26).	
Lithium ion battery	DB-20	The camera body battery.	
Remote Control Unit	DR-3	For remote operation of the camera's recording and playback functions.	
SmartMedia Memory Card		A postage stamp-sized recording media with a thickness of 0.76 mm.	
	4 M	FS-4	Capable of recording a maximum of about 19 images in 1024N mode.
	8 M	FS-8	Capable of recording a maximum of about 39 images in 1024N mode.
	16 M	FS-16	Capable of recording a maximum of about 76 images in 1024N mode.
	32 M	FS-32	Capable of recording a maximum of about 153 images in 1024N mode.
PC Card Adapter	FS-B53	Used to insert the SmartMedia memory card directly into the PC card slot.	
Floppy Disk Adapter	FS-B10	Used to insert the SmartMedia memory card directly into the PC floppy disk drive.	

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Handling Precautions

- This camera is not waterproof. Keep away from water, rain, beverages, etc. Consult your nearest Ricoh service office if any liquid gets into the camera.
- Be careful not to drop the camera or subject it to impact.
- To avoid overheating, do not use the flash more than necessary in continuous shots.
- Never look through the viewfinder directly at the sun or intense light.
- Do not fire the flash close to an infant's eyes as this may result in impaired eyesight.
- Do not fire the flash into the eyes of someone driving a vehicle as this may result in a traffic accident.
- Exercise caution to prevent sand or dust from getting into 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.
- The LCD monitor or the LCD panel 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 the card door, terminal cover or battery cover.
- Do not lift the camera by the LCD monitor, card door, terminal cover or battery cover.
- Do not apply unreasonable force when opening or turning the LCD monitor.
- Be careful not to hit the lens unit or the LCD monitor while carrying the camera. Make sure to close the LCD monitor when carrying the camera.
- Extreme temperature differences 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

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

Care and Storage

■ Care

- Fingerprints or dirt on the lens or AF viewfinder will reduce the image quality so take extra care not to get it dirty.
- Do not wipe dust or smears off the lens or AF viewfinder with your fingers. Use a lens blower, available at most photographic suppliers, to blow dust off, or a soft cloth to wipe it lightly.
- Be particularly diligent in cleaning the lens after use at the beach or in the vicinity of chemicals.
- If your camera should malfunction, take to your nearest Ricoh service office. This product generates high voltage and disassembly is hazardous. Under no circumstances should you attempt to disassemble it yourself.
- Never use solvents, benzene, insecticides or other volatile substances on the equipment as this may deform or dissolve it.
- Be careful not to let objects rub against the LCD monitor or the LCD panel as they are easily scratched.
- To clean the LCD monitor or the LCD panel, wipe it gently with a soft cloth moistened with diluted detergent and well-wrung. Wipe off any moisture with a soft, dry cloth.
* Remove the battery and AC adapter from the camera before commencing any of the above.

■ Storage

To prevent possible failures, avoid storing the camera in places that are:

- Hot and damp, or subject to sharp temperature or humidity changes.
- Sandy or dusty.
- Subject to strong vibration.
- In contact with chemicals, such as insecticides, or rubber or PVC products for extended periods of time.
- Near sources of strong electromagnetism (such as monitors, transformers, and magnets).


Troubleshooting
















Refer to the items listed below before submitting the equipment for repairs. If the problem persists, contact your nearest Ricoh service center.

■ Power Source

Symptom	Cause	Remedy	Page
Power will not come on	Battery expired, improperly inserted or not loaded	Insert the battery correctly or charge the battery	P.23 P.24
	AC adapter not attached correctly	Attach correctly	P.26
	Card door open	Close the card door and turn power on again	P.41
Power cuts out	No buttons touched so auto power off function was activated	Turn power on again	P.41
	Battery expired	Charge battery	P.23
Battery will not charge	End of battery life	Replace with new battery	P.24
Battery quickly consumed	Camera operated in extremely high or low temperature location	–	P.25
	Camera operated in dark area requiring frequent use of flash	–	–





■ Recording and Playback

Symptom	Cause	Remedy	Page
Shutter release button pressed but no image recorded	Battery expired, improperly inserted or not loaded	Insert battery correctly or recharge battery	P.23 P.24
	Power is not turned on or mode dial is not set	Turn power on and set mode dial to shooting mode	P.41
	Shutter release button only pressed halfway	Press shutter release button all the way	P.46
	SmartMedia memory card not formatted	Format SmartMedia memory card	P.98
	No space on SmartMedia memory card	Erase unwanted files or insert new SmartMedia memory card	P.28 P.92
	No space in internal memory	Erase unwanted files	P.92
	End of service life of SmartMedia memory card	Insert new SmartMedia memory card	P.28
	Card door open	Ensure that card door is securely closed.	P.28
	Self-timer on	Press  button to disable the self-timer	P.59
	Flash is charging	Wait until flash LED ceases flashing	P.46
SmartMedia memory card contact surface dirty	Clean contact surface with soft dry cloth	P.27	
Cannot confirm a shot picture	Image confirmation time is too short	Set a longer image confirmation time	P.100
No image on the LCD monitor	Power is off, or LCD monitor is dark	Turn power on and open LCD monitor, or adjust brightness of the LCD monitor	P.41 P.104
	Video system is set on PAL and video cable is still plugged in	Set video system to NTSC or disconnect video cable	P.74 P.103

Symptom	Cause	Remedy	Page
Autofocus is on but camera not focusing	Dirty lens	Clean lens	–
	Subject not in center of autofocus field	Use focus lock	P.61
	Subject difficult to focus	Use focus lock or switch to manual focus	P.61,62
Flash will not fire or will not charge	Shooting mode is set to  (sound),  (continuous) or  (moving image)	Set mode dial to  (still picture) or  (text) mode	P.41 P.49
	Flash is set to  (flash off) mode	Press  button to cancel flash off mode	P.53
	Mode dial is set to macro mode	Press  button to cancel macro mode	P.60
	White balance set to mode other than auto	Press WB button to set white balance to auto	P.57
	Battery expired	Charge battery	P.23
	Image dark even with flash	Subject farther than approx. 3.0m with zoom on telephoto or approx. 3.4m with zoom on wide angle	Come closer to subject
Image is too bright	Camera is too close to subject	Set flash to flash off mode	P.53
	Overexposed	Press  button to change exposure compensation level	P.56
	Brightness setting needs adjusting	Press LCD LIGHT button to adjust brightness of LCD monitor	P.104
Image is too dark	Shot in low light area with camera set to  (flash off) mode	Press  button to cancel flash off mode	P.53
	Under-exposed	Press  button to change exposure compensation level	P.56
	Brightness setting needs adjusting	Press LCD LIGHT button to adjust brightness of LCD monitor	P.104
Unnatural coloration of image	Shooting conditions difficult to achieve white balance in auto mode	Place a white object near the subject, use the flash or select a white balance mode other than auto	P.53 P.57
Date and other recording data will not display	Screen display set to off	Press DISPLAY button to switch screen display mode	P.48 P.79
Cannot play back or image will not appear	Camera not set to  (play) mode	Set mode dial to  (play)	P.76
	Wrong playback source	Press  button to change playback source	P.76
	SmartMedia memory card not inserted or does not contain any files	Insert SmartMedia memory card with recorded images	P.28
	Attempted to play SmartMedia memory card not formatted with this camera	Use SmartMedia memory card that has been formatted and recorded on this camera	P.28
	SmartMedia memory card contains incorrectly recorded files	Insert SmartMedia memory card containing pictures properly recorded with this camera	P.28
	SmartMedia memory card contains files in format not read by this camera	Check format type	P.74
	Card door open	Ensure that card door is securely closed	P.28
	Video interface cable not correctly connected	Check connection	P.74
	Source of interference, such as electric motor, nearby	Relocate camera away from interference source	–
	SmartMedia memory card contact surface dirty	Clean contact surface with soft dry cloth	P.27

Symptom	Cause	Remedy	Page
Replay is not clear	Error in internal memory of camera	Copy required files from internal memory onto SmartMedia memory card and format internal memory	P.83 P.98
	Error in SmartMedia memory card in usecard	Test camera with another SmartMedia memory card. If second card displays well, problem is with card not camera.	–
Display shuts off	Battery expired	Charge battery	P.23
	Auto power off activated	Turn power on again	P.41
Remote control unit will not work	Obstruction between remote control unit and camera sensor	Remove obstruction *Sensor is on upper left of LCD monitor	–
	Dirty remote control transmitter or camera sensor	Clean with soft dry cloth	–
	Remote control battery expired	Replace CR2032 lithium battery	–
LCD monitor brightness changes during AF operation	Area captured by autofocus field and surrounding area are contrasting	There is no malfunction	–
Vertical lines appear on image	A light level or entire subject is dark. Phenomenon occurring with pictures of bright subject, known as smudge phenomenon	There is no malfunction	–

■ Miscellaneous

Symptom	Cause	Remedy	Page
SmartMedia memory card will not fit into slot	Wrong type of SmartMedia memory card	Use a SmartMedia memory card specified for the camera	P.28
	SmartMedia memory card incorrectly oriented	Insert the SmartMedia memory card the correct way	P.28
Camera will not operate even when buttons and switches are operated	Battery expired	Charge battery	P.23
	Camera malfunction	Turn power off and on once. Set the mode dial to  (still picture) or  (text). If the problem persists, reset the camera. 1. Remove the battery, turn the power on, then reload the battery. 2. Try operating the camera again.	—
Date and time are wrong	Date and time setting is incorrect	Set the correct date and time	P.34
Date and time were set but disappeared	Battery has been removed	The date setting is reset if the battery has been removed for about 1 month. Set the date again.	P.34
File will not erase or SmartMedia memory card will not format	Camera not set to erase mode	Set the mode dial to  (play) and press the  button.	P.92
	Write protect pad on SmartMedia memory card	Remove the pad from the SmartMedia memory card	P.27
	Protected file	Use the play menu to cancel the protect setting	P.85
	Power is turned off or auto power off activated	Turn the power on again	P.98
Mode settings have changed	Battery has been removed	Reset mode	P.98
Auto power off will not activate Beep will not sound	Auto power off setting is disabled	Enable setting	P.100
	Camera powered by AC adapter (auto power off is automatically disabled when powered by an AC adapter)	—	—
	Beep disabled	Set beep sound to [ON] on the SET menu.	P.101
No image on TV screen	TV system setting is incorrect	Select correct TV system	P.103

Using Your Digital Camera in Other Countries

Ricoh AC-3 AC Adapter (optional)

- The AC-3 AC adapter adjusts automatically to voltages ranging from 100V to 240V and frequencies of 50Hz to 60Hz.
- 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.

Using a Local TV Receiver for Playing Pictures

- You can play pictures taken with this camera on a TV receiver (or monitor) equipped with a video input terminal. Use the video interface cable supplied.
- This camera supports two television systems: NTSC and PAL. Switch your camera's video system to meet the local television environment. See "Changing Video System" → (p.103).
- If you plan to take the camera with you on a trip abroad, identify the local television system beforehand.

About the Warranty and Servicing

1. The Ricoh RDC-7 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 your nearest Ricoh service office. Please note that you will be liable for any costs incurred in taking the camera to the Ricoh service office.
2. This warranty does not cover any damage resulting from:
 - ① Failure to follow the instructions in the instruction manual;
 - ② Repair, modification or overhaul not conducted by an authorized service center specified in the instruction manual;
 - ③ Fires or natural disaster;
 - ④ Improper storage, such as exposing the camera to high temperatures, humidity, or insecticide; storing it with a leaking battery; storing the camera in a dirty condition so that it becomes moldy; or otherwise insufficiently caring for the camera.
 - ⑤ 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 liable for all repair fees, including those incurred at an authorized service center.
4. You will be liable 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 has been changed or is 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 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 it occurs 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 is 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 nearest Ricoh service representative even after the seven year period.
10. Please note that if the camera is seriously damaged by flooding, submergence, infiltration of sand or mud, violent shocks or dropping, the camera may not be repairable, and restoration of its original condition may be determined to be impossible.

- Note**
- Before submitting the camera for repair, check the battery 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 recommend that you keep this manual and a spare battery on hand.

Specifications

■ General

- **Video Signal Protocol** : NTSC/PAL
- **Power Source Voltage** : Battery: 3.7V
AC: 5V
- **Dimensions** : 135.4 × 74.0 × 26.6 mm (5.3 × 2.9 × 1 in.)
- **Mass** : Approx. 270 g (9.5 oz) (excluding battery)
- **Operating Temperature Range** : 0°C to 40°C (32°F – 104°F)
- **Operating Humidity Range** : 85% or less
- **Storage Temperature Range** : -20°C to 60°C (-4°F – 140°F)

■ Camera

- **CCD** : 3,340,000 pixels (effective: 3,240,000 pixels)
- **Lens** : Zoom lens F=2.6 – 3.4
 - **Focal length** : f=7.3 - 21.9 mm (equivalent to 35 - 105 mm in 35mm camera format)
 - **Minimum shooting range** : Approx. 24 cm (9.4 in) (wide angle)
 - **Macro shooting range** : Approx. 1 - 24 cm (0.4 in – 9.4 in)
- **Viewfinder**
 - **Type** : Real image
 - **Magnification** : Tele 0.81X, wide 0.3X
 - **Parallax correction** : Yes (-2 - +1 dpt)
- **Monitor**
 - **Display size** : 2.0"
 - **Drive system** : TFT Active Matrix System
 - **No. of pixels** : Approx. 200,000
- **White Balance** : Auto/Preset (Daylight, Cloudy, Tungsten Light, Fluorescent Light)
- **Exposure Compensation**
 - **Light metering system** : Centerweighted
 - **Exposure memory mechanism** : Auto backlighting compensation
Manual exposure compensation ±2.0 EV (in 0.5 EV increments)
 - **Metering system** : TTL-CCD
 - **Flash automatic exposure** : Yes (daylight synchro)
 - **Shutter speed** : 1- 1/1000 in still picture mode
 - **ISO sensitivity** : ISO Approx. equivalent to 150 (AUTO)
- **Distance Adjustment**
 - **Autofocus system** : Normal shooting domain: TTL-CCD, macro domain: CCD
 - **Autofocus range** : Normal shooting domain: approx. 24 cm - ∞ (9.4 in - ∞),
macro domain: 1 - 24 cm (0.4 – 9.4 in.)
- **Built-in Flash**
 - **Type** : Auto
 - **Range** : Approx. 0.6 - 2.5 m (2.0 ft – 8.2 ft)
 - **Modes** : Off/Forced flash/Slow synchro/Auto/Red-eye reduction

■ Image Data Recording and Playback

● Resolution

- Still picture mode : 2048 × 1536, 1024 × 768, 640 × 480, 3072 × 2304 (PRO) pixels
- Text mode : 2048 × 1536, 1024 × 768, 3072 × 2304 (PRO) pixels
- Moving image mode : 320 × 240 pixels

● File Format

- Still picture mode : Compressed: JPEG (Exif2.1), Non-compressed: TIFF (Exif2.1)
- Text mode : TIFF (G4 MMR)
- Moving image mode : AVI (conforms to Open DML Motion JPEG format)
: WAV (Exif2.1)

● Camera File System Standard

: DCF (Design rule for Camera File system standardized by JEIDA)

● Compression Format

: JPEG baseline system

● File Sizes

- 2048 × 1536 : F: approx. 1.12 MB, N: approx. 568 KB, E: approx. 280 KB, NC: approx. 6 MB
- 1024 × 768 : F: approx. 376 KB, N: approx. 184 KB, E: approx. 88 KB, NC: approx. 1.5MB
- 640 × 480 : F: approx. 152 KB, N: approx. 72 KB, E: approx. 40 KB, NC: approx. 640 MB
- 3072 × 2304 (PRO) : F: approx. 2.53 MB, N: approx. 1.26 MB, E: approx. 648 KB, NC: 13.5 MB

■ Input/Output Terminal

● Power Input

: 5 V (AC adapter)

● Video Output

: 1.0 Vp-p (75 Ω)

● RS-232C/AUX/USB

: For connecting to a PC

■ Body

● Tripod Screw Hole

: Yes (1/4-20 UNC)

: Less than 6.0 mm

■ Power Supply

● Main Battery

• Type

: Rechargeable lithium ion battery

• Voltage

: 3.7 V

■ Date Retention Time

: Approx. 1 month

■ Auto Power Off

: Off/Activated after more than 1 min., 3 min. or 5 min.

■ Internal Memory

• Capacity

: 8 MB

■ Compatible Memory Cards for Recording and Playback

● Type of Memory

: SmartMedia memory card

• Capacity

: 2, 4, 8, 16, 32, 64 MB

• Operating voltage

: 3.3 V

Recording Capacities

The table below gives approximate recording picture counts available by SmartMedia memory card capacity and by picture quality/size.

			2MB	4MB	8MB	16MB	32MB	64MB
Still picture Mode (No. of images)	PRO	F	0	1	3	6	12	24
		N	1	3	6	12	24	48
		E	3	6	12	24	48	97
		NC	0	0	0	1	2	4
	2048	F	1	3	6	13	27	54
		N	3	6	13	26	53	107
		E	6	13	26	42	105	210
		NC	0	0	1	2	5	10
	1024	F	5	10	20	39	79	159
		N	9	19	39	76	153	307
		E	19	38	76	142	285	570
		NC	1	2	5	10	20	40
	640	F	12	24	49	99	199	399
		N	23	45	90	166	332	665
		E	41	82	165	332	665	1331
		NC	3	6	12	24	49	99
Text Mode (No. of images)	PRO	3	6	12	24	48	97	
	2048	6	13	26	52	105	210	
	1024	19	38	76	142	285	570	
Motion Picture Mode (Seconds)			10	20	41	82	166	332
Sound Mode (Minutes)			252	505	1017	2037	4085	8179

* Sizes (no. of pixels) are as follows.

PRO : 3072 × 2304 pixels

2048 : 2048 × 1536 pixels

1024 : 1024 × 768 pixels

640 : 640 × 480 pixels

* Image quality (compression rate) is as follows.

F : Fine

N : Normal

E : Economy

NC : Non-compressed

* Units are as follows.

For still picture files and text files: number of images.

For moving image files: number of seconds.

For sound files: number of minutes.



- Even when “1” is displayed as the number of recordable picture in the Text mode, recording may not be possible in some cases, depending on the subject.
- The internal memory is similar to an 8 MB SmartMedia memory card.



Declaration of Conformity

“The Product complies with the requirements of the EMC Directive 89/336/EEC.”

INFORMATION TO THE USER

USA FCC Part15 Class B

The 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. In this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help. (FCC 15.105B)

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. (FCC 15.21)
Properly shielded and grounded cables and connectors must be used for connection to a host computer in order to comply with FCC emission limits. (FCC 15.27)
An AC adapter with a ferrite core must be used for RF interference suppression.

COMPLIANCE INFORMATION STATEMENT

Product Name: IMAGE CAPTURING DEVICE

Model Number: RDC-7

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.

RICOH CORPORATION

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Note to Users in Canada

Note: This Class B digital apparatus complies with Canadian ICES-003

Remarque Concernant les Utilisateurs au Canada

Avertissement: Cet appareil numerique de la classe B est conforme a la norme NMB-003 du Canada

IMPORTANT SAFETY INSTRUCTIONS-SAVE THESE INSTRUCTIONS DANGER-TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOLLOW THESE INSTRUCTIONS.

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