3.3 MegaPixels DSC

User Manual - English



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Safety Precautions

Danger



Do not attempt to disassemble, repair or alter the equipment yourself. The high-voltage circuitry in the equipment poses significant electrical hazard.



Do not attempt to disassemble, alter or directly solder the battery.



Do not put the battery in a fire, attempt to heat it, uses it in high temperature environment such as next to a fire or inside a car.



Do not put it into water or allow it to get wet.



Do not use this camera in the bathroom.



Do not use batteries that are significantly damaged or deformed.



Turn off the power immediately in the event of irregularity, such as the equipment emitting smoke or a strange smell. Remove the battery as soon as possible, being careful to avoid electric shocks or burns. If you are drawing power from a household electric outlet, be sure to unplug the power cord.



Keep the battery and SD memory card used in this camera out of the reach of children to prevent accidental ingestion.

Specification

General	
 Video Signal Protocol 	NTSC / PAL
 Power Source 	Rechargeable Lithium-Ion Battery 3.7V
	/ AC Adapter 5V
 Dimensions (WxHxD) 	116.7 x 53.8 x 29.5 mm (4.5" x 2.1" x 11.6)
 Weight 	Approx. 172g (6.0 oz) (without battery)
 Operating Conditions 	Temperature: 0°C to 40°C (32°F to 104°F)
	Humidity: 85% or less
• Storage Temperature	-20°C ~ 60°C (-4°F to 140°F)

Memory Media		
 Internal Memory 	16 MB	
Memory Card Secure Digital Memory Card Slot		

Camera	
• CCD	1/2.7 inch 3.34 mega pixels
● Lens	Zoom Lens F2.8 ~ 3.8
 Focal Length 	f = 5.9 ~ 11.8 mm (equivalent to 38 ~ 76 mm in
	35 mm format)
 Shooting Range 	General: Approx. 14 cm (5.5") (at Wide)
	Approx. 40 cm (15.7") (at Tele)
	• Macro: Approx. 7 ~ 14 cm (2.75" to 5.5") (at Wide)
 Digital Zoom 	2X
 Monitor 	1.5 inch LTPS TFT color LCD
 White Balance 	Auto / Preset (Daylight, Overcast, Fluorescent
	Light, Tungsten Light)
 Exposure 	Exposure Metering System: Center-weighted
Compensation	Mode: Auto /Manual compensation (± 2.0EV in
	0.5 EV steps)
	Metering: TTL CCD method
 Shutter Speed 	4, 2, 1 ~ 1/ 1000
 ISO Sensitivity 	Auto, ISO 200, ISO 400
 Built-in Flash 	Modes: Flash Off, Forced, Auto, Slow Synchro,
	Red-eye Reduction
● Image	• Still Picture: 2848 x 2136 / 2048 x 1536 /
Resolution	1600 x 1200/ 1280 x 960
	Motion Picture:320 x 240
● File Format	JPEG (Exif2.1), TIFF, AVI

Names of Parts

Camera



b. Back



Operating Parts



Main Switch



The camera offers a number of modes for recording and playback. The mode dial is used to select the desired mode.

Mode Dial	Mode Name	Description	
SET UP	Set up mode	This mode is used for changing and confirming the camera setting.	
	Playback mode	This mode is used for playing recording files.	
Ó	Still Picture mode	This mode is used for normal shooting.	

	Continuous Shooting mode	Picture are recorded continuously while the shutter release button is pressed.
۳ پ	Motion Picture	This mode is used for recording motion picture.

4-way Button

For Up / Down / Left / Right and Zoom Function.



MENU / ENTER Button

Display Menu and various modes.

4 Button

lcon	Display	Mode	Description
	Lit	Flash	The flash will not fire under
		Off	any conditions.
No	No	Auto	The flash fire automatically in
lcon	Display		low light and back light
			conditions.
4	Lit	Forced	The flash will fire under
•			any conditions.
	Blinking	Slow	The flash can be fired to
4		Synchro	illuminate the subject while a slow
*			shutter speed correctly exposes the
			background.

PIC Button

The camera offers six image quality modes: 2848 x 2136N, 2048 x 1536NC, 2048 x 1536F, 2048 x 1536N, 1600 x 1200N, and 1280 x 960.

- The default is 2048 x 1536N.
- 2848 x 2136N used for taking pictures with higher image quality. This mode can not be played back by using Zoom Playback Function.
- NC (non-compressed) mode is for recording data without compressing it. N and F stand for Normal and Fine.

CANCEL Button

For Canceling.

DISPLAY Button

For LCD Display Function and Adjusting the Brightness of the LCD Monitor.

 The data display changes to show the recording mode, PIC mode, recordable picture count, etc. each time the DISPLAY button is pressed.



 Press this button (approx. 2 seconds) to adjust the brigstness of the LCD monitor when it is hard to see, such as in strong sunlight.



Before using the camera

Attaching the Wrist Strap

Attach the wrist strap to the camera.

 Pass the end of the strap through the wrist strap eyelet on the camera.



Setting the Date and Time

- 1. Set the mode dial to [SET UP].
- Press the ▲ or ▼ button to select
 [DATE SETTING] and press ▶ Button.
 - •The time is displayed in 24 hour clock format.



 Press ▲, ▼, ◀ and ▶ buttons to set the date and time. Press ◀ or ▶ button to highlight the item you wish to adjust, and press the ▲ or ▼ button to adjust the item.



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1. Preparation

Powering the Camera

• Loading the Battery

- 1. Check that the camera is turned off and slide the battery cover open.
- 2. Load the battery and close the battery cover.

• Charging the battery

- 1. Turn off the camera power.
- 2. Set the battery in the camera.
- 3. Connect the AC Adapter cable to the (DC IN) jack of camera.
- 4. Insert the power plug into a power outlet.
 - The LED on the front side will lit-on in Red. When the LED turn to Green, charging is completed.

• Using the AC Adapter

- 1. Make sure the camera power is turned off, then connect the AC Adapter cable to the camera power (DC IN) jack.
- Insert the power plug into a power outlet.
 When a battery is located in the camera, power from the AC Adapter (power outlet) will take priority.

• Auto Power Off Setting

The camera will turn off automatically in Record and Play modes to conserve the battery if no operation is performed (no buttons are pressed) for the preset length of time. You can select the time until the auto power off is activated from Off, 1 min, 3 min, or 5 min, please see page 25.

Note

Auto Power Off Setting can not be worked when using the AC Adapter as power source.

Storage Media

This camera uses Internal Memory and Secure Digital (SD) Card as storage media to record data.

Internal Memory

The size of the Internal Memory is 16 MB.

• Secure Digital Memory Card

□ Insert the SD Memory Card

- 1. Check that the camera is turned off.
- Slide the card cover switch in the direction shown by the arrow andopen the card cover.



3. Insert the card with the label facing toward you.

• Removing the SD Memory Card

- 1. Check that the camera is turned off
- 2. Slide the card cover switch to open the card cover.
- 3. Push the card and then pull it out.



About Memory Card

You are recommended to use only SD Memory Card. If you using an MMC (Multi-Media Card), the following points shoule be noted.

- 1. You can not record motion pictures.
- 2. The processing speed is slow.

On account of the above limitations, we cannot guarantee operation of MMC.

• Formatting the Internal Memory and SD Memory Card

- 1. Set the mode dial to [SET UP].
- 2. Press the ▲ or ▼ button to select [FORMAT] and press the RIGHT button.
- 3. Press the ▲ or ▼ button to select [CARD] or [Internal] and press the [ENTER] button.
- 4. Press shutter release button.
 - [FORMATTING] message will display. The screen will return to SET UP menu when the formatting is completed.

2. Recording

Basic Recording

- 1. Turn on the camera.
 - Slide the power switch to turn on the camera.
- 2. Set the mode dial to [\square , \square , or \square].
- 3. Select the PIC (image quality) mode.
 - Press the PIC button to select the image quality mode.
 - In Continuous Mode, Image Enlargement Mode and Non-com pressed Mode can not be chose.
 - PIC button does not work to Motion Picture Mode.
- 4. Compose the picture.
 - Press [4] button to make the subject larger and the [4] button to make the subject smaller
- 5. Record the image.
 - Press the shutter release button halfway to lock the focus, and then press the shutter release button fully without releasing it.
 - In continuous Mode, you need to keep pressing the shutter release button.
 - In motion Mode, there will be messages of start : Release / stop : Release.

• Image Enlargement

Used for taking pictures with higher image quality. Pictures can be taken at a size of 2848 x 2136 pixels.

- 1. Set the mode dial to [
- 2. Press the PIC button to selsct 2848 x 2136.
- 3. Compose the picture.
- 4. Press shutter pelease button to record the image.
 - Zoom Playback does not work for the Image Enlargement mode.

• Recording Capacities

Mode / PIC Mode		16MB	32MB	64MB	
	2848 x 2136	Ν	10	21	44
	2048 x 1536	F	10	21	44
Still		Ν	20	44	91
(No. of		NC	1	2	5
Images)	1600 x 1200	N	33	71	146
	1280 x 960	N	49	106	219
Motion Picture (min:sec)		1:10	2:49	5:10	

Using the Flash

- 1. Set the mode dial to [
- 2. Press the **\$** button to select a flash mode.
 - You can choose from four flash mode: Flash Off, Auto, Forced Flash, and Slow Synchro.
 - Flash can not be used in Continuous Mode and Motion Mode.
- 3. Press the shutter release button to record the image.

Menu Function

Use ► button to select funtion and press **ENTER** button.



Exposure Compensation :

The exposure can be compensated to intentionally brighten or darken the overall recorded image. The exposure compensation range is +/- 2.0EV (set in 0.5EV / step).

1. Set the mode dial to [\square , \square , or \square] and press **MENU** button.

- 2. Check that 🔁 has been selected and press ENTER button.
- Press ▲ or ▼ button to select the compensation level and press ENTER button.
- 4. Press shutter release button.

• White Balance : 🎼

The white balance can be adjusted so that images can be recorded in natural colors no matter what light source the subject is exposed. There

are 5 modes can be chose: Auto (default and no display), Daylight (🔆),

Overcast (\bigcirc), Tungsten Light ($- \oint_{-}$), and Fluorescent Light ($\frac{11}{2100}$).

- 1. Set the mode dial to [\square , \square , or \square] and press **MENU** button.
- 2. Check that 😹 has been selected and press ENTER button.
- Press ▲ or ▼ button to select the white balance and press ENTER button.
- 4. Press shutter release button.

• Macro Mode : 関

- 1. Set the mode dial to [\bigcirc , \square , or \square] and press **MENU** button.
- 2. Check that [💭] has been selected and press ENTER button.
- 3. Press ▲ or ▼ button to select [ON] and press ENTER button.
- 4. Press shutter release button.

• Self-Timer : 👏

- 1. Set the mode dial to [📩] and press **MENU** button.
- 2. Check that [[3] has been selected and press ENTER button.
- 3. Press \blacktriangle or \blacktriangledown button to select [**ON**] and press **ENTER** button.
- 4. Press shutter release button.
 - The Self-Timer LED will start flashing (with beep sound) and the
- 14 shutter will be released with approximate delay of 10 seconds.

Other Advance Menu Functions

In MENU, user can set the following functions:



Focus: can be set in Still, Continuous, and Motion Picture Mode
Date Imprint: can be set in Still and Continuous Mode
ISO: can be set in Still and Continuous Mode
Red-eye Reduction: can be only set in Still Mode
Time Exposure: can be only set in Still Mode

Methods to set

- 1. Set the mode dial to [📩 , 🛄 , or 📲] and press **MENU** button.
- 2. Press ► to select (MENU) and press ENTER button.
- 3. Press ▲ or ▼ button to select a function you want to set and press
 ▶ button.
- Press ▲ or ▼ to change the function and press ENTER button to complete the setting.
 - Press CANCEL button to exit the operation.

(Important)

Be sure the card door is closed when there are a message of "RECORDING", "COPYING" or file is reading in Recording, Set Up, or Playback Mode as this colud result in loss or damage of data stored on the card / Internal Memory, or malfunction of the camera.

3. Playback / Delete

Basic Playback

• Playing Still Picture / Continuous Files

- 1. Set the mode dial to [\blacktriangleright].
- 2. Press \blacktriangleleft or \blacktriangleright button to select the file to be played back.

Press \blacktriangleleft button to display the previous file and \blacktriangleright to display next file. If keep the button pressed, the file will advance continuously.

• Playing a Motion Picture File

- 1. Set the mode dial to [\blacktriangleright].
- 2. Press \blacktriangleleft or \blacktriangleright button to select the motion picture file.
- 3. Press shutter release button.

The motion picture file will be played back and the playback indicator and time elapsed will be displayed. Playback of motion picture files ends automatically.

• To pause and resume playback

To temporarily pause playback, press the shutter release button during playback, and to resume playback, press the shutter release button again.

Slow playback

To play a file slowly, press ► button during playback.

Attention :

- If an unplayable is encounted, the "UNMATCHED FILE" message will be displayed.
- In some case, data recorded with the cameras of other companies cannot be played back.

- Playing File on a TV
- Connecting



- 1. Make sure the camera is turned off.
- 2. Open the Video Out Terminal cover and connect the Video Out Cable to the terminal.
- Connect the other end of the Video Out Cable to the Video-In Terminal of the TV.
- 4. Connect the AC Adapter.
- 5. Play back the files.

Turn the camera on and set the mode dial to Playback Mode [].

• Disconnecting

- 1. Make sure the camera is turned off.
- 2. Disconnect the cable.

Various Playback Functions

• Thumbnail Playback

This function enables user to play 9-file at once for quick searching.

- 1. Set the mode dial to [] and press the **MENU** button.
- Press ▶ button to select and press ENTER button. The screen will change to the thumbnail display.



Indicator	Status
No Mark	Still picture
r	Motion Picture File
?	Unplayable File

 Press ▲ , ♥, ◀ , ▶ buttons to select file. The file on which the focus is set is the selected file.



4. Press **ENTER** button , the screen will return to single image display.

• Zoom Playback

- 1. Set the mode dial to [] and press the **MENU** button.
- 2. Press ▶ button to select ⊕ and press ENTER button.
- 3. Press \blacktriangle or \blacktriangledown button to change the magnification.

Note

Image of 2848 x 2136 can not be played back by using Zoom Playback Function.

□ To move the display position

Press **DISPLAY** button, than use \blacktriangle , \checkmark , \triangleleft , \blacktriangleright button to change the position displayed. Press **DISPLAY** button again to return to the zoom playback screen.

- 4. Press CANCEL button.
 - The screen will return to the normal playback screen.

• Protecting a File

This function enables the user to protect important files.

Protecting / Unprotecting a Single File or All Files

- Set the mode dial to [] and press the MENU button.
- Press ◀ or ▶ button to select [O_{TT}] and press ENTER button.
- Press ▲ or ▼ to select [ALL FILES]
 [CANCLE FILES], [ONE FILE]
 and press the ENTER button.





- 4. Press ENTER button.
 - Protecting a File / All Files: the setting will be enabled and the display will return to the protect screen. The symbol will be displayed to the file / files.
 - Unprotecting a file / All Files: If you select [CANCLE FILES] and press the ENTER button when a file has already been protected, it will be unprotected.

• Other Advance Functions under [MENU] in Playback Mode

Auto Playback

This function allows user to select playback time (1 SEC. 3 SEC. 5 SEC. 10 SEC. or 30 SEC.) to play all files automatically.

- Set the mode dial to [▶] and press the MENU button.
- Press ▶ button to select (MENU) and press ENTER button.
- Press ▲ or ▼ button to select
 [AUTO PLAY] and press ▶ button.
- Press ▲ or ▼ button to select the playback time and press ENTER button.



MODE SETT	IN	G
AUTO PLAY		1SEC.
DPOF		3SEC.
DELETE ALL		5SEC.
		10SEC.
		30SEC.
CANCEL:	SEI	L.:ENTER

• DPOF

- 1. Set the mode dial to [] and press the **MENU** button.
- 2. Press ▶ button to select (MENU) and press ENTER button.
- 3. Press ▲ or ▼ button to select [**DPOF**] and press ▶ button.
 - DPOF menu will be displayed.



Press ▲ or ▼ to select [STND PRINTS], [INDEX PRINTS], [CANCEL DPOF], [CONFIRM] on the DPOF menu and press ► button, then works on the function as below :

□ Specifying the Number of Prints

 Press ▲ or ▼ button to select [ALL] or [ONE FILE] and press ENTER button.

• Specify the number of prints.

- In case of [ALL], press ▲ or ▼ button to specify the number of prints and press ENTER button.

Then press \blacktriangle or \blacktriangledown button to specify the number of prints and press **ENTER** button.

- 2. Press ENTER button to complete the setting
 - Press CANCEL button to exit the operation.
- □ Specifying the Number of Index Prints All files can be printed in reduced size.
- Press ▲ or ▼ button to specify the number of Index prints and press ENTER button.









- 2. Press ENTER button to complete the setting.
 - Press **CANCEL** button to exit the operation.



□ Canceling the DPOF Setting

1. Select [STND] or [INDEX] and press ENTER button.



2. Press **ENTER** button to complete the setting. Press **CANCEL** button to exit the operation.



□ Confirming the DPOF Setting

1. After confirm the settings, press **CANCEL** button.



2. Press CANCEL button to return to DPOF menu.

Deleting Files

This section explains how to delete recorded files.

• Deleting a Single File

- 1. Set the mode dial to [\blacktriangleright].
- Press ◀ or ▶ button to select the file you want to delete and press MENU button.
- Check that [m] has been selected and press ENTER button.
 Then press Shutter Release button.



The file will be deleted and the display will return to Playback screen.

• Deleting All Files

- 1. Set the mode dial to [\blacktriangleright].
- 2. Press ▶ button to select (MENU) and press ENTER button.
- Press ▲ or ▼ buttons to select [DELETE ALL] and press button. Then press shutter release button.



All files will be deleted and the display will return to Playback screen.

4. Others

Changing the Camera Settings

This section explains how to change the camera settings:

1. Turn the mode dial to [SET UP].

The set up menu displays.



- 2.Press ▲ or ▼ button to select a camera setting you want to change the setting.
- 3.Press ► button to enter the camera setting and make decision.
- 4.Press **ENTER** to complete the setting.

Press **CANCEL** button to exit the operation.

• FORMAT

Memory Card and Internal Memory can be formatted.

• KEEP SETTING

This keep setting mode is for saving the camera setting after the camera is turned off if you have set it to ON. The following settings can be saved:

• Flash	
Exposure Compensation	White Balance

Focus	Date Print
 ISO Setting 	Time Exposure

• DIGITAL ZOOM

Set it to ON to enable the digital zoom function.

Note

If Digital Zoom function does not be actived, the Tele and Wide button only for Optical Zoom control. After you active the Digital Zoom function, when you set to the end of Tele of the Optical Zoom, the Digital Zoom bar will appear in 2 seconds if keep pressing the Tele key.

• LCD CONFIRM (LCD Confirmation Time)

When you press shutter release button to take a still picture, the image is displayed on the LCD monitor.You can select the image confirmation time from zero (0), 1 SEC., 2 SEC., 3 SEC., or 5 SEC.

• AUTO OFF (Auto Power Off Setting)

The camera will turn off automatically in Record and Play to conserve the battery if no operation is performed (no buttons are pressed) for the preset length of time. You can select the time until the auto power off is activated from OFF, 1 MIN., 3 MIN., or 5 MIN. The default setting is 5 MIN. in Record / Playback mode.

• BEEP SOUND (Beep Sound Setting)

The camera beep to alert you when it records an image.

• **POWER SAVE** (Power Saving Mode)

This function enables you to reduce the power consumed by the LCD monitor and increase the life of the battery

• SEQ. FILE NO (File Numbering System)

This function enables you to set whether sequential numbers are automatically assigned to files.

- Set to ON: The camera remembers the last file name assigned and even when a new memory card is inserted, numbers are assigned in sequence to subsequent files.
- Set to OFF: When a new memory card is inserted, files name are assigned in sequence from 0001. When a memory card on which files have been recorded is inserted, the consecutive numbers on the card will be assigned.

• DATE SETTING

You will need to adjust the Date and Time when you first use the camera and each time you change time zones on trip. For the how to set the Date and Time, please see page 8.

• LANGUAGE (Display Language)

This function enables you to set the language to be displayed on the LCD monitor: English, German, French, Spanish, Italian, Dutch.

• VIDEO OUT (Video out Signal Method)

If you wish to play recorded files on a TV when you are abroad, change the Video-out Signal Method according to the video system (NTSC / PAL) used in the country where you are.

• **OPTION** (Initializing the Settings)

This function enables you to reset all the settings and return them to the status when the camera left the factory.

• COPY (Copy Files to Memory Card from Internal Memory)

This functions allows you to copy files in the Internal memory to Secure Digital Memory Card.

Note

Message of "INSUFFICIENT MEMORY " will be displayed if the

file size is bigger than the memory space of the Memory Card and no copy action will be taken.

• Please make sure there is sufficient memory in card to copy all files.

• **STORAGE** (Selecting a Recording Destination)

This function allows you to select whether to record shot files in Internal Memory or on the Secure Digital Memory Card.

Transferring your Image to the computer

Driver Installation

If you are planning to transfer your images to your PC, make sure to complete the camera driver installation before the camera connection. The steps are as below:

- Insert the software CD-ROM disc into your CD-ROM drive.
- 2. The setup program starts. Follow the on screen instruction to complete the camera driver installation.

• Mass Storage Function

Downloading Images

- 1. Turn on the power of your PC.
- 2. Turn on the power of your camera.
- 3. Set the Storage Destination in SET UP mode
- 4. Set the Mode Dial to PLAY.
- 5. Use the USB cable to connect the camera and PC.
- 6. Double click " My Computer ".
- 7. Double click the newly created "Removable Device (G)".
 - This assumes that the new device is drive G.
- 8. Double click the "DCIM " folder.
 - Image file will display, you can save or copy the file to the desired location on the PC.
- 9. Double click the file to display the image.

4

Note :

 If use the Mass Storage Function, the mode dial must turn to " PLAY ".

Attention :

• If you disconnect the cable before close the Mass Storage, the Storage Destination (the hard disk) will be damaged.

Video Capture

Driver Installation

The steps are as below:

- 1. Insert the software CD-ROM disc into your CD-ROM drive.
- 2. The setup program starts. Follow the on screen instruction to complete the camera driver installation.

Video Capture Function

- 1. Turn on the power of your PC.
- 2. Turn on the power of your camera.
- 3. Set the Mode Dial to MOTION.
- 4. Use the USB cable to connect the camera and PC.
- 5. Double click "Presto! VideoWorks 4.5" to Run VideoWorks.
- Click "Capture Video "Button. Pop Play dialog, then click "Setting " Button, Select Video Device to "JD 3.3 x4ie Video for Windows ".
- 7. Click "PLAY" Button to start.

Note :

- If use the Video Capture Function, the mode dial must turn to "MOTION".
- The LED on front will lit-on in green when the PC and Camera is connected properly.

Attention

During Previewing and Capturing, please do not try to disconnect the USB cable as this could result in malfunction of the camera and the PC. User must turn off the Application Software first before disconnect the 28 cable.

Warning Message

If the warning message is displayed on the LCD monitor, follow the procedures below.

Message	Remedy
NO CARD	No card has been inserted. Insert card.
FORMAT CARD	Card not formatted. Format card.
CARDERROR	Format card again. If warning message is still displayed, there is problem with card. Use another card.
CARDPROTECTED	Card write-protect is set on [LOCK]. Release lock.
INSUFFICIENT MEMORY	Delete unwanted files or format card to ensure sufficient memory space.
	Number of index prints or image prints has exceeded limit. Select some images and set number to zero.
	In Copy Function, card does not have sufficient memory space.
CANNOT RECORD MOVIE	Motion picture file cannot be recorded on this card. Use SD memory card.
FILE PROTECTED	File is protected. Unprotect card before deleting.
UNMATCHEDFILE	Unplayable file selected.
FILE NUMBER OVER	File number limit exceeded. Format card or use another card.
NO FILE	There is no image file in the Memory Card and Internal Memory.

Important

- 1. Do not try to open the card door during recording, playing back, or copying file.
- 2. Do not try to turn off the power during recording, playing back, or copying file.
- 3. Do not try to disconnect USB (TV out) Cable abnormally during recording or (playing back) files.