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Preface

Thank you for purchasing this digital video camera.

Please read this manual carefully and keep in a safe place for further reference.

Note: The product specifications and these operating instructions are printed based on latest available information and are subject to change without prior notice.

The specifications of the particular video camera recorder you have purchased will apply even if these vary from this printed data.

Note: Please format newly purchased SD memory card or one previously used in another video camera prior to using in this video camera. Please back up all the important data in media card before formatting.

FCC STATEMENT FCC part 15.21

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

FCC part 15.105

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver
- Connect the equipment into 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.

Pertinent testing documentation is available for verification.

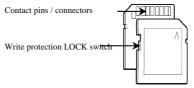
SD Memory card basic information

Your camera must have SD/SDHC Memory Card inserted to store recorded Video, take Photos and Audio records.

SD Memory Card is not supplied and should be purchased separately.

SD/SDHC memory card with capacity up to 8GB may be used in your camera.

SD Memory Card



- Please note that the SD card has tiny LOCK slider on the side for write protection of the SD memory card that helps avoid inadvertent deletion of image files. Set this slider to "un-LOCK" position for storing still images or recording video.
- Camera will accept SD/SDHC Memory cards with max capacity up to 8GB
- SD Memory card is simple and convenient but delicate electronic device; do not open, bend and overheat the card. Keep the card away from strong magnetic

field and dirty / harsh environment.

• If your SD card has been used previously with other devices / cameras or is brand new – the card may require to be *formatted* – please ensure you save all valuable records before formatting.

Inserting the SD Card

- Open the Battery Cover and slide in the card; aligning the card with orientation mark on the camera and push card all way down Do not force the card when inserting to avoid damaging – check position and
 - re-insert carefully.
- 2. To remove the card, please press gently and release the card; camera will eject the SD card automatically

Note: Insert and remove the card only when the camera is turned OFF.

Inserting / removing the card may otherwise damage or erase stored data. Maintenance of the video camera $% \mathcal{M}(\mathcal{M})$

Keep and store your camera away from humid, dust and harmful chemical environment. Do not store or operate the camera under the extremely hot or cold condition.

Keep camera clean and take care to avoid scratching or damaging of the housing and the lens. Blow dust away and use soft cloth if the lens becomes dirty or contaminated. Do not use an organic solvent to clean lens.

Remove batteries if you are not planning to use camera for extended time.

System Requirements You may use the computer to download images and video from your camera, edit images, email or post records over the Internet. Make sure that you computer complies with (below) minimum requirements:

System Requirements		
Operating System	Microsoft Windows 2000, XP, VISTA, 7	
CPU	Intel PIV 1GB or above CPU	
Memory	512MB or higher	
Audio & Video	DirectX8 Audio & Video Card	
Card		
CD-ROM Drive	Min 16x	
Hard Drive space	1GB or higher available memory space	
USB port	Standard USB1.1 or USB2.0 port	

 Features

 The recorder incorporates the following features and functions:

 Digital Video Camera Recorder (supports 1280×720 HD video recording)

 Digital Camera (12 Mega Pixels and other options)

 Mass Storage (Portable Disc)

 & Digital Zoom

Accessories The following accessories are packed together with the camcorder:



USB Cable



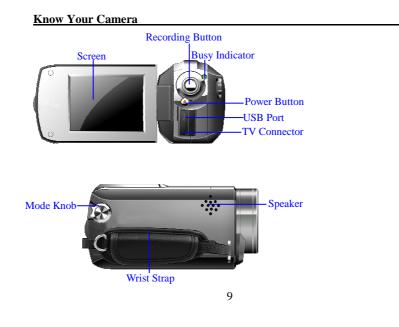


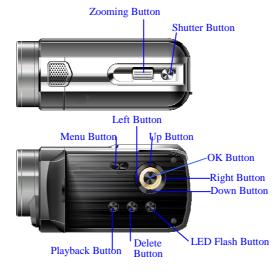


Installation CD

Manual & QSG











Buttons and Function Indicators

tons and Function Indicators			
Buttons/Indicator	Function		
Power Button	Press to turn the camera ON and OFF		
Recording Button	Press to Start / Stop Video / Audio recording		
Shutter Button	Press to take Still photo		
Zooming Button	Tilt Left or Right to "zoom" the scene or enlarge/shrink photos in Playback Mode		
Menu Button	Press to OPEN / CLOSE the MENU selection		
Mode Knob	Turn to select the desired MODE: Video Recording, Camera (taking Still Photos), Audio Recording		
Playback Button	Press to Enter / Quit the Playback Mode		
Up Button	Selects MENU option, moves photos upwards (when the photo is enlarged and set at Pan mode) and changes resolution setting in Video Recording Mode. In Photo Playback Mode, pressing this Button will activate direct printing function of the displayed photo. After connecting the camera via USB cable to the printer that supports PictBridge Standard (printer with icon attached), press OK Button to start printing.		
Down Button	Selects MENU option and moves photos downwards		

	(when the photo is enlarged and set at Pan mode).		
Left Button	Selects files and MENU, moves photos to the left (when the photo is enlarged and set at Pan mode) and presses to turn on / off icons and indicators displayed on the screen / turn off the screen.		
Right Button	Selects files and MENU, moves photos to the right (when the photo is enlarged and set at Pan mode) and switches to the Self-Timer Mode or vice versa		
LED Flash Button	Press to activate / turn OFF the LED Flash Support light		
OK Button	Press to confirm MENU / option changes and start playing video or audio file.		
Delete Button	Press to delete the selected file in playback mode or the last record in Video Recording/ Still Photo Taking or Audio Recording Mode.		
Busy Indicator	Indicates Recording / Processing Status		
Self-Timer Indicator	Flickers during Self-Timer countdown process		

Basic Operation

1. Battery Installation

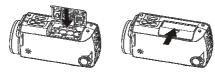
The camcorder uses 4 alkaline batteries AAA size as power supply. Slide and open the Battery Cover and insert batteries correctly following the polarity markings on the Battery Cover, then close the cover.



Before changing installed but exhausted batteries, first turn OFF the camcorder.

2. SD/SDHC Memory Card Installation

Open the Battery Cover and insert the SD/SDHC memory card into the Card Slot. Follow the printed mark indicating SD Card position with the metal connector facing inwards the slot.



To remove / replace the SD/MMC memory card press the card again; the card will pop up

and you may remove the card from the camera.





Turn OFF the camera before inserting / changing the memory card;
Insert the memory card correctly. Do not use force; otherwise you could damage the card or the camera. If the card cannot be inserted easily please check card alignment and position; then repeat installation.

• Please format memory card that is used for the first time or that has been previously used in other recorders.

3. Turn the camera ON

- Open the LCD Screen with display facing you. -
- Press the Power Button to turn ON the camcorder -
- 4. Select the MODE

Note current position of the MODE Knob; turn the knob to set desired mode:

- Video Recording Camera (Still Photo Taking)
- . .
- Audio Recording.

Note location of icons corresponding to the pointer on the Knob. (Please press the PLAYBACK Button if you wish to enter the playback Mode)

Video Recording 🐂

Select the Video Recording Mode.

Press the Recording Button to START recording a video clip, press it again to STOP recording.
Camera (Still Photo Taking)
Select the Still Photo Mode.
Press the Shutter Button to take one Still Photo at a time.

Keep camera steady when pressing the button.

Audio Recording

Select the Audio Recording Mode

Press the Recording Button and START recording voice, press again to STOP recording.

PLAYBACK Mode

To see / review all your records on the camera screen, you need to set camera to PLAYBACK Mode.

- Press the PLAYBACK Button to activate the PLAYBACK Mode.
- Use Left / Right Buttons to browse all recorded video clips, still pictures and recorded Voice files.

Video Playback: Press the OK Button to START playing back recorded Video clip. Use the UP Button to PAUSE / RESUME playing back video.

Press the OK Button to STOP playing Video clip (returning to beginning of the selected Video)

Photo Browse: When the selected photo is displayed, you may use Zoom Button to enlarge

photo, then press OK Button to enter into Pan Mode and use LEFT / RIGHT / UP / DOWN Buttons to move / select interesting part of the photo to review.

- 5. **Turning camera OFF**
- When the camera is turned ON, press and hold the Power Button to turn OFF the camcorder.

Note that if camera is not used or is inactive, then the Auto OFF feature will turn camera OFF to conserve batteries.

Auto OFF delay time (1, 3 or 5 minutes) may be selected.

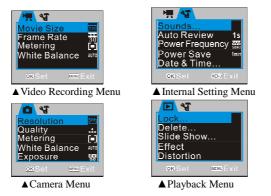
MENU Setup / Internal Setting

- When the camera is active you may enter MENU / Internal Setting options.
 Press the MENU Button to enter Video Recording Menu/ Camera Menu/ Playback Menu, depending on whether the camera is in Video Recording/ Camera (Still Photo Taking) or Playback Mode.
 - If you want to enter Internal Setting Menu MM, press RIGHT button immediately.

(Note that you can access Internal Setting Menu Note only from VIDEO Recording,

CAMERA and the PLAYBACK Mode - there is no access to the Internal Setting Menu

from the Audio Recording Mode.) Use UP / DOWN buttons to select desired setting / MENU option – see corresponding highlighted MENU option.



- Press RIGHT Button to enter highlighted option / setting and use UP / DOWN Buttons to select one from available setting options. Press OK Button to execute setting. -

Settings Date and Time

Press the MENU Button to open menu, and press RIGHT Button to enter Internal Setting



to enter settings window.



In settings window, press LEFT / RIGHT Button to select item (date, time) to be adjusted (the background of selected item is displayed in blue). Then press UP or DOWN Button to adjust and press OK Button to confirm after adjustment or press MENU Button to cancel settings and exit. Finally press MENU Button to exit from settings mode.

Computer Connection

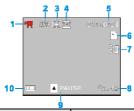
Before connecting for first time to computer, please install the camcorder driver application contained on installation CD.

Turn on camcorder. Set the USB Mode in Setup Menu as MSDC (Portable Hard Disc). Connect to computer using the USB cable. The device will then enter the Portable Hard Disc Mode.

Advanced Operation

Video Recording Mode 🛛 🐂

The following icons / indicators are visible on the DISPLAY when the Video Recording Mode is selected:



	9		
	Icon	Name of Icon	Function
1	7	Mode	Video Recording Mode is activated.
2	AUTO	White Balance	White balance setting; Auto-WB is selected
3		Metering mode	It indicates the metering mode; currently Multi-metering mode.
4	540	Video Format	Indicates the Video Resolution; currently

	1		
			VGA (640 x 480 pixels) Resolution.
5	01:40:01	Recording Time	Indicates the remaining recording time when recording is not activated and the elapsed recording time during recording
6		SD Card	SD Card is installed B SD Card is Write-Protection LOCK-ed.
7	j.	Flash	LED Flash Support Light is ON.
8	Q1.42	Zooming Indication	Indicates the Digital Zoom current magnification
9	(PAUSE/ (REC	Pause/Continue Record prompt	Prompt to press UP Button to make pause or continue RECORD.
10	Г	Battery status	Indicates the current status of battery power; when displayed in red, it indicates depleted batteries. Camera will auto shut down; re-install
new batteries.			

◆ MENU Setup / Video Recording Mode

Press the MENU Button to enter available settings for the Video Recording mode. • Video Recording MENU Options

Main Menu	Submenu	Description
Movie Size /	1280X720	High Definition (HD) Format
Video Resolution	640X480	Mid (VGA) Resolution Format
video Resolution	320X240	Low (QVGA) Resolution Format
	High	30 fps (for VGA and QVGA format)
Frame Rate	Middle	20 to 25 fps (only for HD Format)
	Low	15 fps (for VGA and QVGA format)
	Center spot metering	Metering based on central subject area.
Metering	Multi spot metering	Based on multi spots in subject.
	Spot metering	Based on one spot in subject.
	Auto	Suitable for most typical situations
	Daylight	Suitable for sunny conditions
White Balance	Cloudy	Suitable for cloudy conditions
	Fluorescent	Suitable under fluorescent light source
	Tungsten	Suitable under tungsten lamp light

Internal setting

Main Menu	Submenu	Description
Sounds	Shutter	Turn the shutter tripping sound on/off
	Start-up	Set the main power on sound at the following options: No sound/1/2/3
Sounds	Beep	Turn the button activation sound on/off
	Volume	Set the volume of the built-in speaker at different levels: 0/1/2/3
	Off	No Playback after shooting
Auto Review	1 sec	Playback photo 1 sec after shooting
	3 sec	Playback photo 3 sec after shooting
Power Frequency	50 Hz	Selects 50Hz electric light frequency
Fower Frequency	60 Hz	Selects 60Hz electric light frequency
Power Save	1 minute	Turns off automatically in 1 minute.
	3 minutes	Turns off automatically in 3 minutes.
	5 minutes	Turns off automatically in 5 minutes.
Date & Time	Date and Time	Set the Date and Time of the camera
Date & Time	are displayed	(see P.18).

Language	English	Sets the menu language to English
TV Out	NTSC PAL	NTSC TV System is selected PAL TV System is selected
USB	MSDC PC CAM	Used as Removable Disk Used as PC Camera
	Off	No image on Welcome screen.
Start-up Image	System	Default Welcome screen displayed after main power on.
	My Image	Customized picture displayed after main power on.
Format	Yes/No	Formats the memory card.
Reset All	Yes/No	Factory Setting Recovery (Default settings)

Camera Mode 🧧

Enter the Camera Mode after power-on by adjusting Mode Knob as needed. Press the Shutter Button to take photos, keep camera steady. - Zoom: Tilt the Button T/W to "zoom" the photographed scene or subject. - Self Timer: Press the RIGHT Button to select 2 second / 10 second delay time, or select Self Timer OFF (disable). Press the Shutter Button and the camcorder will take photo automatically in 2 or 10 seconds as selected.