Table of Contents

2.0	2.6	2.5	2.4	2.3	2,2	2.1	G	1	1.	Į.	-	1.	1	1.	1.	1.4	1.3	1.2	1.1	=	Mefo	Prec	Copy	Abox	Prefe	
2.6.1	Befo	Cha	Turr	Cha	Inse	Inse	ettin	1.4.8	1.4.7	4.6	1.4.5	1.4.4	1.4.3	1.4.2	1.4.1	Abo	Ump	Fea	Syst	ntroc	re You	recautions	opyright.	it this	reface	
Setting the language.	Before you start	Changing modes	Turning on/ off the camcorder	Charging the battery	Inserting the batteries	Inserting an SD card	Getting started	About the LEDs	Adjusting the LCD display	Back view	Left view	Right view	Bottom view	Top view	Front view	About the camcorder	Unpacking the camcorder	Features	System requirements	ntroducing the camcorder	lufore You Start	S		bout this manual		
16	16	15	15	15	13	11		10	6	5	5	4	4	3		3	2	1		passal.	······································	Įų.	····· p	v	v	

	3.3.1 3.4 Can 3.41	3 3 3 3 3 3	3 Usi 3.1 C 3.1.1 3.1.2 3.1.3 3.1.4 3.1.5 3.1.6 3.2 Ca	2.7 S 2.7.1 S 2.7.1 2.7.2 2.8 Ta 2.8.1 2.8.2 2.9 Co 2.10 Co
	Camcorder Playback mode	Camer Using Using t Using t Using t Using t Using t	amo	hoot daing
i	order Playback mode	Camera mode icons Using the macro function Using the zoom function Using the LED flash module Using the flash module, auto and force Quick access controls	the camcorder corder and voice recorder mode Camcorder and voice recorder mode Using the macro function Using the zoom function Using the LED flash light Using the Flash module, auto and force Quick access controls	ShootPlayback video
	k modu	onsunction unction unction ssh modul odule, aut	voice reco of function. function. lash light. landle, a	epdeo clipdeo clipesictureses
	e icons	IS	nder mod	o clipture.
	cons	ď	e	
	31 31 34	30 30 31 31 31	24 24 24 24 24 24 24 24 24 24 24 24 24 2	
-				

Using the menus 3 Using the menus 3 A11 White balance 3 41.1 White balance 3 4.1.3 Color effect 4 4.1.4 Night mode 4 4.1.5 Capture mode 41 4.2 Camcorder playback menu 41 4.2.1 Delete 41 4.2.2 Protect 41 4.2.1 Delete 42 4.3.1 White balance 44 4.3.2 Resolution 45 4.3.3 Color effect 45 4.3.4 Night mode 45 4.3.5 Self timer 49 4.4.1 Delete 49 4.4.2 Protect 51 4.4.3 Slide show 55 4.5 System menu 53 4.5.1 Setting the beep 54 4.5.2 Promat 57 4.5.3 Substantant 57 4.5.4 Protect 58 <th< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>•</th><th></th><th>-</th><th>-</th><th>_</th><th>_</th><th>-</th><th>-</th><th>-</th><th>-</th><th>-</th><th>_</th><th></th><th>e. 0</th></th<>																	•		-	-	_	_	-	-	-	-	-	_		e. 0
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6	Troubleshooting		
0	Specifications	-	
0	Appendix		
0	5.3 Quick Time		
2	5.2 Presto! Mr. Photo		
00	5.1 Presto! Video Works 60		
3	Installing the software and drivers60	U	- 22
- 59	4.5.9 Date/time		
59	1		
58	4.5.7 Language		

Preface

Congratulations on your purchase of this advanced camcorder. Ensure that you need this manual carefully and keep it in a safe place for future reference.

About this manual

orrect and up to date. However, no guarantee is made regarding the accuracy of the contents. If the contents of this manual do not tally with the camera, please take the camera as a criterion, and our company reserves the right to change the contents or technical rules without notice in advance. Also, the manufacturer reserves the right to change the technical specification in advance without notice.

If the accessories do not tally with the actual package, please take the actual package as a criterion.

Copyright

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All rights reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, manual or otherwise, without the prior written permission of the manufacturer.

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Precautions

General precautions

- Do not use or store the product in dusty, dirty, or sandy areas, as its components may be damaged.
- Do not store the product in a hot environment. High temperatures can shorten the life of electronic devices, damage batteries and warp or melt certain plastics.
- Do not store the product in cold areas. When the product warms up to its normal temperature, moisture can form inside, which may damage the electronic circuits.
- Do not attempt to open the casing or attempt your own repairs.

 High-voltage internal components create the risk of electric shock when
- Do not drop or knock the product. Rough handling may damage the internal components.
- Do not use harsh chemicals, cleaning solvents or strong detergents to clean the product. Wipe the product with a slightly damp soft cloth.
- Do not fire the flash while it is too close to the subject's eyes. Intense light from the flash can cause eye damage if it is fired too close to the eyes. When using the flash, the camera should be at least one meter from the eyes of the subject.
- Do not open battery cover while an image is being recorded. Doing so will not only make storage of the current image impossible, it can also corrupt other image data already stored in file.
- If the product or any of its accessories are not working properly, take them
 to your nearest qualified service center. The personnel there will assist you
 and if necessary, arrange for the product to be repaired.
- Test for proper operation before using the camera.

Notes on the LCD Screen

Be very careful to ensure the fluid contained in the LCD screen does not escape if the screen becomes cracked or damaged. If this occurs, follow these steps:

 If the fluids make contact with skin, wipe it with a clean cloth then rinse with a large amount of water.

- If the fluid makes contact with eyes, wash eyes with clean water for at least 15 minutes and go to the hospital as soon as possible.
- If the fluid is swallowed, first rinse mouth with water, then drink a large amount of water and induce vomiting. Go to the hospital as soon as

Operation conditions

- This camera is designed for use in temperatures ranging from 0°C to 40°C
- (32°F to 104°F).

 Do not use or keep the camera in the following areas:
- In areas subject to direct sunlight
- In areas subject to high humidity or dust
- Near air conditioners, heaters, or other areas subject to
- temperature extremes
- Inside of a closed vehicle, especially one parked in the sun.
- In areas subject to strong vibration

Power supply

- Use only the type of battery that came with your camera. Using any other type of battery may damage the equipment and invalidate the warranty.
- Ensure the battery is inserted correctly. Inserting the battery incorrectly can cause damage to the product and possibly start a fire.
- Remove the battery to avoid the fluid leakage if the camera is not going to be used for a long time.
- If the battery is crushed or damaged, remove it immediately to avoid the battery fluid leakage and abnormal expansion.

Before You Start

ake some test shots before performing a formal recording.

Wefore taking pictures with this DV camera in any important occasion (such as a wedding ceremony or an overseas trip), do test the DV camera beforehand to msure that it functions properly. Any additional loss caused by the malfunction of this product (such as costs of photography or any loss of benefit generated by the photography) is not the responsibility of the manufacturer and no ompensation will be given for it.

Copyright information

Take care to observe "No Photography" notices in certain locations. In these cases, you cannot record any live performance, improvisation or exhibits, even for personal purposes. Any transfer of pictures or memory card data must be conducted under the constraints of copyright law.

1 Introducing the camcorder

Read this section to learn about the features and functions of the camcorder. This chapter also covers system requirements, package contents, and descriptions of the hardware components.

1.1 System requirements

The camcorder requires a PC with the following specifications:

- Windows® Vista / XP / 2000 operating system
- Intel® Pentium 4 2.8GHz CPU or higher (3GHz recommended)
- At least 512 MB of RAM or higher (1G recommended)
- Standard USB 1.1 port or higher
- At least 64MB or greater video card

• Note:

A USB 1.1 port may enable you to transfer files to and from your host PC, but transfer speeds may be much faster with a USB 2.0 port.

1.2 Features

The camcorder offers a variety of features and functions including:

- HD Digital camcorder
- Digital camera (max. 8 Megapixels)

Additionally, the camcorder also features 5X optical zoom, voice recorder, USB mass storage.

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1.3 Unpacking the camcorder

The following items should be present in the package. If any item is missing or appears damaged, contact your dealer immediately.



Component video

USB cable

AV cable . Power cord

Li-ion battery NP-120

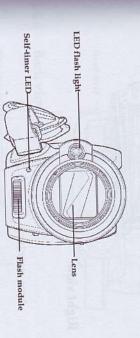
Battery charger

(Application software) CD-ROM

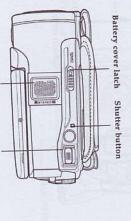
1.4 About the camcorder

Refer to the following illustrations to familiarize yourself with the buitons and controls of this camcorder.

Front view



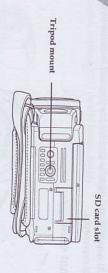
1.4.2 Top view



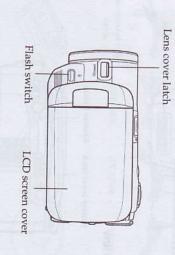
Microphone Zoom/Volume button



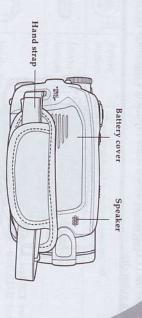
1.4.3 Bottom view



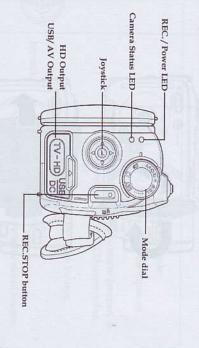
1.4.4 Right view



1.4.5 Left view

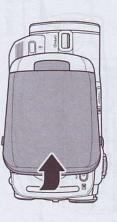


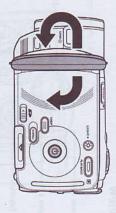
1.4.6 Back view

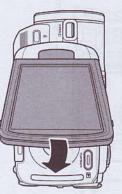


.4.7 Adjusting the LCD display

Hip and twist the LCD screen as shown while capturing a still image or recording a video clip.







See the table below for a description of each button's function.

			400		Kanta		MENU	(a)	Button
	Joystick		And		PUTE CLUMM BUY	Mode dial	Menu button	Power button	Name
 When the image is zoomed in, the LCD screen appears up/down direction keys. You may press the joystick to move the image. Then you may press the center joystick button to switch the moving directions (up/down ↔ left/right). 	In Camera Playback mode: 1. Move up/down to view the stored images.	Move left to adjust the white balance settings.	 Move right to enable the macro function. A icon appears on the LCD screen when enabled. 	 Move up/ down to adjust the exposure settings. 	• In Camcorder and Camera mode:	Use to turn Camcorder, Camera, and SET modes. In Camcorder mode, press the REC.STOP button to start and stop recording. In Camcorder Playback mode, press the REC.STOP to pause/restart playing.	Press to display main OSD menus.	Press and hold to turn power on/off.	Function

	DISP	PA AVALAN	Ö					
Zoom	Display button	Playback button	Shutter					
 In Camcorder and Camera modes, press left/right to zoom in and out. In Camera Playback mode: 1. Press right to zoom in your photo. 	Press once to turn off all OSD icons and press again to display all OSD icons off.	In Camcorder and Camera mode, press to enter playback mode.	 In Camera mode, press to take a photo. In Camcorder mode, you can also press to take a photo before recording a video clip. 	 In SET mode, press up and down to highlight menu items and press the center joystick button to confirm. 	 In the Thumbnail mode, move up and down to select a desired video clip and then press the center joystick button to show the video clip. 	 In Playing mode, move up to rewind a video clip and move down to fast-forward a video clip. 	 In Camcorder Playback mode: 1. Press up and down to view the stored video clips and press the center joystick button to play/ stop the video clips. 	 In the Thumbnail mode, move up and down to select the thumbnail images and then press the center joystick button to view the image in full screen mode.

	иант•	
SD card cover latch	LED flash button	
Slide the latch to open the SD card cover when you insert the SD card.	• In Camcorder and Camera modes, press the button to turn on/ off the increase light.	 Press left to show all stored files in a 3x2 matrix thumbnail view. In Camcorder Playback mode: Press left to show all stored video clips in a 3x2 matrix thumbnail view. Press left/ right to increase or decrease the volume of the video clip you are playing.

1.4.8 About the LEDs

The following table describes the camera LEDs:

Self-timer		Status	Camera	Kec.	Power/	LED
	Red Blinking Rapidly	Red Blinking	Red	Green Blinking	Green	Color
Self-timer is activated. 2 seconds self-timer remaining.	2 seconds self-timer remaining.	Self-timer is activated and flash in charge.	Camera busy	Recording	Power-on	Definition

2 Getting started

Read this section to learn how to start using the camcorder. This section covers basic functions such as switching on, inserting the battery and memory cards, and configuring preliminary settings. See later chapters for advanced functions.

2.1 Inserting an SD card

An SD card can be installed in the camcorder to provide additional storage space for still images, video clips, or other files.

 Open the LCD screen cover and move the SD card cover latch in the direction of the arrow to open the SD card compartment cover.



Insert an SD card, making sure the contacts are facing upwards.



10

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. Close the SD card compartment cover.



2.2 Inserting the batteries

This camcorder is designed to use a rechargeable Li-ion battery. Only use the batteries supplied or similar batteries recommended by the manufacturer or your dealer.

• Note:

Install the battery exactly as described here. Installing the battery incorrectly could cause damage to the camcorder and possibly start a fire.

 Slide the battery cover latch as shown and then the battery cover opens automatically.



... Insert the battery as shown.



13

Close the battery cover as shown.



2.3 Charging the battery

steps to charge your battery. You can charge the battery with the charging unit provided. Follow the below

 Insert the Li-ion battery into the charging bay. Connect one end of the power cord to the charging unit and then plug the other end to the wall outlet as shown.



2.4 Turning on/ off the camcorder

Press and hold the power button to turn the camcorder on/off.

2.5 Changing modes

The camcorder can operate in three modes, Camcorder, Camera, and SET. Move the mode dial to toggle different modes.



2.6 Before you start

Before you start using the camcorder, some basic settings such as date and time, languages and beep function need to be configured.

2.6.1 Setting the date and time

Turn on the camcorder, and move the mode dial to SET. Move the joystick up and down to highlight **Date / Time**. Press the center joystick button to confirm.



Move the joystick up and down to highlight each field and press the center joystick button to select a field.



- Adjust each value by moving the joystick up and down. Press the center joystick button to save your changes.
- t. Press the joystick down to highlight $\sqrt{}$ to leave the **Date/Time** menu.

4.

16

2.6.2 Setting the language

Turn on the camcorder, and move the mode dial to SET. Move the joystick up and down to highlight Language. Press the center joystick button to select it.



Move the joystick left and right to select the following languages: English, Traditional Chinese, Simplified Chinese, German, Italian, Spanish, French, Turkish, Portuguese, Dutch, Japanese, Russian, Korean, and Arabic. After the language is selected, press the center joystick button to confirm.



2.6.3 Setting the beep

Turn on the camcorder, and move the mode dial to SET. Move the
joystick up and down to highlight Beep. Press the center joystick
button to select it.



2. Move the joystick left and right to select X (Beep Off) or \forall (Beep On) and press the center joystick button to confirm.



2.7 Shoot/Playback video

2.7.1 Shooting a video clip

Turn on the camcorder and move the mode dial to Camcorder mode.

Camcorder mode -



- ... Use the LCD screen to frame the video.
- 3. Press the REC.STOP button to start recording.
- 4. Press the REC.STOP button again to stop recording.
- The video clip is automatically saved with a unique file name.

Notes:

- The maximum length of each video recording file is 2GR
- The high-resolution settings result in larger files, and therefore shorter length.

လ The LCD preview and the ratio of a still-image video resolution settings. See the following table: capture can vary depending on the different

Video resolution

HD (1280 x 720)

16:9 ratio

Preview

Taking pictures and focusing

:3 ratio

4:3 ratio

D1 (720 x 480)

CIF (352 x 240)

4. Before shooting a video clip, you can still take a photo in Camcorder mode.

2.7.2 Playing the video clip

In Camcorder mode, press the Playback button. The most recent file displays on the LCD screen.

Camcorder playback— mode indicator



- 2 Move the joystick up and down to select a desired video clip and press the center joystick button. The video clip starts playing.
- ç, Move the joystick up to rewind the video clip and move the joystick down to fast forward.
- 4 Press the REC. STOP button to pause the video playback. Press the REC. STOP button again to resume the video playback.
- adjust the volume. When viewing the video clip, move the **Zoom** button left or right to
- Press the center joystick button to stop playing.
- Press the Playback button again to return to Camcorder mode.

2.8 Taking/viewing pictures

2.8.1 Taking a still picture

Turn on the camcorder and move the Mode Dial to Camera mode.

- Use the LCD screen to frame the picture.
- Press the Shutter button to capture the image.
- The picture is automatically saved with an unique file name.

Viewing images

In Camera mode, press the Playback button. The most recent image displays on the LCD screen.

Camera -Playback mode



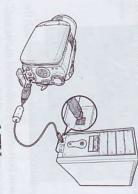
- Press the joystick up and down to scroll through the images.
- Move the **Zoom** button right to zoom in the picture. There are two to pan across the picture and press the center joystick button to direction keys appears on the LCD screen. You may use the joystick switch between the panning directions (up/down \leftrightarrow left/right).
- 4. Press the Zoom button left fully to view the thumbnails of all stored images and then press the joystick up and down to select an image.
- Press the center joystick button to view the image in full screen mode.
- Press the Playback button again to return to Camera mode.

22

2.9 Connecting to a computer

photos on a TV. Read this section to learn how to transfer files to a PC, show the video clips or

Connect the camcorder to a computer with the USB cable provided.



2.10 Connecting to a standard TV

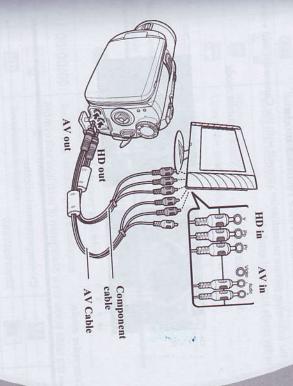
Connect the camcorder to a standard TV as shown with the AV cable provided.



2.11 Connecting to a HDTV

Read this section to learn how to show the video clips or photos on a HDTV. Connecting to a HDTV offers the high resolution for displaying the video clips

Connect the camcorder to a HD TV as shown with the component video cable and AV cable provided.



Using the camcorder

Read this section to learn how to use the camcorder.

3.1 Camcorder and voice recorder mode

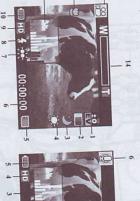
Use this mode to capture video clips or record voice and store them in an internal memory or on an SD card.

Camcorder and voice recorder mode

Use the following picture to familiarize yourself with the Camcorder and voice recorder mode icons and symbols.

Camcorder mode

Voice recorder mode





Camcorder mode:

See the table below for a description of each icon and symbol.

OI OI	4	ω	10	1
	***	(4)		0.
Memory status indicator SD card indicator Internal memory indicator	White balance indicator	Night mode indicator	Effect indicator	EV compensation indicator

27

26

	Zoom indicator	Camcorder mode indicator	Macro indicator	Histogram indicator	Battery indicator	Resolution indicator	[3] Force and auto flash indicator	LED flash light indicator	00:00:00 veriming.
--	----------------	--------------------------	-----------------	---------------------	-------------------	----------------------	------------------------------------	---------------------------	--------------------

Voice recorder mode:

each icon and symbol.

6	OI	4	w	2 0	
		B	E .	00:00:00	
Voice recorder mode indicator	Battery indicator	Resolution indicator	Histogram indicator	Remaining recording time indicator	Memory status indicator SD card indicator Internal memory indicator

3.1.2 Using the macro function

This function can capture subjects close to the lens. In macro mode, subjects can be as close as $5\ \mathrm{cm}$.

While in Camera, Camcorder or Voice recorder modes, move the joystick right to activate the macro function, and a icon displays on the LCD screen.

Move the joystick again to return to normal mode.

1.3 Using the zoom function

The camcorder is equipped with 5x optical zoom.

Move the **Zoom** button **right** to get closer to a subject.

Move the **Zoom** button **left** to move away from a subject.

3.1.4 Using the LED flash light

Use the LED flash light to illuminate subjects in dark environments.

Press the Light button to switch on the flash light and press again to switch it off.

3.1.5 Using the Flash module, auto and force

Use the auto and force flash module to illuminate subjects in dark environments when press the shutter button.

You may switch the auto and force flash module by toggling the Flash switch. The $\mbox{\it G}$ or $\mbox{\it A}\mbox{\it G}$ displays on your camcorder when activated.

3.1.6 Quick access controls

You can also make adjustments to exposure by pressing the joystick up and down.

In Camcorder and Camera modes, press the joystick up and down to adjust the EV compensation settings. Press the joystick right to choose white balance settings.

3.2 Camera mode

Use Camera mode to capture still pictures and store them in the internal memory or on an SD card.

3.2.1 Camera mode icons

Use the following picture to familiarize yourself with the Camera mode icons and symbols.



See the table below for a description of each icon and symbol.

7	6	5	4	3	2	ш
****		\$	*		÷	0003
LED flash light indicator	Memory status indicator : SD card indicator : Internal memory indicator	White balance indicator	Night mode indicator	Effect indicator	EV compensation indicator	Remaining number of photos

Force and auto flash indicator File size indicator Battery indicator Histogram indicator Macro indicator Self timer indicator Camera mode indicator Zoom indicator	15	14	13	12	11	10	9	00
Force and auto flash indicator File size indicator Battery indicator Histogram indicator Macro indicator Self timer indicator Camera mode indicator Zoom indicator		0		3			MB	8,28
The state of the s	Zoom indicator	Camera mode indicator	Self timer indicator	Macro indicator	Histogram indicator	Battery indicator	File size indicator	Force and auto flash indicator

3.2.2 Using the macro function

See section 3.1.2 "Using the macro function".

3.2.3 Using the zoom function

See section 3.1.3"Using the zoom function".

3.2.4 Using the LED flash module

See section 3.1.4 "Using the LED flash light".

.2.5 Using the flash module, auto and force

See section 3.1.5 "Using the Flash module, auto and force".

3.2.6 Quick access controls

See section 3.1.6 "Quick access controls".

3.3 Camcorder Playback mode

Use Camcorder Playback mode to review all the movie files stored in the

.3.1 Camcorder Playback mode icons

Refer to the following picture to familiarize yourself with the Camcorder Playback mode icons and symbols.

Camcorder playback mode Voice recorder playback mode **□** 100-0004 0001/0001-1

Camcorder mode:

See the table below for a description of each icon and symbol.

1	0001/0001	Displays the number of current camcorder / total number of recorded video clips
2	\$ 	Volume level
ω	COO	Memory status indicator : SD card indicator : Internal memory indicator
4	00:00:00	The length of every video clip
OI	\	Play/ Pause indicator
6		Battery status indicator
N		File protect indicator
00		Camcorder playback mode icon
9	100-0001	Displays the file number of the video clip

Voice Recorder mode:

see the table below for a description of each icon and symbol.

10	9	œ	7	6	CI	4	ω	12	-
100-0001) +;⊳/■	D /	00:00:00		Şamını	0001/0001
Displays the file number of the audio clip	Voice playback mode	File protect indicator	Battery status indicator	Indicates: press to Play/ Stop	Play/ Pause indicator	The length of every audio clip	Memory status indicator SD card indicator Im: Internal memory indicator	Volume level	Displays the number of current audio/ total number of recorded audio clips

3.4 Camera Playback mode

Use Camera Playback mode to review all the image files stored in the

Camera Playback mode icons

Refer to the following picture to familiarize yourself with the Camera Playback



See the table below for

6				100-0001		0001/0001	
DPOF (Digital Print Order Format) indicator	Playback mode icon	File protect indicator	Battery status indicator	Displays the file number of the sale	SD card indicator Internal memory indicator	Displays the number of current image / the total	E. S. Cach Icon and symbol.

3.5 Thumbnail mode

When in Camera Playback or Camcorder Playback modes, press the ZOOM

The most recent image /video clip displays on the screen. Press the **Zoom** button left to view **six** thumbnail images /video clips on the Turn on the camcorder and make sure it is in Camera Playback or





and press the center joystick button to view the image or playback the Press the joystick up and down to highlight an image, or a video clip,

Press the ZOOM button left to return to thumbnail view.

Using the menus

advanced features. Read this section to learn how to configure the camcorder settings and use the

4.1 Camcorder menu

options menu. When in Camcorder mode, press the Menu button to show the camcorder

4,1.1. White balance

for different lighting conditions. When white balance is set to Auto, the camcorder automatically compensates Use this option to correct color difference for different lighting conditions.

- Turn the camcorder on and ensure it is in Camcorder mode.
- Press the Menu button and move the joystick up and down to highlight the White Balance option. Press the center joystick button
- çu Tungsten, or Fluorescent. Press the center joystick button to confirm. Move the joystick left and right to select Auto, Sunny, Cloudy, to display the submenu.





Press the Menu button again to exit the menu.

4.1.2. Video resolution

Use the resolution option to determine the resolution of the captured video. The larger screen size requires more memory storage space.

- Turn the camcorder on and ensure it is in Camcorder mode.
- display the submenu. highlight the Resolution option. Press the center joystick button to Press the Menu button and move the joystick up and down to
- Press the joystick left and right to select CIF, D1 or HD. Press the center joystick button to confirm.





- Press the Menu button again to exit the menu.
- Notes:
- 1. The LCD displays the 16:9 ratio while setting as
- 2. The LCD displays the 4.3 ratio while setting as D1 HD video resolution.
- or CIF video resolution.

4.1.3. Color effect

The camcorder can capture standard color images, black and white images, or sepia tone to give an old-fashioned look.

- Turn the camcorder on and ensure it is in Camcorder mode.
- Press the **Menu** button and move the joystick up and down to highlight the **Effect** option. Press the center joystick button to display the submenu.
- Move the joystick left and right to select Color, B&W or Sepia. Press the center joystick button to confirm.





Press the Menu button again to exit the menu.

4.1.4. Night mode

Use this function to shoot a better video clip quality in dark environments

- Turn the camcorder on and ensure it is in Camcorder mode.
- Press the **Menu** button and move the joystick up and down to highlight the **Night Mode** option. Press the center joystick button to display the submenu.

2

Move the joystick left and right to select Off or Night mode options Press the center joystick button to confirm.





4. Press the Menu button again to exit the menu.

4.1.5. Capture mode

Use this function to record sound or image.

- Turn the camcorder on and ensure it is in Camcorder mode.
- Press the **Menu** button and move the joystick up and down to highlight the **Capture Mode** option. Press the center joystick button to display the submenu.
- Move the joystick left and right to select Voice recorder or Video options. Press the center joystick button to confirm.





4. Press the Menu button again to exit the menu.

D) Select

D-OK

4.2 Camcorder playback menu

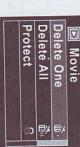
Use the playback menu to manage the files stored in the internal memory or on the SD card.

4.2.1 Delete

Use this function to delete files.

- 1. Turn the camcorder on and ensure it is in Camcorder mode. Press the Playback button and then press the Menu button to display the Camcorder Playback menu.
- Move the joystick up and down to select Delete One or Delete All options.

If you select **Delete One**, the playback screen appears again. Move the joystick up and down to locate the file you want to delete and press the center joystick button to confirm.



D) Select

D-OK



If you select Delete AII, press the center joystick button to display the submenu.



3. Move the joystick left and right to select X or $\sqrt{\ }$ and press the center joystick button to delete.



Press the Menu button again to exit the menu.

· Note:

Once deleted, files cannot be recovered so make sure you have a backup before you delete. Files that have been protected will not be deleted. You have to unlock the files first before deleting them.

4.2.2 Protect

Use this function to lock files to prevent accidental deletion.

- I. Turn the camcorder on and ensure it is in Camcorder mode. Press the Playback button and then press the Menu button to display Camcorder Playback menu.
- 2. Move the joystick up and down to select the **Protect** option. Then playback screen appears again. Move the joystick to locate the file you want to protect and press the center joystick button to confirm. lock a icon is displayed to show that the file is protected.





Press the Menu button again to exit the menu.

• Note:

To unlock a file, repeat the above steps. The lock icon disappears when the file is unlocked.

43

4.3 Camera menu

In Camera mode, press the Menu button to show the Camera Options menu

3.1 White balance

Use this option to correct color difference due to lighting conditions.

- . Turn the camcorder on and ensure it is in Camera mode.
- Press the **Menu** button and move the joystick up and down to highlight the **White Balance** option. Press the center joystick button to display the submenu.
- Move the joystick left and right to select Auto, Sunny, Cloudy,
 Tungsten, or Fluorescent. Press the center joystick button to confirm





4. Press the Menu button again to exit the menu

D) Select

D-OK

3.2 Resolution

Use this option to set the size of the captured image. Larger images contain more detail and therefore use more memory space.

- Turn the camcorder on and ensure it is in Camera mode.
- Press the **Menu** button and move the joystick up and down to highlight the **Resolution** option. Press the center joystick button to display the submenu.
- Move the joystick left and right to select from 3M, 5Mor 8M. Press the center joystick button to confirm.





4. Press the Menu button again to exit the menu.

Color effect

sepia tone to give an old-fashioned look. The camcorder can capture standard color images, black and white images, or

- Turn the camcorder on and ensure it is in Camera mode.
- highlight the Effect option. Press the center joystick button to display Press the Menu button and move the joystick up and down to

3

Move the joystick left and right to select Color, B & W, or Sepia. Press the center joystick button to confirm.





Press the Menu button again to exit the menu.

D-OK

4.3.4 Night mode

Use this function to shoot a better video clip quality in dark environments.

- Turn the camcorder on and ensure it is in Camcorder mode.
- highlight the Night Mode option. Press the center joystick button to Press the Menu button and move the joystick up and down to
- Move the joystick left and right to select Off or Night mode option. Press the center joystick button to confirm.





Press the Menu button again to exit the menu.

3.5 Self timer

Use the self timer function to take a photo of yourself.

- Turn the camcorder on and ensure it is in Camera mode.
- Press the **Menu** button and move the joystick up and down to highlight the **Selftimer** option. Press the center joystick button to display the submenu.
- Move the joystick left and right to select Off, 5 seconds, or 10 seconds options. Press the center joystick button to confirm.





Press the Menu button again to exit the menu.

D) Select

D-OK

4.4 Camera playback menu

1.4.1 Delete

Use this function to delete files.

- Turn the camcorder on and ensure it is in Camera mode. Press the Playback button and then press the Menu button to display the Camera Playback menu.
- Move the joystick up and down to select the Delete One or Delete All options.

If you select **Delete One**, the playback screen appears again. Move the joystick up and down to locate the file you want to delete and press the center joystick button to confirm.





If you select Delete All, press the center joystick button to display the



S center joystick button to delete. Move the joystick left and right to select X or V and then press the



Press the Menu button again to exit the menu

• Note:

Once deleted, files cannot be recovered so make sure you have a backup before you delete, Files have to unlock the files first before deleting them. that have been protected will not be deleted. You

4.4.2 Protect

Use this function to protect files.

- Turn the camcorder on and ensure it is in Camera mode. Press the Playback button and then press the Menu button to display the Camera Playback menu.
- 2 Move the joystick up and down to select the Protect option. Then to confirm. A lock \square icon is displayed to show that the file is locate the file you want to protect and press the center joystick button playback screen appears again. Press the joystick up and down to





Press the Menu button again to exit the menu.

icon disappears when the file is unlocked. To unlock a file, repeat the above steps. The 😧 lock

.4.3 Slide show

The camcorder includes a slide show function, which displays each image in turn with a regular interval between pictures.

- Turn the camcorder on and ensure it is in Camera mode. Press the Playback button and then press the Menu button to display the Camera Playback menu.
- Move the joystick up and down to select the Autoplay option and press the center joystick button. The images are displayed automatically.





Press the Menu button to stop the slide show.

4.4.4 DPOF

Use the DPOF (Digital Print Order Format) function to tag pictures stored in the memory card with print information.

- Turn the camcorder on and ensure it is in Camera mode. Press the Playback button and then press the Menu button to display the Camera Playback menu.
- Move the joystick up and down to highlight the DPOF option. Press the center joystick button to display the submenu.



3. Move the joystick left and right to select X or √. Press the center joystick button to confirm and then press the **Menu** button. A **POPOF** icon is displayed to show that the file is ordered to print.





- Press the Playback button again to exit the image.
- Notes:
- 1. A memory card is required for DPOF function.
- 2. If DPOF is set, all photos are ordered to print.

4.5 System menu

The system menu is used to configure miscellaneous camera functions,

.5.1 Setting the beep

See section 2.6.3 "Setting the Beep".

5.2 Histogram Mode

Use this function to display a histogram graph on LCD screen. This function can help you to capture a better photo/video clip.

- Turn on the camcorder and switch to SET mode.
- Move the joystick up and down to highlight the **Histogram** option. Press the center joystick button to display the submenu.
- Move the joystick left and right to select Histogram or Off options.
 Press the center joystick button to confirm.





4.5.3 Auto power off

Use this function to switch the camcorder off automatically after a period of inactivity for power saving.

- . Turn on the camcorder and switch to SET mode.
- Move the joystick up and down to highlight the **Auto Power Off** option. Press the center joystick button to display the submenu.
- Move the joystick left and right to select Off, 1 minute, or 5 minutes Press the center joystick button to confirm.





55

.5.4 TV standard

Use the TV option to set the TV system for the area.

- Turn on the camcorder and switch to SET mode.
- Move the joystick up and down to highlight the TV standard option. Press the center joystick button to display the submenu.
- Move the joystick left and right to select NTSC or PAL, and press the center joystick button to confirm.



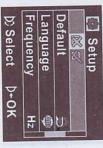


.5.5 Format

Use this function to format the current storage media. This format action will delete everything on the media.

- Turn on the camcorder and switch to SET mode.
- Move the joystick up and down to highlight the Format option. Press the center joystick button to display the submenu.
- 3. Move the joystick left and right to select X or $\sqrt{\ }$ and press the center joystick button to confirm.





The current media (memory card or internal memory) is formatted.

.5.6 Default

Use this option to reset all settings to the default settings.

- Turn on the camcorder and switch to SET mode.
- Move the joystick up and down to highlight the **Default** option. Press the center joystick button to display the submenu.
- Move the joystick left and right to select X or √, and press the center joystick button to confirm.





4.5.7 Language

See section 2.6.2 "Setting the language"

4.5.8 Frequency

Use the Frequency option to set the frequency system for your area. To set the frequency:

- Turn on the camcorder and switch to SET mode.
- Move the joystick up and down to highlight the **Frequency** option. Press the center joystick button to display the submenu.
- Move the joystick left and right to select 50 Hz or 60 Hz. Press the center joystick button to confirm.





1.5.9 Date/time

See section 2.6.1 "Setting the date and time".

Installing the software and drivers

Read this section to learn how to install the software for the camera.

5.1 Presto! Video Works

Presto! Video Works is an advanced software application for editing video. To install Presto! Video Works:

- . Insert the supplied CD into the CD-ROM drive.
- . If the CD-ROM does not automatically boot, use Windows Explorer to execute the InstallMgr.exe file in the root directory.

The following screen is displayed.



-Install button

. Click the **Install** button to begin the installation process and follow the instructions on-screen.

More information about Presto! Video Works can be found in the help files when the application is started.

5.2 Presto! Mr. Photo

Presto! Mr. Photo is an advanced photo editing software application. To install Presto! Mr. Photo:

- Insert the supplied CD into the CD-ROM drive.
- If the CD-ROM does not automatically boot, use Windows Explorer to execute the **InstallMgr.exe** file in the root directory.

The following screen is displayed.



Install button

Click the **Install** button to begin the installation process and follow the instructions on-screen.

More information about Presto! Mr. Photo can be found in the help files when the application is started.

5.3 Quick Time

Quick Time is an easy-to-use application for playing the video clips stored in To install the Quick Time:

- Insert the supplied CD into the CD-ROM drive.
- 2. If the CD-Rom doesn't automatically boot, use Window Explore to execute the InstalMgr.exe file in the root directory.

 The following screen is displayed:



- Install button

 Click the Install button to begin the installation process and follow the instructions on-screen.

More information about Quick Time can be found in the help files when the

Appendix

Specifications

/ideo clips	е		Color effects	Sensor sensitivity	Storage media	Active pixels	Imaging sensor	General
Format: H.264 (MOV) Resolution: CIF, D1, HD (1280 x 720 / 30 ftps) Quality: Fine; Normal Frame Rate: Max. 30fps.	Normal: 45cm ~ inf. Macro: 5cm ~ 45cm	5X Optical zoom lens Wide: F/3.2, f=6.26mm Tele: F/6.8, f=30.75mm	Color/B&W/Sepia	Auto	Built-in 32 MB flash memory (available memory for image storage is approx. 9 MB) SD Card (Support SDHC Class 6)	5.0 Megapixel	1/2.5" CMOS 5.0 Megapixel sensor	

$1 \sim 1/8000 \mathrm{sec}$.	Shutter
NTSC/PAL/ Component output	TV out format
Camera: USB 2.0 (high speed) MSDC: USB 2.0 (high speed)	PC interface
Off, 5, 10 seconds	Self-timer
-2.0 EV~+2.0 EV	EV compensation
Auto/Sunny/Cloudy/Tungsten/ Fluorescent	White balance
Effective Range: 1m ~ 1.5m Mode: Auto / Off / On	Strobe (Camera)
Mode: 0.5m ~ 1m Effective Range: On / Off	LED Flash (Video)
3.0" TFT (960 x 240 pixels)	TFT Monitor
Yes	Audio Video
Camcorder: 5X Optical Zoom Camera: 5X optical zoom Still Image Playback: Digital Zoom Max. 8X	Zoom
Formats: JPEG (DPOF, EXIF) Resolution: 3MP, 5MP, 8MP (Firmware interpolation) Quality: Auto	Still image
	General

General	
Auto power off	Off, 1 min., 5 min options.
Power supply	Power supply Li-Ion battery NP-120 battery
Dimension	57 (W) × 70 (H) × 129(D) mm
Weight	Approx. 292+-5g (without batteries)

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Troubleshooting

Problem	Possible Cause	Solution
Cannot turn on the camcorder.	The batteries are not inserted correctly. The batteries have no power.	 Insert the batteries correctly. (See 2.2 Inserting the batteries.) Please charge the battery. (See 2.3 Charging the battery.)
The camera suddenly turns off.	The auto power off function was enabled. The camera is running out of battery power.	 Turn the power on again. Please charge the battery. (See 2.3 Charging the battery.)
The captured image is not stored in memory.	Before the image is saved the power has been cut off.	When battery indicator turns empty (without green bars), replace the battery immediately.
The camera turns off when capturing image using self-timer.	The camera is running out of battery power.	Please charge the battery. (see 2.3 Charging the battery)
The image is dut of focus.	The subject is beyond focus	Please take a picture within the available

	All buttons are inactive.	used.	Memory card cannot be	
The state of the s	Short circuit occurred when connecting the camera with other devices.	The memory card contains non-DCF images taken by other cameras.	The memory card is protected.	range.
	Remove the batteries from the camera and insert again.	Format the memory card. (See 4.5.5 Format.) Before formatting the card, ensure you back up the files.	Unlock the memory card.	focus range and choose normal or macro mode. (See 3.2.2 Using the macro function).