

User manual

Microflex 102



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This manual is designed to assist you in using your new AgfaPhoto digital video camera. All information presented is as accurate as possible but is subject to change without notice.

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Federal Communications Commission (FCC) Compliance

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 distance between the equipment and the receiver.
- Connect the equipment to 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.

Warning: A shielded-type power cord is required in order to meet FCC emission limits and to prevent interference to radio and television reception. Use only a shielded cable to connect I/O devices to this equipment. Any changes or modifications not expressly approved by the manufacturer may void your warranty and service agreement.

Declaration of Conformity

This device complies with Part 15 of the FCC rules. Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

Disposal of Waste Equipment by Users in Private Households in the European Union



This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it in to a designated collection point for the recycling of waste electrical and electronic equipment.

The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Precautions

General precautions

- Do not try to disassemble the product yourself, which may damage the product or cause electric shock.
- Keep the camera away from children and animals to prevent them from swallowing the batteries or small accessories.
- Stop using the camera if any kind of liquid or foreign object enters it. If this happens, power off the camera and contact your dealer for help.
- Do not operate the camera with wet hands: this may cause electric shock.
- The camera may be damaged in a high-temperature environment. This camera is designed for use in a temperature range of between 0°C and 40°C (32°F and 104°F).
- Do not use or store the product in a dusty, dirty or sandy place or in an area that is close to air-conditioning or heaters.
- It is normal that the temperature of the camera body rises if the camera is in operation for a long period of time.
- Do not open the battery cover whilst an image is being recorded. Doing so will not only make storage of the current image impossible, but it may also corrupt other image data already stored.
- Before using this camera for important occasions (such as weddings or overseas trips), be sure to test it in order to ensure proper operation.

Power Supply

- Be sure to use the type of battery or battery charger that is suitable for this camera. Using any other type of battery or battery charger may damage the equipment and render the guarantee void.
- Make sure the batteries are placed in the correct position. Error in the orientation of batteries may damage this product and result in fire.
- Remove the batteries to avoid leakage of battery fluid when the camera is not to be used for a long period of time.
- Remove a dropped or damaged battery immediately to avoid leakage of battery fluid or abnormal expansion.
- This camera uses either a lithium battery or 2 AA batteries. We recommend the use of a lithium battery for a longer operating time.

1 General Introduction

Please read this chapter carefully to understand the features and functions of this AgfaPhoto Microflex 102. This chapter also includes a description of system requirements, package contents and hardware components.

1.1 System Requirements

In order to get the most out of your camera, your computer must meet the following system requirements:

- Windows® Vista / XP / 2000 operating system or Mac OS 10.3 ~10.4
- Intel® Pentium 4 2.8 GHz CPU or equivalent
- Memory: at least 512 MB RAM
- Standard USB 1.1 connection port or higher
- Display adapter with min. 64MB

Note:

USB 1.1 allows you to transmit files to the host, but using a USB 2.0 connection port will increase transmission speed greatly.

1.2 Features

This AgfaPhoto camera has many features and functions including:

- 5 Megapixel CMOS
- High-resolution camera (maximum 16 million pixels)
- 3.0-inch touch screen
- 2 SD card slots
- Slow Motion Playback
- Still image capture from a movie
- Still image capture in Video Mode
- Infrared Night Vision

In addition, this video camera has a USB mass storage hard disk, and SD card reader.

1.3 Accessories

Please check the contents of your camera package. It should contain:

① Digital video camera



② Pouch



③ Quick guide



④ Software CD



⑤ HDMI cable



⑥ Video cable



⑦ USB cable



⑧ Battery charger



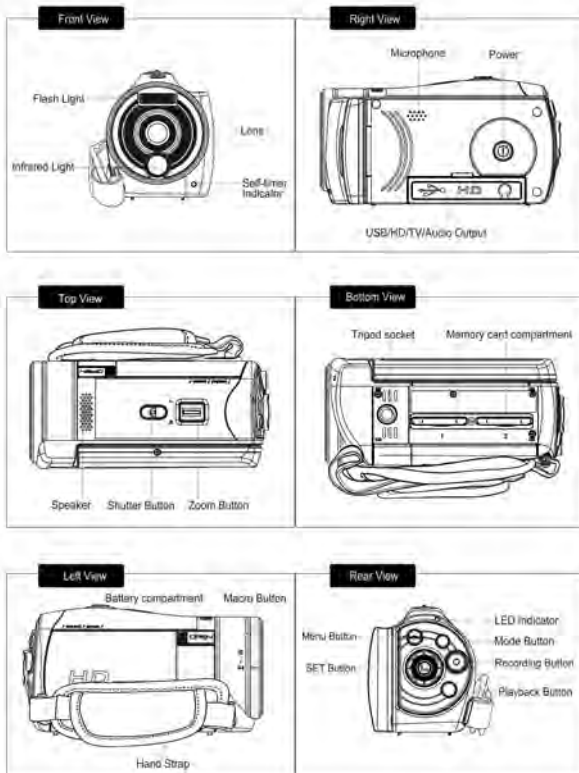
⑨ Power cord



⑩ Lithium battery

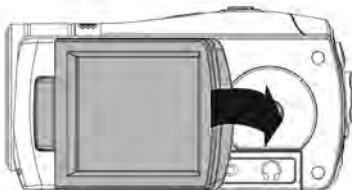
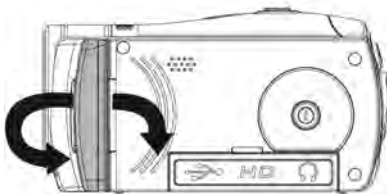
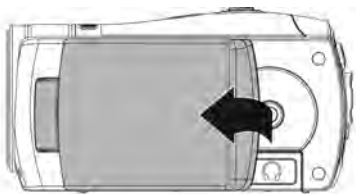


1.4 Camera View



1.5 Adjusting the LCD Display

Before starting to take pictures or record movie clips, rotate the LCD Display according to the illustrations below.



2 Getting Started

Expand your camera's storage by using SD or SDHC memory cards.

2.1 Inserting an SD Card

Insert an SD card with the label facing upwards



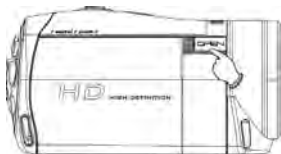
Note: Do not remove or insert an SD card when the camera is powered on to avoid damaging files.

2.2 Inserting the Batteries




Use only the batteries provided or recommended by the manufacturer or dealer.

Note: Insert the batteries properly according to the description below. Inserting the batteries incorrectly could result in non-repairable damage to the camera.

How to open the battery cover.



Battery Status Indicator:

	Battery full
	Battery half full
	Battery empty

Insert the Lithium-ion battery / 2 AA batteries according to the illustration.

1



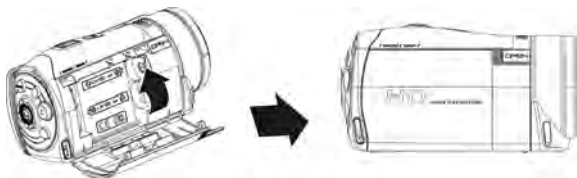
2



***Important:**

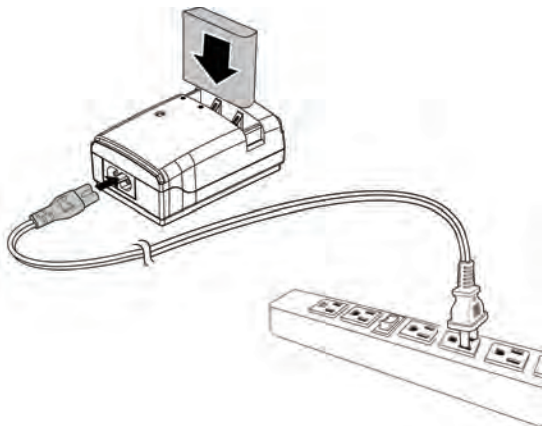
Use the supplied lithium-ion battery when using the Infrared Night Vision function. This function is not supported when using AA batteries.

1. Close the battery cover.



2.3 Charging the Battery

You can use the supplied battery charger to charge the lithium battery.

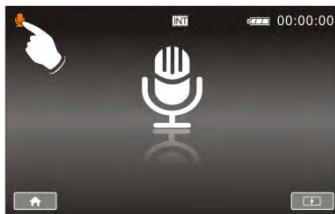
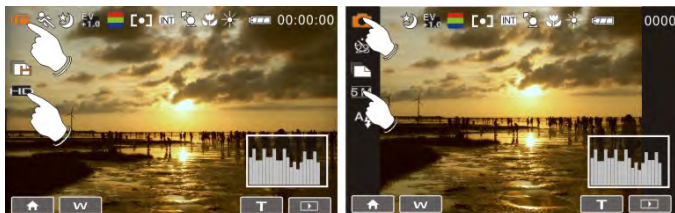


2.4 Using the Touchscreen

2.4.1 Single Touch

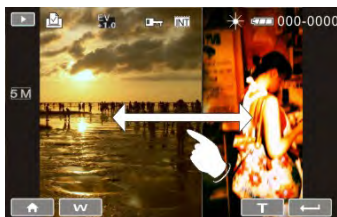
The single touch function acts as a hotkey menu to adjust basic settings directly on the display:

1. Mode change to DV = Digital Video, DSC = Digital Still Camera and Voice Recording
2. Resolution change to FULL HD, HD, WVGA, WEB or 16M, 8M, 5M, 3M



2.4.2 Scroll

Scroll right or left to view the previous file or next file in Playback Mode.














2.4.3 Rotate

In Playback Mode you can rotate the image in 90° steps as shown below.



2.5 Buttons & Functions

Description	Button	Function
Power Button		Press the Power Button to turn the camera ON/OFF.
Menu Button		Press the Menu Button to display the main OSD (On Screen Display) menu.
Mode Button		<p>There are three operating Modes for the camera:</p> <ul style="list-style-type: none">• DV Mode• DSC Mode and• Voice Recording Mode. <p>Press the Mode Button to change to the different Modes.</p>
SET (Menu) Button		Press to confirm the different function settings
Playback Button		Press the Playback Button to enter Playback Mode and play back the last file

<p>4-Way Direction Button</p>		<p>The 4-Way Direction Button allows you to access the various menus available from the OSD.</p> <ul style="list-style-type: none"> • In DSC Mode: press the 4-Way Navigation Button UP to turn the flash light Mode options on/off: off, auto, fill-in; • In DV Mode: press the 4-Way Navigation Button UP to turn the Infrared Night Vision on/off • In Playback: press the 4-Way Navigation Button DOWN to delete a file.
<p>Recording Button</p>		<p>Press the Recording Button to take movie clips and for voice recording. Press the Recording Button again to stop recording.</p>
<p>Shutter Button</p>		<p>Press the Shutter Button to take still images.</p>
<p>Zoom Button</p>		<p>This camera is equipped with a 4X digital zoom function. Please note that the 4x digital zoom is supported in 720P or lower video resolutions. Press the Zoom Button Right (T) to zoom into the subject, or Left (W) to zoom out from the subject</p>
<p>Macro Button</p>		<p>The Macro function allows you to shoot very close-up images of an object. In the Macro Mode, you can zoom in the focusing distance to 20 cm (normal focus range: 1.2m ~ infinity). The  icon will be displayed</p>

		on the LCD screen when the Macro Mode is selected.
--	--	----------------------------------------------------

2.6 About LED Indicators

The following table describes the meaning of the camera's LED indicators:

	Indicator Color	Definition
Power	Green	Powering on.
	Red blinking	Flash charging.
Recording	Red blinking	Recording
Self-timer	Red blinking	Start of Self-timer.

2.7 Initial Settings Before Use


2.7.1 Setting the Date and Time

1. When powering on for the first time, set the camera to the SET Mode. Select the date and time by moving the Up/Down Button or touching the screen to select.



2. Press the 4-Way Direction Button left/right to highlight each column. Then press up/down or touch the screen to select the column.



3. Press the 4-Way Direction Button up/down to adjust the value. Press the SET Button to save the value you have changed or touch the screen to adjust the Year, Date and Time before pressing the Return Button () to save the value and exit the setting.




3 LCD Display Information














The high resolution 3.0" touchscreen display indicates all the important information on the camera settings as well as the visual image of your photo or video.



3.1 In Movie Clip Mode

The following illustration shows the LCD display layout and icon description in the DV Mode (📹).




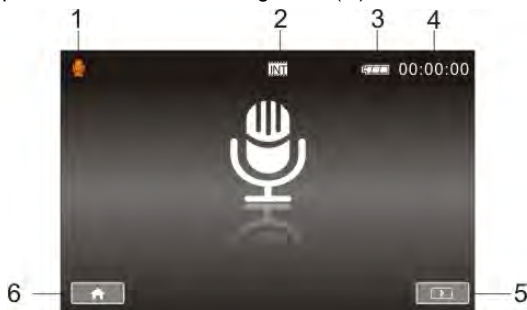
1		Movie Clip recording icon
2		Motion Detection
3		Night Mode






4		Exposure compensation
5		Color effect settings
6		Metering settings
7		Current memory for recording ▶1 : SD card 1 ▶2 : SD card 2 INT : Internal memory (appears when there is no SD card inserted)
8		Compensation indicator
9		Indicates macro is enabled
10		White balance settings
11		Battery level
12	00:00:00	Remaining recording time
13		Histogram indicator (graphical brightness distribution)
14		Playback Mode
15		Zoom
16		Indicates a menu button
17		Infrared Button (on, off)



18		Current resolution
19		Multi shot function

3.2 In Voice Recording Mode

The following illustration shows the LCD display layout and icon description in the Voice Recording Mode ()









1		Voice Recording Mode
2		Current memory for recording  : SD card 1  : SD card 2 INT : Internal memory (displayed when there is no SD card inserted)
3		Battery level
4	00:00:00	Play time















5		Playback Button
6		Menu Button

3.3 In DSC Mode

The following illustration shows the LCD display layout and icon description in the DSC Mode (📷).



1		DSC Mode indicator
2		Night Mode (captures images with night scenery background).
3		EV compensation
4		Color Effect
5		Metering settings
6		Current memory for recording ▶ 1 : SD card 1 indicator

		 : SD card 2 indicator  : Internal memory (displayed when there is no SD card inserted)
7		Backlight compensation
8		Indicates macro is enabled
9		White balance settings
10		Battery level
11	0000	Remaining shots available.
12		Histogram (graphical brightness distribution)
13		Playback Button
14		Zoom
15		Menu Button
16		Flash settings (off, auto, fill-in)
17		Resolution settings
18		Continuous Shot Mode
19		Self-timer indicator

4 Using the Camera



4.1 Recording Movie Clips

1. Set the camera to DV Mode: this is the default setting after you power on the camera.
2. Press the Recording Button to start and stop recording.
3. The camera will store the video clip automatically.

DV Mode Indicator



4. The LCD screen ratio will be different depending on the video clip resolution setting. Please refer to the table shown below:

Video Resolution	Preview
FULL HD (1920 x 1080) HD (1280 x 720) WVGA (848 x 480)	<p data-bbox="657 247 771 276">16:9 ratio</p> 
WEB (320 x 240)	<p data-bbox="663 516 766 546">4:3 ratio</p> 

4.2 Capturing a Still Image from a Movie

You can save a selected frame from a recorded movie as a still image. Select the video clip and press the Shutter Button at the frame you want.

1. Set the camera to DV Mode
2. Press the Recording Button to start or stop video recording.
3. While recording videos, still images can be taken by pressing the shutter Button.
4. The camera will store the image automatically.

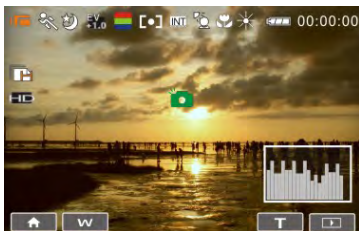






Image resolution	
 FULL HD	1920 x 1080
 HD	1280 x 720
 WVGA	848 x 480
 WEB	320 x 240

Note:

The image size is fixed depending on the image quality of the video clip.





1. When setting to FULL HD, HD or WVGA resolution, the LCD display aspect ratio is 16:9.
2. When setting to WEB video resolution, the LCD display aspect ratio is 4:3.

4.3 Capturing a Still Image in Video Mode

You can save a selected frame in Video Mode as a still image. Press the Shutter Button at the preview image frame you want to save. You can also do this while recording a video clip.

1. Press the Shutter Button in the movie clip during playback.
2. The camera will store the image automatically.



Image resolution	
 FULL HD	1920 x 1080
 HD	1280 x 720
 WVGA	848 x 480
 WEB	320 x 240

Note:

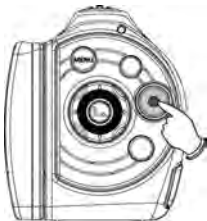
The image size is fixed depending on the image quality of the video clip.

1. When setting to FULL HD, HD or WVGA resolution, the LCD display aspect ratio is 16:9.
2. When setting to WEB video resolution, the LCD display aspect ratio is 4:3.

4.4 Voice Recording

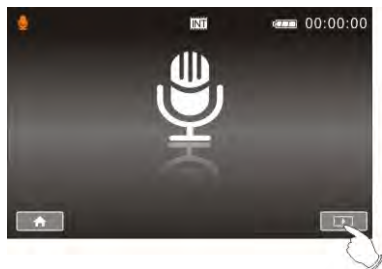
1. Turn the camera on.
2. Press the MODE Button to enter the Voice Recording Mode or touch the screen hotkey.
3. Press the Recording Button to start or stop Voice Recording.

Voice Recording Mode →

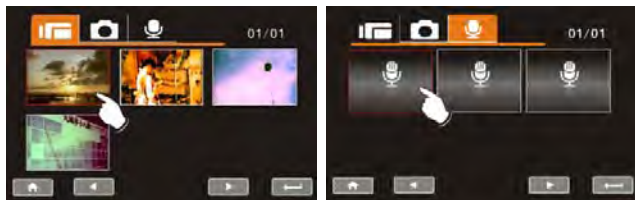


4.5 Movie Clip / Voice Clip Playback

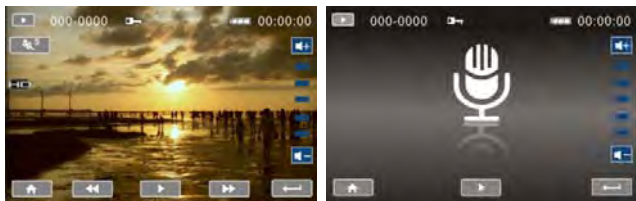
1. In Movie/Voice Recording Mode, press the Playback Button to display recently stored files on the LCD screen.



2. Press the 4-Way Direction Button up/down or left/right to view the stored file. Press the SET Button to play back or touch the screen to select Playback of the file.



3. To pause Playback of the file, press the Recording Button or touch the (▶/⏸) screen icon.



4. Press the Playback Button to return to Movie/Voice Recording Mode.
5. You can also play back the movie clip at a different speed by touching the (⏮/⏭) screen icon ON/OFF.



Playback speed is as below when Slow Motion is **“OFF”** :



Rewind	2X play	Forward
Rewind	4X play	Forward
Rewind	8X play	Forward
Rewind	16X play	Forward



Playback speed is as below when Slow Motion is **“ON”**:



Rewind	1/2X play	Forward
Rewind	1/4X play	Forward
Rewind	1/8X play	Forward
Rewind	1/16X play	Forward



4.6 Taking / Playing Back Photos

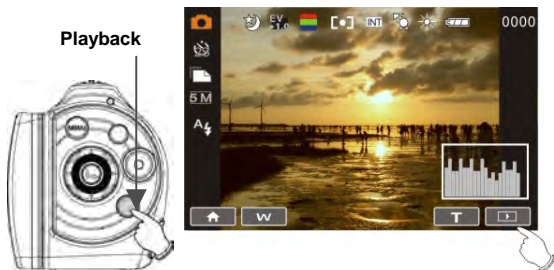
4.6.1 Taking Photos

1. Set the camera to the DSC Mode.
2. Press the Shutter Button to capture images.

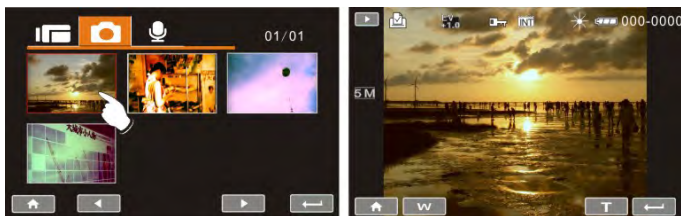


4.6.2 Playing Back Photos

1. Set the camera to the DSC Mode and press the Playback Button to display the images on the LCD screen.



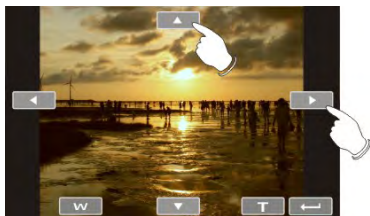
2. Press the 4-Way Direction Button up/down or left/right to view the saved files. Press the SET Button to replay or touch the screen to play back.



3. Press the SET Button or touch the screen to return to full screen to view images.



4. Touch the (**T** or **W**) panel icon to enlarge or shrink the image. You can then move the image up/down or left/right.



5. Press the Playback Button again to return to the DSC Mode.









5 LCD Display Information

5.1 Movie Clip Recording Mode

Please refer to the following table showing the description of each icon and symbol.














1		Indicates current Mode - Playback Mode
2	000-0000	Indicates folder and file number
3		Indicates protected file
4		Memory Status indicator : SD card 1 indicator; : SD card 2 indicator : Internal memory indicator (displayed when there is no SD card)
5		Indicates battery level
6	00:00:00	Indicates played time

7		Sound volume touch icons
8		Return Button
9		Indicates fast forward Playback Button
10		Playback/Pause Button
11		Fast rewind Playback Button
12		Menu Button
13		Resolution indicator
14		Slow motion Playback

5.2 Voice Recording Mode

Please refer to the following table showing the description of each icon and symbol.










1		Playback Mode icon
2	000-0000	Indicates folder and file number
3		Indicates protected file
4		Memory Status indicator  1 : SD card 1 indicator;  2 : SD card 2 indicator  INT : Internal memory indicator (displayed when there is no SD card)
5		Indicates battery level
6	00:00:00	Indicates played time
7		Sound volume touch icons
8		Return Button
9		Playback/Pause Button
10		Menu Button

5.3 DSC Playback Mode

Please refer to the following illustration to familiarize yourself with icons and symbols of the DSC Playback Mode.



1		Image Playback Mode icon
2		DPOF (Digital Print Order Format) indicator; the files is marked for printing
3		Exposure compensation indicator
4		Indicates the protected file
5		Memory Status indicator : SD card 1 indicator; : SD card 2 indicator : Internal memory indicator (displayed when there is no SD card)

6		Displays white balance settings
7		Indicates battery level
8	000-0000	Indicates file number
9		Return Button
10		Zoom- In indicator
11		Zoom- Out indicator
12		Menu Button
13		Resolution indicator

6 Menu Mode

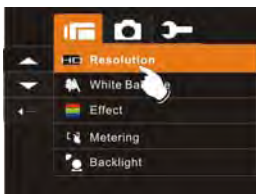
When a menu screen is displayed, the MENU Button is used to move through the highlighted items in the submenu or to select a menu item.



6.1 Menu Options in Movie Clip Mode

Set your camera to Movie Clip Mode and press the MENU Button to show the Movie options menu.

6.1.1 Video Clip Resolution

1. Set the camera to the DV Mode.
2. Press the MENU Button and press the 4-Way Direction Button to highlight the Resolution item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select FULL HD, HD, WVGA or WEB. Press the SET Button to confirm or touch the screen to select the item.



 FULL HD	1920 x 1080
 HD	1280 x 720

VVGA WVGA	848 x 480
WEB WEB	320 x 240

Note:






1. When setting to FULL HD, HD or WVGA resolution, the LCD display aspect ratio is 16:9.
2. When setting to WEB video resolution, the LCD display aspect ratio is 4:3.

6.1.2 White Balance

The White Balance function allows you to adjust the camera setting according to the white light.

1. Turn on the camera and make sure it is in the DV Mode.
2. Press the SET MENU Button and move the 4-Way Direction Button to highlight the White Balance item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select Auto, Daylight, Cloudy, Fluorescent or Tungsten. Press the SET Button to confirm or touch the screen to select the item.

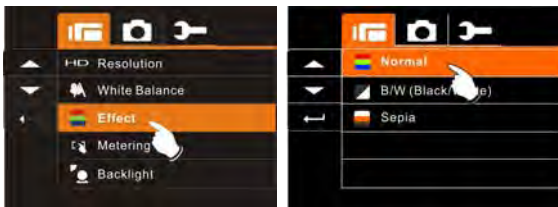





 Auto	The camera automatically adjusts the white balance.
 Daylight	This setting is suitable for outdoor recording in daylight.
 Cloudy	This setting is suitable for recording in cloudy or shady environments.
 Fluorescent	This setting is suitable for indoors with fluorescent lamp lighting, or environments with high color temperatures.
 Tungsten	This setting is suitable for indoors with incandescent lamp lighting, or environments with low color temperatures.

6.1.3 Effect

The effect function lets you record movies and apply different colors or tones for a more artistic effect.

1. Turn on the camera and make sure it is in the DV Mode.
2. Press the MENU Button and press the 4-Way Direction Button to highlight the Effect item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select Normal, B/W or Sepia. Press the SET Button to confirm or touch the screen to select the item.

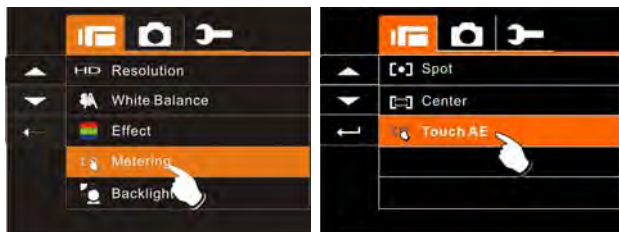





 Normal	Make recordings in nature colors
 B&W	Make recordings in B&W (Black and White) colors
 Sepia	Make recordings in Sepia-toned colors

6.1.4 Metering

The Metering function lets you select the area of the subject or frame by which the camera measures the light to record movies.

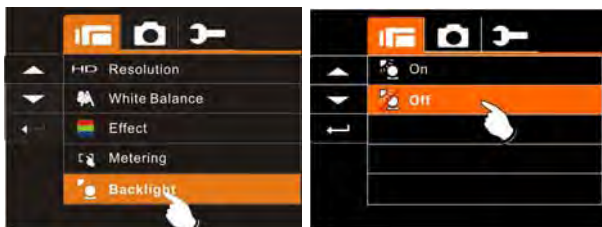
1. Turn on the camera and make sure it is in the DV Mode.
2. Press the MENU Button and move the 4-Way Direction Button to highlight the Metering item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select Spot, Center or Touch AE. Press the SET Button to confirm or touch the screen to select the item.



 Spot	This setting is to ensure correct exposure for the object even if the background is very bright or very dark.
 Center	Use this setting to preserve background details whilst letting the lighting conditions at the center of the frame define the exposure.
 Touch AE	Tap this item to correct exposure.

6.1.5 Backlight

1. Turn on the camera and make sure it is in the DV Mode.
2. Press the MENU Button and move the 4-Way Direction Button to highlight the Backlight item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select On or Off. Press the SET Button to confirm or touch the screen to select the item.



6.1.6 Night Mode

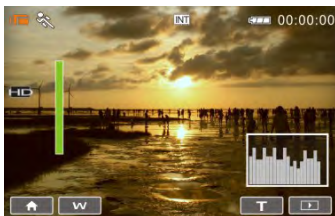
This function is used to capture videos with night scenery backgrounds.

1. Turn on the camera and make sure it is in the DV Mode.
2. Press the MENU Button and press the 4-Way Direction Button to highlight the Night Mode item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select On or Off. Press the SET Button to confirm or touch the screen to select the item.

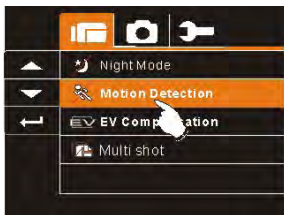


6.1.7 Motion Detection

When the Motion Detection function is turned on, the camera will detect any movement for Movie Clip recording without human intervention. When the AE variation is detected, recording will start immediately.



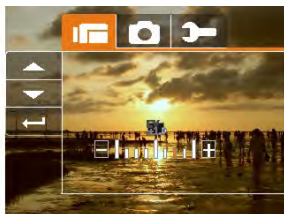
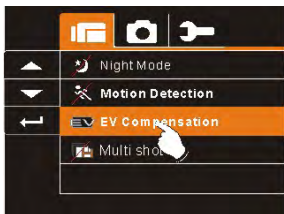
1. Turn on the camera and make sure it is in the DV Mode.
2. Press the MENU Button and move the 4-Way Direction Button to highlight the Motion Detection item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select On or Off. Press the SET Button to confirm or touch the screen to select the item.



6.1.8 EV Compensation

EV stands for Exposure Value. In difficult lighting condition, the auto exposure function of your camera may be misled into giving the wrong readings. You can adjust the value of the exposure compensation which ranges from -2.0EV to +2.0EV (in 0.5EV increments). The higher the EV value, the brighter the image will be.





1. Turn on the camera and make sure it is in the DV Mode.
2. Press the MENU Button and move the 4-Way Direction Button to highlight the EV Compensation item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to adjust the Exposure value (-2.0 ~ + 2.0). Press the SET Button to confirm or touch the screen to select the item.



6.1.9 Multi Shot

1. Turn on the camera and make sure it is in the DV Mode.
2. Press the MENU Button and press the 4-Way Direction Button to highlight the Multi shot item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select On or Off. Press the SET Button to confirm or touch the screen to select the item.



Image resolution	
 FULL HD	1920 x 1080
 HD	1280 x 720
 WVGA	848 x 480
 WEB	320 x 240

Note: The image size is fixed depending on the image quality of the video clip.

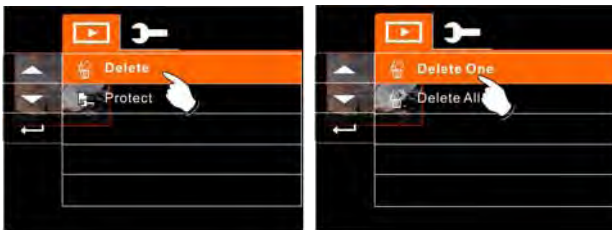
1. When setting to FULL HD, HD or WVGA resolution, the LCD display aspect ratio is 16:9.
2. When setting to WEB video resolution, the LCD display aspect ratio is 4:3.

6.2 Movie Clip/Voice Playback Menus

6.2.1 Delete



The delete function allows you to remove unwanted files.

1. Turn on the camera and make sure it is in the Movie Clip/Voice Playback Mode.
2. Press the MENU Button and move the 4-Way Direction Button to highlight the Delete item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Use the 4-Way Direction Button to select Delete One or Delete All. Press the SET Button to confirm or touch the screen to select the item.



4. Press the 4-Way Direction Button to select "O" Yes or "X" No. Press the SET Button to confirm or touch the screen to select the item.



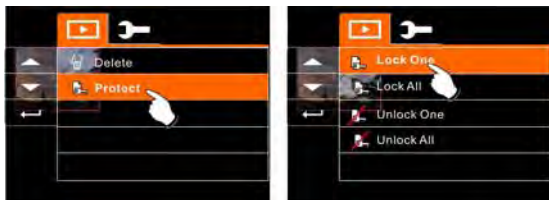
 Delete One	Delete the current file
 Delete All	Delete all files

Note: Files cannot be retrieved once deleted. Therefore please make sure you have backed up the files before deleting. Protected files cannot be deleted. To delete these, you must first unlock the file.

6.2.2 Protect

The Protect function allows you to lock video or audio files.


1. Turn on the camera and make sure it is in the Movie Clip/Voice Playback Mode.
2. Press the MENU Button and move the 4-Way Direction Button to highlight the protected item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Use the 4-Way Direction Button to select Lock One, Lock All, Unlock One or Unlock All. Press the SET Button to confirm or touch the screen to select the item.



Protect Lock



Note:

To unlock a protected file, repeat the above steps. When the file is no longer protected, the Locked icon  will disappear.

6.2.3 Infrared Night Vision

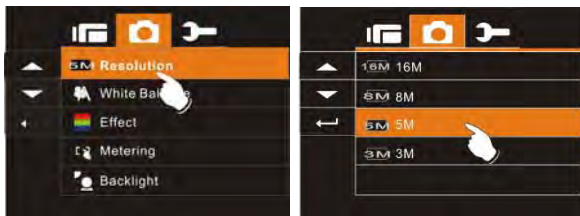
This function provides users with incredible vision in total darkness and the improvement of vision in low light environments.

The function is supported under Video Mode only. Range: < 1.5m

6.3 Camera Mode Menu Options

6.3.1 Still Image Resolution

1. Set the camera to the DSC Mode.
2. Press the MENU Button and move the 4-Way Direction Button to highlight the Resolution item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select 16M, 8M, 5M or 3M. Press the SET Button to confirm or touch the screen to select the item.



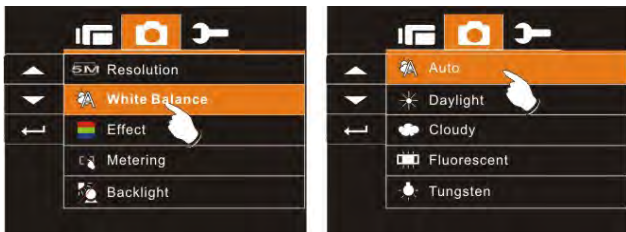
16M 16M	4608 x 3456 pixels (Interpolation)
8M 8M	3200 x 2400 pixels (Interpolation)
5M 5M	2592 x 1944 pixels
3M 3M	2048 x 1536 pixels

6.3.2 White Balance

The White Balance function allows you to adjust the camera setting according to the white light when recording still images.

1. Set the camera to the DSC Mode.
2. Press the MENU Button and move the 4-Way Direction Button to highlight the White Balance item. Press the SET Button to display the submenu or touch the screen to select the item.

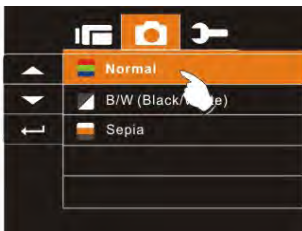
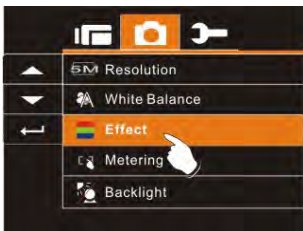
3. Use the 4-Way Direction Button to select Auto, Daylight, Cloudy, Fluorescent or Tungsten. Press the SET Button to confirm or touch the screen to select the item.



6.3.3 Effect

The Effect function allows you to take standard color images, Black & White or Sepia color tone images.

1. Set the camera to the DSC Mode.
2. Press the MENU Button and move the 4-Way Direction Button to highlight the Effect item. Press SET Button to display the submenu or touch the screen to select the item.
3. Use the 4-Way Direction Button to select Normal, B/W or Sepia. Press the SET Button to confirm or touch the screen to select the item.



6.3.4 Metering

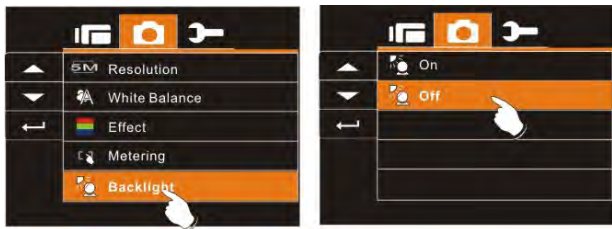
The Metering function allows you to select the area of the subject or frame by which the camera measures light to record images.

1. Set the camera to the DSC Mode.
2. Press the MENU Button and move the 4-Way Direction Button to highlight the Metering item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select Spot, Center or Touch AE. Press the SET Button to confirm or touch the screen to select the item.



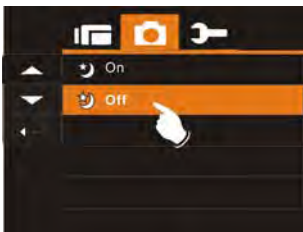
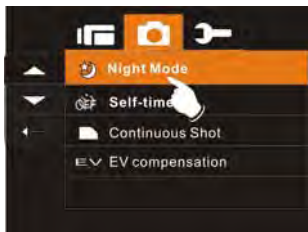
6.3.5 Backlight

1. Turn on the camera and make sure it is in the DSC Mode.
2. Press the MENU Button and move the 4-Way Direction Button to highlight the Backlight item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select ON or OFF. Press the SET Button to confirm or touch the screen to select the item.



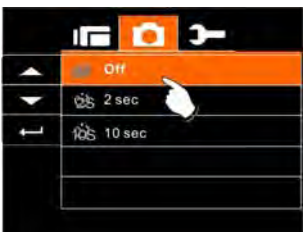
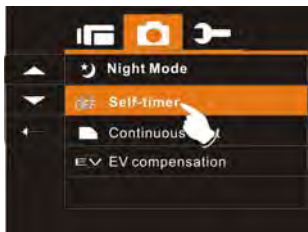
6.3.6 Night Mode

1. Set the camera to the DSC Mode.
2. Press the MENU Button and move the 4-Way Direction Button to highlight the Night Mode item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select On or Off. Press the SET Button to confirm or touch the screen to select the item.



6.3.7 Self-Timer

1. Set the camera to the DSC Mode.
2. Press the MENU Button and use the 4-Way Direction Button to highlight the Self-timer item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select OFF, 2 Sec or 10 sec. Press the SET Button to confirm or touch the screen to select the item.



2 sec. Self-timer:

The image will be taken 2 seconds after the shutter is released.

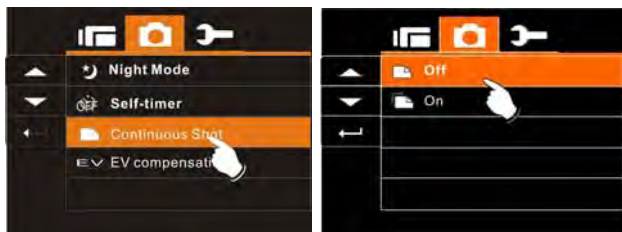
10 sec. Self-timer:

The image will be taken 10 seconds after the shutter is released.

6.3.8 Continuous Shot

You can continuously record three pictures using this function, started by pressing and holding the Shutter Button and ending automatically after taking the third picture.

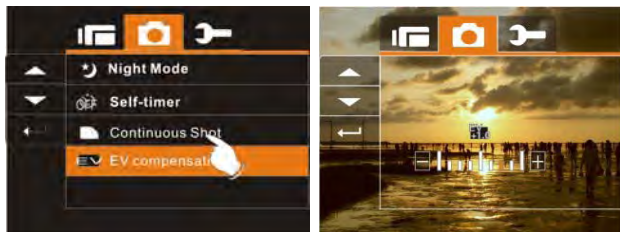
1. Set the camera to the DSC Mode.
2. Press the MENU Button and press the 4-Way Direction Button to highlight the Continuous Shot item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select OFF or ON. Press the SET Button to confirm or touch the screen to select the item.



6.3.9 EV Compensation

You can adjust the value of the exposure compensation which ranges from -2.0EV to +2.0EV (in 0.5EV increments). The higher the EV value, the brighter the image will be.

1. Set the camera to the DSC Mode.
2. Press the MENU Button and press the 4-Way Direction Button to highlight the EV Compensation item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to adjust the exposure value (-2.0 ~ +2.0). Press the SET Button to confirm or touch the screen to select the item.



6.4 Playback Menu

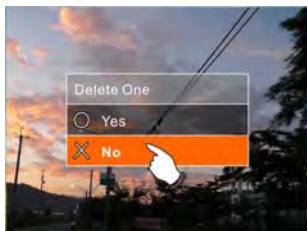
6.4.1 Delete

Use this function to delete files.

1. Set the camera to the Playback Mode.
2. Press the MENU Button and press the 4-Way Direction Button down or touch the screen to select the file to be deleted or to delete all files.
3. Press the 4-Way Direction Button or touch the screen to select “Delete One” or “Delete All” to display the submenu.




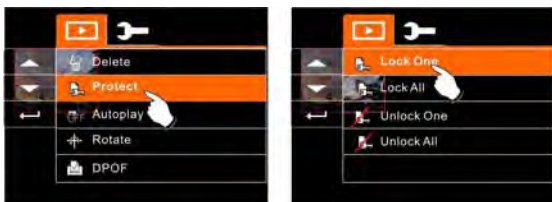
4. Press the 4-Way Direction Button or touch the screen to select “O” Yes or “X” No and press the SET Button to delete file(s).



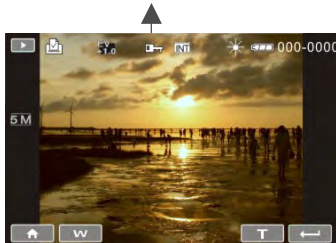
Note: Files cannot be retrieved once deleted. Therefore please make sure you have backed up the files before deleting. Protected files cannot be deleted. To delete these, you must first unlock the file.


6.4.2 Protect

1. Turn on the camera and switch to the Playback Mode.
2. Select the file you want to protect.
3. Press the MENU Button and move the 4-Way Direction Button to highlight the Protect item. Press the SET Button to display the submenu or touch the screen to select the item.
4. Press the 4-Way Direction Button or touch the screen to select the item. Press the SET Button or touch the screen to confirm. The Locked icon  will be displayed to indicate the file is protected.



Protect Lock

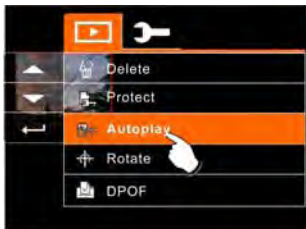


Note: Repeat the above steps to unlock the file. When the file is unlocked, the Locked icon  will disappear.

6.4.3 Autoplay

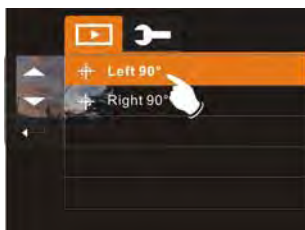
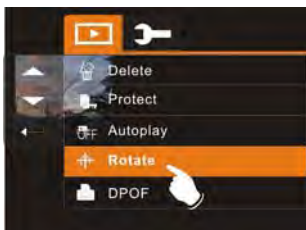
You can set the camera to display images in a slide show at a regular interval.

1. Set the camera to the Playback Mode.
2. Press the MENU Button and move the 4-Way Direction Button to select Autoplay. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button or touch the screen to select "Off", "1sec" or "3 sec". The images will be displayed automatically.



6.4.4 Rotate

1. Set the camera to the Playback Mode.
2. Use the 4-Way Direction Button to highlight the Rotate item and press the SET Button or touch the screen to select Left 90° or Right 90°.




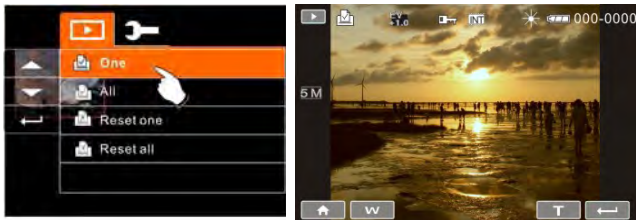
6.4.5 DPOF

The Digital Print Order Format (DPOF) setting allows you to select images on the memory card for printing and specify the number of print copies in advance using the camera.

1. Set the camera to the Playback Mode. Press the Playback Button and press the SET Button to display the Image Playback Menu or touch the screen to select the item.
2. Use the 4-Way Direction Button to highlight the DPOF item. Press the SET Button or touch the screen to display the submenu.



3. Use the 4-Way Direction Button and press the SET Button or touch the screen to select the item. The DPOF icon  will be shown to indicate the files that are ordered for printing.



4. Press the Playback Button or touch the screen to exit the image.

Note:

1. A memory card is required for the DPOF function.
2. If DPOF is set, the pictures to be printed are ordered to print.

6.5 Settings Menu

The Settings Menu can be used to select all kinds of camera settings.

6.5.1 Information

This function can be used to display information on the LCD screen to help you capture the best images and movie clips.

1. Turn the camera power on and switch to the SET Mode.
2. Press the 4-Way Direction Button to highlight the Information item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select Normal, Histogram, or OFF. Press the SET Button to confirm or touch the screen to select the item.



6.5.2 Date / Time

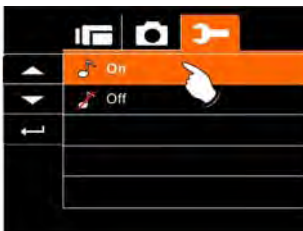
Please refer to 2.7.1, 'Setting the Date and Time' on page 23.

6.5.3 Beep

1. Turn the camera power on and switch to the SET Mode. Press the 4-Way Direction Button up or down to highlight the Beep and press the SET Button to confirm or touch the screen to select.



2. Use the 4-Way Direction Button or touch the screen to select On or Off.



6.5.4 Default

Use this function to reset all settings to default settings.

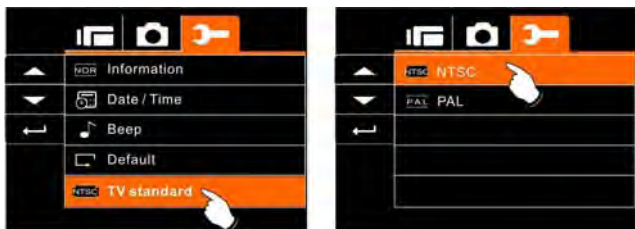
1. Turn the camera power on and switch to the SET Mode.
2. Press the 4-Way Direction Button to highlight the Default item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Use the 4-Way Direction Button or touch the screen to select "O" Yes or "X" No. Press the SET Button to confirm or touch the screen to select the item.



6.5.5 TV Standard

Use the TV standard to set the TV system for your area.

1. Turn the camera power on and switch to the SET Mode.
2. Use the 4-Way Direction Button to highlight the TV standard item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Use the 4-Way Direction Button to select NTSC or PAL. Press the SET Button to confirm or touch the screen to select the item.



TV out standard setting reference

NTSC NTSC	USA, Canada, Japan, Korea, Taiwan, Mexico
PAL PAL	Australia, Austria, Belgium, China, Denmark, Finland, Germany, UK, Italy, Kuwait, Malaysia, New Zealand, Singapore, Spain, Sweden, Switzerland, Thailand, Norway

6.5.6 USB

This setting is for the USB output function. You can select an external device to connect the camera to using the supplied USB cable.

1. Turn the camera power on and switch to the SET Mode.
2. Press the 4-Way Direction Button to highlight the USB item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Use the 4-Way Direction Button to select PC Camera or Mass Storage. Press the SET Button to confirm or touch the screen to select the item.

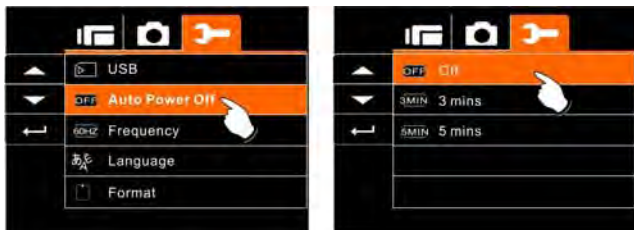


6.5.7 Auto Power Off

This function can be used to turn the Digital Video Camera off automatically after not using it for a period of time.

1. Turn the camera power on and switch to the SET Mode.
2. Press the 4-Way Direction Button to highlight the Auto Power Off item. Press the SET Button to display the submenu or touch the screen to select the item.

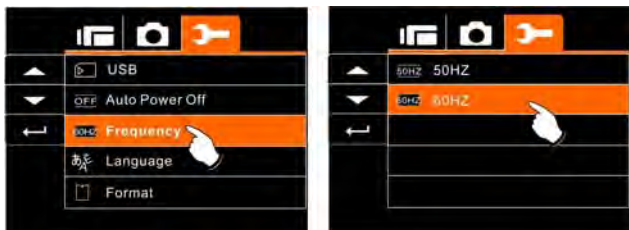
3. Press the 4-Way Direction Button to select OFF, 3 mins, or 5 mins or touch the screen to select the item.



6.5.8 Frequency

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

1. Turn the camera power on and switch to the SET Mode.
2. Use the 4-Way Direction Button to highlight the Frequency selection item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Use the 4-Way Direction Button to select 50 Hz or 60 Hz. Press the SET Button to confirm or touch the screen to select the item.



Frequency setting reference:	
50HZ 50HZ	UK, Germany, Spain, Italy, France, Netherlands, Portugal, Russia, China, Japan
60HZ 60HZ	USA, Taiwan, Korea, Japan

6.5.9 Language

1. Turn the camera power on and switch to the SET Mode. Move the 4-Way Direction Button up/down to highlight the Language item and press the SET Button to confirm or touch the screen to select.



2. Press the 4-Way Direction Button or touch the screen to select the following languages: English, German, French, Italian, Japanese, Spanish, Portuguese, Traditional Chinese, Simplified Chinese, Turkish, Russian, Thai, Arabian or Korean.



6.5.10 Format

This function allows you to format the memory card or the built-in memory.

1. Turn the camera power on and switch to the SET Mode.
2. Press the 4-Way Direction Button to highlight the Format item. Press the SET Button or touch the screen to display the submenu.
3. Press the 4-Way Direction Button to select "O" Yes or "X" No. Press the SET Button to confirm or touch the screen to select the item.



4. The formatting of the current storage media (memory card or internal memory) is now completed.

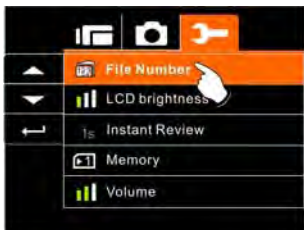
Note: All data stored on the memory card or flash memory will be deleted after formatting.

6.5.11 File Number (Default: Series)

This setting allows you to name the files. If “Series” is selected, the file number will follow the last stored file consecutively.

If “Reset” is selected, the next file number will start from 0001 even after formatting, deleting or inserting a new memory card.

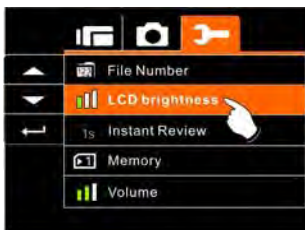
1. Turn the camera power on and switch to the SET Mode.
2. Press the 4-Way Direction Button to highlight the File Number item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Use the 4-Way Direction Button to select Series or Reset. Press the SET Button to confirm or touch the screen to select the item.



6.5.12 LCD Brightness

This function can be used to adjust the screen brightness.

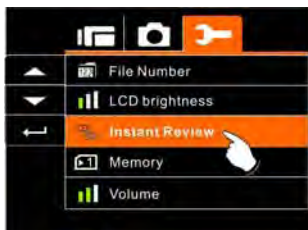
1. Turn the camera power on and switch to the SET Mode.
2. Use the 4-Way Direction Button to highlight the LCD brightness item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select High, Medium, or Low. Press the SET Button to confirm or touch the screen to select the item.



6.5.13 Instant Review

This function can be used to instantly browse files after taking the picture.

1. Turn the camera power on and switch to the SET Mode.
2. Press the 4-Way Direction Button to highlight the Instant Review item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select 1 sec, 3 sec, or 5 sec. Press the SET Button to confirm or touch the screen to select the item.



6.5.14 Memory

This camera supports 2 x 32 GB SD/ SDHC cards. Use this function to select the data storage location.

1. Turn the camera power on and switch to the SET Mode.
2. Press the 4-Way Direction Button to highlight the Memory item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select Internal, SD1, or SD2. Press the SET Button to confirm or touch the screen to select the item.

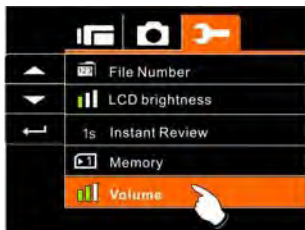


Note: The images or movie clips can be stored on the built-in flash memory or on external SD cards. When SD cards are inserted, the files will be stored on the external SD cards rather than on the internal flash memory. On the other hand, the files will be stored on the built-in flash memory when SD card(s) is/are not inserted.

6.5.15 Volume

Use this function to adjust the sound volume.

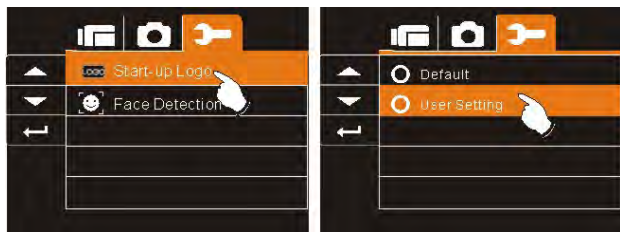
1. Turn the camera power on and switch to the SET Mode.
2. Press the 4-Way Direction Button to highlight the Volume item. Press the SET Button to display the submenu or touch the screen to select the item.
3. Press the 4-Way Direction Button to select High, Medium, or Low. Press the SET Button to confirm or touch the screen to select the item.



6.5.16 Start-Up Logo

Use this function to select the image that is displayed on the LCD when the digital camcorder is turned on.

1. Turn on the camera and switch to the Setup Menu.
2. Press the 4-Way Direction Button to highlight the Start-up Logo item. Press the SET Button or touch the icon on the screen to display the submenu.
3. Press the 4-Way Direction Button to select Default or User Setting. Press the SET Button or touch the screen to select the item.



6.5.17 Face Detection

You can use the Face Detection function to automatically detect faces in a scene during a photo shoot

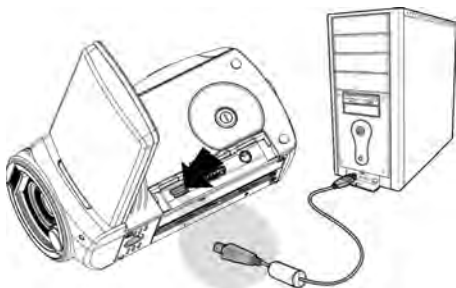
1. Turn on the camera and switch to the Setup Menu.
2. Press the 4-Way Direction Button to highlight the Face Detection item. Press the SET Button or touch the icon on the screen to display the submenu.
3. Press the 4-Way Direction Button to select “O” Yes or “X” No. Press the SET Button or touch the screen to select the item.



7 PC and TV Connection

7.1 Connecting to a Computer

As shown in the illustration, use the USB cable provided to connect the camera to a PC for file transfer, or use the camera as a webcam for conferencing purpose.



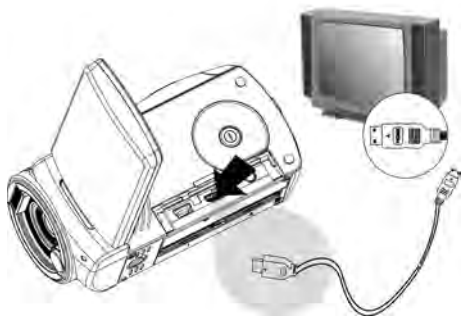
7.2 Connecting to a Standard TV

As shown in the illustration, use the video cable to connect the camera to a standard TV.



7.3 Connecting to an HD TV

As shown in the illustration, use the HDMI cable provided to connect the Digital Video Camera to an HD TV for high resolution picture display.



8 Installing the Software

The bundled software CD has the drivers and software that come with the camera. Insert the CD into your CD-ROM drive. The autorun menu appears:

1. Insert the supplied CD ROM into the CD player.
2. If the CD does not execute automatically, please use Windows File Manager to execute the **Install_CD.exe** file on the CD.



3. Tap the desired menu item to start the installation process and follow the on-screen instructions.

9 Editing Software



ArcSoft TotalMedia Extreme® manages your media for you, and gives you tons of fun and exciting ways to create and share projects featuring your photo, video, and music files. Edit, enhance and add creative effects to your photos. You can:

- Create your own movies or photo slide shows complete with soundtrack.
- Upload your files easily to YouTube®!
- Share them through simple email attachments or popular photo printing.
- Go to <http://www.arcsoft.com/> for more information.

10 Appendix

Specifications

Image sensor	1/2.5 inch. 5.0 mega pixels CMOS sensor
Effective pixels	5.03 Megapixels (2592 x 1944)
Storage media	Built-in 32 MB Flash memory External memory: SD card (4 GB) / SDHC (32 GB) card slot is supported
ISO Equipment	Auto
Color effect	Normal/BW/Sepia
Lens	Fixed lens F/3.2, f=7.5mm
Focus range	Normal: 1.2m~infinity Macro: 20cm
Still image	Format: JPEG (DPOF, EXIF) Resolution: 3MP, 5MP, 8MP, 16MP (interpolation) Scene Mode: Auto
Movie Clip	Format: H.264 (MOV) Resolution: FULL HD (1920 x 1080 / 30 fps) HD (1280 x 720 / 30 fps) WVGA (848 x 480 / 60 fps) WEB (320 x 240 / 30 fps)
Digital zoom	Still Image Mode: 4X (supported for 720P or lower resolutions) Playback Mode: 8X (depending on image size)

Audio	Audio for Voice Recording: ADPCM
LCD Display	3.0" Touchscreen display (16:9)
Flash light	Range: < 1.0m DSC: On/Off
IR Night Vision	Range: < 1.5m Video Mode: On/Off
White balance	Auto / Daylight / Cloudy / Tungsten / Fluorescent
Exposure	-2.0 EV~+2.0 EV
Self-Timer	Off, 2 seconds, 10 seconds.
Interface	Digital output connector: USB 2.0 high-speed (480Mbps Max.) MIC Input, Speaker HDMI USB DC IN
TV output	NTSC/PAL
Shutter	Electronic shutter 1~1/8000 second
Auto Power Off	Off, 3 minutes, 5 minutes
Power Source	CNP-40 Lithium battery or 2 AA Alkaline batteries
Dimensions	110 (L) x 58 (H) x 50 (W) mm
Weight	Approx. 250g

Troubleshooting

Problem	Possible Cause	Solution
Cannot power on camera.	<ol style="list-style-type: none">1. Batteries are not inserted correctly.2. Batteries are exhausted.	<ol style="list-style-type: none">1. Insert batteries correctly.2. Replace batteries.
Camera shuts down suddenly.	<ol style="list-style-type: none">1. Power Saving Mode is activated.2. Battery exhausted.	<ol style="list-style-type: none">1. Power on again.2. Replace batteries.
Pictures are not stored on the memory.	Powers off before storing the images.	Replace batteries when the battery indicator turns red.
Camera shuts down when using Self-timer.	Batteries in camera are exhausted.	Replace batteries.
Images are out of focus.	Object exceeds the range of focus.	Take the picture within the focus range and select normal or Macro Mode.
Unable to use the external memory	<ol style="list-style-type: none">1. Memory card is protected.	<ol style="list-style-type: none">1. Unlock the memory card.

card.	protected. 2. Memory card contains non-DCF images taken by other cameras.	2. Reformat the memory card. Make sure you backup the files before reformatting the memory card.
Buttons do not work or camera hangs.	A short circuit has occurred when connecting the camera to another device.	Remove batteries from the camera and reinsert again.

Customer Care

More information on the complete AgfaPhoto digital camera product range can be found at www.agfaphoto.com / www.plawa.com

Service & Repair Hotline (EU):

00800 752 921 00 (from a landline only)

Service & Support Hotline (Germany):

0900 1000 042 (1.49 euro_/ min. from a German landline only)

Service & Repair Hotline (UK):

+44 1908 488676

Online Service / International contact:

support-apdc@plawa.com

Service & Repair (USA/ Canada):

support-apdc@plawausa.com
866-475-2605

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