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OVERVIEW

Congratulations on your purchase of the Centurion XP digital camera. The Centurion XP is flameproof for use in Ex (potentially explosive) environments. Equipped with a 5.0-megapixel sensor, this camera is capable of capturing images with a resolution of up to 2560 x 1920 pixels.

The camera has a 16MB internal memory (13.5MB available for image storage) and can be ordered with an optional memory expansion of 512Mb, 1Gb, 2Gb or 4GB. This cannot be removed and must be specified at time of order. Images can be downloaded using the USB socket.

PACKAGE CONTENTS

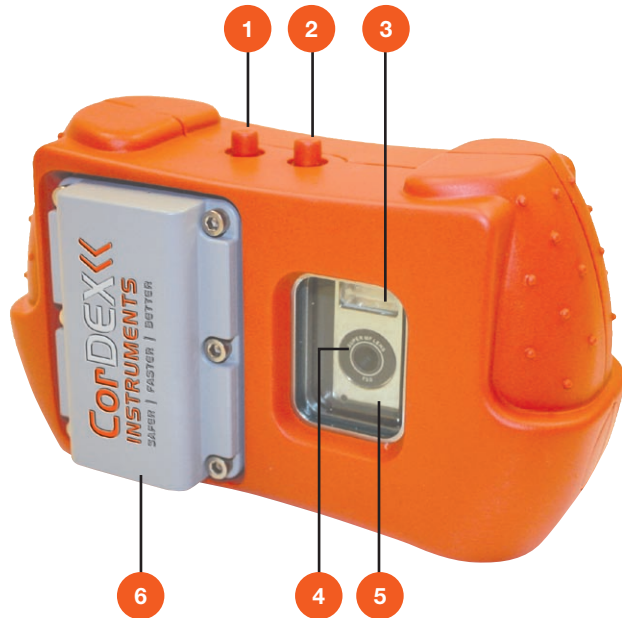
Carefully unpack your Centurion XP and ensure that you have the following items:

- Centurion XP Series Digital Camera
- Centurion XP Series Battery
- Safe Area Charging Station
- USB Communication Wand
- Software & Documentation CD
- M3 Allen Key

2. GETTING TO KNOW YOUR CAMERA

FRONT VIEW

- 1 Shutter Button
- 2 Power Button
- 3 Flash
- 4 Lens
- 5 Self-timer LED
- 6 Battery Compartment



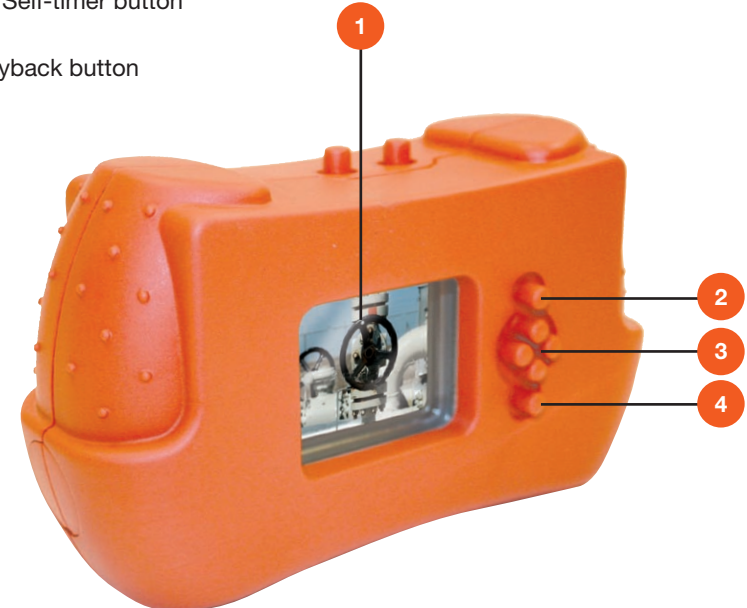
SIDE VIEW

- 1 USB Connector compartment

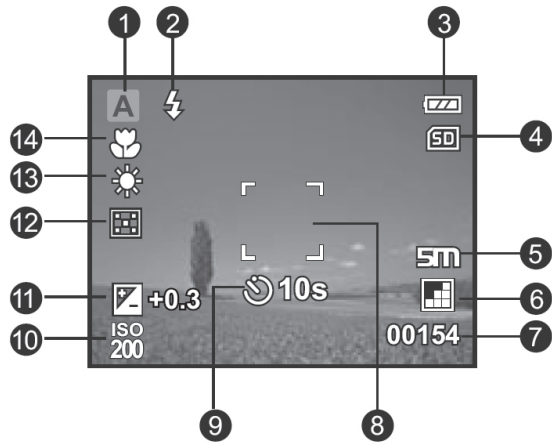


REAR VIEW

- 1 LCD Monitor Screen
- 2 OK Button
Digital Zoom Button
- 3 4-Way control button
 - ▲ Up button
- MENU** Menu button
 - ▶ Right button
 - ⚡ Flash button
 - ▼ Down button
- MODE** Mode button
 - ◀ Left button
 - ⌚ Self-timer button
- 4 Playback button



LCD Monitor Display



1. Mode indication

- Auto Mode
- Sport Mode
- Night Mode
- Portrait Mode
- Landscape Mode
- Backlight Mode

2. Flash mode

- Auto Flash
- Force Flash
- Flash Off

3. Battery condition

- Full battery power
- Medium battery power
- Low battery power
- No battery power

4. Storage

- Internal memory
- SD/SDHC memory card

5. Image size resolution

- 10M** 3648 x 2736
- 8M** 3264 x 2448
- 5M** 2560 x 1920
- 3M** 2048 x 1536
- 1.3M** 1280 x 960
- VGA** 640 x 480

6. Image quality

- Fine
- Standard
- Economy

7. Available number of shots

8. Main focus area

9. Self-timer icon

- 10 sec.
- 2. sec

10. ISO

- Auto
- 100
- 200

11. Exposure compensation

- Average
- Spot

13. W.Balance

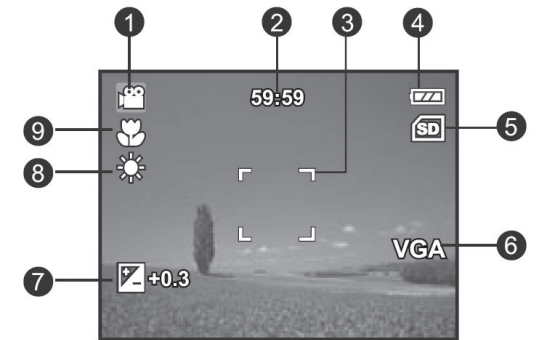
- Blank** Auto
- Daylight
- Cloudy
- Tungsten
- Fluorescent

14. Focus setting

- Blank** Normal (Blank)
- Macro (not available on this model).

Video Mode

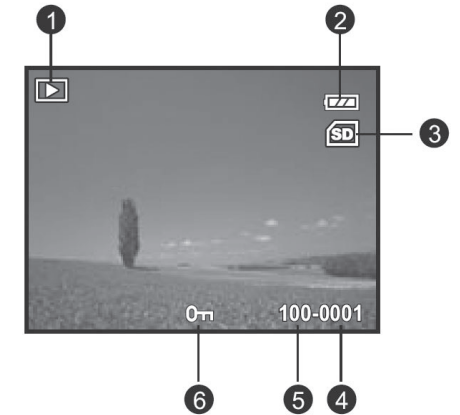
1. Mode icon
2. Available recording time
3. Main focus area
4. Battery condition
5. Storage media
6. Video Resolution
7. Exposure compensation
8. White balance
9. Focus setting



Playback mode

Still image playback

1. Play mode
2. Battery condition
3. Storage media
4. File number
5. Folder number
6. Protect icon



Playback mode

Video playback

1. Play mode
2. Mode icon
3. Total recorded time
4. Battery condition
5. Storage media
6. Video resolution
7. File number
8. Folder number
9. Playback indicator



3. GETTING STARTED

PREPARATION



NEVER OPEN THE BATTERY OR USB COMPARTMENTS IN A HAZARDOUS ENVIRONMENT.

1. Open the camera's battery compartment.
Remove the six retaining screws using the supplied Allen key.
2. Load the battery pack paying careful attention to the orientation of the pack.
3. Close the battery cover, replace the screws and make sure the cover is locked securely.

TURNING THE POWER ON/OFF

- Press and hold down the POWER button until the camera turns on.
- To turn the power off, press the POWER button again.

The camera has an AUTO OFF feature: the camera turns off automatically when the camera has not been operated for a fixed period of time (see page 22). To resume the operation condition, turn the power on again.

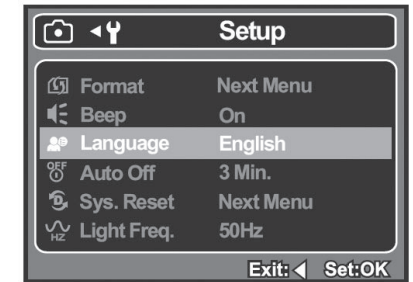
CHOOSING THE LANGUAGE

Specify in which language menus and messages are to be displayed on the LCD monitor.

1. Press the **MENU** button.
2. Select (Setup) menu with the ► button.
3. Select (Language) with the ▲/▼ buttons, and press the **OK** button.
4. Select the displayed language with the ▲/▼ buttons, and press the **OK** button.

The Language setting screen is displayed.

The setting will be stored.

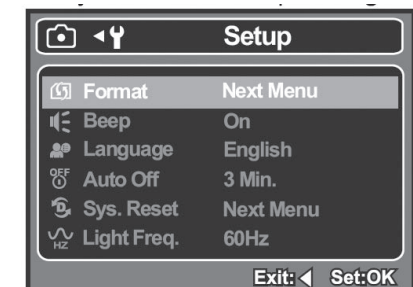
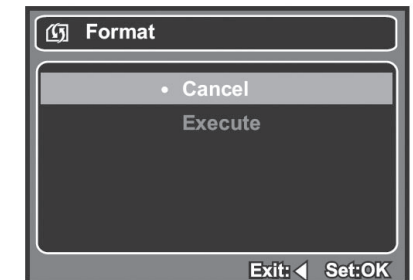


FORMATTING THE MEMORY CARD OR INTERNAL MEMORY

This utility formats the internal memory (or memory card) and erases all stored images and data.

1. Press the **MENU** button.
2. Select (Setup) menu with the ► button.
3. Select (Format) with the ▲/▼ buttons, and press the **OK** button.
4. Select (Execute) with the ▲/▼ buttons, and press the **OK** button.

To cancel the formatting, select (Cancel) and press the **OK** button.



4. TAKING PICTURES

CAPTURING IMAGES

1. Switch the Camera on.


Press the Power button to turn the power on.

2. Compose the image on the preview screen.

If necessary, use the Zoom function to magnify the scene. Press the **OK** button to zoom in on the subject. The digital magnification ranges from 1.0x to 4.0x. Note that the more the image is magnified, the grainier the image may become.

When you record video clips, the zoom function is not available.

3. Choose a Flash mode.

Press the  button to choose a flash mode:

 Auto Flash: Let the camera choose when to use the flash.

 Always On: Always use the flash.







 Flash Off: Never use the flash.

The flash has an effective range of 0.9-1.5m (35-59”).






4. If you do not want to use the camera's automatic settings, select a special **SCENE MODE** (see “Setting the Scene Mode”, below).
5. Press the shutter button to capture the image.

SETTING THE SCENE MODE

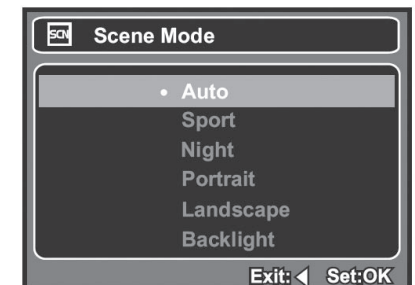
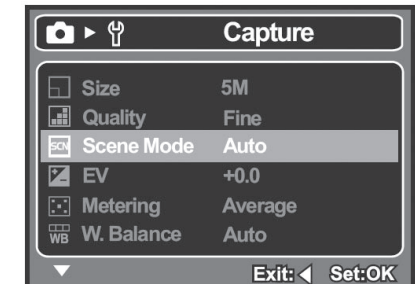
The camera has six scene mode settings for the following

-  Auto: Let the camera choose the settings.
-  Sport: Fast moving subjects.
-  Night: Dark scenes such as night views.
-  Portrait: Make the foreground stand out against a defocused (blurred) background.
-  Landscape: Capture an image with infinity focus, high sharpness and high saturation.
-  Backlight: Capture images when the light comes from behind the object.

To set a scene mode:

1. Press the **MENU** button.
The Capture Menu is displayed.
2. Use the / buttons to select Scene Mode.
3. Press the **OK** button.
4. Use the / buttons to select the required mode.
5. Press the **OK** button.
6. Press the  button to exit the menu.

Whenever you switch the camera on, the **AUTO** scene mode is selected.

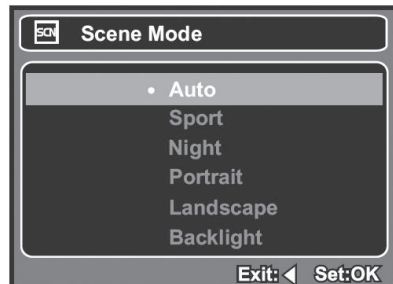
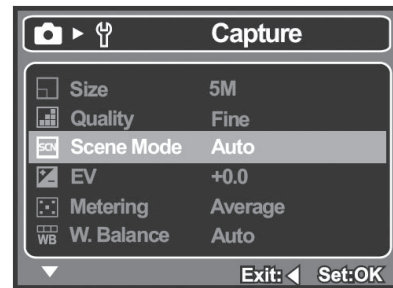


ADJUSTING THE EXPOSURE (EV COMPENSATION)

You can manually adjust the exposure used by the digital camera. Use this mode when the proper exposure cannot be obtained, for example, when the contrast between the subject and the background is extremely large. The EV compensation value can be set in the range from -2.0EV to +2.0EV.

To change the EV setting:

1. Press the **MENU** button.
The Capture Menu is displayed.
2. Use the **▲/▼** buttons to select EV.
3. Press the **OK** button.
4. Use the **▲/▼** buttons to change the EV compensation value in the range 2.0EV to +2.0EV.
5. Press the **OK** button to save the new setting; press the **◀** button to exit the menu without saving any change.
6. Press the **◀** button to exit the menu.



Using EV Compensation Effectively

+(positive) compensation


- * Printed matter with black text on whitish paper.
- * Bright scenes, strong reflected light, when the background is bright and the subject is dark. When the subject has a light source such as the sun behind it.
- * When the sky accounts for a large area on the screen.

-(negative) compensation

- * People illuminated by a spotlight, in particular, against dark background.
- * Printed matter with white text on blackish paper.
- * Weak reflecting bodies such as evergreen trees or darkish leaves

RECORDING VIDEO CLIPS

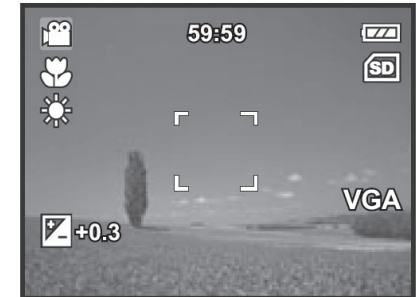
This mode allows you to record video clips at a resolution of VGA (640 x 480) or QVGA (320 x 240) pixels.

1. Press the Mode button to set the camera mode to .
2. Compose the image.
3. Press the shutter button.

The recording of the video clip will start.

Pressing the shutter button one more time will end the recording of the video clip.

The recording time depends on the storage size and the subject of the image to be recorded.



When recording a video clip, the flash cannot be used.










If the write speed of selected memory is not fast enough for recording, video clips in the currently selected size, the video recording will stop. In this case, select a video size lower than the current one

The maximum recordable time for one continuous video clip is 00:59:59.


6. VIEWING PHOTOS AND VIDEOS

PLAYING BACK STILL IMAGES

You can play back the still images on the LCD monitor.




1. Press the  button.
The last image appears on the screen.
2. The images can be displayed in reverse or forward sequence with the / buttons.
To view the previous image, press the  button.
To view the next image, press the  button.
3. Press the **OK** button to adjust the zoom ratio.
The magnification factor is displayed on the LCD monitor.
4. To view different portion of the images, press the /// button to adjust the display area.






An  icon is displayed with the video data.
The magnification factors range from 1x to 4x (within 4 stages: 1.0x, 2.0x, 3.0x, and 4.0x).

PLAYING BACK VIDEO CLIPS

You can play back recorded video clips on the camera.

1. Press the  button.
The last image appears on the screen.
2. Select the desired video clip with the / buttons.
3. Press the **OK** button.

A press of the / buttons during playback allows fast forward play / fast reverse play.

To stop video playback, press the  button.
This stops playback and returns to the start of the video clip.


To pause video playback press the **OK** button.
This pauses video playback. To cancel pause, press the **OK** button again.



Video clips cannot be displayed rotated or enlarged.
This camera does not have a built-in speaker and microphone. Audio function is not available.
To play the video clip back on your computer, you may use either Windows Media Player or Apple "QuickTime Player".
QuickTime basic player is available free of charge, compatible with Mac and Windows computers and can be downloaded from the Apple web site at www.apple.com. For help using QuickTime Player usage, please refer to the QuickTime on-line help for more information.

THUMBNAIL DISPLAY


This function allows you to view 9 thumbnail images on the LCD monitor simultaneously so you may search for a particular image.

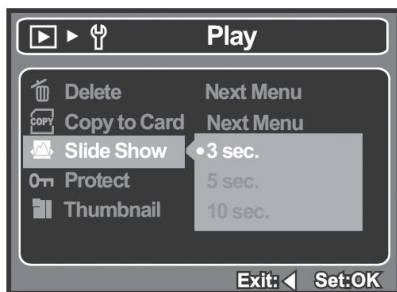
1. Press the  button.
The last captured image is shown.
2. Press the **MENU** button.
The playback menu is displayed.
3. Select [Thumbnail] with the $\blacktriangle/\blacktriangledown$ buttons, then press the **OK** button.
Nine thumbnail images are displayed simultaneously.
The video mode icon is displayed for recorded video clips.
4. Use the $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$ button to move the cursor to select the image to be displayed at regular size.
5. Press the **OK** button to display the selected image on full screen.




SLIDESHOW DISPLAY

The slideshow function enables you to playback your still images automatically in order one image at a time.


1. Press the  button.
The playback menu is displayed.
2. Press the **MENU** button.
The playback menu is displayed.
3. Select [Slide Show] with the $\blacktriangle/\blacktriangledown$ buttons, then press the **OK** button.
4. Select the desired interval time with the $\blacktriangle/\blacktriangledown$ buttons, and press the **OK** button.
The slideshow starts.
5. To stop the slide show during playback, press the **OK** button.
The image is displayed on screen when you press the **OK** button.




 The Auto Off function does not operate during slide show.
All still images in the folder are played back automatically.
Video files display the first frame image and are not played back.

PROTECTING IMAGES

Set the data to read-only to prevent images from being erased by mistake.

1. Press the  button.
2. Select the image that you want to protect with the $\blacktriangleleft/\blacktriangleright$ buttons.
3. Press the **MENU** button.
4. Select [Protect] with the $\blacktriangle/\blacktriangledown$ buttons, and press the **OK** button.
5. Select [Single] or [All] with the $\blacktriangle/\blacktriangledown$ buttons, and press the **OK** button.
[Single]: Protects the selected image or the last image.
[All]: Protects all of the images.
6. Select [Lock] with the $\blacktriangle/\blacktriangledown$ buttons, and press the **OK** button.
Protection is applied to the image and the camera returns to the previous menu mode.


 The protect icon is displayed with protected images.

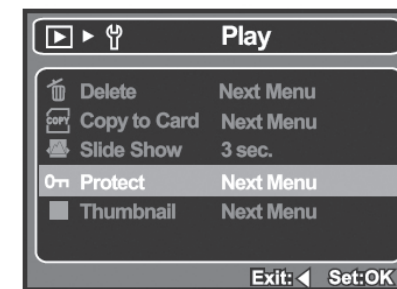
Canceling the Protection

To cancel protection for only one image, display the image on which you want to remove the image protection.

1. Select [Protect] with the $\blacktriangle/\blacktriangledown$ buttons from the playback menu, and press the **OK** button.
2. Select [Single] or [All] with the $\blacktriangle/\blacktriangledown$ buttons, and press the **OK** button.
3. Select [Unlock] with the $\blacktriangle/\blacktriangledown$ buttons, and press the **OK** button.








The removal of image protection is executed and the camera returns to the previous menu mode.

 Formatting an SD/SDHC memory card or internal memory overrides protection, and erases all images regardless of their protected status.





ERASING IMAGES

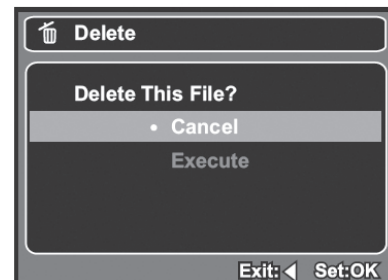
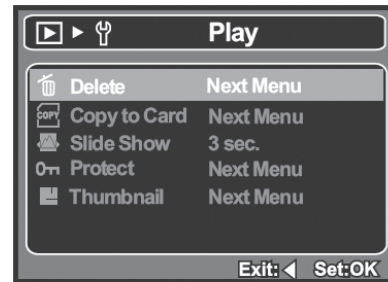
Erasing single image / Erasing all images

1. Press the  button.
The last image is displayed on the screen.
2. Select the image you want to erase with the  /  buttons.
3. Press the **MENU** button.
4. Select [Delete] with the  /  buttons and press the **OK** button.
5. Select [Single] or [All] with the  /  buttons, and press the **OK** button.

[Single]: Erases the selected image or the last image.

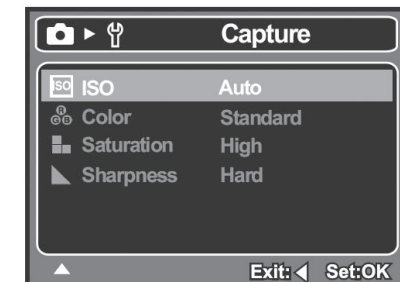
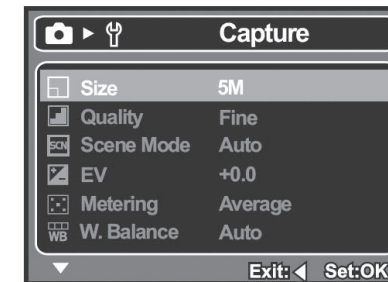
[All]: Erases all of the images except for the protected images.
6. Select [Execute] with the  /  buttons, and press the **OK** button.






Select [Cancel] if you decide not to erase the image, and press the **OK** button.



CAPTURE MENU

This menu is for the basic settings used by the camera to capture still images.




1. Press the **MODE** button to set the camera mode to Camera.
2. Press the **MENU** button.
3. Select the desired option item with the  /  buttons, and press the **OK** button to enter its respective menu.
4. Select the desired setting with the  /  buttons, and press the **OK** button.
6. To exit from the menu, press the  button.

SIZE

This sets the size of the captured image.

10M	10M (3648 x 2736 pixels) (FW interpolation)
8M	8M (3264 x 2448 pixels) (FW interpolation)
5M	5M (2560 x 1920 pixels)
3M	3M (2048 x 1536 pixels)
1.3M	1.3M (1280 x 960 pixels)
VGA	VGA (640 x 480 pixels)

 Deleting an image does not change sequential image numbering. For example, if you delete image number 240, the next captured image will be numbered 241 even though 240 no longer exists. In other words, an image-number is retired when an image is deleted and will not be reused or reassigned to another subsequently captured image.

QUALITY

This sets the quality (compression) at which the image is captured.



Fine



Standard



Economy

SCENE MODE

Refer to “Setting the Scene Mode” on page 9 for further details.

EV

Refer to section in this manual titled “Adjusting the Exposure (EV Compensation)” for further details.

METERING

Sets the metering method for calculating the exposure.



Average: The entire area of the screen is measured, and the exposure is calculated.



Spot: A very small portion of the center of the screen is measured, and the exposure is calculated.

WHITE BALANCE

Sets the white balance for a variety of lighting conditions and permits images to be captured that approach the conditions that are seen by the human eye.

Blank

Auto



Daylight



Cloudy



Tungsten



Fluorescent

ISO



Sets the sensitivity for capturing images. When the sensitivity is raised (and the ISO figure is increased), photography will become possible even in dark locations, but the image will appear more pixelated (grainier).

COLOR

Sets the color of the image.

* Standard / Vivid / Sepia / B&W

SATURATION

Sets the saturation of the image.

* High / Normal / Low


SHARPNESS

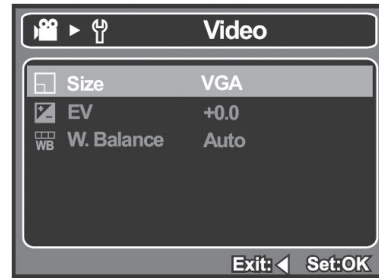
Sets the sharpness of the image.

* Hard / Normal / Soft

VIDEO MENU

This menu is for the basic settings to be used when recording video clips.

1. Press the **MODE** button to set the camera mode to .
2. Press the **MENU** button.
3. Select the desired option item with the **▲/▼** buttons, and press the **OK** button to enter its respective menu.
4. Select the desired setting with the **▲/▼** buttons, and press the **OK** button.
5. To exit from the menu, press the **◀** button.



SIZE

This sets the resolution of the video clip that will be captured.

VGA 640 x 480

QVGA 320 x 240


EVW


Refer to “Adjusting the Exposure (EV Compensation)” on page 10.

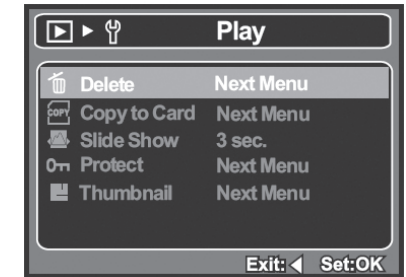
WHITE BALANCE

Refer to “White Balance” on page 20.

PLAYBACK MENU

In the  mode, choose which settings are to be used for playback.

1. Press the  button.
2. Press the **MENU** button.
3. Select the desired option item with the **▲/▼** buttons, and press the **OK** button to enter its respective menu.
4. Select the desired setting with the **▲/▼** buttons, and press the **OK** button.
5. To exit from the menu, press the **◀** button.



DELETE

Refer to “Erasing Images” on page 16.

COPY TO CARD

Allows you to copy your files from the camera’s internal memory to the upgraded memory area. Of course, you can only do this if you have a specified a memory upgrade and some files in internal memory.

*Cancel / Execute

SLIDE SHOW

Refer to “Slideshow Display” on page 14.

PROTECT

Refer to “Protecting Images” on page 15.

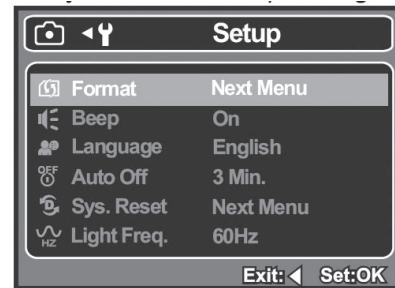
THUMBNAIL

Refer to “Thumbnail Display” on page 14.

SETUP MENU

Set your camera's operating environment.

1. Press the MENU button.
2. Select the Setup menu with the ► button.
3. Select the desired option item with the ▲/▼ buttons, and press the OK button to enter its respective menu.
4. Select the desired setting with the ▲/▼ buttons, and press the OK button.
5. To exit from the menu, press the ▼ button.



Format

Refer to section in this manual titled “Formatting the Memory Card or Internal Memory” for further details.

Beep

Switch on or off the camera sound each time you press the camera's buttons.

Language

Refer to “Choosing the Language” on page 7.

Auto Off

If no operation is performed for a specific period of time, the power to the camera is automatically turned off. This feature is useful for reducing battery consumption. Set the time period to 1, 3 or 5 minutes. Alternatively, select the Off option if you want the camera to remain on until you manually switch it off.

System Reset

Select the Execute option to restore the original factory set default settings to all camera functions.

Light Freq.

The function allows to change the light frequency of environment to 60Hz or 50Hz.

60Hz: the light frequency of environment is 60Hz like the US.

50Hz: the light frequency of environment is 50Hz like the UK.



NEVER OPEN THE BATTERY OR USB COMPARTMENTS IN A HAZARDOUS ENVIRONMENT.

SYSTEM REQUIREMENT

Windows	Macintosh
Pentium 166 MHz or higher	PowerPC G3/G4/G5
Windows 2000/XP/Vista	OS 9.0 or later
128MB RAM	128MB RAM
128MB hard disk space	128MB hard disk space
CD-ROM drive	CD-ROM drive
Available USB port	Available USB port

DOWNLOADING YOUR FILES

1. Connect one end of the USB cable to an available USB port on your computer.
2. Connect the other end of the USB cable to the USB terminal on the camera.
3. Select [PC] using the ▲/▼ buttons, and press the **OK** button.

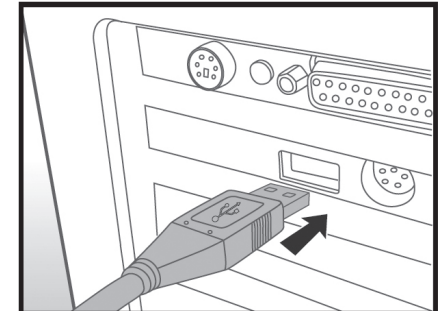
Windows Users

1. From the Windows desktop, double click on “My Computer”.
2. Look for a new “removable disk” icon. This “removable disk” is actually the memory (or memory card) in your camera. Typically, the camera will be assigned drive letter “e” or higher.
3. Double click on the removable disk and locate the DCIM folder.
4. Double click on the DCIM folder to open it to find more folders. Your recorded images and video clips will be inside these folders.
5. Copy & Paste or Drag-N-Drop image and video files to a folder on your computer.

Mac Users

Double-click the “untitled” or “unlabeled” disk drive icon on your desktop.

iPhoto may automatically launch.



9. TECHNICAL INFORMATION

SPECIFICATION

Item	Description
Image sensor	1/2.5" CMOS sensor
Effective pixels	5.0 Mega pixels
Image resolution	Still image 10M: 3648 x 2736 (FW interpolation), 8M: 3264 x 2448 (FW interpolation), 5M: 2560 x 1920, 3M: 2048 x 1536, 1.3M: 1280 x 960, VGA: 640 x 480 Video clip VGA: 640 x 480 (24 fps), QVGA: 320 x 240 (30 fps)
Recording media	16MB internal memory (13.5MB available for image storage)
	Supports SD/SDHC memory card (up to 4GB) (optional)
File format	Image format: JPEG; video format: Motion JPEG
Lens	F-no.: f 3.0 Focus Length: 6.47 mm (equivalent to 39mm on a 35mm camera)
Focus range	1.45m (57.1") ~ infinity
Shutter speed	1 - 1/1000 sec.
LCD monitor	2.48" full color LTPS-TFT LCD (153.6K pixels)
Self-timer	10 sec delay, 2 sec delay
Exposure compensation	-2.0EV~ +2.0EV (in 0.3EV increments)
White balance	Auto, Daylight, Cloudy, Tungsten, Fluorescent
ISO	Auto, 100, 200
Interface	USB connector
Power	1 x ATEX Certified CorDEX Instruments battery pack part number CDX2341-801
Dimensions	TBA
Weight	TBA