FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Use of shielded cable is required to comply with Class B limits in Subpart B of Part 15 of the FCC rules.
Do not make any changes or modifications to the equipment unless otherwise specified in the manual. If such changes or modifications should be made, you could be required to stop operation of the equipment.

Notice
If static electricity or electromagnetism causes data transfer to discontinue midway (fail), restart the application or disconnect and connect the communication cable (USB, etc.) again.

READ THIS FIRST

Trademark Information

- Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.
- Pentium® is a registered trademark of Intel Corporation.
- Macintosh is a trademark of Apple Inc.
- SD™ is a trademark.
- SDHC™ is a trademark.
- Other names and products may be trademarks or registered trademarks of their respective owners.

Product Information

- Product design and specifications are subject to change without notice. This includes primary product specifications, software, software drivers, and user's manual. This User Manual is a general reference guide for the product.
- The product and accessories that come with your camera may be different from those described in this manual. This is due to the fact that different retailers often specify slightly different product inclusions and accessories to suit their market requirements, customer demographics, and geographical preferences. Products very often vary between retailers especially with accessories such as batteries, chargers, AC adapters, memory cards, cables, pouches, and language support. Occasionally a retailer will specify a unique product color, appearance, and internal memory capacity. Contact your dealer for precise product definition and included accessories.
- The illustrations in this manual are for the purpose of explanation and may differ from the actual design of your camera.
- The manufacturer assumes no liability for any errors or discrepancies in this user manual.

SAFETY INSTRUCTIONS

Read and understand all ***Warnings*** and ***Cautions*** before using this product.

Warnings

If foreign objects or water have entered the camera, turn the power off and remove the battery.

Continued use might cause fire or electric shock. Consult the store of purchase.

If the camera has fallen or its case has been damaged, turn the power off and remove the battery.

Continued use might cause fire or electric shock. Consult the store of purchase.

Do not disassemble, change or repair the camera.

This might cause fire or electric shock. For repair or internal inspection, ask the store of purchase.

Use the supplied AC adapter only with the indicated power supply voltage.

Use with any other power supply voltage might cause fire or electric shock.

Do not use the camera in areas near water.

This might cause fire or electric shock. Take special care during rain, snow, on the beach, or near the shore.

Do not place the camera on inclined or unstable surfaces.

This might cause the camera to fall or tilt over, causing damage.

Keep the battery out of the reach of children.

Swallowing the battery might cause poisoning. If the battery is accidentally swallowed, immediately consult a physician.

Do not use the camera while you are walking, driving or riding a motorcycle.

This might cause you to fall over or result in traffic accident.

Please use battery with complete external seals.

Do not use battery from which the seals have been damaged or removed. This may cause leakage, explosion, or injury.

Cautions

Insert the battery paying careful attention to the polarity (+ or –) of the terminals.
Inserting the battery with its polarities inverted might cause fire and injury, or damage to the surrounding areas due to the battery rupturing or leaking.

Do not fire the flash close to anyone's eyes.
This might cause damage to the person's eyesight.

Do not subject the LCD monitor to impact.
This might damage the glass on the screen or cause the internal fluid to leak. If the internal fluid enters your eyes or comes into contact with your body or clothes, rinse with fresh water. If the internal fluid has entered your eyes, consult a physician to receive treatment.

A camera is a precision instrument. Do not drop it, strike it or use excessive force when handling the camera.
This might cause damage to the camera.

Do not use the camera in humid, steamy, smoky, or dusty places.
This might cause fire or electric shock.

Do not remove the battery immediately after long period of continuous use.
The battery becomes hot during use. Touching a hot battery might cause burns.

Do not wrap the camera or place it in cloth or blankets.
This might cause heat to build up and deform the case, resulting in fire. Use the camera in a well-ventilated place.

Do not leave the camera in places where the temperature may rise significantly, such as inside a car.
This might adversely affect the case or the parts inside, resulting in fire.

Before you move the camera, disconnect cords and cables.
Failure to do this might damage cords and cables, resulting in fire and electric shock.

Notes on Battery Usage

When you use the battery, carefully read and strictly observe the *Safety Instructions* and the notes described below:

- Use only the specified battery (3.7V).
- Avoid extremely cold environments as low temperatures can shorten the battery life and reduce camera performance.
- When you are using a new rechargeable battery or a rechargeable battery that has not been used for an extended period of time (the battery that passed the expiry date is an exception), it may affect the number of images that can be captured. Therefore, to maximize its performance and lifetime, we recommend that you fully charge the battery and discharge it for at least one complete cycle before use.
- The battery may feel warm after a long period of continuous use of the camera or the flash. This is normal and not a malfunction.
- The camera may feel warm after a long period of continuous use. This is normal and not a malfunction.
- If the battery is not to be used for a long period of time, remove it from the camera to prevent leakage or corrosion and store it after no battery power is left. Stored for a long time in a fully charged condition, its performance may be impaired.
- Always keep the battery terminals clean.
- There is a risk of explosion if the battery is replaced by an incorrect type.
- Dispose of used battery according to the recycle instructions.
- Charge the rechargeable battery fully before using for the first time.
- To prevent short-circuiting or fire, keep the battery away from other metal objects when carrying or storing.

This symbol mark [crossed-out wheeled bin] indicates separate collection of waste batteries in the EU countries. The batteries provided with this product shall not be treated as household waste. Please use the return and collection systems available in your country for the disposal of the waste batteries.
If a chemical symbol is printed beneath the symbol mark, this chemical symbol means that the batteries contains a heavy metal at a certain concentration. It is indicated as follows:
Hg: mercury, Cd: cadmium, Pb: lead.

CONTENTS

INTRODUCTION

Overview

Congratulations on your purchase of the new digital camera.
Capturing high-quality digital images is fast and easy with this state-of-the-art smart camera. Equipped with a 12.0-megapixel CCD, this camera is capable of capturing images with a resolution of up to 3968 x 2976 pixels.
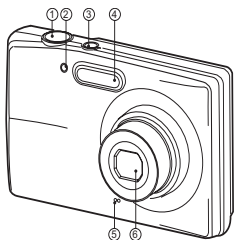
Package Contents

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

Common Product Components:
- Digital Camera
- Quick Start Guide
- Software CD-ROM
- USB cable
- AV cable
- Camera strap
- Camera pouch
- Rechargeable lithium-ion battery
- AC/DC adapter

GETTING TO KNOW YOUR CAMERA

Front View

1.	Shutter button
2.	Self-timer LED
3.	**ON/OFF** Power button
4.	Flash
5.	Microphone
6.	Lens

Rear View
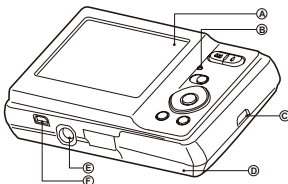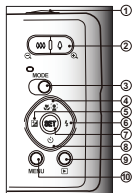
A. LCD monitor
B. Status LED
C. Strap holder
D. Battery / Memory card cover
E. Tripod socket
F. USB and AV OUT terminal

Item	Function		
	Capture Mode	**Video Mode**	**Playback Mode**
1.	Shutter button	Record button	Still image: to capture mode Video clip: to capture mode
2.	📷 :Zooms out 🔍 :Zooms in	📷 :Zooms out 🔍 :Zooms in	📷 :Zooms out 🔍 :Zooms in
3.	Switches to: Video mode > Capture mode	Switches to: Capture mode > Video mode	Still image: to capture mode Video clip: to capture mode
4.	Focus	Focus	Next 10th image
5.	Compensation ▨ > ▨	--	Previous Image
6.	Flash	--	Next Image
7.	If any scene mode is set: switches to scene mode selection screen	--	Still image: to display image Video clip: to play video clip
8.	Self-timer	Self-timer	Previous 10th image
9.	Playback mode	Playback mode	Still image: to capture mode Video clip: to capture mode
10.	Capture menu	Video menu	Playback menu

LCD Monitor Display

Capture mode

1. Zoom status
2. Available number of shots
3. Storage media
   [SINT]   Internal memory (no card)
   [⬛]   SD/SDHC memory card
4. Battery condition
   [▥]   Full battery power
   [▣]   Medium battery power
   [▢]   Low battery power
   [▢]   No battery power
5. Focus setting
   [AUTO]   Auto
   [◉]   AF Tracking
   [☺]   Face Detect
   [♥]   Macro
   [∞]   Infinity
6. Flash mode
   [⚡A]   Auto
   [⚡]   Flash On
   [⊘]   Flash Off
   [⚡◉]   Red-eye
   [⚡S]   Slow Sync
   [⚡⚡]   Pre-flash
7. [⬛]   Exposure compensation
   (It can not be used in below modes: Smile Detection, Portrait Man & Portrait Lady.)
   [⬛]   Backlight correction
   (It can only be used in Portrait Man and Portrait Lady.)
8. Self-timer & Self-portrait icon
   [OFF]   Off
   [◉]   Self-portrait
   [⏱]   2 sec.
   [⏱]   10 sec.
   [⏱]   10+2 sec.
9. [⬛]   Histogram
10. Image size resolution
    [⬛MP]   3968 x 2976
    [⬛MP]   3264 x 2448
    [⬛MP]   2304 x 1728
    [⬛MP]   1600 x 1200
    [VGA]   640 x 480
11. Shortcut
12. Date and time
13. Quick shot
14. Capture mode icon
    [⬛]   Single
    [⬛]   Continuous
    [A]   AEB (Auto Exposure Bracketing)
    [⬛]   Album Shot
    [⬛]   Burst
    [⬛]   Cont.flash
    [⬛]   Pre-shot
    [⬛]   Coupl.shot
    [⬛]   Burst 30fps
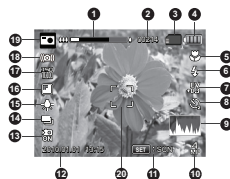
15. White balance
    [AUTO]   Auto
    [☀]   Incand.
    [⬛]   Fluoresc.1
    [⬛]   Fluoresc.2
    [☀]   Daylight
    [☁]   Cloudy
    [⬛]   Manual WB
16. Image quality
    [⬛]   Fine
    [⬛]   Standard
    [⬛]   Economy
17. ISO
    [⬛]   Auto
    [⬛]   ISO 100
    [⬛]   ISO 200
    [⬛]   ISO 400
    [⬛]   ISO 800
    [⬛]   ISO 1600
18. Slow shutter warning
19. Mode icon / Scene mode
    [ ]   Auto
    [SCN]   Intelligent Scene
    [◉]   Smile Detection
    [ ]   Anti-shake
    [ ]   Panorama
    [8]   Portrait Man
    [ ]   Portrait Lady
    [ ]   Landscape
    [ ]   Sports
    [ ]   Night Portrait
    [◖]   Night Scene
    [ ]   Candlelight
    [ ]   Fireworks
    [ ]   Text
    [ ]   Sunset
    [ ]   Sunrise
    [ ]   Splash Water
    [ ]   Flow Water
    [ ]   Snow
    [ ]   Beach
    [ ]   Pets
    [ ]   Natural Green
    [ ]   Program AE
20. Main focus area

Video mode
1. Zoom status
2. Storage media
3. Battery condition
4. Focus setting
5. Flash off
6. Self-timer icon
7. Video resolution
8. Available recording time/Elapsed time
9. Date and time
10. Video quality
11. Audio off
12. Mode icon
13. Main focus area

Playback mode - Still image playback
1. Protect icon
2. Folder / File number
3. Storage media
4. Battery condition
5. Image size resolution
6. Date and time
7. Histogram
8. Shutter speed/Aperture value
9. Exposure value
10. Image quality
11. ISO
12. Mode icon
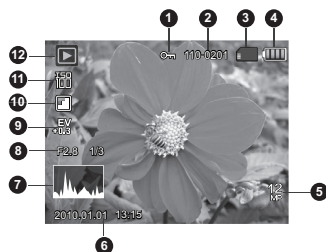
Playback mode - Video playback
1. Protect icon
2. Folder / File number
3. Storage media
4. Battery condition
5. Volume mode
6. Total recorded time
7. Video status bar
8. Video condition icon
9. Elapsed time
10. Set key: Play/Pause hint icon
11. Down key: Stop hint icon
12. Mode icon

GETTING STARTED
Preparation
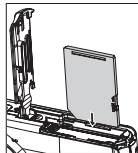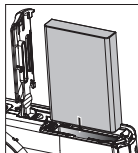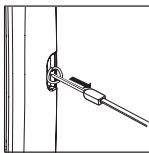
1. Attach the camera strap.
2. Open the battery/memory card cover.
3. Insert the supplied battery with correct orientation as shown. (label side back)
4. Insert an SD/SDHC memory card (Optional).
   - The camera has 32MB internal memory(10MB available for image storage), but you can load an SD/SDHC memory card to expand the camera's memory capacity.
   - Be sure to format the memory card with this camera before its initial usage.
5. Close the battery/memory card cover and make sure it is locked securely.

- To prevent valuable data from being accidentally erased from an SD/SDHC memory card, you can slide the write protect tab (on the side of the SD/SDHC memory card) to "LOCK".
- To save, edit, or erase data on an SD/SDHC memory card, you must unlock the card .
- To prevent damaging of an SD/SDHC memory card, be sure to turn off the power when inserting or removing the SD/SDHC memory card. If inserting or removing the SD/SDHC memory card with the power on, the camera will automatically turn off.
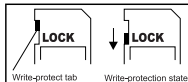
Charging the Battery
The battery is not fully charged at the time of purchase. Before use, be sure to charge the battery until the status LED lights red.
1. Connect camera to AC/DC adapter with USB cable.
2. Insert the plug into a wall outlet.
   - The status LED blinks red when charging has started and lights red when charging is completed.
   - If the status LED does not light, the camera is not correctly connected or the battery, camera or AC/DC adapter may be damaged.
   - Charging time varies according to the ambient temperature and the status of battery.
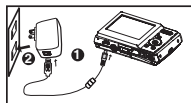
- The included AC/DC adapter differs depending on the region where you purchased the camera.
- User can also charge the battery by connecting camera to computer with USB cable.

Initial Settings

Setting the Date and Time

The date/time needs to be set if and when:

■ The camera is turned on for the first time.
■ The camera is turned on after leaving the camera without the battery for an extended period of time.

When the date and time information is not displayed on the LCD monitor, follow these steps to set the correct date and time.
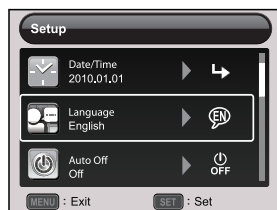
1. Press the **MODE** button, and set the camera mode to [▣] or [▥]; or press the ▣ button.
2. Press the **MENU** button.
3. Select the [Setup] at the end of the Menu with the ▲ / ▼ buttons, and press the **SET** button.
4. Select [Date/Time] with the ▲ / ▼ buttons, and press the **SET** button.
5. Select the date format with the ▲ / ▼ buttons, and press the **SET** button.
    ■ Select the item's field with the ◄ / ► buttons and adjust the value for the date and time with the ▲ / ▼ buttons.
    ■ The time is displayed in 24-hour format.
    ■ After confirming all settings are correct, press the **SET** button.
6. To exit from the [Setup] menu, press the **MENU** button.
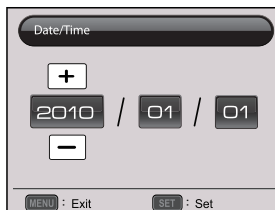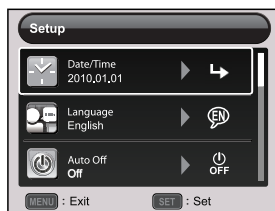
Choosing the Language

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

1. Press the **MODE** button, and set the camera mode to [▢] or [▥]; or press the ▶ button.
2. Press the **MENU** button.
3. Select the [Setup] at the end of the Menu with the ▲ / ▼ buttons, and press the **SET** button.
4. Select [Language] with the ▲ / ▼ buttons and press the **SET** button.
5. Select the displayed language with the ◄ / ► / ▲ / ▼ buttons and press the **SET** button.
   - The setting will be stored.
6. To exit from the [Setup] menu, press the **MENU** button.

Formatting the Memory Card or Internal Memory

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

1. Press the **MODE** button, and set the camera mode to [▢] or [▥]; or press the ▶ button.
2. Press the **MENU** button.
3. Select the [Setup] at the end of the Menu with the ▲ / ▼ buttons, and press the **SET** button.
4. Select [Format] with the ▲ / ▼ buttons, then press the **SET** button.
5. Select [Execute] with the ◄ / ► buttons, and press the **SET** button.
   - To cancel formatting, select [Cancel] and press the **SET** button.
6. To exit from the [Setup] menu, press the **MENU** button.
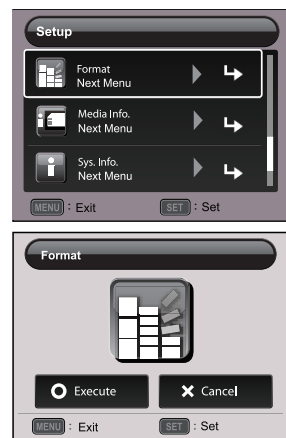
CAPTURE MODE

Capturing Images

Your camera is equipped with a 2.36" full color TFT LCD monitor to help you compose images, playback recorded images/video clips or adjust menu settings.

1. Press the **ON/OFF** button to turn the power on.
2. Press the **MODE** button, and set the camera mode to [▢].
3. Compose your image in the LCD monitor.
   - Turn the zoom lever to ⊕ side to zoom in on the subject, and enlarges the subject on the LCD monitor.
   - Turn the zoom lever to ⊖ side to zoom out on the subject, and provides a wider angle image.
4. Press the shutter button.
   - Pressing the shutter button down halfway automatically focuses and adjusts the exposure, and pressing the shutter button down fully captures the image.
   - The focus area frame turns green when the camera is in focus and the exposure is calculated.
   - When the focus is not suitable, the frame of the focus area turns red.
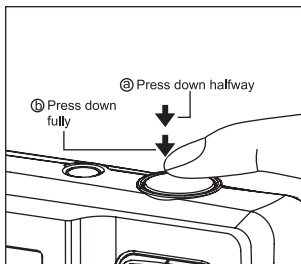
Setting the Scene Mode

By simply selecting one of the available scene modes, you can capture the image with the most appropriate settings.

1. Press the **MODE** button, and set the camera mode to [▣], and press the **SET** button.
2. Select the desired scene mode with the ◄ / ► /
   ▲ / ▼ buttons, and press the **SET** button.
3. Compose the image and press the shutter button.
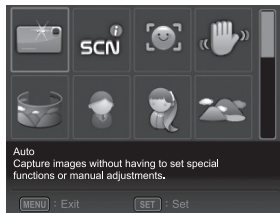
The table below will help you choose the appropriate scene mode:

| Scene mode	Description
▣ Auto	Select this mode when you want to capture images without having to set special functions or manual adjustments.
scn Intelligent Scene	Select this mode when you want the camera to select an ideal shooting mode according to environment automatically.
☺ Smile Detection	Select this mode to automatically capture an image when a smiling face is detected.
🖐 Anti-shake	This mode minimizes the influences of hand shaking when you want to capture an image.
🏔 Panorama	Select this mode when you want to capture a series of shots then stitch them together with software to make a single photo on the computer.
👤 Portrait Man	Select this mode when you want to capture an image that makes a man stand out against a blurred background.
👤 Portrait Lady	Select this mode when you want to capture an image that makes a lady stand out against a blurred background.
🏞 Landscape	Select this mode when you want to capture an image with infinity focus, hard sharpness and high saturation.
🏃 Sports	Select this mode when you want to capture fast-moving subjects.
🌃 Night Portrait	Select this mode when you want to capture people with an evening or night scene background.
🌙 Night Scene	Select this mode when you want to capture dark scenes such as night views.
🕯 Candlelight	Select this mode when you want to capture photos of candlelight scene, without spoiling the ambience.

Scene mode	Description
▦ Fireworks	Select this mode when you want to capture fireworks clearly with optimal exposure. The shutter speed becomes slower, so using a tripod is recommended.
▤ Text	Select this mode when you want to capture an image that contains black and white subjects like printed documents.
◠ Sunset	Select this mode when you want to capture a sunset. This mode helps keep the deep hues in the scene.
◠ Sunrise	Select this mode when you want to capture a sunrise. This mode helps keep the deep hues in the scene.
▦ Splash Water	Select this mode when you want to capture photos of splashing water.
▨ Flow Water	Select this mode when you want to capture the soft flowing water.
▨ Snow	Select this mode when you want to capture clear snow scenes without darkened subjects and bluish tint.
▨ Beach	Select this mode when you want to capture bright beach scenes and sunlit water surfaces.
▨ Pets	Select this mode when you want to capture your pets. Shoot from their eye level.
▨ Natural Green	Select this mode when you want to capture the green scenery background such as forest. This mode helps to brighten the colors.
▨ Program AE	This mode allows you to manually set parameters other than the shutter speed and the aperture value.

Taking Images with Intelligent Scene mode

In this Intelligent Scene mode, the camera can sense the ambient conditions and automatically select the ideal shooting mode.
1. Press the **MODE** button, and set the camera mode to [▣], and press the **SET** button.
2. Select [Intelligent Scene] with the ◄ / ► / ▲ / ▼ buttons, and press the **SET** button.
   ■ The camera can automatically select best mode for the shooting scene from [Auto] / [Landscape] / [Night Portrait] / [Sports] / [Portrait Man] / [Macro].
3. Compose the image, and press the shutter button down fully.

Setting the Panorama Mode

This mode is designed to make it easier to take a series of shots then stitch them together with software to make a single image. You can capture a photographic subject that won't fit into a single frame, such as a landscape, and stitch it together later with a program such as Arcsoft Panorama Maker**®** 4.0 application.

1. Press the **MODE** button, and set the camera mode to [▣], and press the **SET** button.
2. Select [Panorama] with the ◄ / ► / ▲ / ▼ buttons, and press the **SET** button.
3. Select the photographic direction with the ◄ / ► buttons.
4. Shoot the first image.
   ■ The next image appears beside the previous image.
5. Orient the camera so that the second frame overlaps a small portion of the photographic subject of the first image and press the shutter button to capture the next image.
6. Follow the same steps to capture subsequent images in the sequence.
7. Finish the sequence by pressing the **MENU** button or switch to another mode after the last image has been recorded.

Taking Images When the Smile Feature Is On

With the camera's new "smile detection" function, this camera detects smiles so you do not miss those special moments in life.

1. Press the **MODE** button, and set the camera mode to [▣], and press the **SET** button.
2. Select [Smile Detection] with the ◄ / ► / ▲ / ▼ buttons, and press the **SET** button.
3. Compose the image, and press the shutter button down fully.
4. Once the camera detects a smile, it will automatically capture 3 images (by default, the flash mode setting is set to ⚡).
   ■ If the [Capture Md.] is set to [Single], the camera will only capture an image after it detects a smile.
   ■ When capturing group shots (if the number of people is more than 1), the camera will automatically capture the image(s) when it detects two smiles.
   ■ If the camera does not detect a smile within 5 seconds, the camera returns to preview display.
   ■ Press the shutter button once again to reactivate this function.
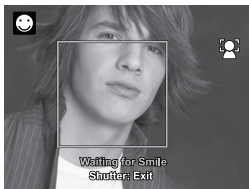
Recording Shots using Face Detection Technology

Face Detection Technology can identify and focus on the human faces in the image.

1. Press the **MODE** button, and set the camera mode to [🔳].
2. Press the ♨🄟 button, and select [🄟] icon with the ◄ / ► buttons. Press the **SET** button.
   - With Face Detection turned on, the camera identifies main face (white frame) and subsidiary faces (gray frames).
   - If the camera cannot detect and track any faces, there will be no frame shown on the screen.
3. Press the shutter button halfway down to lock the focus.
   - When the main face is in focus, the white frame simultaneously turns green. Otherwise, it turns red.
4. Press the shutter button down fully to capture your image.

main face (Green frame)

Focus lock
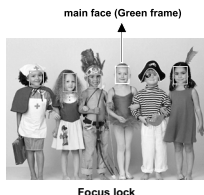
■ Subjects that are not suitable with this function:
   a. A person is wearing glasses, sunglasses, or face is covered with hat or hair.
   b. A person turns sideways.

Self-portrait Function

Use this function to take pictures of yourself or include yourself in pictures.

1. Press the **MODE** button, and set the camera mode to [🔳].
2. Press the ⟳ button, and select [🖐] icon with the ◄ / ► buttons. Press the **SET** button.
3. Press the shutter button.
4. If the camera detect and track any faces, after twice blinking of the self-timer LED, one image will be captured.
   - Press the shutter button to exit.
   - If it does not detect any face within 30 seconds, the camera will automatically capture an image and return to preview display.
   - Select [🖐] to reactivate this function.

VIDEO MODE
Recording Video Clips

This mode allows you to record video clips at a resolution of 320 x 240 / 640 x 480 / 720p pixels.

1. Press the **MODE** button, and 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.
   - The zoom function cannot be used during video recording.
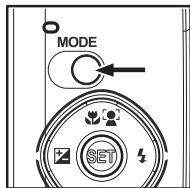
- When recording a video clip, the flash and "10+2 sec." self-timer function cannot be used.
- If the write speed of your SD/SDHC memory card is not fast enough for recording video clips in the currently selected quality, the video recording will stop. In this case, select a video quality lower than the current one.

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

- Video clips cannot be displayed rotated or enlarged.
- You cannot play sounds because the camera does not support the speaker function. Please use PC or other media to play the videos with sounds.
- Windows Media player or QuickTime Player is recommended to play back the video clip on your computer.
- QuickTime Player is a free media player available at www.apple.com; and compatible with Mac and Windows computers.
- For more information about the operation of the media player, refer to its respective help documentation.

PLAYBACK MODE

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 forward or reverse sequence with the ◄ / ► buttons.
   - To view the previous image, press the ◄ button.
   - To view the next image, press the ► button.
   - Turn the zoom lever to ⊕ side enlarges the image.
   - To return to normal magnification, turn the zoom lever to ⊖ side.

Entire image   Current position of enlargement
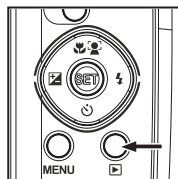
■ An [🎬] icon is displayed with the video data. Video clips cannot be rotated.

Playback Display

This function allows you to search quickly for the image that you want and playback images on the LCD monitor sequentially.

1. Press the ▶ button.
   - The last image appears on the screen.
2. Press the ▲ button to display the next 10th image.
   - If the 1st image taken is displayed, press the ▲ button to playback the 11th image taken. Press the ▲ button again to playback the 21th image taken and so forth.
3. Press the ▼ button to display the previous 10th image.
4. Press and hold the ◄ / ► buttons to display the previous or next images automatically in sequential order.
   - Release the ◄ / ► buttons if you wish to stop the automatic playback.

■ If the total number of images is less than 10, press the ▼ button jumps to the first image and press the ▲ button jumps to the last image.
■ Video clips will be displayed with an [🎬] icon.

Removing Red-eye

You can use this function to remove the red-eye effect after an image is taken.

1. Press the ▶ button.
   - The last image appears on the screen.
2. Select the image that you want to edit with the ◄ / ► buttons.
3. Press the **MENU** button.
4. Select [Fix Red Eyes] with the ▲ / ▼ buttons, and press the **SET** button.
5. Select [Execute] with the ◄ / ► buttons, and press the **SET** button.
6. View the changes on the corrected image.
7. To save your corrected image, select [Confirm] with the ◄ / ► buttons, and press the **SET** button.
   - When this process ends, this replaces the original image with the corrected image.
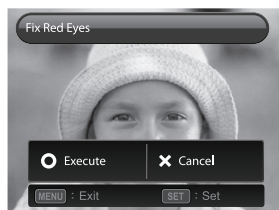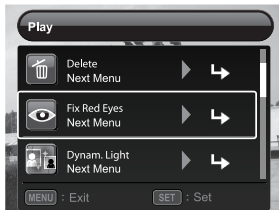
Dynamic Lighting Feature

This feature compensates for the unfavorable lighting conditions by brightening underexposed areas and balancing overexposed areas.

1. Press the ▶ button.
   - The last image appears on the screen.
2. Select the image that you want to edit with the ◄ / ► buttons.
3. Press the **MENU** button.
4. Select [Dynam. Light.] with the ▲ / ▼ buttons, and press the **SET** button.
5. Select [High] or [Low] with the ◄ / ► buttons, and press the **SET** button.
6. View the changes on the corrected image.
7. To save your corrected image, select [Confirm] with the ◄ / ► buttons, and press the **SET** button.
   - When this process ends, this replaces the original image with the corrected image.

Protecting Images

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

1. Press the ▶ button.
   - The last image appears on the screen.
2. Select the image that you want to protect with the ◀ / ▶ buttons.
3. Press the **MENU** button.
4. Select [Protect] with the ▲ / ▼ buttons, and press the **SET** button.
5. Select [Single] or [All] with the ◀ / ▶ buttons, and press **SET** button.
6. Select [Set] with the ◀ / ▶ buttons, and press the **SET** button.
   - Protection is applied to the image and the camera returns to the playback mode.
   - The protect icon [⚿] is displayed with protected images.
     When [All] has been selected, [⚿] is displayed with all the images.

Canceling the Protection

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

1. Press the ▶ button.
   - The last image appears on the screen.
2. Select the image that you want to cancel protection with the ◀ / ▶ buttons.
3. Press the **MENU** button.
4. Select [Protect] with the ▲ / ▼ buttons, and press the **SET** button.
5. Select [Single] or [All] with the ◀ / ▶ buttons, and press the **SET** button.
6. Select [Cancel Protect] with the ◀ / ▶ buttons, and press the **SET** button.
   - The removal of image protection is executed and the camera returns to the playback mode.

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

Erasing Images

Erasing a single image / Erasing all images
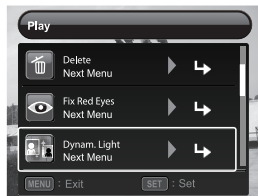
1. Press the ▶ button.
   - The last image appears on the screen.
2. Select the image you want to erase with the ◄ / ▶ buttons.
3. Press the **MENU** button.
4. Select [Delete] with the ▲ / ▼ buttons, and press the **SET** button.
5. Select [Single] or [All] with the ◄ / ▶ buttons, and press the **SET** 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 **SET** button.
   - To not erase, select [Cancel], and press the **SET** button.
7. To exit from the menu, press the **MENU** button.
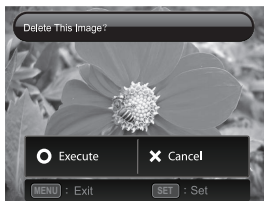
- Deleting an image will not affect sequential image numbering. For example, if you delete image number 240, the next captured image will be numbered 241 even though 240 no longer exists. In other words, an image-number is retired when an image is deleted and will not be reused or reassigned to another subsequently captured image.

MENU OPTIONS

Capture Menu

This menu is for the basic settings to be used when capturing still images.

1. Press the **ON/OFF** button to turn the power on.
2. Press the **MODE** button, and set the camera mode to any scene mode.
3. Press the **MENU** button to enter the [Capture] menu.
4. Select the desired option item with the ▲ / ▼ buttons, and press the **SET** button to enter its respective menu.
   ■ The selectable items may vary in different capture modes.
5. Select the desired setting with the ◄ / ► buttons, and press the **SET** button.
6. To exit from the menu, press the **MENU** button.

Size

This sets the size of the image that will be captured.
* 12M / 8M / 4M / 2M / VGA

ISO

This 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 more pixelated (grainier) the image will appear.
* Auto / ISO100 / ISO 200 / ISO 400 / ISO 800 / ISO 1600

Quality

This sets the quality (compression) at which the image is captured.
* Fine / Standard / Economy

W. Balance

This 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.
*Auto / Incand. / Fluoresc.1 / Fluoresc.2 / Daylight / Cloudy / Manual WB

Sharpness

This sets the sharpness of the image that will be captured.
* Hard / Standard / Soft

Color

This sets the color of the image that will be captured.
* Standard / Vivid / Sepia / B&W / Blue / Red / Green / Yellow / Purple

Saturation

This sets the saturation of the image that will be captured.
* High / Standard / Low

Metering

This sets the metering method for calculating the exposure.

* Center: Averages the light metered from the entire frame, but gives greater weight to the subject matter at the center.
* Spot: A very small portion of the center of the screen is measured to calculate the correct exposure.
* Average: The exposure is measured all of the image area.

Capture Md.

This sets the recording method at the time of capturing images.

* Single: Captures one image at a time.
* Continuous: Permits continuous capture of up to 3 images.
* AEB: Permits 3 consecutive images in the order of standard exposure, underexposure and overexposure compensation.
* Album Shot: Creates an album-like layout to combine 3 shots into a single image.
* Burst: Permits continuous photography while pressing and holding the shutter button. As long as you hold the shutter button pressed, images are captured until the memory capacity is exhausted.
* Cont.flash: Permits continuous capture of up to 3 images with flash.
* Pre-shot: Lets you capture the background first, then have someone to capture you in front of it.
* Coupl.shot: Uses separate areas to combine two shots. You can include yourself in the shot.
* Burst 30fps   Permits continuous capture of up to 30 images in the resolution 640 x480 within 1 second.

Quick Shot

If this function is set to "On", the camera takes a quick shot without focusing.
* On / Off

Digi. Zoom

This sets whether or not to use digital zoom at the time of photography.
* On / Off

Date Print

The date of recording can be printed directly on the still images. This function must be activated before the image is captured.
* On / Off

Setup

Refer to the section in this manual titled "Setup Menu" for further details.

Video Menu

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

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

Size

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

* HD / VGA / QVGA

Quality

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

* Fine / Standard

Color

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

* Standard / Vivid / Sepia / B&W / Blue / Red / Green / Yellow / Purple

Audio

This sets whether or not to record audio at the time of video recording.
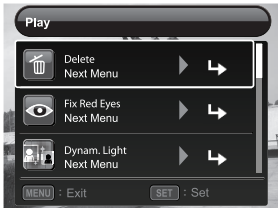
* On / Off

Digi. Zoom

Refer to the section in this manual titled "Digi. Zoom" in Capture Menu for further details.

Setup

Refer to the section in this manual titled "Setup Menu" for further details.

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 **SET** button to enter its respective menu.
4. Select the desired setting with the ◄ / ► buttons, and press the **SET** button.
5. To exit from the menu, press the **MENU** button.

Delete

Refer to the section in this manual titled "Erasing Images" for further details.

Fix Red Eyes

Refer to the section in this manual titled "Removing Red-eye" for further details.

Dynam. Light.

Refer to the section in this manual titled "Dynamic Lighting Feature" for further details.

Slide Show

This function enables you to play back your still images automatically in order one image at a time.
* 3 Sec. / 5 Sec. / 10 Sec.

Rotate

If you wish to rotate a still image 90 degrees to the right, select +90°; if you wish to rotate it 90 degrees to the left, select -90°. Video clips cannot be rotated.
* +90° / -90°

Protect

Refer to the section in this manual titled "Protecting Images" for further details.

Resize

Resizes a previously saved image. Resizing replaces the original image with the changed image. It is only possible to resize to a smaller size.

Qual. Change

Changes the quality (compression) of a recorded image. Compress images down to half of their size or less, overwrite old size images with newly compressed images. It is only possible to reduce the image quality/size, never to increase it.

Copy to Card

Allows you to copy your files from the camera's internal memory to an SD/SDHC memory card. Of course, you can only do this if you have a memory card installed and some files in internal memory. All files remain in the internal memory, even after copy to the SD/SDHC memory card from the internal memory.
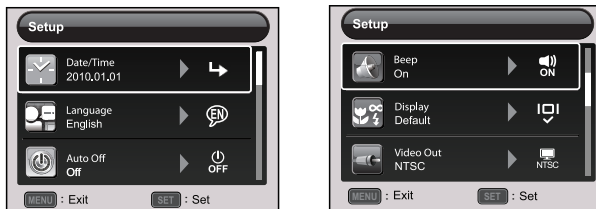
* Cancel / Execute

Setup

Refer to the section in this manual titled "Setup Menu" for further details.

Setup Menu

Set your camera's operating environment.

1. Press the **MODE** button, and set the camera mode to [☐] or [☷]; or press the ▶ button.
2. Press the **MENU** button.
3. Select the [Setup] at the end of the Menu with the ▲ / ▼ buttons, and press the **SET** button.
4. Select the desired option item with the ▲ / ▼ buttons, and press the **SET** button to enter its respective menu.
5. Select the desired setting with the ◄ / ► buttons, and press the **SET** button.
6. To exit from the menu, press the **MENU** button.

Date/Time

Refer to the section in this manual titled "Setting the Date and Time" for further details.

Language

Refer to the section in this manual titled "Choosing the Language" for further details.

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 usage.
* 1 Min. / 2 Min. / 3 Min. / Off

Beep

This sets whether or not to mute the camera sound each time you press the camera's buttons.
* On / Off

Display

This sets the image information display state.
* Default / All / Off

Video Out

This sets your camera to match the system of the equipment that you are going to connect to the camera.
* NTSC / PAL

Fr. No. Reset

This creates a new folder. The captured images are recorded to the newly created folder from number 0001.
* Cancel / Execute

LCD Bright.

Select a brightness level for the LCD monitor.
* Standard / Bright

Format

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

Media Info.

This displays the free capacity of the internal memory or the memory card.

Sys. Info.

This displays the firmware version of the camera.

Sys. Reset

This returns all basic settings to the camera's default settings.
* Cancel / Execute

TRANSFERRING FILES TO YOUR COMPUTER

System Requirement

Windows	Macintosh
■ Pentium III 1GHz or equivalent	■ PowerPC G3/G4/G5
■ Windows 7/XP/Vista	■ OS 10.3.9 or later
■ 512MB RAM	■ 256MB RAM (512 MB recommended)
■ 150MB available hard disk space	■ 128MB available hard disk space
■ CD-ROM drive	■ CD-ROM drive
■ Available USB port	■ Available USB port

Downloading Your Files

1. Turn on your camera.
2. Connect the camera to your computer with the USB cable.
3. Select [PC] using the ▲ / ▼ buttons and press the **SET** button.
4. From the Windows desktop, double click on "My Computer".
5. Look for a new "removable disk" icon.
6. Double click on the removable disk and locate the DCIM folder.
    - ■ Your recorded images and video clips will be inside the folders of DCIM folder.
    - ■ Copy&Paste or Drag-N-Drop image and video files to a folder on your computer.
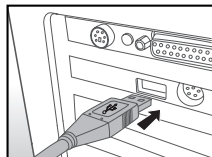
Mac users: Double-click the "untitled" or "unlabeled" disk drive icon on your desktop.
iPhoto may automatically launch.

USING THE CAMERA AS A PC CAMERA

Your camera can act as a PC camera, which allows you to videoconference with business associates, or have a real-time conversation with friends or family. Your computer system must include the items, Microphone, Sound card, Speakers or headphones, Network or Internet connection.

Install the PC camera driver

The PC-camera driver included in the CD-ROM is exclusively for Windows. The PC camera function is not supported for Mac platforms.

1. Insert the enclosed CD-ROM into your CD-ROM drive.
2. Follow the on-screen instructions to complete the installation.
3. After the driver installation is completed, restart your computer.

- ■ Make sure to install and launch a videoconferencing application software to activate the PC-camera function.
- ■ If the PC Operation System is Windows 64 bit, press F8 to enter the menu when restarting your computer, and select "Disable Driver Signature Enforcement" to activate the PC-camera function.

EDITING SOFTWARE INSTALLATION

There are 3 types of software that are included on the CD-ROM:

ArcSoft MediaImpression™ - 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. Create your own movies or photo slide shows, complete with soundtrack; edit, enhance, and add fun creative effects to your photos; and share your files easily through simple email attachments or popular photo printing and video sharing websites.

Print Creations - brings you a family of fun and easy print-project software that brings out the creativity in you. You can personalize the designs with your own digital pictures and text based on professionally designed templates and layouts. Projects can be printed at home or saved as image files for sharing with family and friends by email or the web.

Arcsoft Panorama Maker® 4.0 - Like magic, ArcSoft Panorama Maker® 4 turns any series of overlapping photos into a gorgeous panoramic image in just seconds. The program does most of the work for you by automatically selecting an entire group of pictures with one click, automatically organizing the photos into the proper order, then seamlessly stitching the photos into a panoramic masterpiece that you can print, share or post to the web. Create horizontal, vertical and 360° panorama pictures all within this one amazing program.

To install software:
1. Insert the CD-ROM that came with the camera into your CD-ROM drive.
   The welcome screen appears.
2. Click the respective software name.
   Follow the on-screen instructions to complete the installation.

- For more information about the operation of the software, refer to its respective help documentation.
- For Windows 7/XP/Vista users, please make sure to install and use the software in "Administrator" mode.
- The software is not supported by Mac.

SPECIFICATIONS

Item	Description
Image sensor	1/2.33" CCD sensor (12.0 megapixels)
Image resolution	Still image 12M (3968X2976), 8M(3264 x 2448) ,4M (2304x1728), 2M(1600 x 1200) ,VGA(640 x 480) Video clip VGA(640x480)/30fps, QVGA(320x240)/30fps, HD(720p)/30fps
LCD monitor	2.36" full color TFT LCD (112K pixels)
Recording media	32MB internal memory (10MB available for image storage) Supports SD/SDHC memory card (up to 16GB) (optional)
File format	DCF, JPEG (EXIF 2.2), Motion-JPEG (AVI), HD720p/30fps
Lens	3x optical zoom lens Aperture range: 3.1(W) - 5.9(T) Focal length: 6.3mm - 18.9mm
Focus Range	Macro: 0.2m~Inf.(W) 0.6m~Inf (T) Normal: 0.6m~Inf (W) 1m~Inf (T)
Shutter speed	4~1/2000 Sec.
Digital zoom	6x (Capture mode) 4x (Playback mode)
Terminals	USB／AV OUT (2 in 1 terminal)
Power supply	Rechargeable Lithium-ion battery (3.7V)
Battery Charging environment	Temperature 0°C - 40°C(32°F to 104°F)(Charging)
Dimensions	Approx. 95 x 59.7 x 22.6mm (without protruding parts)
Weight	Approx. 104g (without battery and memory card)

* Design and specifications are subject to change without notice.

APPENDIX

Possible Number of Shots

Possible number of shots (still image)

The table shows the approximate shots that you can capture at each setting based on the capacity of the internal memory and the SD/SDHC memory card.

Size	Quality		SD/SDHC memory card capacity				
			1GB	2GB	4GB SDHC	8GB SDHC	16GB SDHC
12 MP 3968 x 2976		Fine	170	331	682	1370	2675
		Standard	321	623	1282	2575	5025
		Economy	398	772	1589	3190	6227
8 MP 3264 x 2448		Fine	244	474	978	1963	3832
		Standard	453	877	1805	3623	7072
		Economy	560	1082	2228	4473	8729
4 MP 2304 x 1728		Fine	592	1143	2354	4275	9221
		Standard	928	1782	3667	7360	14362
		Economy	1156	2212	4551	9134	17824
2 MP 1600 x 1200		Fine	1303	2487	5118	10272	20045
		Standard	2066	3896	8015	16085	31389
		Economy	2452	4597	9457	18979	37035
VGA 640 x 480		Fine	5511	9856	20276	40689	79397
		Standard	12292	19974	41090	82457	99998
		Economy	12268	19974	41090	82457	99998

Possible recording time / sec (video clip)

Size	Quality		SD/SDHC memory card capacity				
			1GB	2GB	4GB SDHC	8GB SDHC	16GB SDHC
HD 1280 x 720		Fine	00:06:22	00:12:24	00:25:32	00:51:15	01:40:00
		Standard	00:06:31	00:12:42	00:26:08	00:52:27	01:42:22
VGA 640 x 480		Fine	00:08:43	00:16:58	00:34:35	01:10:05	02:16:45
		Standard	00:09:58	00:19:25	00:39:57	01:20:11	02:36:27
QVGA 320 x 240		Fine	00:26:38	00:51:53	01:46:45	03:34:13	06:57:59
		Standard	00:32:47	01:03:51	02:11:21	04:23:35	08:34:20

* We recommend a memory card of at least 10MB/Sec write speed to prevent auto stop or unexpected results. If you experience an error using a slower SD/SDHC memory card, you can set your camera's video recording to QVGA (320 x 240) and standard quality.

Troubleshooting

Refer to the symptoms and solutions listed below before sending the camera for repairs. If the problem persists, contact your local reseller or service center.

Symptom	Cause	Solutions / Corrective Actions
The power does not come on.	The battery is not inserted.	Insert the battery correctly.
	The battery is exhausted.	Recharge the battery.
The battery runs out quickly.	The battery is not fully charged. The battery is not used for an extended period of time after being charged.	Fully charge the battery and discharge it for at least one complete cycle before use to maximize its performance and lifetime.
The battery or camera feels warm.	Long period of continuous use of the camera or the flash.	
Even if press the shutter button, the camera does not take a picture.	The shutter button is not pressed all the way down.	Press the shutter button all the way down.
	The memory card does not have any free capacity.	Insert a new memory card, or delete unwanted files.
	The memory card is write-protected.	Remove the write-protection.
Images do not appear on the LCD monitor.	LCD monitor is dark.	Adjust the brightness of the LCD monitor in the menu.
Although it is set to auto focus, it does not focus.	The lens is dirty.	Wipe clean with a soft, dry cloth or lens paper.
	The distance to the subject is smaller than the effective range.	Get your subject within the effective focus range.
The contents on the memory card cannot be played back.	You played back a memory card that was not formatted by this camera.	Insert a memory card that was formatted on this camera.
Files cannot be deleted.	The file is protected.	Cancel protection.
	The memory card is write-protected.	Remove the write-protection.
Even when the camera's buttons are pressed, it does not operate.	The battery is running low.	Recharge the battery.
The date and time are wrong.	The correct date and time is not set.	Set the correct date and time.
Cannot download images.	The free space on the hard disk in your computer may be insufficient.	Check whether the hard disk has space for running Windows, and if the drive for loading image files has a capacity at least that of the memory card inserted in the camera.
	No power supply.	Recharge the battery.

The available flash settings in different photography modes:

		🔺A Auto	🔺 Flash On	🚫 Flash Off	🔺 Red-eye	🔺 Slow Sync	🔺 Pre-flash
Scene Mode	Auto	O	O	O	O	O	O
	Smile Detection	X	O	O	X	X	X
	Anti-shake	O	O	O	O	O	O
	Panorama	O	O	O	O	O	O
	Portrait Man	O	X	X	O	X	X
	Portrait Lady	O	X	X	O	X	X
	Landscape	X	X	O	X	X	X
	Sports	X	X	O	X	X	X
	Night Portrait	O	X	X	O	X	X
	Night Scene	X	X	O	X	X	X
	Candlelight	X	X	O	X	X	X
	Fireworks	X	X	O	X	X	X
	Text	X	X	O	X	X	X
	Sunset	X	X	O	X	X	X
	Sunrise	X	X	O	X	X	X
	Splash Water	O	O	O	O	O	O
	Flow Water	X	X	O	X	X	X
	Snow	X	X	O	X	X	X
	Beach	O	O	O	O	O	O
	Pets	O	O	O	O	O	O
	Natural Green	X	X	O	X	X	X
	Program AE	O	O	O	O	O	O
Capture Mode	Single	O	O	O	O	O	O
	Continuous	X	X	O	X	X	X
	AEB	X	X	O	X	X	X
	Album Shot	O	O	O	O	O	O
	Burst	X	X	O	X	X	X
	Cont.flash	X	O	X	X	X	X
	Pre-Shot	O	O	O	O	O	O
	Coupl.shot	O	O	O	O	O	O
	Burst 30fps	X	X	O	X	X	X
Focus Mode	Auto	O	O	O	O	O	O
	AF Tracking	O	O	O	O	O	O
	Face Detect	O	O	O	O	O	O
	Macro	O	O	O	O	O	O
	Infinity	O	O	O	O	O	O

* This table is for reference only and varies according to different combination of photography modes.
* O: Available   X: Unavailable