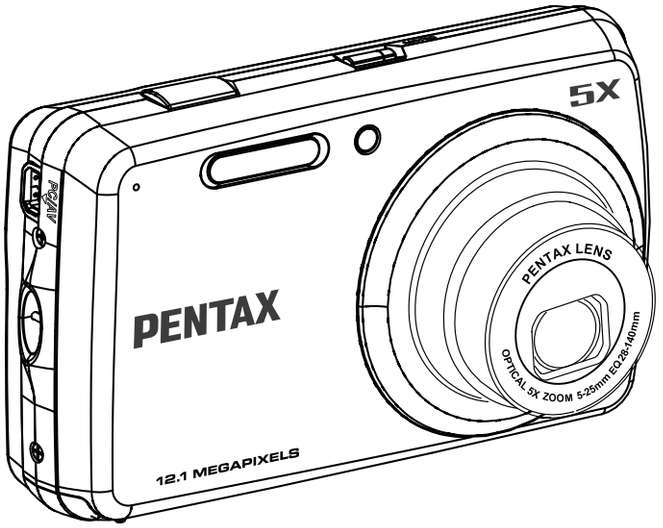
PENTAX

EN

Digital Camera

Operating Manual

Optio M90 / M900



To ensure the best performance from your camera, please read the Operating Manual before using the camera.

English

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Preface

About this Manual

Thank you for purchasing this PENTAX Digital Camera. Please read this manual before using the camera in order to get the most out of all the features and functions. Keep this manual safe, as it can be a valuable tool in helping you to understand all the camera capabilities.

Regarding Copyrights

Images taken using the PENTAX Digital Camera that are for anything other than personal enjoyment cannot be used without permission according to the rights as specified in the Copyright Act. Please take care, as there are cases where limitations are placed on taking pictures even for personal enjoyment during demonstrations, performances or of items on display. Images taken with the purpose of obtaining copyrights also cannot be used outside the scope of use of the copyright as laid out in the Copyright Act, and care should be taken here also.

Trademark Recognition

- PENTAX and Optio are trademarks of HOYA CORPORATION.
- SDHC logo ( ) is a trademark of SD-3C, LLC.
- Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and other countries.
- Windows Vista is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.
- Adobe, the Adobe logo, and Reader are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- ArcSoft®, and its logo are either the registered trademark or trademark of ArcSoft Inc. in the United States and/or other countries.
- All other brands or product names are trademarks or registered trademarks of their respective companies.

English

To users of this camera

- There is a possibility that recorded data may be erased or that the camera may not function correctly when used in surroundings such as installations generating strong electromagnetic radiation or magnetic fields.
- The liquid crystal panel used in the display is manufactured using extremely high precision technology. Although the level of functioning pixels is 99.99% or better, you should be aware that 0.01% or fewer of the pixels may not illuminate or may illuminate when they should not. However, this has no effect on the recorded image.
- There is a possibility that the illustrations and the display screen in this manual are different from the actual product.
- Do not use or store this device in the vicinity of equipment that generates strong electromagnetic radiation or magnetic fields.
- Strong static charges or the magnetic fields produced by equipment such as radio transmitters could interfere with the monitor, damage the stored data, or affect the product's internal circuitry and cause camera misoperation.

Regarding Product Registration

In order to better serve you, we request that you complete the product registration on the PENTAX website. Thank you for your cooperation.

USING YOUR CAMERA SAFELY

We have paid close attention to the safety of this product. When using this product, we request your special attention regarding items marked with the following symbols.

⚠ Warning This symbol indicates that violating this item could cause serious personal injuries.

⚠ Caution This symbol indicates that violating this item could cause minor or medium personal injuries, or material losses.

About the Camera

⚠ Warning

- Do not attempt to take the camera apart or remodel the camera. High voltages are present within the camera, and there is therefore a danger of electric shocks if the camera is taken apart.

- If the inside of the camera should become exposed as a result of, for example, the camera being dropped, please do not under any circumstances touch such exposed portions, as there is a danger of receiving an electric shock.
- To avoid the risk of it being swallowed by mistake, keep the memory card out of the reach of small children. Seek medical attention immediately if a card is accidentally swallowed.
- Wrapping the strap of the camera around your neck is also dangerous. Please take care that small children do not hang the strap around their necks.
- If the camera emits smoke or a strange smell, or in the event of any other irregularity, stop using the camera immediately, remove the battery and contact your nearest PENTAX Service Center. Continued use of the camera may result in fire or electric shock.
- During thunderstorms, unplug and discontinue use of the Battery charger. Continued use could cause equipment failure, a fire, or electric shock.

⚠ Caution

- Never try to disassemble or short the battery. Also, do not dispose of the battery in a fire, as they may explode.
- Do not charge any battery other than rechargeable lithium-ion battery D-LI108. The battery could explode or catch fire.
- Do not place your finger on the flash when it is discharging as there is a risk of burns.
- Do not discharge the flash while it is touching your clothing as there is a risk of discoloring of the clothing.
- If any leakage from the battery should come in contact with your eyes, do not rub them. Flush your eyes with clean water and get medical attention immediately.
- If any leakage from the battery should come in contact with skin or clothes, wash the affected areas thoroughly with water.
- Precautions for D-LI108 Battery Usage:
  - BATTERY MAY EXPLODE OR FIRE IF MISTREATED.
  - DO NOT DISASSEMBLE OR DISPOSE OF IN FIRE.
  - DO NOT CHARGE EXCEPT SPECIFIED CHARGING CONDITION.
  - DO NOT HEAT ABOVE 140 °F/60 °C, OR SHORT CIRCUIT.
  - DO NOT CRUSH OR MODIFY.
- Remove the battery from the camera immediately if it becomes hot or begins to smoke. Be careful not to burn yourself during removal.
- Some portions of the camera heat up during use, so please take care, as there is a risk of low temperature burns if such portions are held for long periods of time.
- Should the liquid crystal display be damaged, be careful of glass fragments. Also, be careful not to allow the liquid crystal to get on your skin or in your eyes or in your mouth.

- Depending on your inherent factors or physical condition, the use of the camera may cause itching, rashes or blisters. In case of any abnormality, stop using the camera and get medical attention immediately.

About the Battery charger

⚠ Caution

- Do not place heavy objects on the Battery charger, allow heavy objects to drop onto it or allow the Battery charger to become damaged due to excessive bending. If the Battery charger becomes damaged, consult a PENTAX Service Center.
- Do not short or touch the output terminals of the product while it is still plugged in.
- Do not plug in the Battery charger with wet hands. This can cause an electrical shock.
- Do not subject the product to strong impacts or allow it to drop onto a hard surface. This can cause a malfunction.

Care to be Taken During Handling

- Take the Worldwide Service Network listing that is included in the package with you when traveling. This will be useful if you experience problems abroad.
- When the camera has not been used for a long time, confirm that it is still working properly, particularly prior to taking important pictures (such as at a wedding or during traveling). Contents of the recording cannot be guaranteed if recording, playback or transferring your data to a computer, etc. is not possible due to a malfunction of your camera or recording media (memory card), etc.
- The lens on this camera is not interchangeable. The lens is not removable.
- Do not clean the product with organic solvents such as thinner, alcohol or benzene.
- Places of high temperature and humidity should be avoided. Particular care should be taken regarding vehicles, which can become very hot inside.
- Storing the camera where pesticides and chemicals are handled should be avoided. Remove from case and store in a well-ventilated place to prevent the camera from becoming moldy during storage.
- As this camera is not waterproof, do not use the camera where it may come in contact with rain, water or any other liquid.
- Ensure that the camera is not subjected to substantial vibrations, shocks or pressure as this may cause damage or malfunction. Place the camera on a cushion for protection when the camera is subjected to the vibrations of a motorbike, car, ship, etc. If the camera is subjected to substantial vibrations, shocks or pressure, take your camera to your nearest PENTAX Service Center and have it checked.
- The temperature range in which the camera can be used is 0°C to 40°C (32°F to 104°F).

- The liquid crystal display will become black at a high temperature but will return to normal when normal temperatures are returned to.
- The response speed of the liquid crystal display becomes slow at low temperatures. This is due to the properties of the liquid crystal and is not a fault.
- Periodic checks are recommended every 1 to 2 years in order to maintain high performance.
- If the camera is subjected to rapid temperature changes, condensation may form on the inside and outside of the camera. Therefore put the camera in a bag or plastic bag, and take the camera out when the difference in temperature has subsided.
- Be careful not to allow dirt, mud, sand, dust, water, toxic gases or salt to enter the camera as this may damage the camera. Wipe away any raindrops or water droplets and allow the camera to dry.
- Please note that formatting a memory card or internal flash memory will delete all data; however it may still be possible to recover that data using off-the-shelf data recovery software. Please manage your camera memory at your own risk.
- Please do not press forcefully on the display. This could cause breakage or malfunction.
- Be careful not to sit down with the camera in your back pocket as this may damage the exterior of the camera or the display.
- When using a tripod with the camera, be careful not to over tighten the screw in the tripod socket on the camera.

Introduction

Congratulations on the purchase of your new digital camera. This manual provides step-by-step instructions on how to use your camera, and is intended for your reference only.

System Requirements

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

- OS: Windows XP/Vista/7
- Memory: 512 MB or above
- HDD space: 500 MB or above
- USB port

Package Contents

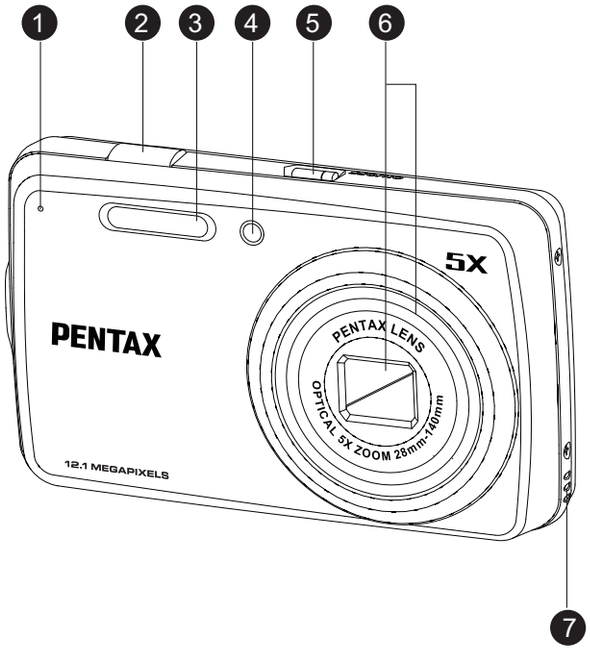
Check the contents of your camera package. It should contain:

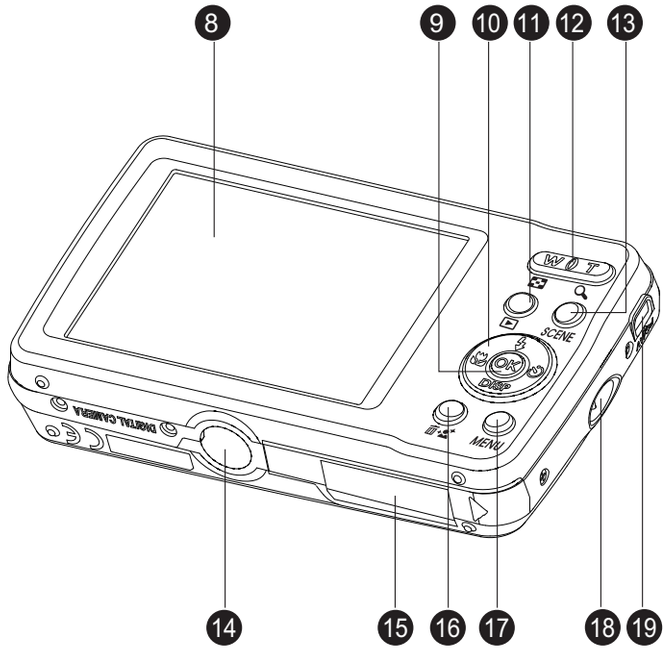
- Camera Optio M90/M900
- USB/AV 3-in-1 cable
- Wrist strap
- Rechargeable Li-ion battery
- Charger
- Quick start guide
- Application Software and Operating Manual (CD-ROM)

Main Features

- 12.1 mega pixels resolution
- 25X zoom (Up to 5X optical zoom and 5X digital zoom)
- 1/2.3 inch CCD image sensor
- 2.7 inch TFT LCD monitor
- 20 MB internal flash memory, support SD/SDHC memory card up to 32 GB
- Sleek and slim design
- Easy-to-use button interface

Camera Views





Front View

1.	Microphone
2.	Shutter button
3.	Flash
4.	Self-timer LED
5.	Power button
6.	Zoom Lens
7.	Speaker

Rear View

8.	LCD screen
9.	OK button
10.	4-way navigation buttons
11.	Playback button
12.	Zoom button
13.	SCENE button
14.	Tripod mount
15.	Battery/SD card compartment
16.	Delete/Face Beautification button
17.	MENU button
18.	Wrist strap loop
19.	PC/AV port

English

LED Indicators

LED	LED Status	Camera Status
Self-timer LED	Off	Self-timer off.
	Red (blinking) (10 sec)	Timer count down, flash after 10 seconds.
	Red (blinking) (2 sec)	Timer count down, flash after 2 seconds.

Camera Buttons

Navigation Buttons

The 4-way navigation buttons and the **OK** button allow you to access the various options available from the On Screen Display (OSD) menu. You can configure a wide range of settings to ensure maximum results from your photos and videos.

Icon	Button	Function
OK	OK/Anti-shake	1. Confirm a selection when using the OSD menus. 2. In Capture mode: • Press to enable/disable the Anti-Shake in Auto mode. • Enable AF area selection when SELECTED AREA is selected in FOCUS ZONE. 3. In Playback mode: • Press to start and pause the video playback. • Press to play and pause the audio playback. • Press to stop the voice memo playback.

	Up/Flash	1. Move up in the OSD menus. 2. In Capture mode: • Scroll through the flash mode options (Auto, Off, Fill and Red-eye Reduction). • Press to pan up in AF area selection. 3. In Playback mode: • Press to pan up in zoom in mode. • Press to move up in the thumbnail display.
	Right/ Self-timer/ Burst mode	1. Move right in the OSD menus. 2. In Capture mode: • Press to scroll through the Self-timer/Burst/Multi-Burst mode. • Press to pan right in AF area selection. 3. In Video mode: • Press to scroll through the Self-timer options. 4. In Playback mode: • Press to pan right in zoom in mode. • Press to navigate to next image in single image display. • Press to move right in the thumbnail display. • Press to fast forward video playback during Pause ⏸ mode.
	Down/Screen	1. Move down in the OSD menus. 2. In Capture mode: • Press to enable the following functions: full icon, full icon with histogram and simple display (hide all icons except the mode icon). Press again to turn all icons back on the LCD screen. 3. In Video mode: • Press to turn off extra icons on the LCD screen, press again to turn all icons back on the LCD screen. 4. In Playback mode: • Press to pan down in zoom in mode. • Press to move down in the thumbnail display. • Press to enable the following functions: normal, information, simple display. Press again to back normal display.

	Left/Macro	1. Move left in the OSD menus. 2. Go up to the previous level in the OSD menus. 3. In Capture mode: • Press to enable Macro mode. Macro icon displays on the LCD screen. 4. In Playback mode: • Press to pan left in zoom in mode. • Press to navigate to previous image in single image display. • Press to move left in the thumbnail display. • Press to fast rewind video playback during Pause ⏸ mode.

The SCENE Button

The camera is equipped with a convenient **SCENE** button that takes you to the **SCENE menu** where you can scroll between different modes and choose different scene options. Use the **Left/Right/Up/Down** navigation buttons to scroll and use the **OK** button to select. Use the **SCENE** button to:

Mode Type	Icon	Mode Type	Icon
Auto		Snow	
Auto Scene		Sunset	
P-Mode (Program Mode)		Fireworks	
Auto Panorama		Beach	
Smile Catch		Party	
Sport		Foliage	
Landscape		Kids & Pets	
Night Landscape		Copy	
Portrait		Backlight	
Self Portrait		Frame Composite	
Night Portrait		Audio	
Museum		Video	

English

English

Function Buttons

Icon	Button	Function
MENU	Menu	Press to display the Menu options.
▶	Playback	Press to review photo/video/audio clips saved in the internal memory or on the memory card.
🗑 / ✨	Delete/ Face Beautification button	In Capture mode: • Press to enable/disable the Face Beautification function. • Press to delete during 🗑 mark appears on LCD (**QUICK VIEW QV** has to be set "**ON**" at **SETUP** 🔧 mode). In Playback mode: • Press to delete image/s. **Note: Face Beautification function is not available in auto panorama, sport, landscape, night landscape, fireworks, foliage, copy and video mode.**
T / 🔍	Zoom in	In Capture mode: • Press to zoom in on the subject to be taken. In Playback mode: • Press to zoom in on saved photos.
W / ▦	Zoom out	In Capture mode: • Press to zoom out from the subject to be taken. In Playback mode: • Press to zoom out of saved photos. • Press to view thumbnails of all current saved media.

LCD screen

The 2.7" TFT LCD screen shows all important information regarding camera settings as well as the visual image for your photo or video.

Use the **SCENE** button to switch between screen modes. Press the **Down/Screen** button to switch among a Full display with histogram and without histogram or a Simple display (only mode icon and focus area are shown while other icons are hidden).

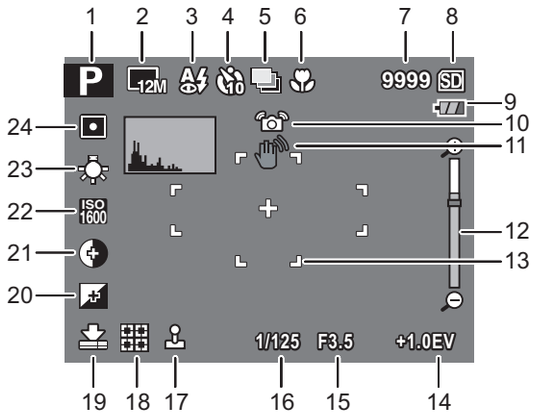
Camera Buttons

Capture/Video Mode Display

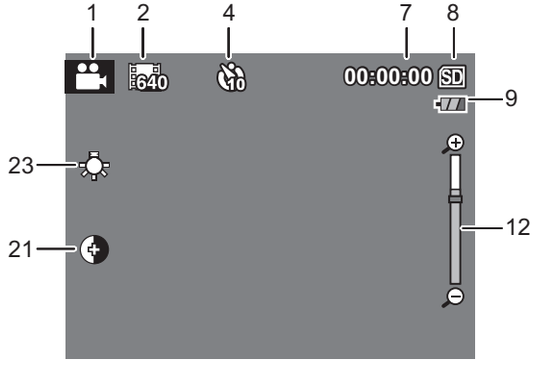
1. Scene indicator	
Auto	
Auto Scene	
P-Mode	
Auto Panorama	
Smile Catch	
Sport	
Landscape	
Night Landscape	
Portrait	
Self Portrait	
Night Portrait	
Museum	
Snow	
Sunset	
Fireworks	
Beach	
Party	
Foliage	
Kids & Pets	
Copy	
Backlight	
Frame Composite	
Audio	

Video	
2. Image Resolution	
Capture Mode	
12M	
10.7M 3:2	
9M 16:9	
8M	
5M	
3M	
2M	
VGA	
Video Mode	
640X480	
320X240	
3. Flash	
Auto Flash	
Flash Off	
Fill Flash	
Red-eye Reduction	
4. Self-Timer/Burst Mode	
Self Timer	
10 Seconds	
2 Seconds	
Burst Mode	

Capture Mode



Video Mode



M-burst Mode	
5. AEB	
6. Macro indicator	
Macro Mode	

English

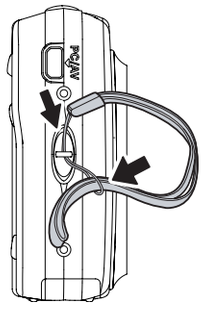
English

7. Image Counter	
Capture Mode	
Quantity	9999
Video Mode	
Time	00:00:00
8. Memory Interface	
SD Card	SD
Internal Memory	
9. Battery Indicator	
Battery Full	
Battery Medium	
Battery Low	
Battery Insufficient	Blinking
10. Anti-Shake	
11. Camera Steady Warning	
12. Zoom Bar	
13. AF Frame	
14. EV Compensation	-2.0 EV~ +2.0 EV
15. Aperture Value	F3.5/F5.9
16. Shutter Speed	2~1/1000
17. Date Stamp	
18. Focus Zone	
Multi-Zone	
Center	
Selected Area	
19. Image Quality	
Best	
Better	
Good	
20. Sharpness	
High	
Normal	
Low	
21. Contrast	
High	
Normal	
Low	
22. ISO Speed	
Auto	
ISO 80	ISO 80
ISO 100	ISO 100
ISO 200	ISO 200
ISO 400	ISO 400
ISO 800	ISO 800
ISO 1600	ISO 1600
23. White Balance	
Auto	
Sunny	
Tungsten	
Fluorescent	
Cloudy	
24. AE Metering	
Matrix	
Center Weighted	
Spot	

Camera Buttons

Camera Setup

Attaching the Wrist Strap



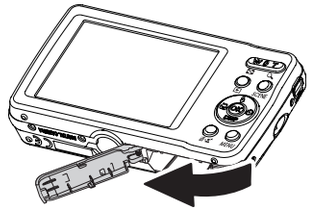
Follow these instructions to attach the wrist strap to your camera to facilitate easy carrying:

1. Insert the short loop of the strap in the strap eyelet.
2. String the larger loop of the strap through the short loop and pull tight to attach the strap to the camera.

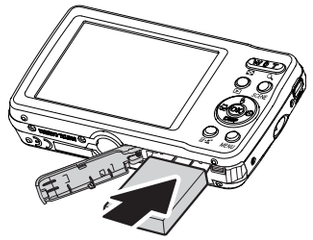
Inserting the Battery

Follow these instructions to insert the Li-ion battery into the battery compartment.

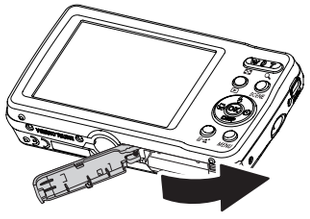
1. Open the battery compartment at the bottom of the camera.



2. Insert the battery into the compartment observing the correct polarity.



3. Close the battery compartment.



Note:
The Li-ion battery should be fully charged more than 4 hours before using for the first time.

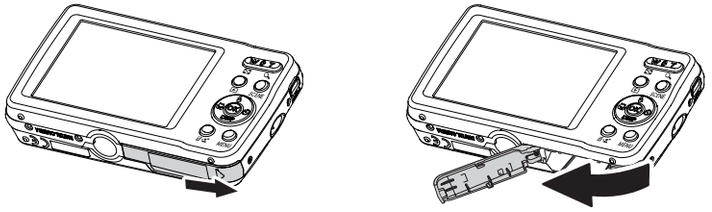
English

Inserting an SD/SDHC Memory Card

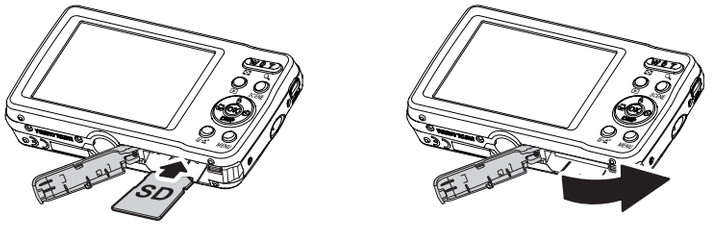
The camera features Approx. 20 MB internal flash memory but you may also use an optional SD/SDHC memory card for additional storage.

Follow these instructions to insert the SD/SDHC card.

1. Open the battery compartment on the bottom of the camera.



2. Insert the SD/SDHC card into the memory card slot as shown. (Label side up)



3. Close the battery compartment.

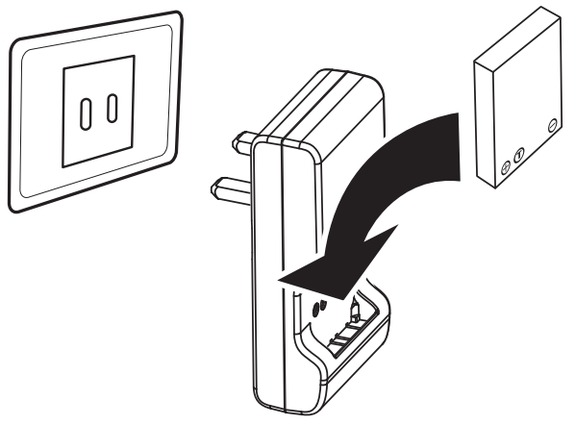
To remove the SD/SDHC card, gently push the card until it pops out. Pull out the card carefully.

Note:

- **Format memory cards via CAMERA before first use, and be sure to reformat all memory cards after using them in a computer or other device. For more information on formatting memory cards, see page 46.**
- **If remove or insert SD card when power on, the camera will tune off automatically.**

Charging the Battery

Insert the battery into the Charger observing the correct polarity and plug in the Charger as shown.



English

Note:
This charger is designed for the specified batteries. Do not use the charger to charge any battery other than the specified ones. It may cause the battery leaking, heating, explosion or on fire.

Turning On

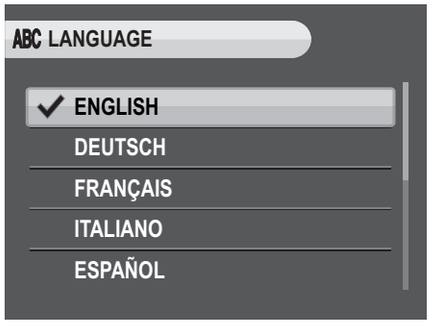
Press and hold the **Power** button to turn on the camera. To turn off the camera, press the **Power** button again.

English

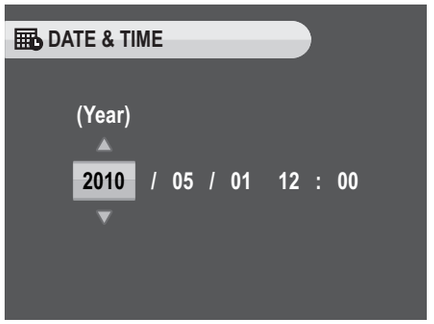
First Time Use

Press the **Power** button as described on page 12, a welcome screen displays momentarily on the LCD screen.

If the camera is turned on for the first time, the **LANGUAGE** menu pops up automatically after powering on the camera. Select the desired language by **Up/Down** navigation buttons, then press the **OK** button to confirm.



After the desired language is selected, the **DATE & TIME** menu pops up. Select each field and adjust the value using the navigation buttons. Press the **OK** button to confirm.



Note:
If the Date and Time is reset (when the batteries die or are removed and the camera is not used for a long period), the DATE & TIME setup screen displays automatically.

Getting Started

Now that you are familiar with the layout of your camera, you are ready to start taking photos and movies.

Taking Photos

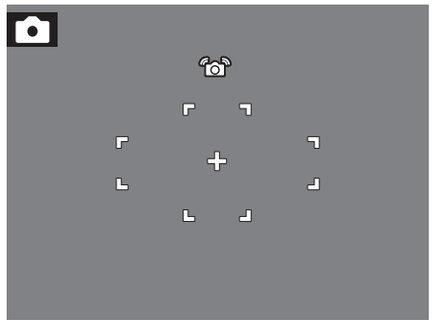
Taking a photo with the camera is very simple.

Turn the camera on and press the **SCENE** button to access the **Auto** mode.

1. Frame the shot on the LCD screen and press the **Shutter** button halfway. The camera automatically adjusts the focus and exposure. The AF Frame turns green when ready.
2. Press fully and hold the **Shutter** button to capture the image.

When a camera steady warning icon appears, hold the camera as still as possible, as a longer exposure time is required.

Anti-Shake Function



This function is available in **Auto** mode. Press the **OK** button to enable the Anti-Shake function, and press again to disable it.

An **Anti-Shake** icon displays on the LCD screen when the function is activated.

Using Macro Mode

Macro mode is designed for close-up photography and can capture all detail even when your subject is very close to the camera. Press the **Left/Macro** navigation button. The Macro icon displays on the LCD screen.

English

Setting the Flash Mode

You can choose from four flash modes to suit various lighting conditions.

Press the **Up/Flash** navigation button to scroll through the four modes on the LCD screen. The flash setting remains the same for subsequent photos until you change it as described above.

Auto flash: The flash fires automatically when needed.

Flash off: The flash is turned off.

Fill flash: The flash always fires.

Red-eye Reduction: The flash fires twice so as to reduce the red-eye effect.

Using the Zoom in/out Function

The camera comes equipped with 5X optical zoom and 5X digital zoom that allows you to zoom in on your subject.

To use the zoom:

1. Press the right side of the Zoom button **T** to zoom in on your subject.
2. Press the left side of the Zoom button **W** to zoom out from your subject.

Using the Self-timer and Burst Photography

The camera comes equipped with a self-timer which allows you to take photos after a pre-defined delay. The burst photography feature allows you to take multiple consecutive photos by pressing and holding the **Shutter** button. The multi-burst photography feature allows you to take multiple (16) consecutive VGA photos by pressing the **Shutter** button once.

To set the self-timer/burst mode:

1. Press the **Right/Self-timer /Burst mode** navigation button to cycle through the self-timer (or) and burst photography options (or) on the LCD screen.
2. Once you have selected an option, frame and take your shot. In self-timer mode, the icon will flash until the time expires and the photo is taken.

3. After taking a photo, the Self-timer automatically switches off. If you want to use these functions for the next photo, press the **Right/Self-timer /Burst mode** navigation button again to activate the function.

Note:

: Burst Mode
Take photos until shutter button is released or memory full.

M: Multi-Burst Mode
16 photos continuously by pressing the shutter button once.

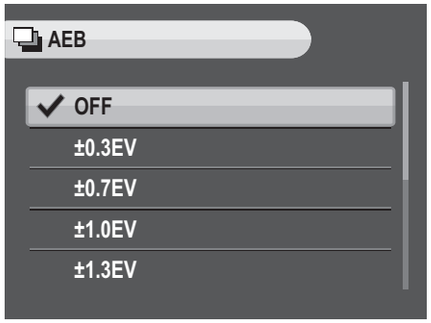
English

Using the AEB (Auto Exposure Bracketing) Function

When using the **AEB (Auto Exposure Bracketing)** function, the camera automatically takes 3 consecutive photos with different exposures by pressing the **Shutter** button once. For example, when the current EV compensation value is +0.3 EV and the AEB bracket interval value is set to ±0.3, the camera takes shots of the same scene with 3 varying levels of exposure: 0 EV, +0.3 EV and +0.7 EV.

This function is only available in **Auto** and **P-Mode** modes. To set the AEB mode:

1. Press the **MENU** button to display menu options.
2. Press the **Up/Down** navigation buttons to select **AEB** setting and press **OK** to enter.
3. Press the **Up/Down** navigation button to select OFF (default) or set the bracket interval value ranging from ±0.3 to ±2.0 EV in 0.3 or 0.4 EV increments.



Note:

1. **When taking AEB shots, hold the camera steadily. For the best result, use the tripod.**
2. **Flash, Burst, and M-Burst modes are not allowed when the AEB function is enabled.**

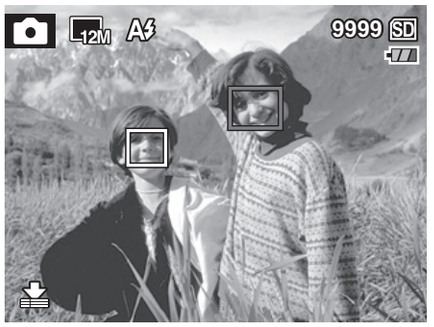
English

Face detection AF/AE Function

The face detection AF function is the default AF setting in most capture modes. When the subject's face is detected, the white bracket appears to track faces while the camera or people are moving.

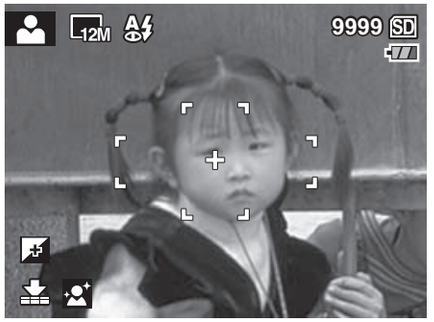
When the **Shutter** button is pressed halfway, the green focus frames appear on the LCD screen. Then the camera automatically adjusts the focus point and exposure to the optimized value. Press the **Shutter** button all the way to take pictures with detected face.

However, when the camera fails to detect your subject's face, a white focus frame will be displayed according to the selected focus mode.

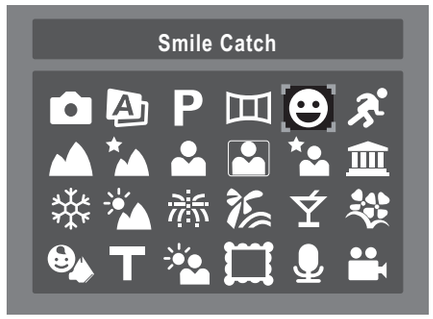


Face Beautification Function

Face beautification can make skin look bright, rosy and smooth. This function is available in Auto, Auto SCN, P-mode, Smile Catch, Portrait, Self-Portrait, Night Portrait, Museum, Snow, Beach, Party, Kids&Pets, Backlight, and Frame Composite modes. Users need to press delete 🗑/face beautification button to enable Face beautification function. When face beautification is enabled, there is a face beautification icon shown in the live view.



Setting the SCENE Mode



The camera supports various preset modes for shooting in different environments and conditions. Each setting is configured automatically by the camera.

To select scene modes:

Press the **SCENE** button to access the **SCENE** menu which displays the Scene menu options.

1. Use the **Left/Right/Up/Down** navigation buttons to scroll through the modes.

- Auto
- Auto scene
- P-Mode
- Auto Panorama
- Smile Catch
- Sport
- Landscape
- Night Landscape
- Portrait
- Self Portrait
- Night Portrait
- Museum
- Snow
- Sunset
- Fireworks
- Beach
- Party
- Foliage
- Kids & Pets
- Copy
- Backlight
- Frame Composite
- Audio
- Video

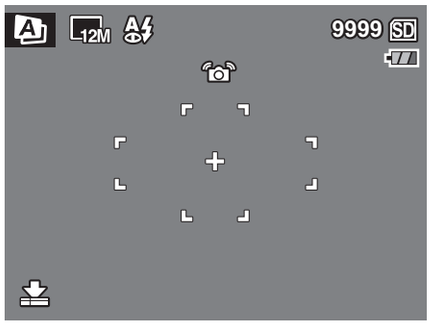
2. Press **OK** to confirm your selection.

English

English

Using Auto scene Mode

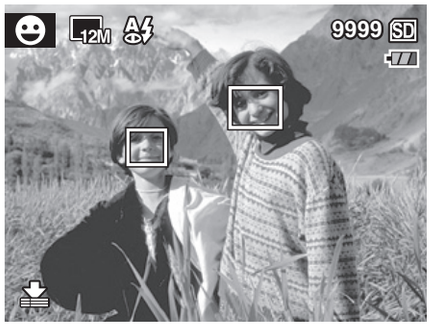
When **Auto Scene** mode is enabled, the camera will automatically detect the proper scene modes you may want to switch, such as Portrait, Landscape, Night Portrait, Night Landscape, Backlight, Copy, Macro, Foliage. However, the image resolution and quality, and the exposure compensation are still controllable in this function.



1. Press the **SCENE** button and select **Auto Scene** mode.
2. The detected scene icon will be displayed on the LCD.

Using the Smile Catch Mode

The **Smile Catch** mode allows you to take smiling photo anytime without pressing the **Shutter** button. When a detected face smiles, the shutter automatically fires.



1. Press the **SCENE** button and select **Smile Catch** mode. The **Smile Catch** icon displays on the LCD screen.
2. The camera will automatically take a picture when a detected face smiles.

Using the Self Portrait Mode

The up-to-date Self Portrait function allows you to take self-portrait shots. When enabling the Self Portrait function, a white detection frame will appear and track your face automatically. After focus on, it will take a shot without pressing the **Shutter** button.

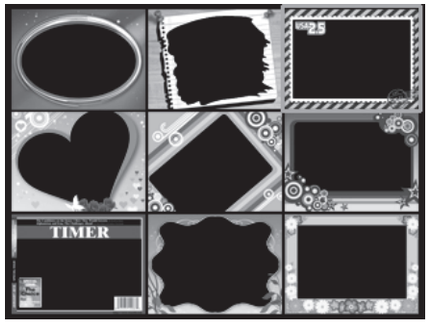
To take a self-portrait shot:

1. Press the **SCENE** button and select **Self Portrait** mode, and then press the **OK** button to confirm. The Self Portrait icon displays on the LCD screen.
2. Turn the camera lens toward your face.
3. The camera will automatically take a picture. This function is available in any flash mode.

Note:
1. **The Shutter button, Macro mode, Self-timer and Burst functions could not work when enable the Self Portrait mode.**
2. **The white focus frame only works within the effective yellow frame.**

Using Frame Composite Mode

Press **SCENE** button to select **Frame Composite** mode and select the frames by pressing **Left/Right/Up/Down** navigation buttons. Then, press **OK** button to confirm the selection and move to Frame Composite live view screen.



Taking Auto Panoramic Pictures

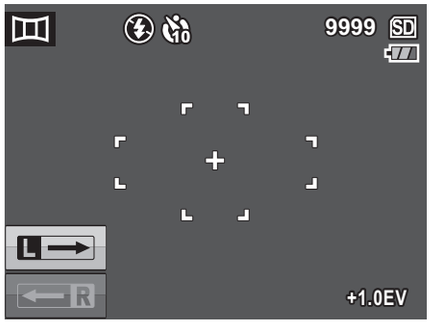
Auto panorama mode allows you to shoot ultra wide panoramic shots automatically. You can create wide-view photos by stitching three images into a single panoramic scene.

To take an auto panoramic picture:

1. Press the **SCENE** button and select **Auto Panoramic** mode.

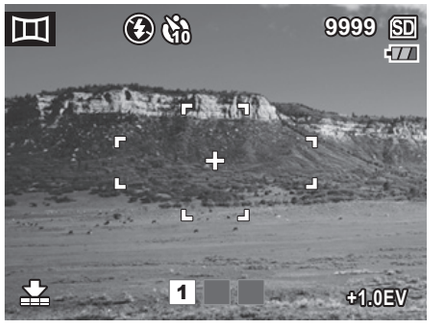
   The Auto Panorama icon displays on the LCD screen.

2. You can take panoramic shots in either left-to-right ( ) or right-to-left ( ) sequence. Press the **Up/Down** navigation buttons to select the direction in which the sequence will be taken. Then press the **OK** button.

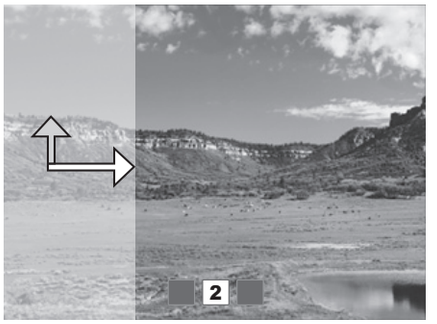


English

3. Frame the first view on the LCD screen and press the **Shutter** button. The frame record icon is displayed to indicate the location of frame is going to take for the panorama image.



4. After the quick preview, the LCD screen shows the live view and dynamic arrow(s) to indicate the right position for the second picture. When the arrow is getting shorter, meaning the distance is getting closer, camera's alert tone will be more rapid. When the dynamic arrow is disappeared, the camera catches the right position and will take picture automatically.
5. You can press the delete 🗑/face beautification button to retake the picture. If you are taking only two pictures, press the **OK** button to stitch them together.
6. After you take three pictures, the camera will automatically stitch them together into one panorama shot.
7. Press the **Playback** ▶ mode to view the result.



Note:
Strongly recommended using tripod, or using the camera as the center of rotation while taking pictures.

Recording Videos

You can also record video clips with the camera.

To record a video clip:

1. Turn the camera on and press the **SCENE** button. Use the 4-way navigation buttons to locate **Video** mode. Press the **OK** button to select.
2. Frame your subject using the LCD screen and press the **Shutter** button to start recording. The self-timer LED is steady on to indicate recording is in progress.
3. Press the **Shutter** button again to stop recording.
4. In playback mode (press the button), press the **OK** button to playback the video. Press the delete /face beautification button to delete the recording if needed.

Recording Audio Files

You can also record audio files with the camera.

To record an audio file:

1. Press the **SCENE** button and select the **Audio** mode with 4-way navigation buttons, then press the **OK** button to confirm.
2. Press the **Shutter** button to start recording. A counting up timer will be displayed during audio recording.
3. Press the **Shutter** button again to stop recording, and ready to the next audio recording.
4. In playback mode (press the button), press the **OK** button to playback the audio. Press the delete /face beautification button to delete the recording if needed.

English

Recording Voice Memos

The voice memo should be activated (ON) on the VOICE MEMO submenu of SETUP menu at first.

In Capture mode:

You can add a **20 sec** voice memo to an image right after it's taken.

1. Hold the **Shutter** button to start recording and release the **Shutter** button to stop recording.
2. While recording, the captured image and the elapsed time are shown on the LCD screen.
3. For the playback, press the ▶ button, and the playback of the voice memo automatically starts.
4. Press the **OK** button once for playback again.

In Playback mode:

1. Press the **Shutter** button to start recording and press again to stop recording.
2. While recording, the selected image and the elapsed time are shown on the LCD screen.
3. The playback of the voice memo automatically starts.
4. Press the **OK** button once for playback again.

Capture Settings

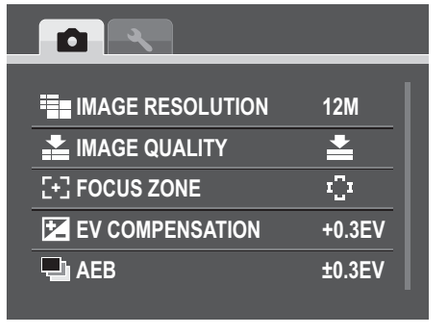
This section describes the various settings you can modify to get better results when taking photos and video clips.

The Capture Menu

To access the Capture menu:

1. Press the **SCENE** button. Use the 4-way navigation buttons to select the capture mode you need.
2. Press the **MENU** button to display menu options and use the **Up/Down** navigation button to select the function you need and press **OK** to enter.
3. Press the **Up/Down** navigation buttons to highlight an option and press the **OK** button to confirm.

Refer to the following sections for more detailed information about each setting.



Note:
The displayed options in this section may vary according to the mode selected.

English

Image Resolution

The **Image Resolution** setting refers to the size of the image in pixels. Eight settings for image resolution are available:

- 12M (4000X3000) (default)
- 10.7M 3:2 (4000X2664)
- 9M 16:9 (4000X2248)
- 8M (3264X2448)
- 5M (2576X1932)
- 3M (2048X1536)
- 2M (1600X1200)
- VGA (640X480)

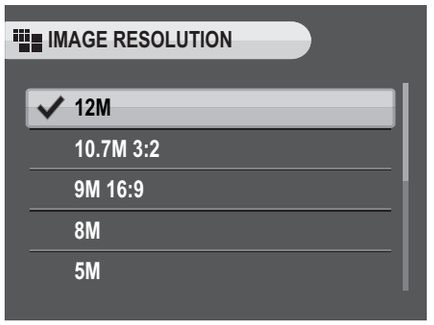
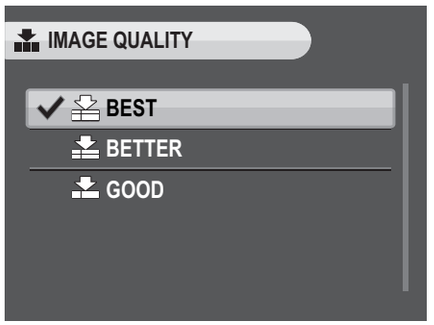


Image Quality

The **Image Quality** setting refers to the compression ratio of the JPG. The higher image quality, more memory space is required.
Three settings for image quality are available:

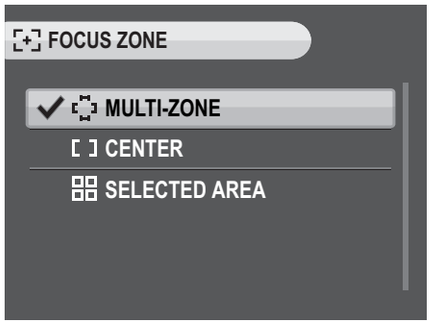
- BEST (default)
- BETTER
- GOOD



Focus Zone

The **Focus Zone** setting allows you to select the number of zones the camera will focus on when taking a photo. Three settings for focus zone are available:

- MULTI-ZONE (default)
- CENTER
- SELECTED AREA: Sets the focusing area to one of points in the AF area.

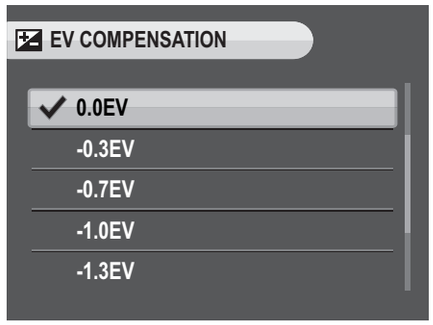


Note:
In Auto Mode, there is no "Selected Area" item.

EV Compensation

The **EV Compensation** menu allows you to adjust the exposure or amount of light that enters the lens while capturing photos or videos. Use this feature to take pictures that are intentionally overexposed or underexposed.

To brighten, select a positive (+) value. To darken, select a negaitive (-) value. This setting can be modified from -2.0 EV to +2.0 EV in a 0.3 or 0.4 EV increment/decrement.



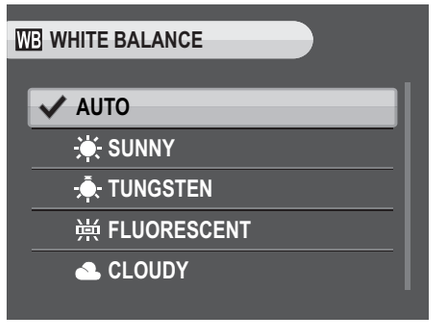
AEB

See "Using the AEB (Auto Exposure Bracketing) Function" on page 16 for more detailed information.

White Balance

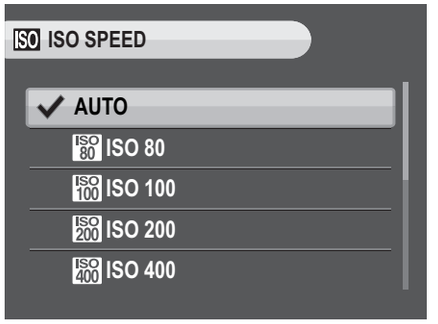
The **White Balance** setting allows you to adjust the camera setting according to the ambient white light when shooting. White balance represents the color temperature of the light. If the light has a yellowish or reddish tinge, it is said to be warm; if it has a bluish tinge, it is said to be cool. You can select the setting and preview it on screen before confirming your choice. Five white balance settings are available:

- AUTO (default)
- SUNNY
- TUNGSTEN
- FLUORESCENT
- CLOUDY



English

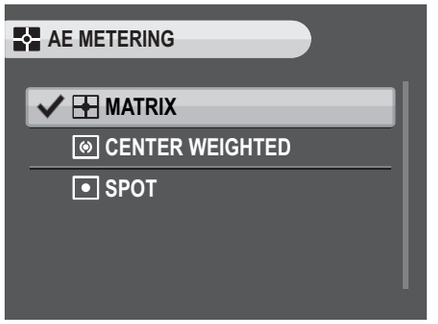
ISO Speed



The **ISO Speed** setting allows you to adjust the CCD light-sensitivity. Seven ISO settings are available:

- AUTO (default)
- ISO 80: For outdoor photography in bright sunlight.
- ISO 100: For outdoor photography in bright sunlight.
- ISO 200: For outdoor or indoor photography in bright light.
- ISO 400: For indoor photography or low light environments.
- ISO 800: For moving object photography or low light environments without using flash.
- ISO 1600: For moving object photography or low light environments without using flash.

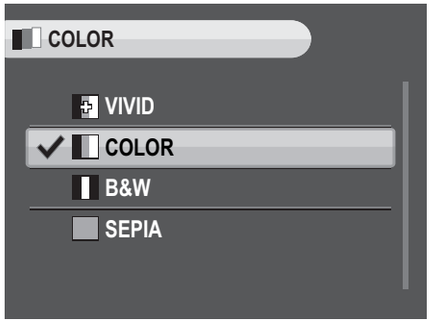
AE Metering



AE Metering allows you to select the area of the subject or frame that the camera selects to measure light. Three AE metering settings are available:

- MATRIX (default): Camera metering is set for evaluating 16 zones of objects with intelligent weighting in the frame.
- CENTER WEIGHTED: The metering puts more emphasis on the center of the image while still looking at the entire scene.
- SPOT: Camera metering is set for the brightness of a single object in the center of the frame.

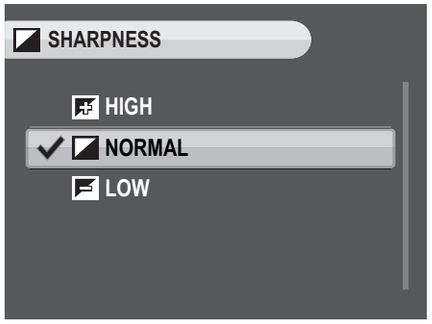
Color



The **Color** setting allows you to take photos and apply different colors or color tones for an artistic effect. Four color settings are available:

- VIVID
- COLOR (default)
- B&W
- SEPIA

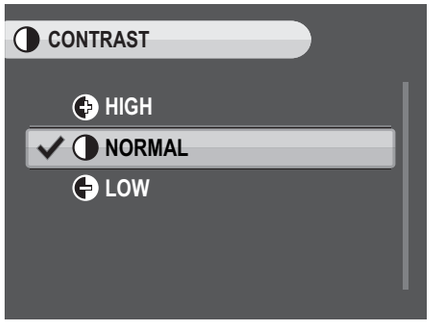
Sharpness



The **Sharpness** setting allows you to enhance the finer details of your photos. Use a higher setting for very sharp photos and a lower setting for a soft-toned photo. Three sharpness settings are available:

- HIGH
- NORMAL (default)
- LOW

Contrast



The **Contrast** setting allows you to adjust the contrast of your photos. Three contrast settings are available:

- HIGH
- NORMAL (default)
- LOW

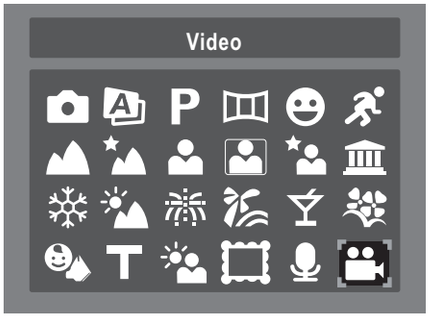
English

English

Video Capture Menu

To access the video menu:

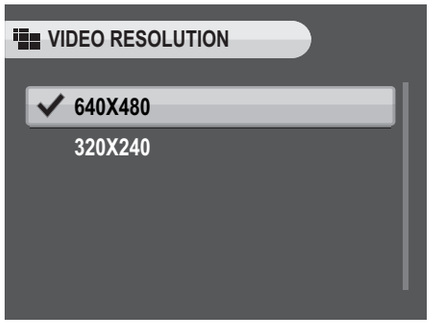
1. Press the **SCENE** button and scroll to **Video** mode and press the **OK** button to enable the Video function.
2. Press the **MENU** button to display the menu options.
3. Refer to the following sections for more detailed information about each setting.



Video Resolution

The **Video Resolution** setting allows you to adjust the resolution at which your videos are recorded. Two video size settings are available:

- 640X480 (default)
- 320X240



White Balance

See “White Balance” on page 26 for more details on the setup menu options.

Color

See “Color” on page 27 for more details on the setup menu options.

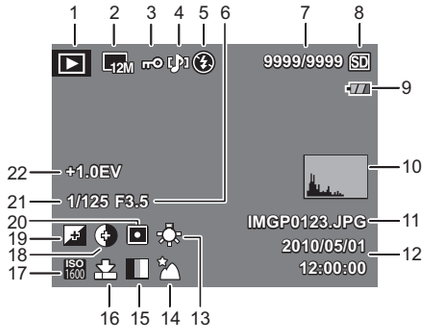
Photo, Video & Audio Playback

Playback Mode Display

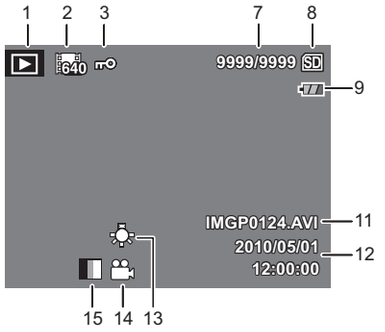
Press the **Down/Screen** navigation button at Playback mode.

1. Playback mode	
2. Image resolution	Photo mode: 12M 3:2 16:9 8M 5M 3M 2M VGA Video mode: 640 (640X480), 320 (320X240)
3. Protect	
4. Voice memo	
5. Flash mode	Photo mode: Video mode: **00:00:00** (Length of the video clip.)
6. Aperture value	F3.5/F5.9
7. File x of y number of files	x/y
8. SD card/ Internal memory	SD
9. Battery status	
10. Histogram	
11. File Name	Photo mode: **IMGP0123.JPG** Video mode: **IMGP0124.AVI**
12. Date and Time	2010/05/01 12:00:00
13. White balance	
14. Mode icons	Please see "Capture/Video Mode Display" on page 8 for detailed information.

Photo Playback



Video Playback



15. Color mode	
16. Image quality	
17. ISO Speed	ISO 80 ISO 100 ISO 200 ISO 400 ISO 800 ISO 1600
18. Contrast	
19. Sharpness	
20. AE Metering	
21. Shutter speed	2 ~ 1/1000 Sec.
22. EV Compensation	+2.0 EV ~ -2.0 EV

English

English

Viewing Photos/Videos on the LCD Screen

To view your photos and video files on the LCD screen:

1. Press the **Playback** button ▶. The most recent photo or video clip is displayed.
2. Use the **Left/Right** navigation buttons to scroll through photos and video clips.
3. Press the **OK** button to begin playback of a video clip.
4. Press the **Left/Right** navigation buttons at any time during playback to skip to the previous/next photo or video.
5. Press the **OK** button at any time during playback to pause the video.
6. Press the **Left/Right** navigation buttons to fast-rewind/fast-forward during video playback.
7. After the video clip finishes playing, the LCD screen displays the first frame of the clip.

Viewing M-Burst Photos

To view your multi-burst photos on the LCD screen:

1. Press the **Playback** button ▶. The most recent photo or video clip is displayed.
2. Use the **Left/Right** navigation buttons to scroll through photos.
3. When reviewing a multi-burst image, it will be displayed from the 1st frame to the 16th frame at 2 frames per second like a slideshow.
4. Press the **Left/Right** navigation buttons and skip to the previous/next image.

Listening to Audio Files

To listen to audio files:

1. Press the **Playback** button ▶. The most recent photo or video clip is displayed.
2. Use the **Left/Right** navigation buttons to scroll through the files.
3. Press the **OK** button to begin playback of an audio file.
4. Press the **Left/Right** navigation buttons at any time during playback to skip to the previous/next audio file.
5. Press the **OK** button at any time during playback to pause.
6. Press the **Left/Right** navigation buttons to fast-rewind/fast-forward during audio playback.

Listening to Voice Memo

A voice memo plays simultaneously when playing a saved image with voice memo.

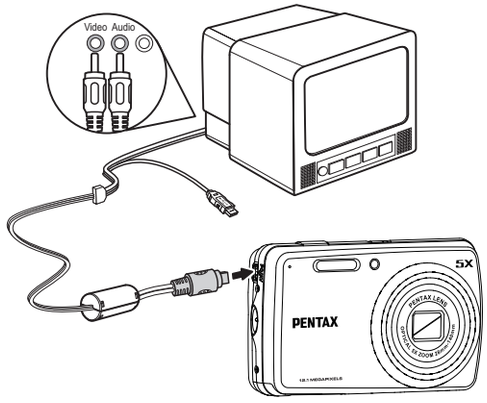
To stop a voice memo while reviewing an image, press the **OK** button.

To skip to previous/next image, press the **Left/Right** navigation buttons.

Viewing Photos/Videos on your TV

To view images stored on the camera on your TV, you must connect via the **PC/AV** port on the side of the camera. To connect your camera to a TV:

1. Turn on the camera and make sure that the camera's video out format is set to the same as that of the TV. See "Video Out" on page 44 for more information.
2. Connect the USB/AV 3-in-1 cable to the **PC/AV** port on the camera.
3. Connect the other end of the cable to the TV's AV input sockets.
4. The LCD screen turns black and all images and video clips are displayed on the TV screen. Follow the same steps described in "Viewing Photos/Videos on the LCD Screen" on page 31.



Zooming In/Out During Playback

The camera's zoom feature can also be used during playback. This allows you to view photos in greater detail.

To zoom in/out on saved photos:

1. Press on the right side of the Zoom button **T** to zoom in and on the left side of the Zoom button **W** to zoom out of the photo.
2. Use the 4-way navigation buttons to pan across the image.
3. To crop an image, press the **OK** button, when zoomed in on a photo. The cropped image is saved with a new name. When zoomed out to the minimum, the LCD screen will display all photos and videos as a series of thumbnails.

English

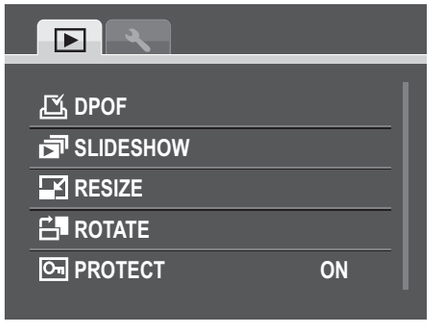
Deleting Images/Videos/Audios

The **Delete** function allows you to remove unwanted files stored on the internal memory or on a memory card.

To delete a photo/video:

1. In **Playback** mode, press the delete 🗑/face beautification button to display the **Delete** menu.
2. Press the **Up/Down** navigation buttons and the **OK** button to select from the four available options:
   - ALL: Select to delete all files.
   - IMAGE/VIDEO/AUDIO: Select to delete the current image/video/audio.
   - VOICE MEMO (only available for image with voice memo attached): Select to delete the voice memo.
   - CANCEL: Select to cancel the action and exit to the main menu.

Using the Playback Menu



Access the playback menu to view further information, configure printing settings, view a slideshow, or delete photos or movies.

To access the playback menu:

1. Press the **Playback** button ▶.
2. Press the **MENU** button to display the menu options. Use the **Up/Down** navigation button to select the function from menu and press **OK** to enter.
3. Use the **Up/Down** navigation buttons to highlight an option and press the **OK** button to confirm.

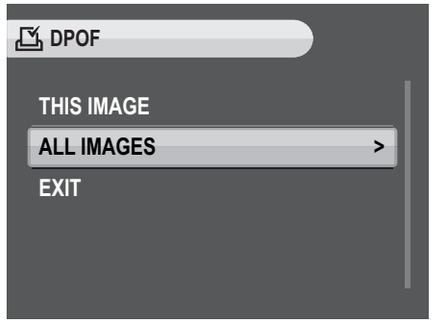
DPOF

DPOF (Digital Print Order Format) allows you to specify the number of copies of a certain image that you want to print at a later date.

Use this function to tag pictures stored in your memory card with print information. You can tag all pictures to be printed or just the current picture. You can also select how many copies to print.

To set DPOF:

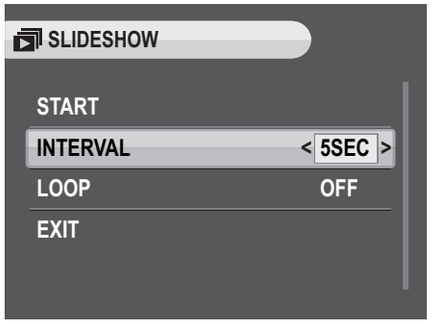
1. Press the **MENU** button to select **DPOF** from the menu in the playback mode.
2. Press the **Up/Down** navigation buttons and the **OK** button to select from the available options:
   - THIS IMAGE: Select to print the current image.
   - ALL IMAGES: Select to print all images.
   - EXIT: Select to exit to the main menu.
3. Use the **Up/Down** navigation buttons to set the number of copies you wish to print.



English

English

Slideshow

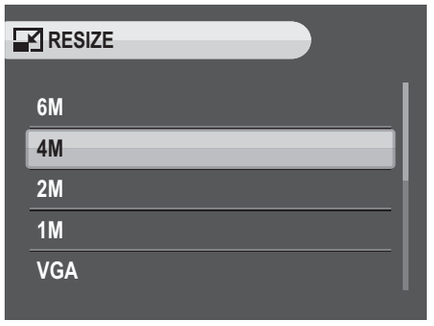


The **Slideshow** function allows you to view all stored photos in a continuous sequence.

To view a slideshow:

1. Press the **MENU** button to select **SLIDESHOW** from the menu.
2. Press the **Up/Down** navigation buttons and the **OK** button to select from the available options:
   - START: Select to start the slideshow.
   - INTERVAL: Select to set the interval time between each photo during the slideshow. The default setting is 5 seconds.
   - LOOP: Select to enable/disable a continuous loop of the slideshow. Select **ON** or **OFF** (default) from the submenu.
   - EXIT: Select to exit to the main menu.

Resize



The **Resize** function allows you to change the image resolution.

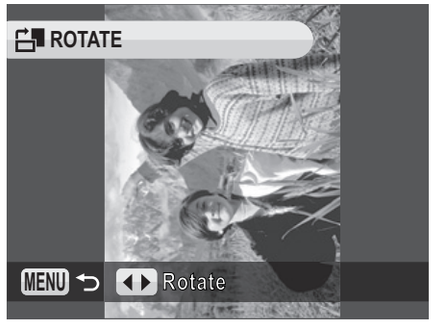
To resize a photo:

1. Press the **MENU** button to select **RESIZE** from the menu.
2. Press the **Up/Down** navigation buttons and the **OK** button to select the resize ratio you require: 6M, 4M, 2M, 1M, VGA, EXIT.
3. Select **EXIT** to return to the main menu.

Note:
It is only possible to scale-down image resolutions. If the current image resolution is VGA, this menu item is disabled in the Resize submenu. The ratio of the image (3:2 or 16:9) remains unchanged after resizing.

- **This function only supports pictures taken with this camera**
- **Cropped images cannot be resized**
- **If there is not sufficient storage space, images cannot be resized**
- **If the SD/SDHC card is locked, images cannot be resized**
- **VGA images cannot be resized**

Rotate



The **Rotate** function allows you to change the orientation of a saved photo.

To rotate an image:

1. Press the **MENU** button to select **Rotate** from the menu. Press the **OK** button to enter.
2. Press **Left/Right** navigation button to rotate the selected image.
3. Press the **OK** or **MENU** button to confirm the one you needed.

English

Protect

You can lock a photo or video to protect it from being accidentally erased. To lock a photo or video:

1. Press the **MENU** button to select **PROTECT** from the menu.
2. Use the **Left/Right** navigation button to select **ON** or **OFF**.
3. **Protect** icon displays at the top of the screen to indicate the photo/video is now locked.
4. To unprotect a photo or video, perform the steps 1 and 2 again.

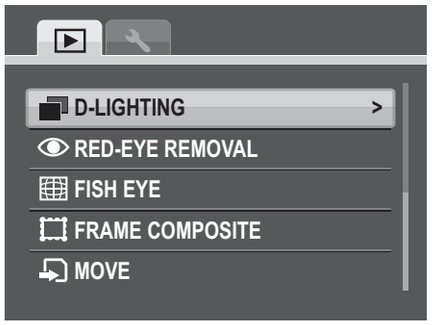
English

D-Lighting

When in review state, user can do lighting compensation by enabling D-Lighting via Playback menu.

To apply lighting effect on a photo:

1. Press the **MENU** button to select **D-LIGHTING** from the menu and press **OK** to process.



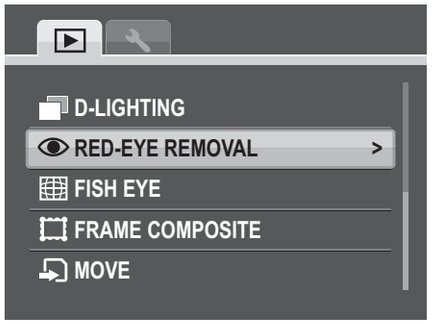
2. Press the **Up/Down** navigation button and the **OK** button to select from the three available options:
   - NEW FILE: Select to save the fixed image to a new file.
   - OVERWRITE: Select to overwrite the original image.
   - EXIT: Select to discard the change to the image and return to the main menu.

Red-Eye Removal

The **Red-Eye Removal** function allows you to perform red-eye reduction on a saved photo.

To remove red-eye from a photo:

1. Press the **MENU** button to select **RED-EYE REMOVAL** from the menu and press the **OK** button to process.



2. Press the **Up/Down** navigation buttons and the **OK** button to select from the three available options:
   - NEW FILE: Select to save the fixed image to a new file.
   - OVERWRITE: Select to overwrite the original image.
   - EXIT: Select to discard the change to the image and return to the main menu.

Note:
1. The Red-Eye Removal is only available after taking photo with flash.
2. If no red-eye is found, the message "Cannot process correctly" appears on the screen.

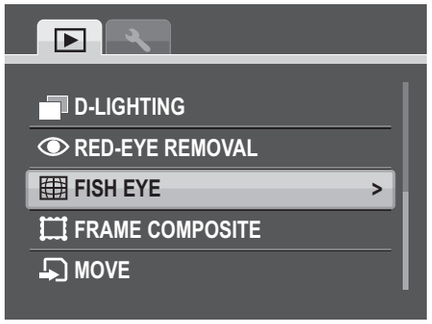
English

Fish Eye

The **Fish Eye** function allows you to perform fish eye effect on a saved photo.

To add fish eye effect on your picture:

1. Press the **MENU** button to select **FISH EYE** from the menu and press the **OK** to process.



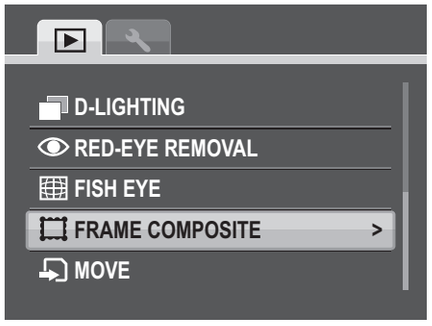
2. Press the **Up/Down** navigation buttons and the **OK** button to select from the three available options:
   - NEW FILE: Select to save the fixed image to a new file.
   - OVERWRITE: Select to overwrite the original image.
   - EXIT: Select to discard the change to the image and return to the main menu.

Frame Composite

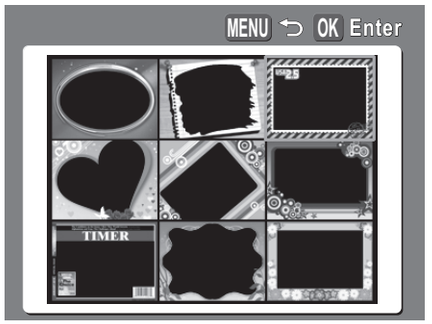
The **Frame Composite** function supports nine various decoration frame types to make your captured pictures more funny. Please note the image resolution of the picture that you want apply the frame needs being higher than 3M.

To add a frame on your picture:

1. Press the **MENU** button to select the **IMAGE RESOLUTION** from menu. Make sure the current resolution is higher than 3M and then press the **OK** button to confirm.
2. After taking pictures, press the **Playback** ▶ button and select the image you want to apply a frame.



3. Press the **MENU** button again to select **Frame Composite** from the menu and then press **OK** to enter.

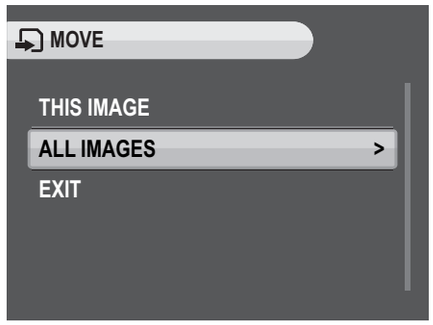


4. Use the 4-way navigation (**Left/Right/Up/Down**) button to select the frame type you like and press the **OK** button.
5. Press **OK** button to save the picture as **NEW FILE** or **OVERWRITE** the original one, or **EXIT** to main menu.

Note:
1. The function is unavailable when the storage space is not enough.
2. All images' size will be changed to 3M after applying the Frame Composite function; even you take the pictures' size higher than 3M.
3. The function does not support cropped or rotated images.

Move

The **Move** function allows you to move images stored in internal memory to a memory card.



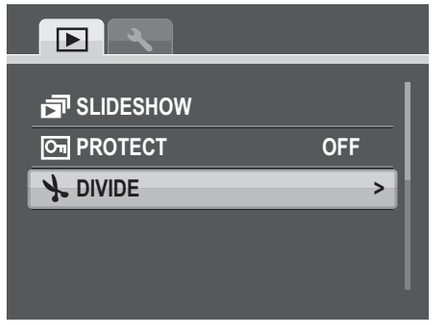
To move an image:

1. Press the **MENU** button to select **MOVE** from the menu.
2. Press the **Up/Down** navigation buttons and the **OK** button to select from the three available options:
   - THIS IMAGE: Select to move the current image to a memory card.
   - ALL IMAGES: Select to move all images to a memory card.
   - EXIT: Select to exit to the main menu.

Note:
The Move function is only available when you choose internal memory as the storage media and an SD card has been inserted into the camera.

Divide

The **Divide** function allows you to cut unnecessary portions of a video. This feature is useful when the memory capacity is insufficient or when users want to trim video clips.



To divide a video:

1. Press the **MENU** button to select **DIVIDE** from the menu.
2. Press the **OK** button to enter the edit mode.
3. Use the **Up/Down** navigation buttons to select the portion of the video you want to delete.
   - Beginning of the new video clip
   - End of the new video clip

4. Press and hold the **Left/Right** navigation buttons to specify the beginning and end position of the new video clip and release at the frame you want to stop.
5. Press the **Up/Down** navigation buttons and the **OK** button to select from the following options:

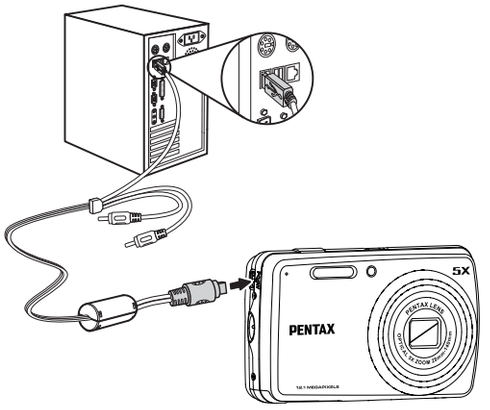
- ► Select to review the trimmed video clip.
- OK Select to save the trimmed video clip as a new file or overwrite the original video. Select **EXIT** to discard the changes.
- ⮌ Select to return to the main menu.

Note:
The Divide function is only available when a video file is selected. Video clips shorter than one second cannot be edited.

Transferring Photos/Videos to your PC

To transfer photos and videos to your PC, you need to set the USB mode as MSDC first. Follow the on-screen instructions to complete the installation:

Connect the camera's **PC/AV** port to a free USB port on your PC using the USB cable.



The camera's internal memory and/or SD/SDHC card appear as removable drives in the file manager. Copy the files from the drives to the directory on your PC.

Use ArcSoft MediaImpression (provided on the software CD) to view or edit the photos and videos respectively.

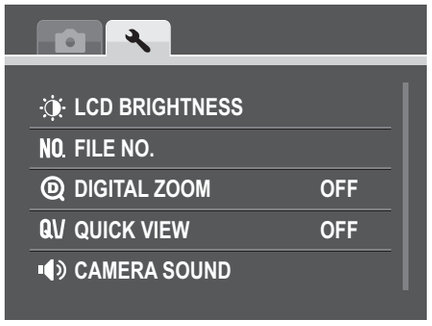
Camera Settings

The Setup Menu

The setup menu, available in capture and playback modes, allows you to configure the camera's general settings according to your preferences.

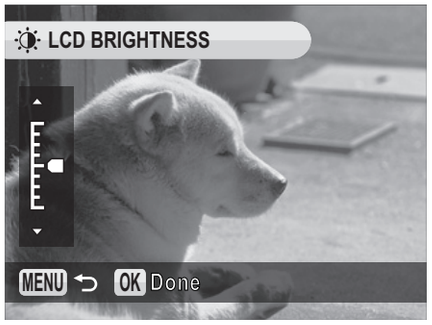
To access the setup menu:

1. Press the **MENU** button when in **Playback** or any of the capture modes.
2. Use the **Left/Right** navigation buttons to select the **Setup** menu.
3. Press the **Up/Down** navigation button to select the function from menu and press **OK** to enter.



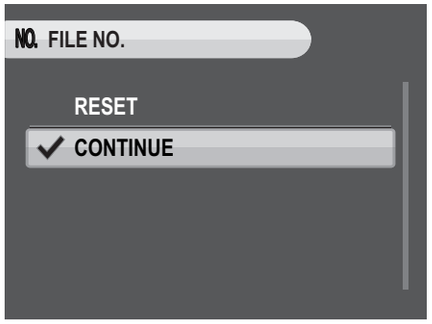
LCD Brightness

The **LCD Brightness** setting allows you to brighten or darken the LCD backlight. Use the **Up/Down** navigation buttons to increase or decrease the brightness.



File Number

The **File No.** setting allows you to reset the file number to 0001 when the camera creates a new folder. Otherwise, the next file number will be used. Select **RESET** to reset or **CONTINUE** (default) to to set the file numbers in continuous order.

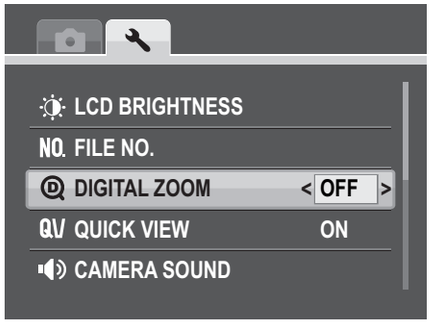


English

English

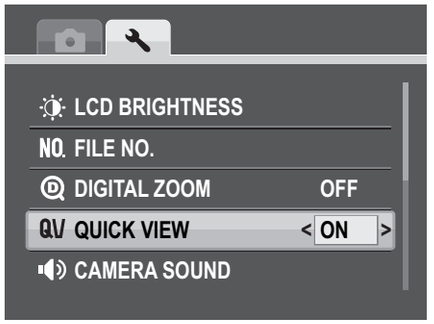
Digital Zoom

The **Digital Zoom** setting allows you to turn the digital zoom function on or off. Select **ON** to enable the function or **OFF** (default) to disable it.



Quick View

The **Quick View** setting allows you to view the photo that you have just taken. Once you have taken your photo, it displays on the LCD screen. If you are not satisfied with the result, you can press the delete 🗑/face beautification button to delete the photo immediately. Select **ON** (default) to enable the function or **OFF** to disable it.

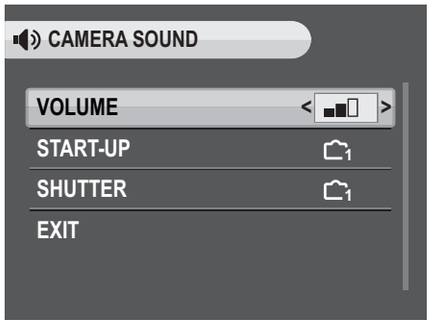


Note:
The Quick View function is not available in M-Burst modes.

Camera Sound

The **Camera Sound** setting allows you to adjust the camera sound level. You can also set the start-up and shutter sound when you turn on the camera and press the **Shutter** button. Available options are as follows:

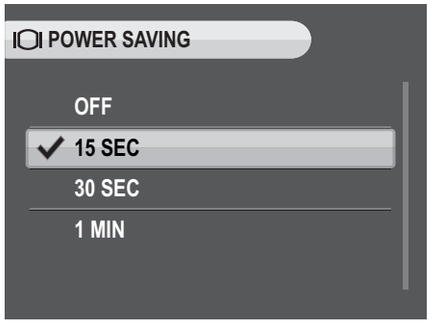
- VOLUME: OFF, LOW, NORMAL (default), HIGH
- START UP: Sound 1 (default), Sound 2, Sound 3
- SHUTTER: Sound 1 (default), Sound 2, Sound 3
- EXIT: Select to exit to the main menu.



Power Saving

The **Power Saving** setting allows you to adjust the length of time that LCD screen turn dim to save battery power. Four options are available:

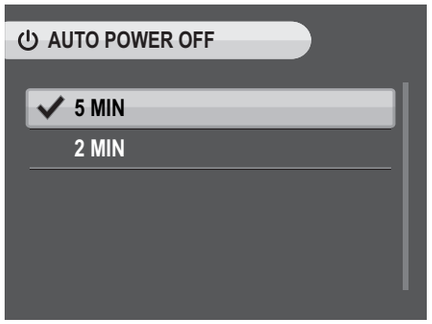
- OFF
- 15 SEC (default)
- 30 SEC
- 1 MIN



Auto Power Off

The **Auto Power Off** setting allows you to adjust the length of time after which the camera will power down when inactive. Two options are available:

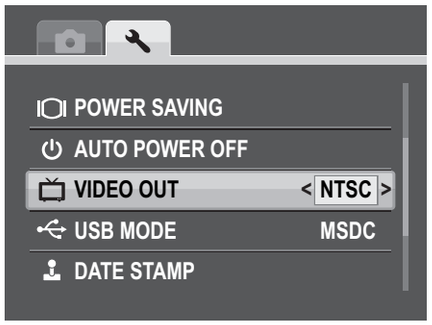
- 5 MIN (default)
- 2 MIN



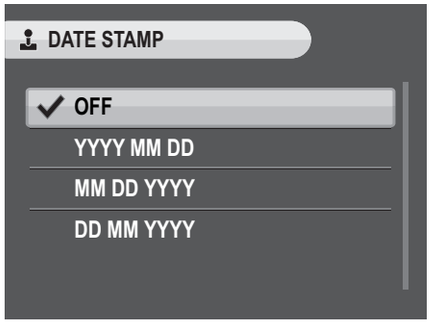
Video Out

The **Video Out** setting allows you to adjust the video output, depending on the type of your TV. Two options are available:

- NTSC
- PAL



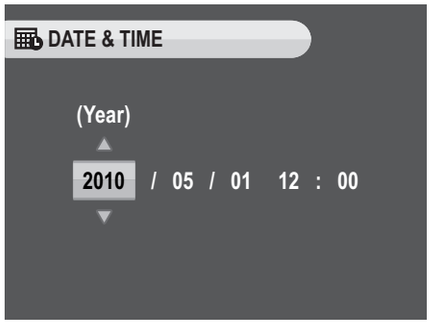
Date Stamp



The **Date Stamp** setting allows you to adjust the format in which the date will appear on each photo. You can also deactivate this function if you wish. Setting a date stamp allows for easy sorting and the date will appear on the photo when printed. Four options are available:

- OFF (default)
- YYYY MM DD: year-month-day format
- MM DD YYYY: month-day-year format
- DD MM YYYY: day-month-year format

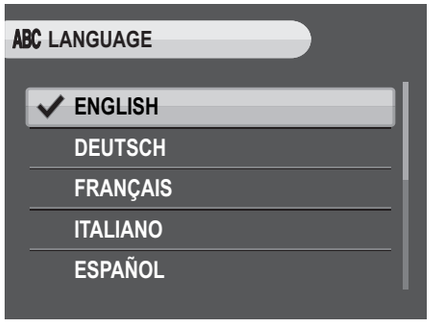
Date and Time



The **Date and Time** setting allows you to set or adjust the date and time on your camera. To set or adjust the date and time:

- Press the **Left/Right** navigation buttons to select the **Year** field.
- Press the **Up/Down** navigation buttons to adjust the **Year** value.
- In the same way, select the **Month**, **Day**, **Hour** and **Minute** fields and adjust them accordingly.

Language

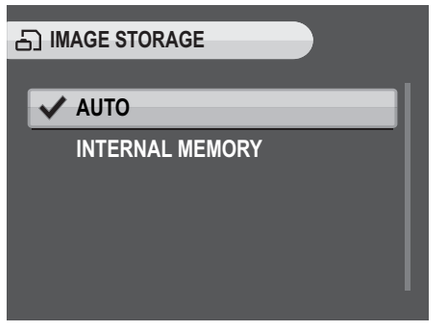


The **Language** setting allows you to choose which language the OSD menu uses. Scroll down the list and select your language. Press the **OK** button to confirm.

Image Storage

The **Image Storage** setting allows you to specify where photos and video clips will be stored. The camera features Approx. 20 MB internal memory but you can also insert an SD/SDHC card (See "Inserting an SD/SDHC Memory Card" on page 11 for more details). Two options are available:

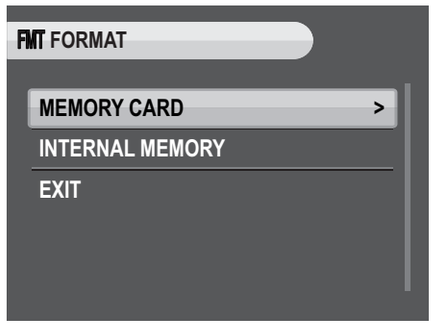
- AUTO (default): When selected, the camera chooses the storage medium automatically. If an SD/SDHC card is inserted in the camera, all photos and videos are stored on the card. If an external card is not detected, all photos and videos are stored in the internal memory.
- INTERNAL MEMORY: All photos and videos are stored in the internal memory.



Format

The **Format** setting allows you to erase all data in the internal memory or on the SD/SDHC card. Three options are available:

- MEMORY CARD (default): All data on the SD/SDHC will be formatted.
- INTERNAL MEMORY: All data in the internal memory will be formatted.
- EXIT: Select to exit to the main menu.



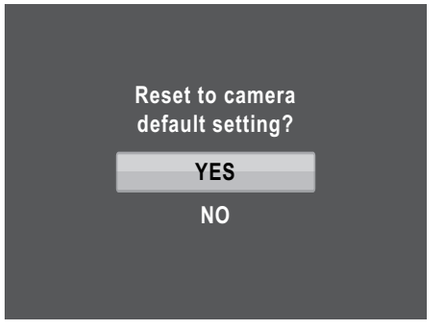
English

English

Reset

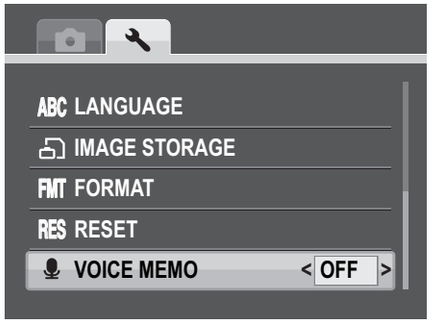
The **Reset** setting allows you to reset the camera to the original factory default settings except date&time, language, and video out format. This means all modifications you have made to the camera settings will be cleared.

Once selected, the **Reset** screen displays a confirmation message. Select **YES** (default) to proceed or **NO** to cancel.



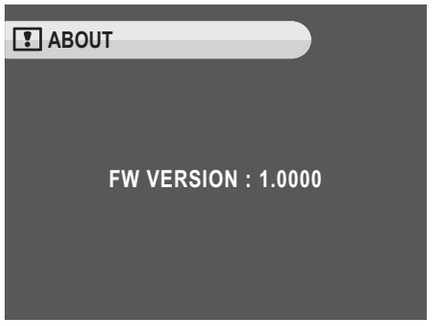
Voice Memo

The **Voice Memo** setting allows you to record a voice memo when a photo is taken or in playback mode. Select **ON** to enable the Voice Memo function or **OFF** (default) to disable it.



About

The **About** screen allows you to check the current firmware version of the camera.



Specifications

General	Resolution / Image Type	12.1M Pixels/1/2.3CCD
	LCD	2.7" TFT, 230,000 Pixels
	Dimensions	97.5 (W) X 58.5 (H) X 23.0 (D) mm
	Exterior Casing	Plastic housing + Plastic top band
Optics	Aperture	Wide: F3.5, Tele: F5.9
	Optical Zoom	Up to 5X
	Digital Zoom	Up to 5X
	Focal Length	f=5.05 mm (W), 25.25 mm (T) (f=28 mm ~ 140 mm, 35 mm equivalent)
	Photo Graphic Range	Normal: 0.5 m ~ infinity (W), 2.0 m ~ infinity (T) Macro: 0.1 ~ 0.8 m (W), 1.0 ~ 2.1 m (T) Landscape: 1.0 m ~ infinity (W), 3.0 m ~ infinity (T) Support seamless AF in Auto/P-mode/Auto Panorama
	Shutter Speed	2 ~ 1/1000 Sec.
	Viewfinder	None
Camera Features	Auto Power Off / Time Out	Yes
	ISO Equivalent	Auto, ISO 80/100/200/400/800/1600
	External Memory	Support SD/SDHC card up to 32 GB
	Flash Modes	Auto Flash, Flash Off, Fill Flash, Red-eye Reduction
	SCENE Mode	Auto, Auto scene, P-Mode, Auto Panorama, Smile Catch, Sport, Landscape, Night Landscape, Portrait, Self Portrait, Night Portrait, Museum, Snow, Sunset, Fireworks, Beach, Party, Foliage, Kids & Pets, Copy, Backlight, Frame Composite, Audio, Video
	Tripod Mount	1/4” Standard
	Macro	Yes

English

Image Resolution	Image File Formats	Still Image: JPEG (Exif2.21)
	Image Quality Mode	Still Image: 12M (4000X3000), 10.7M 3:2 (4000X2664), 9M 16:9 (4000X2248), 8M (3264X2448), 5M (2576X1932), 3M (2048X1536), 2M (1600X1200), VGA (640X480) Movie Mode: 640X480@30fps, 320X240@30fps
	Quality Levels	Best, Better, Good
Capture Features	DPOF	Version 1.1
	Erase Protection	Yes
	Exposure Compensation	Selectable +/-2.0 EV with 0.3 EV steps
	Sharpness	High, Normal, Low
	Color	Vivid, Color, Black&White, Sepia
	AE Metering	Matrix, Center Weighted, Spot
	Focus	Multi-Zone, Center, Selected area
	Flash Range	W: 0.3 ~ 3.0 m @ ISO 400 T: 1.0 ~ 1.8 m @ ISO 400
	Anti-Shake	Yes, High ISO
	Drive Mode	Single Mode, Burst Mode, Multi-Burst (VGA@16 shots)
	Quick Delete	Yes
	Quick View	Yes
	Self-timer	2 or 10 seconds
	Playback Magnify	Up to 6X (0.5 steps)
	White Balance	Auto, Sunny, Tungsten, Fluorescent, Cloudy

Video	Video Out	PAL, NTSC
	Speaker	Mono
	Movie File Format	AVI (Motion JPEG with sound)
	Movie Length	Close to 80 min. Max. file size is 4 G
	Microphone	Mono
	Audio Recording	Wave format
Power	Battery	D-LI108
	Battery Life	CIPA 200 shots
Connectivity	Camera Interface	USB 2.0 (high speed)
	Host Platform	Windows XP/Vista/7
Standards	Operating Temperature	0°C ~ 40°C
	Language	English/German/French/Italian/Spanish/Portuguese/ Simplified Chinese/Traditional Chinese/Russian/Arabic/ Turkish/Japanese/Dutch/Polish/Hungarian/Greek/Danish/ Swedish

Troubleshooting

Problem	Action
Camera does not turn on	• The battery may be exhausted. Charge or replace the battery. • The battery is installed incorrectly. Reinsert the battery observing the correct polarity.
Camera turns off automatically	Press the Power button again to turn on the camera.
LCD turns dim automatically	Press any button to turn on the LCD when POWER SAVING setting (30 SEC or 1 MIN) is activated.
Empty battery icon is displayed on the LCD then camera turns off	Battery is exhausted. Charge or replace the battery.
LCD screen displays 'Card Requires Formatting'	Memory card format not recognized. Reformat the memory card.
LCD screen displays 'Card is Full'	Memory card is full. Replace the memory card with a new one or delete unnecessary images from the existing card.
LCD screen displays 'Card is Locked'	The card is protected by a protect switch mechanism. Move the switch to the unlock position.
Insufficient memory space to complete request	Insufficient space in memory to rotate an image or divide a video. Delete unnecessary images and videos.
No image displays on the TV screen	Incorrect TV-out type was selected. Set correct TV-out type to match your TV system.
Insufficient space on the card	Delete unnecessary images.

Information for Users on Collection and Disposal of Old Equipment and Used Batteries

1. In the European Union

These symbols on the products, packaging and/or accompanying documents mean that used electrical and electronic equipments and batteries should not be mixed with general household waste.

Used electrical/electronic equipments and batteries must be treated separately and in accordance with legislation that requires proper treatment, recovery and recycling of these products. Following the implementation by member states, private households within the EU states may return their used electrical/electronic equipments and batteries to designated collection facilities free of charge*.

In some countries your local retailer may also take back your old product free of charge if you purchase a similar new one. *Please contact your local authority for further details.

By disposing of this product correctly you will help ensure that the waste undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling.

2. In other countries outside the EU

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

For Switzerland: Used electrical/electronic equipment can be returned free of charge to the dealer, even when you don’t purchase a new product. Further collection facilities are listed on the home page of www.swico.ch or www.sens.ch.

Note for the batteries symbol (bottom two symbol examples): This symbol might be used in combination with a designation for the chemical element or compound in use. In this case you have to comply with the requirement set by the Directive for the chemicals involved.