

The Samsung logo is located in the top left corner of the blue background. It consists of the word "SAMSUNG" in white, bold, sans-serif capital letters, enclosed within a white oval shape.

SAMSUNG

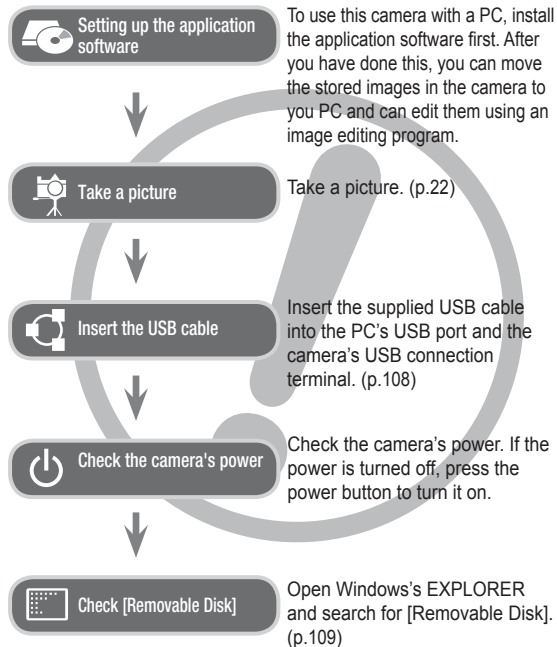
User Manual

HZ50W

Thank you for buying a Samsung Camera.
This manual will help you learn to capture
images, share or print your photos, and edit
photos with the accompanying software.
Please read this manual thoroughly.

Instructions

Use this camera in the following order.



Getting to Know your camera

Thank you for buying a Samsung Digital Camera.

- Prior to using this camera, please read the user manual thoroughly.
- If you require After Sales service, please bring the camera and the cause of the camera malfunction (such as battery, Memory card etc.) to the A/S center.
- Please check that the camera is operating properly prior to when you intend to use it (e.g. for a trip or an important event) to avoid disappointment. Samsung takes no responsibility for any loss or damage that may result from camera malfunction.
- Keep this manual in a safe place.
- If you use a card reader to copy the images on the memory card to your PC, the images could be damaged. When transferring the images taken with the camera to your PC, be sure to use the supplied USB cable to connect the camera to your PC. Please note that the manufacturer holds no responsibility for loss or damage of images on the memory card due to the use of a card reader.
- The contents and illustrations of this manual are subject to change without prior notice for upgrading the camera functions.

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Danger

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

- Do not attempt to modify this camera in any way. To do so may result in fire, injury, electric shock, or severe damage to you or your camera. Internal inspection, maintenance, and repairs should only be carried out by your dealer or Samsung Camera Service center.
- Please do not use this product in close proximity to flammable or explosive gases, as this could increase the risk of explosion.
- Should any form of liquid or a foreign object enter the camera, do not use it. Switch off the camera, and then disconnect the power source. You must contact your dealer or Samsung Camera Service center. Do not continue to use the camera as this may cause a fire or electric shock.
- Do not insert or drop metallic or inflammable foreign objects into the camera through access points e.g. the memory card slot and battery chamber. This may cause a fire or electric shock.
- Do not operate this camera with wet hands. This could pose a risk of electric shock.

Warning

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

- Do not use the flash in close proximity to people or animals. Positioning the flash too close to your subject's eyes may cause eyesight damage.
- For safety reasons, keep this product and its accessories out of reach of children or animals to prevent accidents e.g.:
 - Swallowing battery or small camera accessories. If an accident should occur, please consult a doctor immediately.
 - There is the possibility of injury from the camera's moving parts.
- The battery and camera may become hot during prolonged use and it may result in camera malfunction. If this occurs, allow the camera to sit idle for a few minutes to allow it time to cool.
- Do not leave this camera in places subject to extremely high temperatures, such as a sealed vehicle, direct sunlight or other places of extremes in temperature. Exposure to extreme temperatures may adversely affect the camera's internal components and could cause a fire.
- When in use, do not cover the camera or Charger. This may cause heat to build up and distort the camera body or cause a fire. Always use the camera and its accessories in a well-ventilated area.

Caution

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in a minor or moderate injury.

- Leaking, overheating, or damaged battery could result in fire or injury.
 - Use battery with the correct specification for the camera.
 - Do not short circuit, heat or dispose of battery in fire.
 - Do not insert the battery with the polarities reversed.
- Remove the battery when not planning to use the camera for a long period of time. Otherwise the battery may leak corrosive electrolyte and permanently damage the camera's components.
- Do not fire the flash while it is in contact with hands or objects. Do not touch the flash after using it continuously. It may cause burns.
- Do not move the camera while it is switched on, if you are using the AC adapter. After use, always switch off the camera before unplugging the cable from the wall socket. Then make sure that any connector cords or cables to other devices are disconnected before moving the camera. Failure to do so may damage the cords or cables and cause a fire or electric shock.
- Take care not to touch the lens or lens cover to avoid taking an unclear image and possibly causing camera malfunction.
- Avoid obstructing the lens or the flash when you capture an image.
- When using this camera in low temperatures, you may experience the following. These are not camera malfunctions. The camera usually recovers at normal temperatures.
 - It takes longer to turn on the LCD screen and the color may differ from the subject.
 - After changing to a different subject or scene, there may be an after image on the LCD screen.
- Credit cards may be demagnetized if left near case. Avoid leaving magnetic strip cards near the case.
- Never connect the 20 pin connector to the USB port of a PC. This carries a high risk of computer malfunction.

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System chart

Please make sure your package contains the contents listed below before using this product. The contents can vary depending on the sales region. To buy the optional equipment listed under Sold Separately, contact your nearest Samsung dealer or Samsung service center. The appearance of the parts and accessories in your package may differ from the illustrations below.

Package Contents



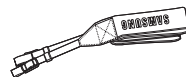
Camera



Rechargeable battery
4302-001226



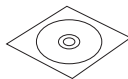
AC adapter / USB cable
AD44-00143A / AD39-00183A



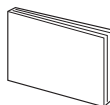
Neck strap (see p.10)
AD63-04525A



Lens cap / Lens cap strap (see p.10)
AD67-01588A / AD63-04527A



Software CD
(User manual included)
AD46-00343A



Quick Start Manual
AD68-05244A

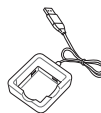
Sold Separately



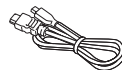
SD/SDHC memory card
(see p.16)



AV cable
AD39-00146A



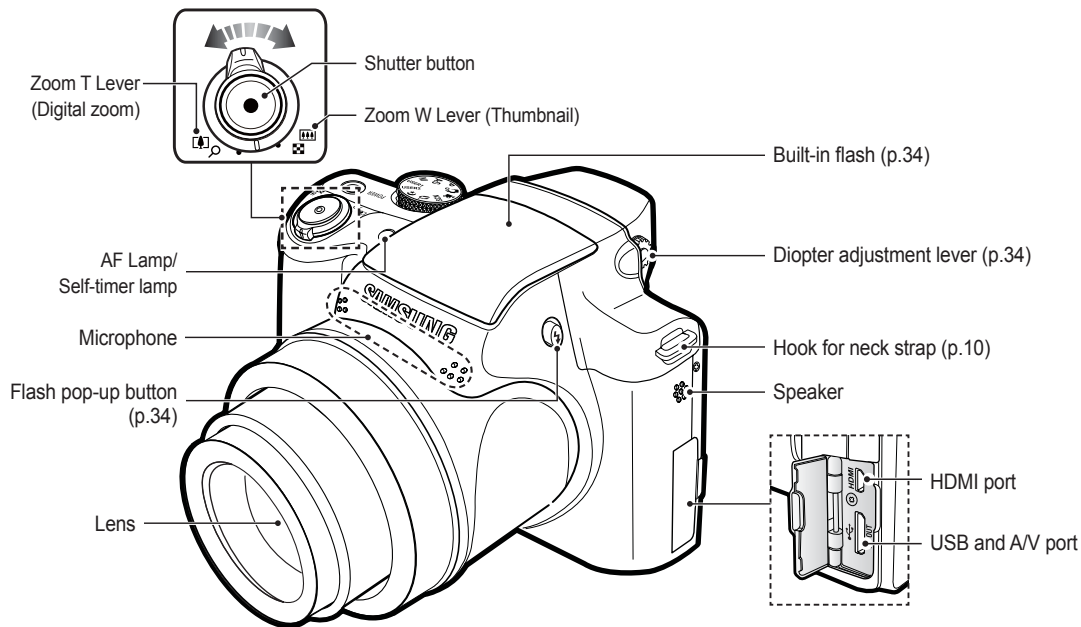
Battery charger
AD44-00164A



HDMI cable
AD39-00179A

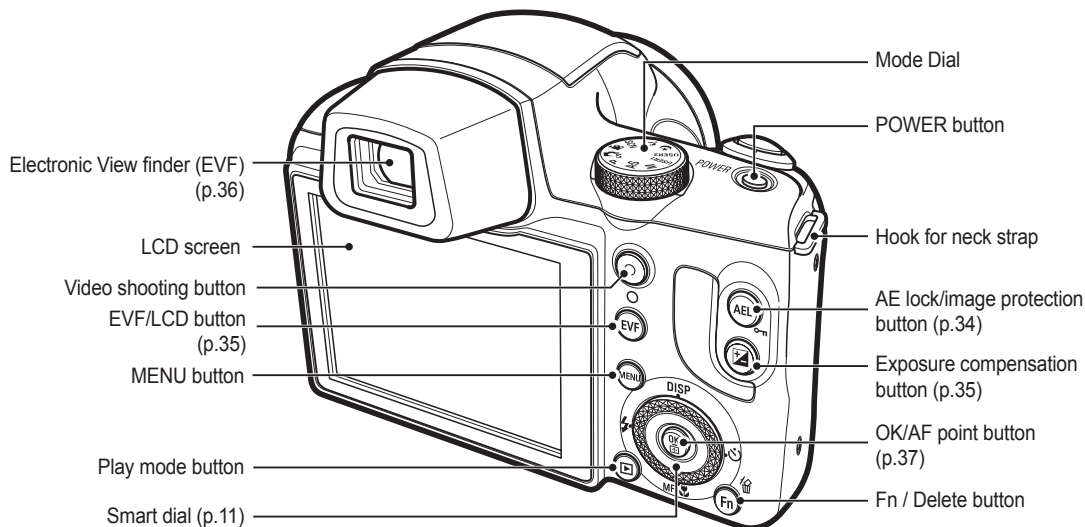
Identification of features

Front & Top



Identification of features

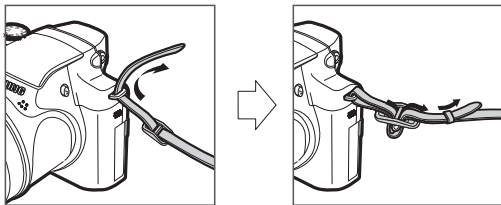
Back



Identification of features

■ Attaching the neck strap

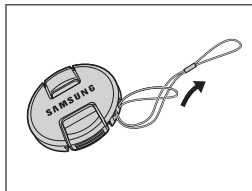
Attach the neck strap as shown below.



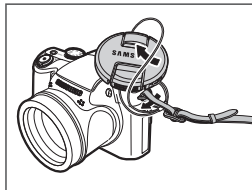
Ensure that the neck strap is attached correctly or the camera may fall.

■ Attaching a lens cap to the camera

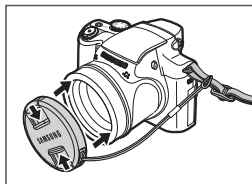
1. Insert the lens cap string into the hole in the lens cap.



2. Attach the lens cap to the neck strap.

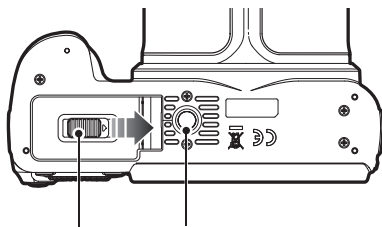


3. Attach the lens cap as shown in the image.



Identification of features

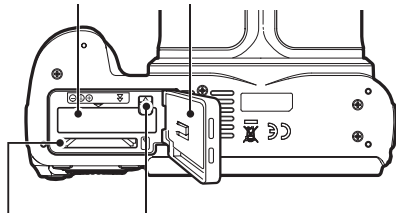
Bottom



Battery chamber cover lever
Tripod socket

Push the battery chamber cover lever in the direction of the arrow to open the battery chamber cover.

Battery chamber
Battery chamber cover

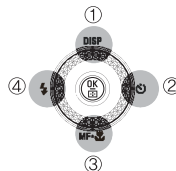


Memory card slot
Battery holder

Smart dial

■ When pressing the Smart Dial

- Move UP/DOWN /LEFT/RIGHT
- Execute options in the shooting mode:
 - ① Change the display
 - ② Change the timer option
 - ③ Change the close-up shooting option
 - ④ Change the flash option



■ When turning the Smart Dial

- Move option or menu
- Adjust the shutter speed, aperture value, exposure value and set the automatic exposure bracketing (AEB) area in the shooting mode.
- Search files in the playback mode.



Identification of features

Self-timer lamp

Icon	Status	Description
	Blinking	- For the first 8 seconds, the lamp blinks at 1 second intervals. - For the final 2 seconds, the lamp blinks quickly at 0.25-second intervals.
	Blinking	For the 2 seconds, the lamp blinks quickly at 0.25-second intervals.
	Blinking	A picture will be taken after about 10 seconds and 2 seconds later a second picture will be taken.

Camera Status Lamp

Status	Description
Power on	The lamp turns on and off when the camera is ready to take a picture.
After taking a picture	The lamp blinks while saving the image data and turns off when the camera is ready to take a picture.
When flash battery is charging	The lamp blinks.
When the USB cable is inserted to a PC	The lamp lights up. (LCD screen turns off after initializing the device.)
Transmitting Data with a PC	The lamp blinks. (LCD screen turns off.)
When the USB cable is inserted into a printer	The lamp blinks.
When the printer is printing	The lamp blinks.
When the AF activates	The lamp turns on. (The camera focus on the subject.)
	The lamp blinks. (The camera doesn't focus on the subject.)

Mode icon

Refer to page 22 for more information about the camera mode setting.

MODE	Smart Auto	Program	Aperture. Shutter Priority
ICON			
MODE	Manual	User	Night
ICON			
MODE	Beauty Shot	Scene	Movie
ICON			

MODE	SCENE			
	Frame Guide	Portrait	Children	Landscape
ICON				
MODE	Close Up	Text	Sunset	Dawn
ICON				
MODE	Backlight	Fireworks	Beach & Snow	
ICON				

Connecting to a Power Source

You should use the rechargeable battery SLB-11A supplied with the camera. Be sure to charge the battery before using the camera.

■ SLB-11A rechargeable battery Specification

Model	SLB-11A
Type	Lithium Ion
Capacity	1130mAh
Voltage	3.8V
Charging time	Approximately 200 Minutes

■ Number of images and battery life: Using the SLB-11A

	Battery life / Number of images	Conditions
Still image	Approx. 120 MIN / Approx. 240 shots	Using the fully charged battery, Default settings, Program mode, Shot to shot interval: 30Sec. Changing the zoom position between the Wide and the Tele after every shot. Using the flash on every second shot. Using the camera for 5 minutes and then powering it off for 1 minute.
Movie	Approx. 120 MIN	Using the fully charged battery 640x480 image size 30fps frame rate

※ These figures were measured under Samsung's standard shooting conditions. Your results may differ.



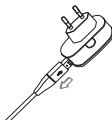
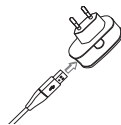
Important information about battery usage.

- When camera is not in use, turn off the power.
- Please remove the battery if the camera will not be used for long periods. Batteries can lose power over time and are prone to leaking if kept inside the camera.
- Low temperatures (below 0°C) can affect the performance of the battery and you may experience reduced battery life.
- Batteries will usually recover at normal temperatures.
- During extended use of the camera, the camera body may become warm. This is perfectly normal.

■ Using the AC Adaptor and USB Cable.

- When you connect the USB cable to the AC Adaptor, you can use the combination to power your camera or to charge the battery.

- When you use the USB cable without the AC Adaptor, you can attach it to the USB port on a PC and download stored images to the PC or use the connection to supply power to the camera.



Connecting to a Power Source



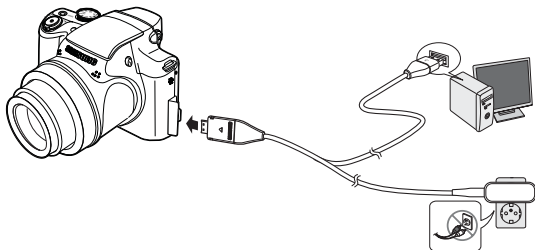
Important information about USB cable usage.

- Use a USB cable with the correct specification.
- Do not connect the camera to a PC through a USB hub. Connect the camera directly to the PC.
- Do not connect the camera and other devices to a PC at the same time. Connect the camera by itself.
- If your PC can not detect the camera when you use the front side USB port, use the back side USB port of computer.
- If the USB port of the PC doesn't meet the Power output standard (5V, 500mA), the battery may not charge.



- Before inserting any cables or the AC adapter, make sure the direction of the cable or adapter plug is correct. Do not insert by force. It may cause breakage of cable or camera.
- If the charging LED of the AC Charger does not turn on or blink after you have inserted the rechargeable battery, please make sure the battery is inserted correctly.
- If you charge the battery with the camera power on, the battery won't be fully charged. Turn the camera off while charging the battery to get a full charge.

■ How to charge the rechargeable battery



■ Charging LED of the AC charger

	Charging LED
Being Charged	Red LED is on
Charging is complete	Green LED is on
Charging error	Orange LED is off or blinking

- If you insert a fully discharged battery to charge it, do not turn on the camera at the same time. The camera must not be turned on because of the low battery capacity. Charge the battery for more than 10 minutes before using the camera.
- Do not use the flash frequently or take a movie clip with the fully discharged battery charged only for a short time. Even if the charger is inserted, the camera power may turn off because the rechargeable battery has discharged again.

Connecting to a Power Source



When using the battery, please follow these guidelines. Failure to do so may cause excessive heat, fire, or explosion.

- If the battery is bulging or distorted, contact a Samsung service center. It may present a physical danger.
- Use only the recommended battery charger.
- Do not place the product close to a fire or any high temperature source.
- Do not insert the product into the microwave oven.
- Do not leave the product inside a car during the summer.
- Do not place the product in a hot, humid environment.
- Do not place the camera on a carpet, comforter, or electronic mattress for a long time.
- Do not leave the product turned on where there is little or no air circulation.
- Do not let accessories like necklaces, coins, keys, watches, etc., come in contact with the battery chamber.
- Use Advanced Lithium Batteries with a guarantee from the manufacturing company.
- Do not disassemble the battery or perforate the battery with a sharp pin.
- Do not subject the battery or camera to high pressure.
- Do not drop or strike the camera or battery, or subject either to rough handling or sudden shocks.
- Do not exposure the battery or camera to the temperatures over 60°C (140°F) degree.
- Do not exposure the camera or battery to water or high humidity.
- Do not expose the battery to sources of excessive heat such as sunshine, fire, or the like.



Guidelines for disposal

- Do not throw away batteries that no longer charge.
- Do not dispose of a battery by throwing it in a fire.
- Dispose of the battery according to the environmental laws of your country, state, or area.



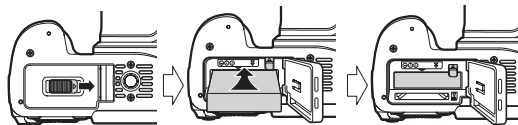
Guideline for recharging a battery

- Do not recharge the battery using a method that differs from the method detailed in this users manual. Failure to follow these instruction may cause a re or explosion.

Connecting to a Power Source

■ Insert the battery as shown

- If the camera does not turn on after you have inserted battery, please check whether the battery (+ / -) direction is right.
- When opening the battery chamber cover, do not force it. You may damage it.



■ There are 4 battery status indicators displayed on the LCD screen.

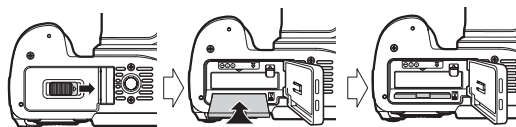
Battery indicator				
Battery status	The battery is fully charged	Low battery capacity (Prepare to recharge or use spare battery)	Low battery capacity (Prepare to recharge or use spare battery)	Battery empty. (Recharge or use spare battery)

※ When using the camera and the battery in a place that is excessively cold or hot, the battery status on the LCD may be different from the actual battery status.

Inserting the memory card

■ Insert the memory card as shown.

- Turn off the camera's power before inserting the memory card.
- Have the front label of the memory card facing toward the front of the camera (Lens) and the card pins toward the back of the camera (LCD screen).
- Do not insert the memory card the wrong way round. Doing so may damage the memory card slot.



Instructions on how to use the memory card

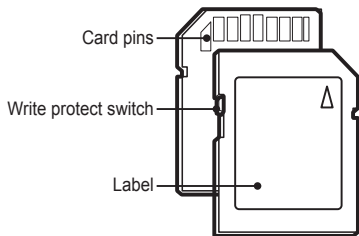
- Be sure to format the memory card (see p.68) if you are using a newly purchased memory card for the first time, if it contains data that the camera cannot recognize, or if it contains images captured with a different camera.
- Turn off the camera power whenever the memory card is being inserted or removed.
- Repeated use of the memory card will eventually reduce the memory card's performance. Should this be the case, you will need to purchase a new memory card. Wear and tear on the memory card is not covered by the Samsung warranty.
- The memory card is an electronic precision device.
Do not bend, drop or subject the memory card to harsh impacts
- Do not store the memory card in an environment with strong electronic or magnetic fields, e.g. near loud speakers or TV receivers.
- Please do not use or store in an environment where there are extremes in temperature.
- Do not allow the memory card to become dirty or to come into contact with any liquid. Should this happen, clean the memory card with a soft cloth.
- Please keep the memory card in its case when not in use.
- During and after periods of extended use, you may notice that the memory card is warm. This is perfectly normal.
- Do not use a memory card that was used in another digital camera. If you must use such a card, format it using this camera.
- Do not use a memory card formatted by another digital camera or memory card reader.
- If the memory card is subjected to any of the following, the recorded data may become corrupted :
 - The memory card is used incorrectly.
 - The power is switched off or the memory card is removed while recording, deleting (formatting) or reading.
- Samsung cannot be held responsible for lost data.
- It is advisable to copy important data onto other media as back-up e.g. hard disks, CD etc.
- If there is insufficient memory available :
A [Memory Full] message will appear and the camera will not operate. To optimize the amount of memory in the camera, replace the memory card or delete unnecessary images stored on the memory card.



- Don't remove the memory card when the camera status lamp is blinking as this may cause damage to data in the memory card.

Instructions on how to use the memory card

The camera can use SD/SDHC Memory Cards.



[SD (Secure Digital) memory card]

- The SD/SDHC memory card has a write protect switch that prevents image files from being deleted or formatted. When you slide the switch towards the bottom of the SD/SDHC memory card, the data is protected. When you slide the switch towards the top of the SD/SDHC memory card, the data protection will be cancelled.
- Slide the switch towards the top of the SD/SDHC memory card before taking a picture.

The specified shooting capacities of a 16GB SD Memory Card are listed below. These figures are approximate. Image capacities can be affected by variables such as subject matter and memory card type.

Recorded image size		RAW-SF	RAW-F	5F	F	F
Still image	14m	29	33	116	191	285
	12m	-	-	131	215	321
	10m	-	-	154	252	375
	8m	-	-	199	324	479
	5m	-	-	311	502	733
	3m	-	-	487	779	1113
	2m	-	-	716	1113	1558
	1m	-	-	1640	2397	3116

Recorded image size		60F	30F	15F
Movie clip	1280x1080	-	12'58"	25'18"
	640	-	41'31"	01:38'30"
	320	01:29'48"	02:38'14"	03:23'03"



- Total recording time can be impacted by how often you use the zoom. Note that the Zoom W/T lever does not function while the camcorder is recording a video. It does function before and after.
- Several videos were recorded in succession to determine the total recording time.

When using the camera for the first time

- Charge the rechargeable battery fully before using the camera for the first time.
- When the camera is turned on for the first time, a menu will be displayed on the LCD screen to set date, time, time zone, and language. This menu will not be displayed again after you set up the date, time, time zone, and language. Set up the date, time, time zone, and language before using this camera.

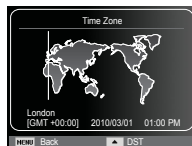
■ Setting up the language

1. Select the [Language] menu by pressing the Up/Down button, and then press Right button.
2. Select the desired sub menu by pressing the Up/Down button, and then press the OK button.



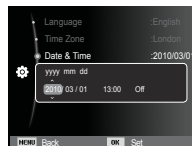
■ Setting up the Time Zone

1. Select the [Time Zone] menu by pressing the Up/Down button, and then press the Right button.
2. Press the Left/Right button to select the desired mode.



■ Setting up the date, time, and date type

1. Select the [Date&Time] menu by pressing the Up/Down button, and then press the Right button.
2. Select the desired sub menu by pressing the Up/Down/Left/Right button, and then press the OK button.



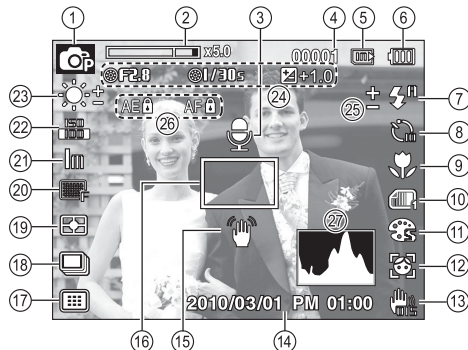
Left/Right button : Selects world time/year/month/day/hour/minute/date type.

Up/Down button : Changes the value of each item.

※ For more information about the World Time, refer to the page 69.

LCD screen indicator

- The LCD screen displays information about the shooting functions and selections.



[Image & Full Status]

No.	Description	Icons	Page
1	Recording mode		p. 22
2	Optical / Digital Zoom bar / Digital Zoom rate		p. 33
3	Voice Memo		p. 61
4	Number of available shots remaining	00001	p. 18
	Remaining time	00:00:00	p. 18
5	Memory card icon / Internal memory icon		-

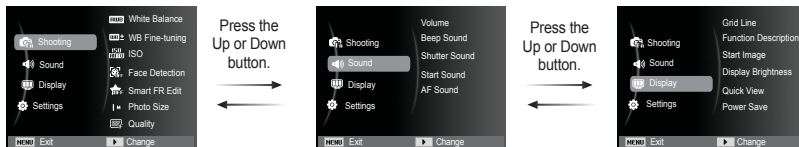
No.	Description	Icons	Page
6	Battery		p. 16
7	Flash		p. 41
8	Self-timer		p. 43
9	Macro		p. 38
10	Smart Range		p. 54
11	Photo Style Selector		p. 57
12	Face Detection / Smart Filter		p. 49/58
13	Camera Shake Compensation / Without Sound		p. 60/63
14	Date / Time	2010/03/01 PM 01:00	p. 69
15	Camera Shake Warning		p. 30
16	Auto Focus Frame		p. 56
17	Auto Focus type		p. 56
18	Drive mode		p. 55
19	Metering		p. 55
20	Image Quality / Frame Rate		p. 54
21	Photo Size / Movie Size		p. 53
22	ISO / Face Retouch		p. 48/53
23	White Balance / Face Tone		p. 46/53
24	Aperture Value/Shutter Speed/Exposure compensation		p. 24-25/ 35
25	Flash EVC		p. 57
26	Locking the Exposure/Locking the Focus		p. 61
27	Histogram		p. 38

How to use the menu

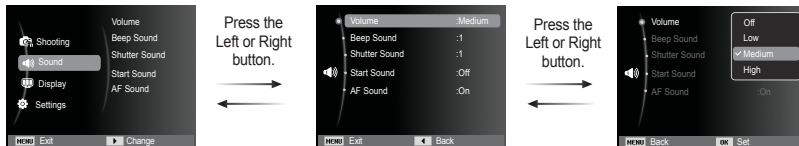
1. Turn on the camera, and then press the MENU button. A menu for each camera mode appears.



2. Use the up or down button to navigate through the menus.



3. Use the left or right button to select a sub menu.



4. Select a submenu, and then click the OK button to save settings and return to the previous window.

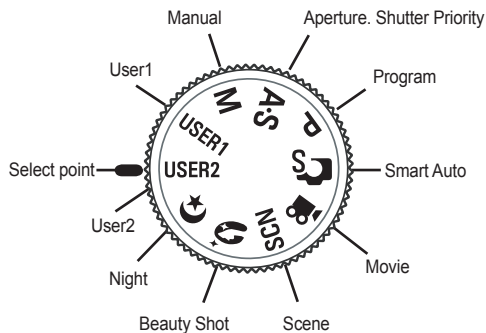
Starting the recording mode

Selecting modes

You can select the shooting modes by using the mode dial on the upper right side of your camera.

■ How to use the mode dial

Select the shooting mode by turning the mode dial to the selection point.



■ Shooting modes

	Smart Auto	In Smart Auto mode, the camera automatically chooses camera settings based on the type of scene it detects.
P	Program	The camcorder sets the aperture and shutter speed.
A/S	Aperture. Shutter Priority	Lets you set the aperture values or shutter speed manually.
M	Manual	Lets you set various shooting options, including the shutter speed and the aperture values, manually.
USER1 USER2	User	Lets you preset frequently used shooting options.
	Night	Sets the camcorder for recording at night or in poor lighting conditions.
	Beauty Shot	Lets you clear or retouch the facial imperfections of a subject.
SCN	Scene	Lets you select a scene mode with settings optimized for a given scene.
	Movie	To record movies.

Starting the recording mode

How to use the Smart Auto mode ()

In Smart Auto mode, the camera automatically chooses the appropriate camera settings based on the type of scene (Night, Land-scape, etc.) it detects. Use Smart Auto mode if you are unfamiliar with the camera's settings and functions. Note that you can still manually configure all functions except the aperture value and shutter speed.

1. Select Smart Auto mode using the Mode dial. (p.22)
2. Point the camera towards the subject and compose the image using the LCD screen.
3. Press the Shutter button to capture an image.



- If the camera does not recognize a proper scene mode, it uses the default settings.
- Even if it detects a face, the camera may not select a portrait mode depending on the subject's position or lighting.
- The camera may not select the correct scene depending on shooting conditions, such as camera shake, lighting, and distance to the subject.
- The camera recognizes [Night] mode scenes only when the flash is set to off. The camera implements [Tripod] mode after checking the shooting conditions for a period of time.
- Despite being on a tripod, the camera may not select a [Tripod] mode depending on the subject's movement.



The camera recognizes scenes under the following conditions;

- [Landscape] () : When shooting outdoor scenes
- [White] () : When shooting a white background
- [Nights] () : When shooting nighttime scenes
- [Night Portrait] () : When shooting portraits or people in a dark outdoor place
- [Backlight] () : When shooting backlit scenery without a portrait
- [Backlight Portrait] () : When shooting a backlit portrait
- [Portrait] () : When shooting a portrait
- [Macro] () : When shooting close-ups
- [Macro Text] () : When shooting text close up
- [Tripod] () : When shooting a subject that doesn't move when the camera is mounted on a tripod (available only when the camera recognizes it as nighttime)
- [Action] () : When shooting a subject making frequent movements
- [Sunset] () : When shooting a sunset
- [Blue Sky] () : When shooting blue sky

Starting the recording mode

- [Natural Green] () : When shooting nature such as forest and leaves
- [Macro Color] () : When shooting a close-up shot of a subject with multiple colors
- [Macro Portrait] () : When shooting close-up portrait shot

How to use the Program mode ()

In Program Mode, the camera selects the optimal shutter speed and aperture settings. You can manually configure all other functions.

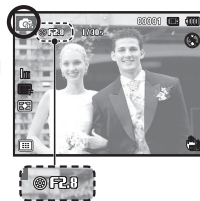
1. Select the Program mode using the Mode dial. (p.22)
2. Press the Menu button to configure advanced functions.



How to use the Aperture. Shutter Priority mode ()

In Aperture.Shutter Priority mode, you can manually adjust the aperture value or the shutter speed. If you manually adjust the aperture value, the camera adjusts the shutter speed automatically. If you manually adjust the shutter speed, the camera automatically selects an aperture value for optimal exposure.

1. Select the Aperture. Shutter Priority mode using the Mode dial. (p.22)
2. Select aperture value or shutter speed by turning the Smart Dial.
An "A" icon will appear on the selected item.
3. Select the aperture value or shutter speed by pressing the left or right button and then adjust a desired value by turning the Smart Dial.
 - If you set the aperture value, the camera sets the shutter speed. If you set the shutter speed, the camera sets the aperture value.
4. Point the camera towards the subject and compose the image using the LCD screen.
5. Press the Shutter button to capture an image.



Starting the recording mode

How to use the Manual mode ()

You can set both the aperture value and the shutter speed manually.

1. Select the Manual mode by using the Mode dial. (p.22)
2. Select aperture value or shutter speed by turning the Smart Dial.
An "M" icon will appear on the selected item.
3. Select the aperture value or shutter speed by pressing the left or right button and then adjust a desired value by turning the Smart Dial.
- You can set both the aperture value and shutter speed manually by repeating Steps 2 and 3 for each function.
4. Point the camera towards the subject and compose the image using the LCD screen.
5. Press the Shutter button to capture an image.



How to use the User Setting shooting mode ()

You can set the camera to a shooting mode you created when you saved shooting options you configured in the [Program], [Aperture. Shutter Priority], or [Manual] modes using the User mode function. See page 63 to see how to set the User mode.

1. Set a User Setting mode (User 1, User 2) by turning the Mode Dial. (p.22)
2. Point the camera towards the subject and compose the image using the LCD screen.
3. Press the Shutter button to capture an image.



Starting the recording mode

How to use the Nightscene modes (🌙)

Select this mode at night or in low light conditions.

1. Select the Nightscene mode using the Mode dial. (p.22)
2. Point the camera towards the subject and compose the image using the LCD screen.
3. Press the Shutter button to capture an image.



How to use the Beauty Shot mode (👤)

Take portraits with settings that clear facial imperfections.

1. Select the Beauty Shot mode using the Mode dial. (p.22)
2. Press the Up/Down button in the [Shooting] menu to select [Face Tone] or [Face Retouch].
3. Press the Left/Right button to select a desired level of [Face Tone] or [Face Retouch], and then press the OK button.
4. Press the Shutter button to capture images.

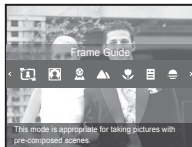


Starting the recording mode

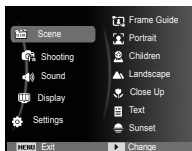
How to use the Scene modes ()

Using Scene modes, you can easily configure the camera so that it automatically uses the optimal settings for a given shooting situation.

1. Select the Scene mode using the Mode dial. (p.22)
2. Press the Left/Right button to select the desired Scene (Portrait, etc.).
3. Point the camera towards the subject and compose the image using the LCD screen.
4. Press the shutter button to capture an image.



※ To change to another Scene, press the MENU button, and then select a new Scene.



The scene modes are listed below.

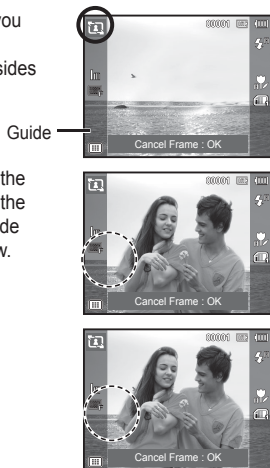
- [Frame Guide] () : Use this mode when you want someone else to take a picture for you from the angle you choose.
- [Portrait] () : To take a picture of a person.
- [Children] () : To take pictures of subjects that move fast or don't stay still, for example, children.
- [Landscape] () : To take pictures of distant scenery.
- [Close Up] () : For close-up shots of small objects such as plants and insects.
- [Text] () : For shots of documents and text.
- [Sunset] () : For pictures of sunsets.
- [Dawn] () : Daybreak scenes.
- [Backlight] () : Portraits without shadows caused by backlight.
- [Fireworks] () : Firework scenes.
- [Beach & Snow] () : For ocean, lake, beach and snowscape scenes.

Starting the recording mode

■ How to use the [Frame Guide] mode

Set [Frame Guide] mode when you want someone else to take a picture for you from the angle you choose.

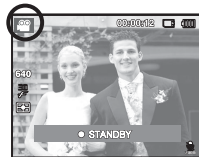
1. Take a picture from the angle you choose.
- A guide appears around the sides of the picture.
2. Then another person can take the picture by aligning the edge of the picture to be taken with the guide framing the sides of the window.



How to use the Movie clip mode ()

You can record individual movie clips for as long as there is available capacity in the memory or 20 minutes, whichever comes first. No individual clip can exceed 20 minutes.

1. Select the Movie clip mode by using the Mode dial. (p.22)
2. Point the camera towards the subject and compose the image using the LCD screen.
3. Press the shutter button once and the camera records a movie clip. The camera continues to record the movie clip for up to 20 minutes, even if you release the shutter button. To stop recording, press the shutter button again.



※ You can record movies in the shooting mode and the playback mode by pressing the video shooting button once. See the illustration to the right. When you press the video shooting button again, you stop recording.



- ※ Movie clip size and type are listed below.
- Movie clip size: 1280X720HQ, 640x480, 320x240
(Choose 1280X720HQ to record high-quality videos.)
 - Movie clip file type: H.264 (MPEG4.AVC)
 - Frame Rate: 60FPS, 30FPS, 15FPS

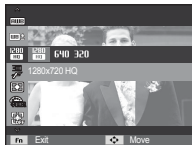
 Select [Zoom Mute] from the recording menu during video recording to prevent the camera from recording the sound of the zoom when it operates.

Starting the recording mode

Recording HD (High Definition) movie clips

You can record HD (High Definition) movie clips (1280x720HQ, 30 fps) using H.264 (MPEG4.AVC) video compression. H.264 (MPEG4.AVC) is the standard for digital video codecs. It supports high quality video in small size files.

1. Select the Movie clip mode by using the Mode dial. (p.22)
2. Press the Fn button to set the resolution to [1280x720 HQ].
3. Press the Shutter button to record video for the available recording time.



- What is **H.264(MPEG4 part10/AVC)**?

With its high-compression rate and the small file size, H.264 is the standard for digital video codecs, supporting top quality recordings in high resolution.

Recording a movie clip without sound

You can record a movie clip without sound.

Steps 1 through 3 are the same as those for MOVIE mode.

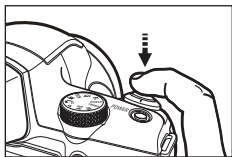
4. Press the Menu button.
5. Press the Up / Down button to select the [Movie] menu, and then press the Right button.
6. Select the [Voice] menu by pressing the Up / Down button, and then press the OK button.
7. Select the [Off] menu by pressing the Left / Right button.
8. Press the OK button. You can record a movie without sound.

※ See p.63 for further details.

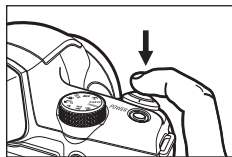


Things to Watch Out for When Taking Pictures

- Pressing the shutter button down half way.
Lightly press the shutter button to confirm focus and flash battery charge. Press the shutter button all way down to take the picture.



[Lightly press the shutter button]



[Press the shutter button]

- The available memory capacity may vary depending on shooting conditions and camera settings.
- When shooting in low light, the camera shake warning indicator () may appear on the LCD screen. If this occurs, use a tripod, support the camera on a solid surface, or change to flash shot mode.
- Shooting against the light : It is best to take pictures with the sun behind you. Taking pictures with the sun behind the subject may make the subject come out dark. To take a picture against the light, please use the [Backlight] in scene shooting mode (see page 23), fill-in flash (see page 42), spot metering (see page 55), exposure compensation (see page 35) or the ACB function (see page 87) .
- Avoid obstructing the lens or the flash when you capture an image.
- Compose the image by using the LCD screen.
- Under certain conditions, the auto focus system may not perform as expected.
 - When photographing a subject that has little contrast.
 - If the subject is highly reflective or shiny.
 - If the subject is moving at high speed.
 - When there is strong reflected light, or when the background is very bright.
 - When the subject matter has only horizontal lines or the subject is very narrow (such as a stick or flagpole).
 - When the surroundings are dark.

Focus lock

To focus on a subject not positioned in the center of the picture, use the focus lock function.

■ Using the Focus Lock

1. Ensure the subject is in the center of the autofocus frame.
2. Press the shutter button halfway. When the green auto focus frame lights up, it means the camera is focused on the subject. Be careful not to press the shutter button all the way down to avoid taking an unwanted picture.
3. With the shutter button still pressed down only halfway, move the camera to recompose your picture as desired, and then press the shutter button completely to take the picture. If you release your finger from the shutter button, the focus lock function will be cancelled.



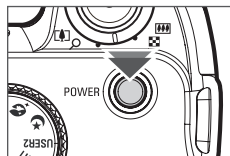
1. The image to be captured.
2. Press the shutter button halfway and focus on the subject.
3. Recompose the picture and fully depress the shutter button.

Using the camera buttons to control the camera

You can control the camera by using the camera buttons.

POWER button

Used for turning the camera's power on / off. If there is no operation during a specified time, the camera turns off automatically to save battery life. Refer to page 70 for more information about the auto power off function.

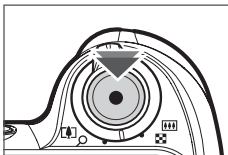


SHUTTER button

Used for taking an image or recording voice in the Recording mode.

- In Movie clip mode

Press the shutter button down once fully to start a movie clip recording. Individual clips record for as long as there is available capacity in the memory or 20 minutes, whichever comes first. To stop a recording before the 20 minutes are up, press the shutter button again.



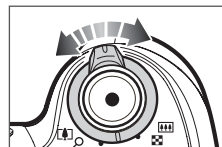
- In Still image mode

Press the shutter button down halfway to activate the autofocus and check the condition of the flash. Press the Shutter button down fully to take and store an image. If you've selected voice memo recording, the recording starts after the camera has stored the image data.

Zoom W/T Lever

When the menu is not displayed, this lever works as the OPTICAL ZOOM or DIGITAL ZOOM lever.

This camera has a 26X optical zoom and a 5X digital zoom function. Using both provides a total zoom ratio of 130X.



- TELE Zoom

Optical zoom TELE : Push the Zoom W/T lever to the right to enlarge the subject.

Digital zoom TELE : After you have reached maximum optical zoom, push the Zoom W/T lever to the right again to enable digital zoom (software tele). Release the Zoom W/T lever to stop digital zoom (tele). When digital 5x zoom reaches its maximum magnification, it will not enlarge the image further even if you push the Zoom W/T lever.



[WIDE zoom]



[TELE zoom]



[Digital zoom 5.0X]

Zoom W/T Lever

■ WIDE Zoom

Optical zoom WIDE : Push the Zoom W/T lever to the left in optical zoom mode to decrease the size of subjects. Continue to push the Zoom W/T lever to the left to disable optical zoom.



[TELE zoom]

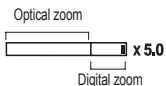


[Optical zoom 2X]



[WIDE zoom]

Digital zoom WIDE : Push the Zoom W/T lever to the left in digital zoom mode to decrease the size of the subjects. Release the Zoom W/T lever to stop changing the subject's size. Continue to push the Zoom W/T lever to the left when digital zoom is disabled to disable optical zoom (optical tele). The subjects return to their original size.



[Digital zoom 5.0X]



[TELE zoom]



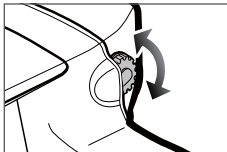
[WIDE zoom]



- If you turn the Zoom W/T lever fully, the zoom adjusts quickly. If you turn the Zoom W/T lever a little, the zoom adjusts slowly.
- Images taken using the digital zoom may take a little longer for the camera to process. Allow time for this to take place.
- If you use the Zoom during video recording, the camera may record the sound of the Zoom in operation.
- Select [Zoom Mute] from the recording menu during video recording to prevent the camera from recording the zoom sound.
- You may notice a decrease in image quality when using the digital zoom.
- To view a clearer digital zoom image, press the shutter button halfway at the maximum optical zoom position, and then move the Zoom W/T lever to the right again.
- You can not activate the digital zoom in the [Face Detection], [Beauty Shot], [Smart Auto], [Movie] and some Scene modes.
- To avoid taking an unclear image and possibly causing the camera to malfunction, do not touch the lens. If the image is dim, turn the camera power off and on again to modify the lens position.
- Do not press the lens. Pressing the lens can cause a camera malfunction.
- When the camera is turned on, do not touch the camera's moving lens parts. Touching these parts can cause the resulting image to be dim and unclear.
- Do not touch the lens while operating the Zoom W/T lever.

Diopter adjustment lever

When the electronic view finder is out of focus, you can achieve the clearest focus by turning the diopter adjustment lever. (p.36)



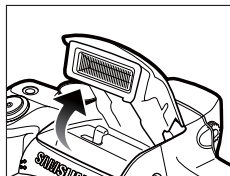
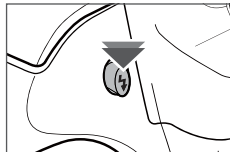
AEL/Image protection button (O-T)

You can save an exposure value prior to shooting by pressing the AEL button. Use this button when a subject is too small for the camera to obtain the appropriate exposure value or to preset the exposure for backlight shots. You can also use the AEL button for AFL, AEL/AFL, and AF (see page 61 for setting procedure). In the playback mode, use this button to apply image protection (O-T) (p. 92).



Flash pop-up button

To pop up the flash, press the flash pop-up button. Use the flash when the background is brighter than the subject or in poor lighting conditions. See page 41 for instructions explaining how to set the various flash modes.

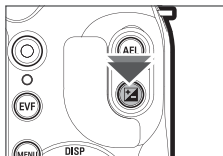


Precautions when using the built-in flash

- Do not attempt to open the built-in flash forcibly, as it may damage the camera.
- Ensure that the flash is always closed when it is not in use. If you push the flash backwards, you can damage it.

Exposure compensation button

Your camera adjusts the exposure automatically so that it is appropriate for the shooting conditions. You can deliberately change the exposure by using the exposure compensation button to shoot with excessive exposure (bright images) or insufficient exposure (dark images). The exposure compensation button lets you set exposure compensation from -2 to +2 (EV), at intervals of 1/3 EV.



■ How to set exposure compensation

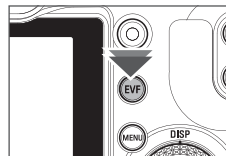
1. Press the exposure compensation button in the shooting mode.
 2. Set a desired exposure compensation value by using the LEFT/RIGHT buttons or the Smart Dial.
 3. Press the OK button to save a configured value.
The exposure compensation icon (a square with a diagonal line) appears on the LCD screen after you set exposure compensation as long as the exposure compensation value is not 0.0EV.
- ※ Note that the LCD screen will look blurry or will not display good images if you set a [+] exposure compensation. If you set a [-] exposure compensation, the image on the LCD screen becomes dim.



- Exposure compensation setting is available in the [Program], [Aperture. Shutter Priority] and [Movie] modes.

EVF/LCD button

You can shoot with the electronic view finder when it is difficult to see the LCD display due to bright ambient lighting. Switch between EVF and LCD by pressing the EVF/LCD button.



[LCD screen]

[Press the
EVF/LCD button.]



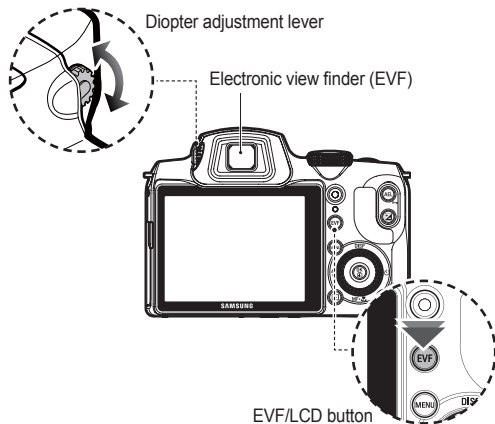
[Electronic view finder]

EVF/LCD button

■ Using the electronic view finder (EVF)

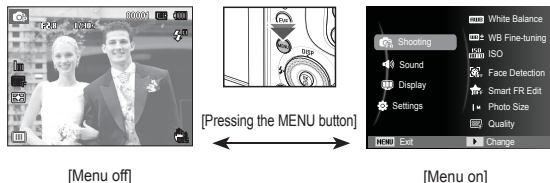
The electronic view finder shows the same display as the LCD screen. Use it when you have difficulty seeing the LCD screen due to bright ambient lighting. Pressing the EVF/LCD button switches the display between the electronic view finder and the LCD screen. The camera retains its EVF/LCD display setting when you turn the camera off or when you select another mode with the Mode Dial.

When the electronic view finder is out of focus, turn the diopter adjustment lever to obtain the clearest image.



MENU button

- When you press the MENU button, a menu displaying each of the camera's primary functional areas appears on the LCD screen. Pressing it again returns the LCD to the initial display.
- The menu screen is available in the [Smart Auto], [Program], [Aperture. Shutter Priority], [Manual], [Night], [Beauty Shot], [Scene] and [Movie] modes, but it is not available if you select the voice recording function.

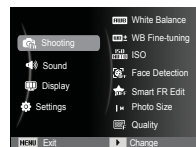
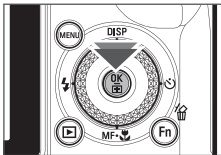


OK/AF point button ()

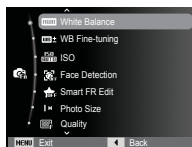
When the menu is displayed on the LCD screen, use this button to shift the cursor to a sub-menu or to confirm data or selections.

This button is used when moving to or saving data changed on the menu screen.

Press the UP/DOWN/LEFT/RIGHT buttons to shift the AF points.



[Pressing the OK button]



Info (DISP) / Up button

While the menu is showing, the Up button operates as a direction button. In the recording modes or playback mode, press this button to display image information.



[Filming screen]



[Histogram/Grid Window]



[Information screen]



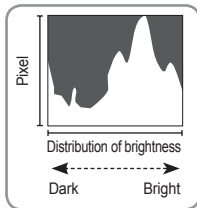
- In the [Face Detection] function, the Histogram is not available.

Info (DISP) / Up button

■ Histogram/Grid Window ()

Histogram

The Histogram shows you the distribution of brightness in recorded images. If the bars in the histogram are higher towards the right, the image may be too bright. If the bars are higher on the left, the image may be too dark. If the lighting conditions are too bright for you to see the subject properly in the LCD, checking the histogram will give you more precise exposure control for the shots.



Grid

If you focus on the subject using a variety of horizontal or vertical grids, you will be able to take better pictures by checking size, horizontality, or proportions. For information on grid types and how to set them, refer to Page 66.

Macro () / Down button

While the menu is showing, the DOWN button operates as a direction button.

When the menu is not showing, you can use the Macro () / Down button to choose a macro mode for macro pictures.

Press the Macro button until the macro mode indicator you want appears on the LCD screen.

The macro mode focus ranges are shown on the next page.



[Auto Focus]



[Macro ()]



[Auto Macro ()]



[Super Macro ()]



[Manual Focus (MF)]

Macro (🌸) / Down button

■ How to Set Focus Manually

If it is difficult to get the automatic focus to work (for example in low light), you can control the focus manually.

1. Press the Macro button to enable manual focus.
 - The control bar for manual focus appears.
2. Press the Left/Right button to control the focus.



Control Bar for Manual Focus

※ Set the manual focus to expand the center of the window to the entire window. Press the shutter button halfway down to return to the initial state.



- Note that the picture may be blurred if you do not perform manual focusing properly.

■ Types of focus modes and focus ranges

(Unit: cm (inches))

Mode	Program(📷)/Aperture. Shutter Priority(📷)/Manual(📷)				
Focus Type	Normal	Auto Macro	Macro	Super Macro	Manual Focus
Focus range	Wide 80 ~ Infinity (xx ~ Infinity)	Wide 10 ~ Infinity (xx ~ Infinity)	Wide 10 ~ 80 (xx ~ xx)	1 ~ 10 (xx ~ xx)	10 ~ Infinity (xx ~ Infinity)
	Tele 170 ~ Infinity (xx ~ Infinity)	Tele 170 ~ Infinity (xx ~ Infinity)	Tele 80 ~ 150 (xx ~ xx)		



- When you select the macro mode, be particularly careful to avoid camera shake.
- When using the Super Macro function, you cannot operate the zoom or adjust the zoom magnification rate.
- The zoom is limited in Macro shooting.

Macro (🌸) / Down button

- Focusing methods you can select, by recording mode
(○ : Selectable, ∞ : Infinity focus range)

Mode	Normal	Auto Macro	Macro	Super Macro	Manual Focus
	○		○	○	○
	○		○	○	○
	○		○	○	○
	○				
		○			
	○		○	○	
	○		○	○	○
	○		○	○	○



- The camera automatically selects the focus range in [Smart Auto] mode.

Mode	SCENE				
	Normal	Auto Macro	Macro	Super Macro	Manual Focus
		○			
	○				
	○				
	○				
			○		
		○			
	○				
	○				
	○				
	∞				
	○				

Flash () / Left button

When the menu is displayed on the LCD screen, pressing the Left button shifts the cursor to the left tab.

When the menu is not displayed on the LCD screen, the flash () / Left button operates as the flash () button.

■ Selecting the flash mode

1. Press the Flash pop-up button to pop up the flash.
 2. Select the desired Recording mode. You can select any mode but the [Movie] mode. (p.22)
 3. Press the Flash button until the flash mode indicator icon you want appears on the LCD screen (Fill-in, Red-eye Reduction, etc.).
 4. A flash mode indicator appears on the LCD screen.
Use the correct flash mode to suit the environment and conditions.
- ※ You can control the flash intensity in the [Shooting] menu. (p.57)

■ Flash range

(Unit: m (inches))

	Shooting range		ISO
	Wide	Tele	
Normal	0.3 ~ 6.0 (xx ~ xx)	1.7 ~ 3.0 (xx ~ xx)	AUTO
Auto macro	0.3 ~ 6.0 (xx ~ xx)	1.7 ~ 3.0 (xx ~ xx)	
Macro	0.3 ~ 0.8 (xx ~ xx)	0.8 ~ 1.5 (xx ~ xx)	
Super Macro	—		
Manual Focus	0.3 ~ 6.0 (xx ~ xx)	1.7 ~ 3.0 (xx ~ xx)	



- If you press the shutter button after selecting the flash, the flash fires once to check the shooting conditions (flash range and the power ratio of the flash). Do not move the camera until the flash fires a second time.
- Using the flash frequently will reduce the life of the battery.
- Under normal operating conditions, the flash usually re-charges within 5 seconds. If the battery is weak, the charging time will be longer.
- The camera flash does not operate in the [Movie] and some Scene modes.
- Take photographs within the flash range.
- The image quality can be degraded if the subject is too close or highly reflective.
- When taking an image in poorly lit conditions with the flash, there may be a white speck in the captured image. The speck is caused by light from the flash reflecting off atmospheric dust.
- If the flash doesn't pop up, you can not use the flash.

Flash () / Left button

■ Flash mode indicator

Icon	Flash mode	Description
	Auto flash	If the subject or background is dark, the camera flash operates automatically.
	Red-eye	If a subject or background is dark, the camera flash works automatically and reduces the red-eye effect by using the red-eye reduction function.
	Fill in flash	The flash fires regardless of the available light. The camera controls the intensity of the flash automatically to suit the prevailing conditions.
	Slow synchro	The flash operates with a slow shutter speed to obtain a balanced, correct exposure. In poor lighting conditions the camera shake warning indicator () appears on the LCD screen.
	Red-eye reduction	When the camera detects a shot with "red eye", this mode automatically reduces the red-eye effect.
	Flash off	The flash does not fire. Select this mode when capturing images in a place or situation where flash photography is prohibited. When you capture an image in poorly lit conditions, the camera shake warning indicator () appears on the LCD screen.

■ Flash modes you can select, by recording mode

(o : Selectable)

Mode						
	o	o	o	o	o	o
			o	o		o
			o			o
				o	o	o
		o			o	o
						o



- Smart Auto Flash () icon appears in [Smart Auto] mode.

Flash () / Left button

Mode	SCENE					
						
	0				0	0
		0			0	0
		0				0
						0
						0
						0
						0
						0
			0			
						0
	0					

Self-timer () / Right button

When the menu is displayed on the LCD screen, pressing the Right button shifts the cursor to the right tab.

When the menu is not displayed on the LCD screen, the Right button operates as the Self-timer () button. Use the Self-timer when you would also like to be in the picture.



- If you press the Self-timer button during the self-timer operation, the self-timer function is cancelled.
- Use a tripod to prevent the camera from shaking.
- In [Smart Auto], [Frame Guide], [Movie] mode, only the 10SEC self-timer works.

Self-timer () / Right button

■ Selecting the self-timer

1. Select a Recording mode. You can select mode except Voice recording. (p.22)
2. Press the Self-timer / Right () button until the desired mode indicator icon appears on the LCD screen.
A 10 second, 2 second or Double Self-timer icon appears on the LCD screen.
3. When you press the shutter button, the camera takes a picture after the specified time has elapsed.



[Selecting the 10 SEC self-timer]

■ Self-timer mode indicator

Icon	Mode	Description
	10SEC self-timer	The camera takes a picture 10 seconds after you press the shutter button.
	2SEC self-timer	The camera takes a picture 2 seconds after you press the shutter button.
	Double self-timer	The camera takes a picture 10 seconds after you press the shutter button and, 2 seconds later, takes a second picture. When you use the flash, the 2-second self-timer may be delayed for longer than 2 seconds depending on the flash charging time.

Shooting ()

To access a functional sub-menu, use the mode menu that contains the sub-menu, or press the FN key. A list of Shooting sub-menus is below:

Mode	Sub-Menu	Available When Camera Set To	Page
	White Balance		p.46
	WB Fine-tuning		p.48
	ISO		p.48
	Face Detection		p.49-51
	Smart FR Edit		p.52
	Face Tone		p.53
	Face Retouch		
	Photo Size / Movie Size		p.53
	Quality / Frame Rate		p.54
	Smart Range		p.54
	Metering		p.55
	Drive		p.55
	AEB Area		p.56
	Focus Area		p.56
	Flash EVC		p.57
	Photo Style Selector		p.57
	Smart Filter		p.58
	Image Adjust		p.59



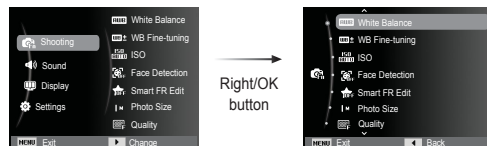
(Shooting)

Shooting ()

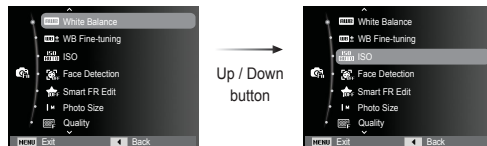
Mode	Sub-Menu	Available When Camera Set To	Page
 (Shooting)	Image Stabiliser		p.60
	Key mapping		p.61
	Voice		p.61-63
	User Mode Set		p.63
	Distortion Control		p.64
	Stabilizer		p.64
	Smart Scene Detection		p.64

How to Enable Functions Using the MENU Button

1. Press the MENU button in an available mode.
2. Press the Up / Down button to select the [Shooting] menu, and then press the Right/OK button.

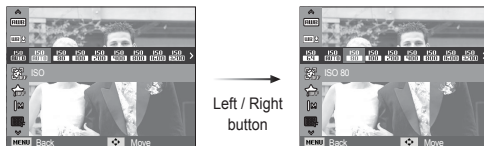


3. Select a desired menu by pressing the Up / Down button, and then press the OK button.



Shooting ()

4. Select a desired menu by pressing the Left / Right button, and then press the OK button.

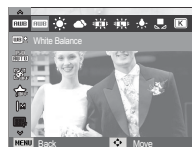


-  Use the Fn button on the rear of the camera to bring up the menus that contain frequently used functions faster.

White balance

Different lighting conditions can cause an unnatural color cast in your images.

The white balance function lets you adjust the white balance in response to the lighting conditions and colors of a scene so that the whites in a photograph appear white and other colors appear natural.



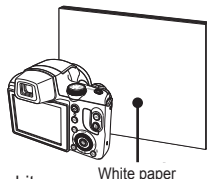
Mode	Icon	Description
Auto WB		The camera automatically selects the appropriate white balance settings, depending on the prevailing lighting conditions.
Daylight		For capturing images outside.
Cloudy		For capturing images under a cloudy and overcast sky.
Fluorescent_H		For shooting under daylight fluorescent lights or three-way fluorescent lights.
Fluorescent_L		For shooting under white fluorescent lighting.
Tungsten		For shooting under tungsten (standard light bulb) lighting.
Custom Set		Allows the user to set the white balance according to the shooting condition.
Color Temperature		Allows the user to set the desired color temperature according to the shooting conditions.

Shooting ()

■ Using the Custom White Balance

White balance settings may vary slightly depending on the shooting environment. You can select the most appropriate white balance setting for a given shooting environment by setting up a custom white balance.

1. Select Custom () in the White Balance Menu, and then place a sheet of white paper in front of the camera so that the LCD screen shows only white.



2. OK button : Selects the previous custom white balance.

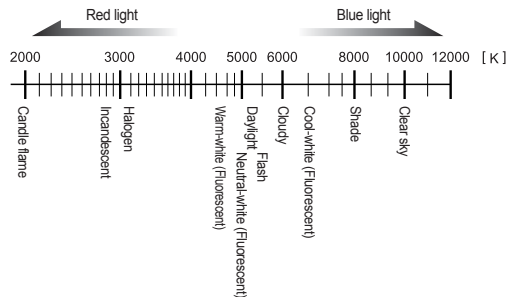
Shutter button : Saves the new custom white balance.

- The camera applies the custom white balance value, starting with the next picture you take.
- The camera retains the user configured white balance until you overwrite it with a new custom white balance.



What is color temperature?

The Color Temperature scale is a conventional measure of color expressed in degrees Kelvin (K). The scale runs from reds and yellows at the low end (below about 2700 K) to blues at the high (above about 5000 K). Every light source, for example, an incandescent bulb, radiates light that is mainly one color (see the scale above). This one color can distort the natural colors of a scene, giving everything in the scene a distinctive color cast. Your camera lets you change the color temperature setting of the white balance to adjust for the light source so that when you take pictures, the colors in the picture look natural.



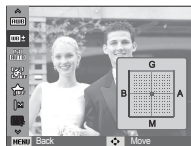
The Color Temperature scale correlates the temperature of what is called an ideal black body radiator to the color it radiates at that temperature. For example, a black body radiator glows red when heated to about 2000 degrees Kelvin and glows blue when heated to about 10,000 degrees Kelvin. The color of light from another source, for example, a fluorescent light, can be correlated to the color radiated by the black body at a certain temperature, and then expressed in degrees Kelvin.

Shooting ()

Fine-tuning the white balance

Press the UP/DOWN/LEFT/RIGHT buttons to adjust the white balance. Seven levels (196 patterns) are available on the G-M and B-A axis.

- G: Green
- A: Amber
- M: Magenta
- B: Blue



ISO

You can select the ISO sensitivity of the camera. The speed or specific light-sensitivity of a camera is rated in ISO numbers.



[Auto] : The camera changes its sensitivity automatically in response to such variables as light intensity and subject brightness.

[ISO 80, 100, 200, 400, 800, 1600, 3200, 6400] :

Generally, with the same amount of available light, you can take pictures at a faster shutter speed if you increase the ISO value.

However, at high ISOs, the image may be saturated in high luminance. The higher the ISO value, the higher the camera's sensitivity to light and therefore the greater its capacity to take pictures in dark conditions. However, the noise level in the image will increase as the ISO value increases, making the image appear coarse.

※ When [Motion Capture] is set, the camera sets ISO to Auto.

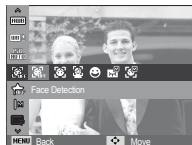
※ ISO setting is available in the [Program], [Aperture. Shutter Priority] and [Manual] modes.

※ When you set the ISO speed to 6400, you can select only 3M or lower resolution.

Shooting ()

Face Detection

If you use face detection options, your camera can detect a human face. When focusing on a human face, the brightness of the face is also adjusted. You can also capture natural facial expressions by using self portrait.



※ Selectable modes: Program, Aperture, Shutter Priority, Manual, Beauty Shot, Portrait, Children, Beach & Snow

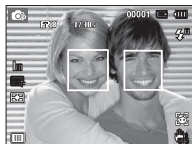
■ Normal

This mode detects the face of the subject automatically and then sets the focus and exposure. Select this mode for quick and easy pictures of faces.

1. The size and position of the auto focus frame is set around the face of the subject automatically.



2. Press the shutter button halfway.
The focus frame turns to green when the focus is activated.
3. Press the shutter button fully to take a picture.



- This function can detect up to 10 people.
- When the camera recognizes many people at the same time, it will focus on the nearest person.
- You can not activate Digital zoom when [Face Detection] is on.
- When the camera detects a target face, the white color focus frame is displayed over the target face and the grey color focus frame appears over the remaining faces.
Press the shutter button halfway down to focus on the face and the white focus frame turns green.
- Return to previous AF mode if face detection was failure.
- Under the following conditions, this function cannot work properly.
 - When a person wears dark glasses or some part of the face is hidden.
 - When the person being taken does not look at the camera.
 - If the face is too dark or too brightly lit.
 - If the distance between the camera and object is too far.
- The maximum available Face Detection range is 2 m or about **XX** feet (Wide).
- The nearer the subject, the faster the camera can recognize the subject's face.
- In [Beauty Shot], [Portrait], and [Children] mode, the camera sets [Face Detection] to its default value.

Shooting ()

■ Self Portrait

When taking pictures of yourself, the area of your face is automatically detected so that you can take self pictures more easily and quickly.

1. For self-filming, set the camera lens towards the face of the object.
It automatically detects the face of the object, and emits a guiding sound. See note below.



2. Start filming by pressing the shutter button.



- When locating a face in the center of the screen, the camera repeatedly emits a faster sound that differs from the sound that is emitted when the face is not in the center.

■ Smile Shot

The camera automatically takes a picture when it detects the face of the subject without your pressing the Shutter button. If you press the Shutter button, the picture is taken in the normal way. When you take a smile shot, having the subject smile or show teeth helps the camera to detect the subject correctly.



■ Blink Detection

If the eyes of the subject are closed when the shutter button is pressed, the camera takes 2 continuous shots and then the saves the images. The camera takes only one picture if the eyes of the subject are open when the Shutter button is pressed.



- The camera may not be able to detect a smiling face or blinking eyes if any of the following situations occur:
 - The subject is wearing sunglasses.
 - The subject is not facing directly to the camera.
 - The ambient light is too bright or too dark for the camera to detect the face of the subject.
 - When the camera is far the subject. (Orange colored focusing mark)
 - Reflections from the ambient light or the back light are too bright.

Shooting ()

■ Smart Face Recognition

The camera automatically registers faces that you frequently photograph. This feature automatically prioritizes the focus on those faces and on favorite. This feature is available only when you use a memory card.



The nearest face appears in a white focus frame and the rest of the faces appear in gray focus frames.

-  : Indicate favorite faces (To register favorite faces, see page 52).
-  : Indicate faces that the camera automatically registers.



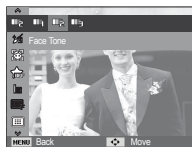
- The camera can recognize the same person as a different person depending on glasses, brightness, extreme change of pose, or facial expressions.
- If you register a new face when 12 faces are already registered, the face with the lowest priority is replaced with the newly added face.
- The camera can register a maximum of 10 people in a scene.
- Picture categorizing is available in the playback mode according to the priority of faces (p. 93).
- Even though the camera recognizes a face, it may not categorize the face in Smart Album according to priority.

Shooting ()

Face Tone

This menu lets you control the skin tone of images shot in beauty shot mode. The higher the level you select, the brighter the skin tone.

1. Select [Face Tone] by pressing the Up/Down button.
2. Select a desired face tone by pressing the Left / Right button, and then press the OK button.
3. Press the Shutter button to capture an image.



Face Retouch

This menu lets you make skin appear clear and beautiful before recording in beauty shot mode. The higher the level you select, the more effective the control.

1. Select [Face Retouch] by pressing the Up/Down button.
2. Select a desired face retouch level by pressing the Left / Right button, and then press the OK button.
3. Press the Shutter button to capture an image.

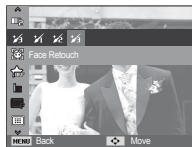


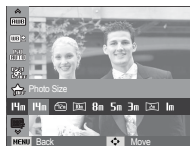
Photo Size / Movie Size

You can select the photo size / movie size appropriate for your application.

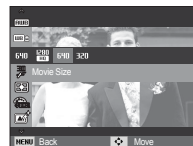
(Unit: pixel)

Still image mode							
Icon							
Size	4288x3216	4288x2848	4288x2416	3264x2448	2592x1944	2048x1536	1920x1080

Movie clip mode			
Icon			
Size	1280x720HQ	640x480	320x240



[Still image mode]



[Movie clip mode]



- The higher the resolution, the lower the number of shots available because high resolution images require more memory.

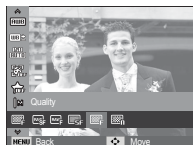
Shooting ()

Quality / Frame rate

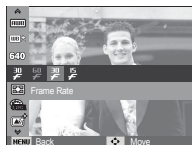
You can select the compression ratio appropriate for your use of the captured images. The higher the compression ratio, the lower the picture quality.

Mode	Still image mode				
Icon					
Sub menu	RAW + S.Fine	RAW + Fine	Super Fine	Fine	Normal
File Format	DNG+JPEG	DNG+JPEG	JPEG	JPEG	JPEG

Mode	Movie clip mode		
Icon			
Sub menu	60 FPS	30 FPS	15 FPS
File Format	H.264	H.264	H.264



[Still image mode]



[Movie clip mode]

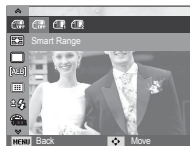


- This file format complies with the DCF (Design rule for Camera File system).
- JPEG (Joint Photographic Experts Group) :
JPEG is the image compression standard developed by the Joint Photographic Experts Group. This type of compression is most commonly used for compressing photos and graphics because it can compress the files efficiently.

Smart Range

Use the Smart Range function to get detailed expressions of dark and bright areas. Apply Smart Range before you shoot.

Note that the level of brightness adjustment for [Smart Range 2] is set higher than [Smart Range 1].



- If Smart Range is set too high, noise may appear in your pictures.

Shooting ()

Metering

If exposure conditions are not ideal, changing the metering method can result in brighter pictures.

[Multi] () : Exposure is calculated based on an average of the available light in the image area. However, the calculation will be biased towards the center of the image area. This is suitable for general use.



[Spot] () : Only the rectangular area in the center of the LCD screen is metered for light. This is suitable when the subject in the center is exposed correctly, regardless of the background lighting.

[Center-weighted] () : Exposure is calculated based on an average of the available light in the image area. However, the calculation is biased towards the center of the image area. This is suitable for taking a picture of small object such as flowers or insects.

※ If the subject is not in the center of the focus area, do not use spot metering as this may result in an exposure error. Use exposure compensation instead. See page 35.

Drive mode

You can select continuous shot and AEB (Auto Exposure Bracketing).

[Single] () : Takes one picture only.

[Continuous] () : Takes pictures continuously until you release the shutter button.

[High-speed] () : Takes about 5.5 shots per second when you press and hold the shutter button. The shooting speed may get slower depending on the shooting environment or the number of shots. (Up to 3M Size)

[Motion Capture] () : Takes 10 shots per second when you press and hold the shutter button. After you've completed continuous shooting, the camera saves the images and plays them back on the Rear LCD. The maximum number of shots is 30 and the image size is fixed as 1024X768.

[AEB] () : Takes three consecutive photos using different exposure values. Use this mode if it is hard to decide what exposure to use for a shot.



Shooting ()

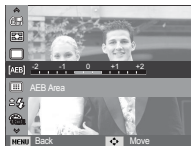


- High resolution and picture quality increases file saving time, which increases stand-by time.
- If you select the [Continuous], [High-speed], [Motion Capture], or [AEB] sub menu, the camera turns the flash off automatically.
- If the memory has space for less than 3 pictures, the AEB shooting is not available.
- It is best to use a tripod for the AEB shooting. The time the camera takes to save each image file is longer and blurring caused by camera shake may occur.

Setting AEB Exposure Ranges (AEB Area)

You can set exposure ranges and intervals for the three AEB mode photos.

- Set a standard for the exposure bracket by pressing the LEFT/RIGHT buttons.
- Set a range for the left and right exposure bracket by using the Smart Dial.



Auto Focus type

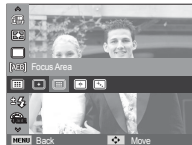
You can select your preferred Focus Area according to the shooting conditions.

[Center AF] () : The camera focuses using the rectangular area in the center of the LCD screen.

[Multi AF] () : The camera focuses by selecting all the available AF points from the 9 AF points.

[Selection AF] () : Focus on a desired position on the LCD screen.

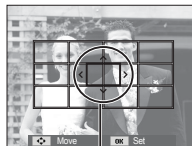
[Tracking AF] () : The focus moves along with the movements of a subject.



※ When the camera focuses on a subject, the auto focus frame turns green. When the camera doesn't focus on the subject, the auto focus frame turns red.

■ How to Enable Selection AF

1. After setting [Selection AF], press the OK button. The screen for setting the location of a focus frame will appear.
2. Press the Up/Down/Left/Right button to move the focus mark to the desired position.
3. Press the shutter button to enable Selection AF. Once setting is complete, the focus mark will be fixed at the position you set.



Focus Mark

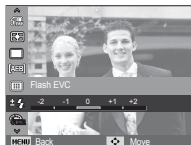
Shooting ()

4. Press the OK button once again to change the location of the focus frame and the focus frame will appear again.
- ※ Even if you turn off the power and turn on it again, the camera maintains the [Selection AF] setting.
 - ※ [Selection AF] is not available when you use the [Face Detection] function.

Flash Intensity

You can control flash intensity. (You can set flash intensity within the range of +/- 2EV in intervals of 1EV.)

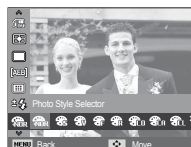
[-2], [-1], [0], [+1], [+2]



- The [Flash EVC] function is not available in the [Smart Auto], [Beauty Shot], [Scene] and [Movie], [Night] modes.
- If the subject is too close or the ISO sensitivity is too high, changing the value to a negative value (-) may not have any effect.
- If the flash intensity is out of the control range because the exposure value is too high or low, the camera may not operate properly.

Photo Style Selector

You can add various effects to an image without using image editing software.



1. Select the desired Photo style by pressing the Left/Right button and press the OK button.
2. Press the Shutter button to take an image.

Style mode	Icon	Description
Normal		No style effect is applied.
Soft		Soft style is applied.
Vivid		Vivid style is applied.
Forest		Forest style is applied.
Retro		Sepia style is applied.
Cool		Cool style is applied.
Calm		Calm style is applied.
Classic		Black & white effect is applied.
Negative		Negative effect is applied.
Custom RGB		Define an RGB tone to create your own photo style.

Shooting ()

- Custom color : You can change the R (Red), G (Green) and B (Blue) values of the image.



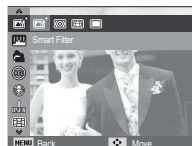
- Up/Down button : Selects R, G, B
- Left/Right button : Changes the values



- When you select any Photo Style, Face Detection is not available.
- When you select the Soft or Vivid Photo Style, saturation is not available.
- When you select the Negative Photo Style, contrast is not available.

Smart Filter

Apply various filter effects to your photos to create unique images.



1. Select the desired Smart Filter by pressing the Left/Right button, and then pressing the OK button.
2. Press the Shutter button to capture an image.

Smart Filter	Icon	Description
Normal		No effect
Vignetting		Apply retro-looking colors, high contrast, and strong vignette effect.
Fish-eye		Distort close objects to imitate the visual effect of a fisheye lens.
Defog		Distinct style is applied.



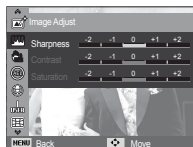
- When you apply a Smart Filter effect while recording a video, the video is automatically resized to (640x320) or smaller.
(Frame rate : 15 Fps)
- If you use this function, the Photo Style and Image Adjustment functions are not available.

Shooting ()

Image Adjust

■ Sharpness

You can adjust the sharpness of the picture you are about to take. You cannot check the sharpness effect on the LCD screen before you take a picture, because this function is applied only when the captured image is stored in the memory.



1. Select [Sharpness] by pressing the Up/Down button.
2. Change the Sharpness by pressing the Left/Right button.
3. Press the Shutter button to capture an image.

■ Contrast

You can change the contrast of the image.

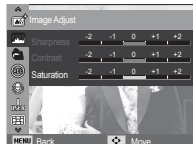
1. Select [Contrast] by pressing the Up/Down button.
2. Change the contrast by pressing the Left/Right button.
3. Press the Shutter button to capture an image.



■ Saturation

You can change the color saturation of the image.

1. Select [Saturation] by pressing the Up/Down button.
2. Change the saturation by pressing the Left/Right button.
3. Press the Shutter button to capture an image.

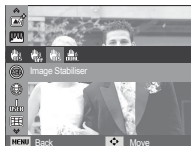


- When Image Adjust is set, Photo Style Selector function is not available.
- When Image Adjust is set, Face Detection mode is not available.

Shooting ()

Image Stabilization

This feature minimizes camera shake when you take a picture.



[OIS] () : Performs optical image stabilization.

[DUAL IS] () : Performs optical image stabilization and digital image stabilization simultaneously.

■ Things to watch out for when using the DUAL IS mode

- The digital zoom will not operate in the DUAL IS mode.
- If the lighting conditions are brighter than fluorescent lighting conditions, the DUAL IS will not activate.
- If the lighting conditions are darker than fluorescent lighting conditions, camera shake warning indicator () appears. For best results only take pictures in situations where the camera does not display the camera shake warning indicator ().
- If the subject is moving, the captured image may be blurred.
- As the DUAL IS uses the camera's digital signal processor, it may take a little longer for the camera to process and save the images.



- OIS function may not work sufficiently in the following cases:
 - When you are taking pictures of a moving subject.
 - When you are taking pictures at higher zoom magnifications.
 - When camera shake is beyond the camera-shake correction range.
 - When the shutter speed is slow.
 - When the battery is low.
- If you operate the OIS function using a tripod, the vibration of of OIS sensor can blur pictures. Turn off the OIS function when you use a tripod.
- If the camera is struck or dropped, the LCD screen can be affected. To make the camera function properly again, turn it off and on.

Shooting ()

Key mapping

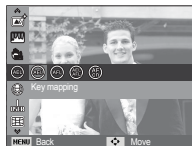
You can map one of four functions to the AEL button.

[AEL]: To pre-set an exposure value before shooting.

[AFL]: To preset the focus before shooting.

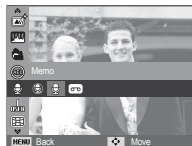
[AEL + AFL]: To pre-set both an exposure value and the focus before shooting.

[AF-On]: To activate metering and autofocus. This is a replacement for pressing the shutter halfway down.



Voice Memo

You can add your voice-over to a stored still image. (Max. 10 sec.)



- Select Voice Memo in the menu.
When the Voice Memo indicator is displayed on the LCD screen, the Voice Memo function is ready.



- Press the shutter button and take a picture. The picture is stored on the memory card.

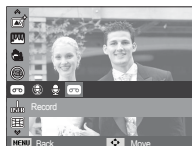
- The Voice Memo function records for ten seconds from the moment the camera stores the picture. You can stop the recording in the middle by pressing the shutter button.



Shooting ()

Voice Recording

With Voice Recording, the camera can record a voice for as long as the available recording time allows (maximum 5 hours at once).



Select Voice Recording in the menu.
Press the shutter button to record a voice.

- Press the shutter button once and the camera records your voice for as long as there is available recording time (maximum 5 hours at once).

The recording time is displayed on the LCD screen. The camera continues to record audio even if you release the shutter button.

- If you want to stop recording, press the shutter button again.

- File type : *.wav



[Voice recording mode]

■ Pausing while recording a voice

Using this function, you can record your favorite voice clips into a voice recording file without having to create multiple voice recording files.



[Voice recording mode]

1. Press the OK button to pause recording.
2. Press the OK button again to resume the recording.
3. If you want to stop recording, press the shutter button again.

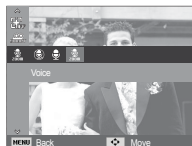


- The optimal recording distance - the distance between you and the camera - is 15.75 inches (40cm).
- If you turn off the camera while a voice recording is paused, the camera cancels the voice recording.

Shooting ()

Setting audio for movie recording

You can set the desired voice recording mode in Movie mode.



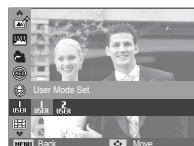
- [Voice] sub menus

- [Off] : Record a video without sound.
() icon appears on the LCD screen.
- [On] : Record a video with sound.
- [Zoom Mute] : Record video without sound while zooming.

Setting user mode

You can set your own shooting mode by saving shooting options which you set in the [Program], [Aperture. Shutter Priority] and [Manual] modes.

Set a desired option and save the setting information.



■ How to set the user mode

1. Select a mode from [Program], [Aperture. Shutter Priority] or [Manual] modes.
2. Select settings.
3. Select [User Mode Set] in the [Shooting] menu.
4. Select [User Mode 1] or [User Mode 2] by pressing the LEFT/RIGHT buttons and press the OK button to save the setting information.



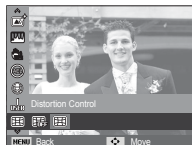
- For instructions explaining how to use a User Mode, see page 25.

Shooting ()

Distortion compensation

Distortion Compensation lets you compensate for the distortion in the center of an image captured using a wide-angle lens.

If you use Distortion Compensation, the size of the photo will be smaller than one taken without Distortion Compensation.

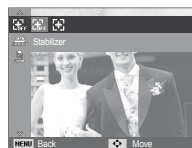


[Off]: Distortion is not compensated for.

[On]: Distortion is compensated for.

Movie clip frame stabiliser

This function helps stabilize images captured during movie recording. You can select this function only in the Movie clip mode.



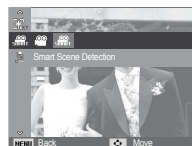
[Off]: Movie clip frame stabilizer function is disabled.

[On]: Minimizes camera shake during movie recording.

※ The recording frame range becomes narrow when you select this menu.

Smart Scene Detection

You can set the camera to use Smart Scene Detection during movie recording.



[Off]() : Disable scene detection function.

[On]() : Enable scene detection function.



- Select [Off] for normal movie recording.
- When you set [Smart Scene Detection], you cannot set the [Photo Style Selector] and [Smart Filter] options.

Sound menu

Using the Sound menu, you can set or adjust sound settings in all camera modes except the Voice Recording mode.

■ The items indicated by * are default settings.

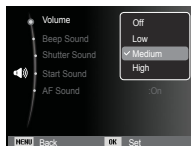
※ Menus are subject to change without prior notice.

Sound ()

Volume

You can select the volume of the start up sound, shutter sound, beep sound, and AF sound. Select Off for no sounds.

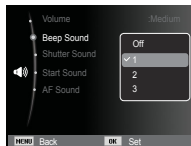
- [Volume] sub menus : [Off], [Low], [Medium]*, [High]



Beep Sound

You can select the beep sound the camera plays when you press the buttons. Select Off to turn the Beep Sound off.

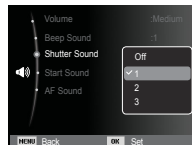
- [Beep Sound] sub menus : [Off], [1]*, [2], [3]



Shutter sound

You can select the shutter sound.
Select Off to turn the Shutter sound off.

- Shutter sound : [Off], [1]*, [2], [3]

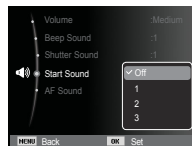


Start up sound

You can select the sound the camera plays whenever you turn it on. Select Off to turn the Start Up Sound off.

- Start up sound : [Off]*, [1], [2], [3]

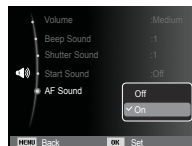
- If the start up image is set to [Off], the Start Up sound will not play, even if you have set it to 1, 2, or 3 here.



AF sound

If you set AF sound to On, the camera emits the AF sound when you press the Shutter button down half way. Set to On if you want to be aware of when you've pressed the Shutter button half way down.

- [AF sound] sub menus : [Off], [On]*



Setup menu

In this menu, you can set up and adjust basic settings. You can use the setup menu in all camera modes except Voice Recording mode.

■ The items indicated by * are default settings.

※ Menus are subject to change without prior notice.

Display ()

Setting the Grid Line

You can set the type of grid displayed on the histogram/grid window. (p.37)

– [Grid Line] sub-menus:

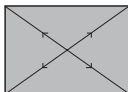
[+]:



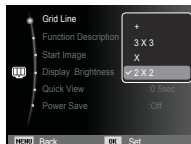
[3 X 3]:



[X]:



[2 X 2]*:



Display ()

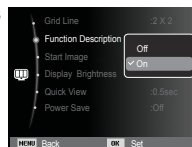
Function Description

You can select whether function descriptions appear on the LCD screen in Recording mode.

- Function Description sub-menus

[Off] : The function description does not appear.

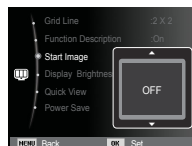
[On]* : The name and description of the function appears.



Start up image

You can select the image that appears on the LCD screen first whenever the you turn on the camera.

- Sub menus : [Off]*, [Logo], [User Image]
- To use a saved image as the start-up image, run [Start Image] in the [Resize] menu while in Play mode. (Page 84)
- The start-up image will not be deleted by [Delete] or [Format] functions.
- The User images will be deleted by [Reset] function.

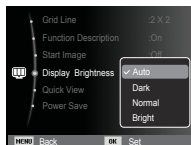


Display ()

Display Bright

You can adjust the LCD brightness.

- Sub menus : [Auto]*, [Dark], [Normal], [Bright]



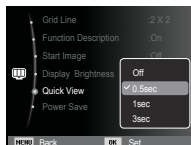
Quick view

If you enable Quick View before capturing an image, you can view the image you just captured on the LCD screen for the duration set in the [Quick View] setup. You can use Quick view only with still images.

- Sub menus

[Off] : The quick view function is off.
[0.5 sec]*, [1 sec], [3 sec]

* : The captured image is briefly displayed for the selected time.



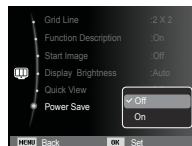
Display Save

If you set the [Power Save] to On and the camera isn't operated during the specified time, the LCD screen will be turned off automatically.

- Sub menus

[Off]* : The LCD screen will not be turned off.

[On] : If you don't operate the camera within the specified time (about 30 SEC.), the LCD screen turns off automatically. (Camera status lamp: Blinking)



※ You can't set the [Power Save] in Playback Mode.

Settings (⚙)

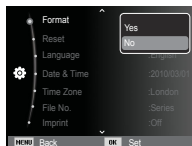
Formatting memory

Use to format the internal memory or a memory card. If you run [Format] on the memory, all images, including the protected images, are deleted. Be sure to download important images to your PC before formatting the memory.

- Sub menus

[Yes] : A window for confirming the selection displays. Select [Yes]. A [Formatting] message appears and the memory will be formatted. If you run FORMAT in Play mode, a [Format is completed] message will appear.

[No]* : The memory is not formatted.



■ Be sure to run [Format] on the following types of memory card.

- A new memory card, or an unformatted memory card.
- A memory card that has a file this camera can't recognize or one that has been taken from another camera.
- Always format the memory card using this camera. If you insert a memory card that has been formatted using other cameras, memory card readers, or PCs, you will get a [Card Error] message.
- If you have installed a memory card, [Format] formats the card. If you have no card installed, [Format] formats the camera's internal memory.

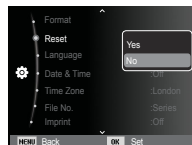
Initialization

All camera menu and function settings are restored to their default values. However, values for Date & Time, Language, and Video Out are not changed.

- Sub menus

[Yes] : A window to confirm the selection is displayed. Select [Yes] and all settings are restored to their defaults.

[No]* : Settings are not restored to their defaults.



Language

You can choose the language displayed on the LCD screen. The language setting is preserved even if the battery is removed and re-inserted.

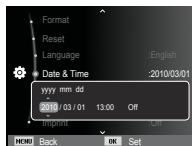


Settings (⚙)

Setting up the Date / Time / Date type

You can change the date and time that the camera displays on captured images and set up the date type. Setting [Time Zone] enables you to display the local date and time on the LCD screen when travelling overseas.

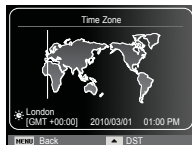
- Date type : [yyyy/mm/dd], [mm/dd/yyyy], [dd/mm/yyyy], [Off]*



Time Zone

■ Available cities/Time Zones:

London, Cape Verde, Mid-Atlantic, Buenos Aires, Sao Paulo, Newfoundland, Caracas, La Paz, New York, Miami, Chicago, Dallas, Denver, Phoenix, LA, San Francisco, Alaska, Honolulu, Hawaii, Samoa, Midway, Wellington, Auckland, Okhotsk, Guam, Sydney, Darwin, Adelaide, Seoul, Tokyo, Beijing, Hong Kong, Bangkok, Jakarta, Yangoon, Almaty, Kathmandu, Mumbai, New Delhi, Tashkent, Kabul, Abu Dhabi, Teheran, Moscow, Athens, Helsinki, Rome, Paris, Berlin



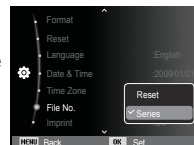
※ DST : Daylight Saving Time

File name

This function lets you select the file naming format.

[Reset] : After using the reset function, the next file name is started at 0001 even if you've formatted the memory, deleted all pictures, or inserted a new memory card.

[Series]* : New files are named using numbers that follow the previous sequence, even if you've installed a new memory card is used, formatted, or deleted all pictures.



- The first stored folder name is 100PHOTO, and the first file name is SAM_0001.
- File names are assigned sequentially from SAM_0001 → SAM_0002 → ... → SAM_9999.
- The folder number is assigned sequentially from 100 to 999 as follows: 100PHOTO → 101PHOTO → ... → 999PHOTO.
- The maximum numbers of files in a folder is 9999.
- The files used with the memory card conform to the DCF (Design rule for Camera File systems) format. If you change the image file name, the image may not play back.

Settings ()

Imprinting the recording date

You can include DATE / TIME on still images.

- Sub menus

[Off]* : The Date & Time is not imprinted on the image file.

[Date] : Only the Date is imprinted on the image file.

[Date & Time] : The Date & Time is imprinted on the image file.



- ※ The Date & Time are imprinted at the bottom right side of the still image.
- ※ The imprint function is applied only to still images.
- ※ Depending on the manufacturer and print mode, the date printed on an image may not be printed correctly.

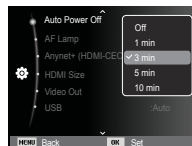
Auto power off

This function switches the camera off after a set amount of time to prevent unnecessary battery drainage.

- Sub menus

[Off] : The power off function does not operate.

[1 min], [3 min]*, [5 min], [10 min] :
The power turns off automatically if the camera is not used for the period of time specified.



- After replacing the battery, the power off setting will be preserved.
- Note that the automatic power off function will not operate if the camera is running a slide show, playing back a voice recording, playing back a movie clip, or in the PC / Printer mode.

Settings ()

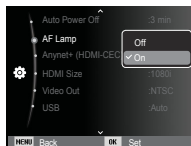
Auto Focus lamp

You can turn the Auto Focus lamp on and off.

- Sub menus

[Off] : The AF lamp does not light up in low light conditions.

[On]* : The AF lamp lights up in low light conditions.



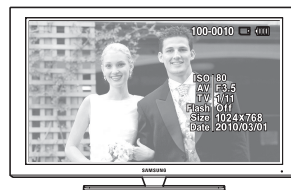
Anynet+ (HDMI-CEC)

Anynet+ (HDMI-CEC) is an AV network system that lets you control Anynet+ compatible Samsung AV devices connected to an Anynet+ Samsung compatible TV with the TV's remote control. When your camcorder is connected to a Samsung Anynet+ compatible HDTV, you can operate the playback functions using the TV's remote control.

■ How to use Anynet+ (HDMI-CEC)

1. Connect your camcorder to your Samsung Anynet+ compatible HDTV using an optional HDMI cable. (p.72)
2. TV turns on as soon as you press the power button is pressed on the camera.
3. If there is no picture after the TV turns on, press the source button on the TV remote control to change to the HDMI mode.
 - Depending on the TV, it might not change to the HDMI mode even though you press the source button.

4. When you select the camera menu of Anynet+ using the TV remote, a play menu screen appears on the TV.
 - The Playback menu appearing on TV screen operates the same way as the Playback menu on the camera.



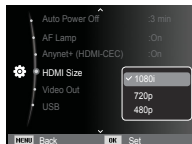
5. Select the playback function you want using the remote control of the TV.
 - To select the sub menus, move to the desired playback menu and then press the Enter button.
- Only available when using a TV that supports Anynet+ (HDMI-CEC). (Not available when using a TV that supports only Anynet.)
 - For more detailed information of the HDTV connection and Anynet+, see the user manual of your Samsung HDTV.



Settings ()

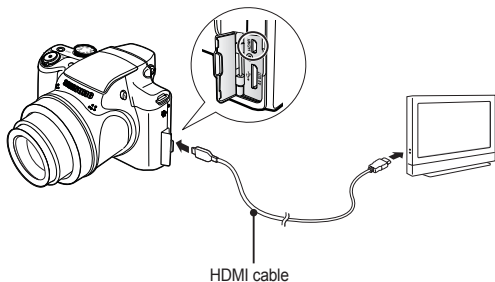
HDMI Size

When the camera is connected to an HDTV, you can select an image size that is compatible with the HDTV. The image sizes available are [1080i], [720p], [576p], and [480p]. Only when [480p] is set to [NTSC] and [576p] is set to [PAL], those resolutions will be displayed in the menu.



■ How to connect the camera to an HDTV

Connect your camera to your HDTV using an optional HDMI cable.



- HDMI (High Definition Multimedia Interface) is a data transfer protocol that transfers uncompressed recorded images through an HDMI cable. You can see the images in a high resolution in an HDTV.
- When Anynet+ (HDMI-CEC) is used and HDMI resolution is set to [480p] (NTSC) or [576p] (PAL), it is only available to play back the image, movie clip, voice.
- If your HDTV does not support the HDMI resolution you selected, it cannot show a clear image on the screen.
- If you try to select a resolution that your HDTV does not support, the camcorder adjusts the resolution to the maximum resolution the HDTV does support. For example, if you select "1080i" when the HDTV only supports up to "720p", the camcorder adjusts to "720p."
- You can play back the movie clip at its actual resolution as well.
- You can not use HDMI on your HDTV that does not support it. Please check the specification of HDTV before connecting it.
- For more information about the HDTV connection, see the user manual of your HDTV.

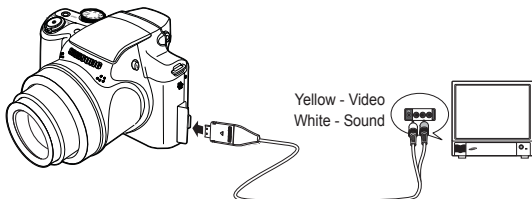
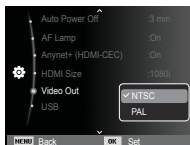
Settings (⚙)

Selecting Video out type

The Video output signal from the camera can be NTSC or PAL. Your choice of output is governed by the type of device (monitor or TV, etc.) to which the camera is connected. PAL mode can support only BDGHI.

■ Connecting to an external screen

When you connect the camera to an external monitor, the images and menus on the camera's LCD screen will be visible on the external screen.



- NTSC : U.S.A, Canada, Japan, South Korea, Taiwan, Mexico etc. .
- PAL : Australia, Austria, Belgium, China, Denmark, Finland, Germany, U.K., Holland, Italy, Kuwait, Malaysia, New Zealand, Singapore, Spain, Sweden, Switzerland, Thailand, Norway etc. .
- When using a TV as an external screen, you need to select the external or AV channel of the TV.
- There may be digital noise on the external screen, but it is not a malfunction.
- If the image is not in the center of the screen, use the TV controls to center it.
- When you connect the camera to an external screen, the screen may not display some parts of some images.
- When you connect the camera to an external screen, the camera's menu is displayed on the external screen. The functions displayed on the screen are the same as those on the camera's LCD screen.

Setting the USB

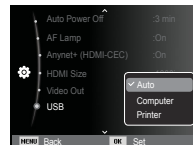
If the camera has failed to connect automatically with a PC or a printer through a USB cable, you can manually set [Computer] or [Printer].

-[USB] sub menus:

[Auto]* : Automatically enables an external device connected with a USB cable.

[Computer] : Sets computer connection mode if the camera does not recognize a connected computer automatically.

[Printer] : Sets the Printer connection mode if the the camera does not recognize a connected printer automatically.



Starting play mode

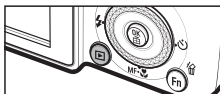
Turn the camera on and select Play mode by pressing the play mode button (). The camera can now play back the images stored in the memory. If a memory card is inserted in the camera, all the camera functions apply only to the memory card. If a memory card is not inserted in the camera, all the camera functions apply only to the internal memory.



- Each kind of file has a distinctive OSD (On Screen Display). For example, a movie clip displays a play bar while a voice file displays a microphone. You can use the differences in the OSD to identify the kind of file you are viewing.

Playing back a still image

1. Select the Play mode by pressing the play mode button ().
 2. The last image stored in the memory is displayed on the LCD screen.
 3. Select an image that you want to view by pressing the Left/ Right button.
- ※ Press and hold the Left or Right button to play back the images quickly.



Playing back a movie clip

1. Select the recorded movie clip that you want to play back by using the Left/Right button.
2. Press the OK button to play back a movie clip file.
 - To pause a movie clip file while playing it back, press the OK button again.
 - Press the OK button again to restart the movie clip.
 - To rewind the movie clip while it is playing, press the Left button.
 - To fast forward the movie clip, press the Right button.
 - To stop playback of the movie clip, press the OK button, and then press the Left or Right button.



- Your camera can not play back video files (H.264 (MPEG4.AVC)) recorded with another camera.

■ How to Control the Volume While Playing Back Movie Clips

While the camera plays a movie clip, turn the Zoom W/T lever to the left to decrease the volume. Turn the Zoom W/T lever to the right to increase volume.



- ※ You can control the volume for voice memos, movie clips, and voice recordings in the same way.

Starting play mode

Movie clip capture function

You can capture still images from a movie clip.

■ Capturing a still image from a movie clip

1. Press the OK button while playing the movie clip. Then, press the Down button.
2. A still from the movie clip is saved under a new file name.

- ※ The captured movie clip file is the same size as the original movie clip (1280x720HQ, 640x480, 320x240).
- ※ When you press the down button at the beginning of the movie clip, the first frame of the movie clip is saved as a still image.



[Paused]

On camera movie trimming

You can extract desired frames of movie clip during the movie clip play back.

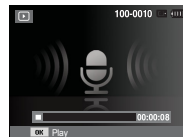
1. Press the OK button at the point of the movie clip that you want to start extracting, and turn the lever to the right.
2. Press the OK button at the point of the movie clip that you want to stop extracting, and turn the lever to the right.
3. A confirmation window will be displayed.
4. Press the Up / Down button to select a desired sub menu.
[Yes]: The extracted frames are saved as a new file name.
[No]: The movie trimming will be cancelled.

- ※ If the running time is under 10 seconds, the movie clip can't be trimmed.



Playing back a recorded voice file

1. Select the recorded voice file that you want to play back by using the Left/Right button.
2. Press the OK button to play back the recorded voice file.
 - To pause a recorded voice file while playing it back, press the OK button again.
 - To resume playback of the voice file, press the OK button.
 - To rewind the voice file while it is playing, press the Left button.
 - To fast forward the voice file, press the Right button.
 - To stop playback of the voice file, press the Down button.



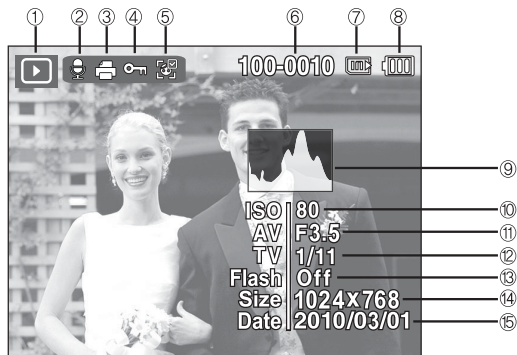
Playing back a voice memo

1. Select a still image that has a voice memo.
2. Press the OK button to play back the voice memo.
 - To pause the voice memo while playing it back, press the OK button again.
 - To resume playback of the voice memo, press the OK button.



LCD screen Indicator

The LCD screen displays shooting information about the displayed image.



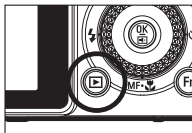
No.	Description	Icon	Page
1	Playback mode		p.74
2	Voice Memo		p.93
3	DPOF		p.94
4	Protect		p.92
5	Smart Face Recognition		p.51
6	Folder name & File name	100-0010	p.69
7	Memory indicator		-
8	Battery		p.16
9	Histogram		p.38
10	ISO	80 ~ 6400	p.48
11	Aperture value	F2.8 ~ F8.0	-
12	Shutter speed	16 ~ 1/2,000	-
13	Flash	On/Off	p.41
14	Image size	4288x3216 ~ 320x240	p.53
15	Recording date	2010/03/01	p.69

Using the camera buttons to set the camera

In Play mode, you can use the buttons on the camera to conveniently set up the Play mode functions.

Play mode button

- If you have turned on the camera by pressing the POWER button, you can press the Play mode button once to switch to Play mode and press it again to switch to Recording mode.
- You can turn the power on with the Play mode button. The camera is turned on in play mode. Press the Play mode button again to turn off the camera.
- Manner mode: To select the Manner mode, press the Play mode button for more than 3 seconds. In the Manner mode, the camera does not generate Operating sound, Effect sound, Start-up sound, and Shutter sound. To cancel the Manner mode, turn on the camera by pressing the POWER button.



Thumbnail ([]) / Digital Zoom ([Q]) Lever

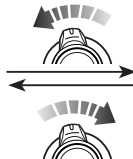
Smart Album

You can view multiple pictures, enlarge a selected picture, or crop and save a selected area of an image.

1. To enter Smart Album mode, push the Thumbnail lever to the left when the camera is displaying a single picture.
2. Press the Left/Right button to move to the image you want.
3. To return to the normal display screen, push the Digital Zoom lever to the right.



[Highlighted image]



[Smart Album Window]

Thumbnail () / Digital Zoom () Lever

■ Searching for or Deleting Files

- Press the Thumbnail button in Smart Album.
- Each time you press the Thumbnail button, you increase the number of thumbnails the camera displays, from 3 to 9 to 20. Pressing the Enlargement button decreases the number of thumbnails the camera displays. See the illustrations below.
- Use the Up/Down/Left/Right buttons to select an image.



To delete an image, follow these steps:

- Follow Steps 1 and 2 above.
- Press the Delete button. The Delete window appears.
- Press the Up/Down button to select Yes, and then press the OK button.



- In Smart Album, it may take a few seconds for images to appear, depending the number of images you've recorded. This is not a malfunction. Please wait until the Smart Album screen appears.

■ Smart Album Filter

- Press the MENU button in Smart Album mode. A list of categories appears on the left of the screen.
- Use the Up/Down button to move up or down the list.
- Press the OK button to select a category.
The camera selects the images that fit the category, then displays them in the Smart Album format.



■ Details of Each Category

Category	Description	File Format
Type	Categorized by file type. (e.g., picture, video, or voice)	Pictures, Videos, Voice
Date	Categorized by date.	
Color	Categorized by the main color in the image.	
Week	Categorized by week.	
Face	Categorized by faces photographed in the Face Detection mode.	



- The [Face] category appears only if there are faces that were photographed in the Face Detection mode.

Thumbnail () / Digital Zoom () Lever

■ Image enlargement

1. Select an image you want to enlarge, and then move the Digital Zoom lever to the right.
2. Move the Digital Zoom lever to the right repeatedly to make the image larger.
3. Press the Up/Down/Left/Right sides of the 5 Function button to view different portions of the enlarged image.
4. Press the Thumbnail button repeatedly to decrease the size of the image.
 - You can tell whether the image displayed is an enlarged view by checking the image enlargement indicator shown at the top left of the LCD screen. If the image is not an enlarged view, the indicator will not be displayed. You can also check the area of enlargement.
 - You can't enlarge Movie clips and WAV files.
 - If you enlarge an image, a loss of quality may occur.

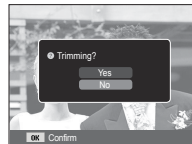


■ The maximum enlargement rate in proportion to the image size

Image size	14m	12m	10m	8m	5m	3m	2m	1m
Maximum enlargement rate	X13.4	X11.2	X11.2	X10.2	X8.1	X6.4	X5.0	X3.2

■ Trimming : You can extract part of the image that you want and save it separately.

1. Select an image that you want to enlarge, and then move the Digital Zoom lever to the right. Then, press the OK button, and the trimming message appears.
2. Select a desired sub menu by pressing the Up / Down button, and then press the OK button.
 - [Yes] : The trimmed image is saved as a new file name, and appear on the LCD screen.
 - [No] : The trimming menu disappears.

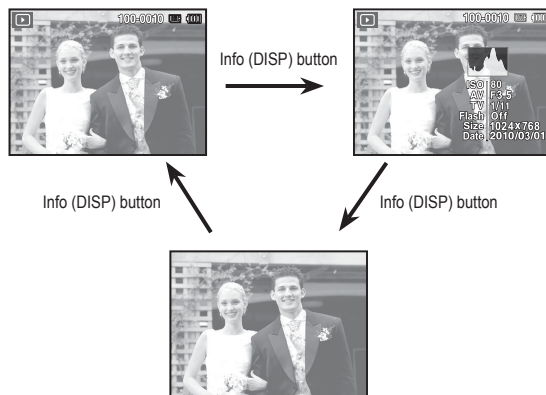


※ If there is not enough memory space to save the trimmed image, the image can't be trimmed.

Info (DISP) / Up button

When the menu is displayed on the LCD screen, the Up (DISP) button operates as a direction button.

When an image is displayed on the LCD screen, pressing the Up (DISP) button repeatedly displays image information on the LCD screen.



Play & Pause / OK button

In Play mode, the Play & Pause / OK button works as follows:

- When the menu is displayed on the LCD screen, you use the OK button to confirm changes to data that you have made using the 5 function button.
- If a still image with a voice memo, a voice file, or a movie clip is playing
 - In Stop mode : Plays a still image with a voice memo, a voice file, or a movie clip.
 - During playback : Temporarily stops playback.
 - In Pause mode : Resumes playback



[Voice recording is stopped]

[Voice recording is playing]

[Voice recording is paused]

Left / Right / Down / MENU button

Left / Right / Down / MENU buttons activate the following.

- Left button : While the menu is showing, the Left button operates as a direction button. When the menu is not showing, press the Left button to select the previous image.
- Right button : While the menu is showing, the Right button operates as a direction button. When the menu is not showing, press the Right button to select the next image.
- Down button : While the menu is showing, the Down button operates as a direction button.
- MENU button : When you press the MENU button, the play mode menu is displayed on the LCD screen. Pressing it again will return the LCD to the initial display.

Delete () button

This deletes images stored in the memory.

■ To delete a single image, follow these steps:

1. Press the Play mode button to view images.
2. Press the Left/Right button to select an image you want to delete.
3. Press the Delete button. The camera displays the Delete File window.
4. Press the Up/Down button to select Yes, and then press the OK button.

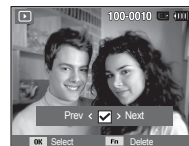


[Single Image]

※ You can also delete images in Thumbnail mode. See page 78.

■ To delete multiple images, follow these steps:

1. Press the Play mode button to view images.
2. Press the Delete button. The camera displays the Delete File window.
3. Use the Up/Down button to select Multiple Delete, and then press the OK button.
4. Use the Left/Right button to move to an image you want to delete.
5. Press the OK button to mark an image for deletion. A check appears on the image.
6. After you've selected all the files you want to delete, press the Delete button. The camera displays a message asking if you want to delete.
7. Use the Up/Down button to select Yes, and then press the OK button.



Setting the playback PictBridge functions using the LCD screen

You can change Playback functions using menus displayed on the LCD screen. To display the Playback menus while in Playback mode, press the Menu button. To close the Playback menus, press the Play mode button or the Shutter button.

The Playback menus are listed in the tables below.

Menu Tab	Main Menu	Sub Menu		Page
Edit ()	Resize	2592x1944	2048x1536	p.84
		1024X768	2592X1728	
		1800X1200	2592X1456	
		1920X1080	Start Image	
	Rotate	Right 90°	Left 90°	p.85
		180°	Horizontal	
		Vertical	-	
	Photo Style Selector	Normal	Soft	p.85
		Vivid	Forest	
		Retro	Cool	
		Calm	Classic	
		Negative	Custom RGB	
	Smart Filter	Off	Miniature	p.86
		Vignetting	Fish-eye	
		Sketch	Defog	
	Image Adjust	Off	ACB	p.87
		Red-eye Fix	Face Retouch	
		Brightness	Contrast	
		Saturation	Add Noise	
View ()	Single, 9, 20			p.89

Menu Tab	Main Menu	Sub Menu		Secondary Menu	Page
Multi Slide Show ()	Start	Play / Repeat		-	p.89
	Images	All	Date	-	p.90
		Select	-	-	
	Interval	1, 3, 5, 10 sec		-	p.90
	Music	Off	Mist	-	p.91
		Drops	Muse	-	
		Trip	Fall	-	
	Effect	Off	Calm	-	p.91
		Shine	Relax	-	
		Lively	Sweet	-	
File Options ()	Delete	Select		-	p.91
		All		Yes / No	
	Protect	Select		-	p.92
		All		Lock / Unlock	
	Face List Edit	Edit Ranking		-	p.93
		Delete My Star		-	
	Voice memo	Off		-	p.93
		On		-	
	DPOF	Standard		Select / All / Reset	p.94
		Index		Yes / No	p.95
		Size		Select / All / Reset	
	Copy to Card	Yes		-	p.96
		No		-	

Setting up the play back function using the LCD monitor

This menu is available while the camera is connected to a PictBridge supporting printer (direct connection to the camera, sold separately) with a USB cable.

Menu Tab	Main Menu	Sub Menu	Secondary Menu	Page
	Images	One Photo	-	p.98
		All Photos	-	
	Paper	Auto	-	p.98
		PostCard	-	
		Card	-	
		4X6	-	
		L	-	
		2L	-	
		Letter	-	
		A4	-	
		A3	-	
	Layout	Auto	-	p.98
		Full	-	
		1	-	
		2	-	
		4	-	
		8	-	
		9	-	
		16	-	
		Index	-	

Menu Tab	Main Menu	Sub Menu	Secondary Menu	Page
	Type	Auto	-	p.98
		Plain	-	
		Photo	-	
		Fast Photo	-	
	Quality	Auto	-	
		Draft	-	
		Normal	-	
		Fine	-	
	Date	Auto	-	
		Off	-	
		On	-	
	File Name	Auto	-	
		Off	-	
		On	-	
	Reset	No	-	p.99
		Yes	-	

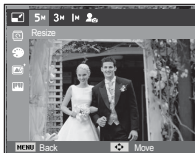
※ Menus are subject to change without prior notice.

Edit ()

Resize

Change the resolution (size) of pictures taken. Select [Start image] to save an image to be the start-up image.

1. Press the Play mode button.
2. Press the Left/Right button to select an image.
3. Press the Menu button.
4. Press the Up/Down button (if necessary) to select Edit, and then press the OK button.
5. Press the Up/Down button (if necessary) to select Resize, and then press the OK button.
6. Press the Left/Right button to select a size or the Start Image icon, and then press the OK button.



■ Image Resize Tables

The current image sizes are on the left side of the table. The available resize dimensions are on the top.

(o : Sizes you can Select)

	5m	3m	1m	
14m	o	o	o	o
8m	o	o	o	o
5m		o	o	o
3m			o	o
1m				o

		
	o	o
		
	o	o

- You can resize a large sized image to a smaller size, but not vice versa.
- You can only resize JPEG images. Movie clip (H.264), Voice recording (WAV) files can't be resized.
- You can change the resolution of only those files compressed in the JPEG 4:2:2 format.
- The resized image will have a new file name. The [Start Image] image is not stored in the memory card but in the internal memory.
- If you save a new Start Image, the original Start Image is deleted.
- If the memory capacity is insufficient to store the resized image, a [Memory Full] message appears on the LCD screen and the resized image can't be stored.

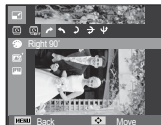
Edit ()

After using [Edit] feature, the edited image will be saved at a smaller size than original image.

Rotating an image

You can rotate the stored images.

1. Press the Play mode button.
2. Press the Left/Right button to select an image.
3. Press the Menu button.
4. Press the Up/Down button (if necessary) to select Edit, and then press the OK button.
5. Press the Up/Down button to select Rotate, and then press the OK button.
6. Press the Left/Right button to select how much you want the picture rotated, and then press the OK button. The camera saves the rotated image as a new file.



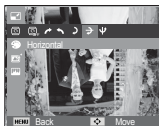
[ : Right 90°]
: Rotate picture in a
clock-wise direction



[ : Left 90°]
: Rotate picture in a
counter-clock-wise direction



[ : 180°]
: Rotate picture 180 degrees



[ : Horizontal]
: Rotate picture horizontally



[ : Vertical]
: Rotate picture vertically

※ If you display the rotated image on the LCD screen, empty spaces may appear to the left and right of the image.

Photo Style Selector

You can apply various effects to your images by using this function.

1. Press the Play mode button.
2. Press the Left/Right button to select an image.
3. Press the Menu button.
4. Press the Up/Down button (if necessary) to select Edit, and then press the OK button.
5. Press the Up/Down button to select Photo Style Selector, and then press the OK button.
6. Press the Left/Right button to select a Photo Style, and then press the OK button. The camera saves the changed image as a new file.



Style mode	Icon	Description
Normal		No style effect is applied.
Soft		Soft style is applied.
Vivid		Vivid style is applied.
Forest		Forest style is applied.
Retro		Sepia style is applied.
Cool		Cool style is applied.
Calm		Calm style is applied.
Classic		Black & white effect is applied.
Negative		Negative effect is applied.
Custom RGB		Define an RGB tone to create your own photo style.

Edit ()

■ Custom color

If you select the Custom RGB Photo Style, you can change the Red (R), Green (G), and Blue (B) values of an image.



- OK button : Select / setup the Custom Color
- Up / Down button : Selects R, G, B
- Left / Right button : Change the R, G, or B value

Smart Filter

Apply various filter effects to your photos to create unique images.

1. Press the Play mode button.
2. Press the Left/Right button to select an image.
3. Press the Menu button.
4. Press the Up/Down button (if necessary) to select Edit, and then press the OK button.
5. Press the Up/Down button to select Smart Filter, and then press the OK button.
6. Press the Left/Right button to select a Smart Filter function, and then press the OK button. The camera saves the changed image as a new file



Smart Filter	Icon	Description
Off		No effect
Miniature		Make a photo of a life-size location or object look like a photo of a miniature scale model. Blurring parts of the photo makes the scene seem much smaller than it actually is.
Vignetting		Apply retro-looking colors, high contrast, and strong vignette effect.
Fish-eye		Distort close objects to imitate the visual effect of a fisheye lens.
Sketch		Make photos look like sketches.
Defog		Distinct style is applied.

Edit ()

Image Adjust

1. Press the Play mode button.
2. Press the Left/Right button to select an image.
3. Press the Menu button.
4. Press the Up/Down button (if necessary) to select Edit, and then press the OK button.
5. Press the Up/Down button to select Image Adjust, and then press the OK button.

■ ACB

You can automatically adjust the brightness of dark areas, caused by under exposure.

1. Select () by pressing the Left/Right button, and then press the OK button.
2. The [Making New Image] message is displayed and the camera saves image as a new file.



■ Red eye Removal

You can remove the red eye effect from the captured image.

1. Select () by pressing the Left/Right button, and then press the OK button.
2. The [Making New Image] message is displayed and the camera saves the image as a new file.



■ Face Retouch

You can make the skin in an image appear clear and beautiful.

1. Select () by pressing the Left / Right button. The [Processing] message appears.
2. Press the OK button. The Face Retouch bar appears.
3. Use the Left / Right button to select 1, 2, or 3. The [Processing] message appears.
4. Press the OK button. The camera saves the adjusted image as a new file.



■ Brightness control

You can change the brightness of the image.

1. Select () by pressing the Left/Right button, and then press the OK button. A bar for selecting the brightness appears.
2. Change the brightness by pressing the Left/Right button.
3. Press the OK button and the camera saves the image as a new file.



Edit (🔧)

■ Contrast control

You can change the contrast of the image.

1. Select (🔍) by pressing the Left/Right button, and then press the OK button. A bar for selecting the contrast appears.
2. Change the contrast by pressing the Left/Right button.
3. Press the OK button and the camera saves the image as a new file.



■ Saturation control

You can change the saturation of the image.

1. Select (🌈) by pressing the Left/Right button, and then press the OK button. A bar for selecting the saturation appears.
2. Change the saturation by pressing the Left/Right button.
3. Press the OK button and the camera saves the image as a new file.



■ Noise effect

You can add noise to an image to create a more classic feel to your photo.

1. Select (🔲) by pressing the Left/Right button, and then press the OK button.
2. The [Making New Image] message appears and the camera saves the image as a new file.



View ()

You can view thumbnails and easily categorize or search a large number of pictures and videos.

1. Press the MENU button in playback mode.
2. Press the Up/Down button to select View, and then press the OK button.
3. Press the Up/Down button to select Single, 9, or 20, and then press OK.



Starting the Multi Slide Show ()

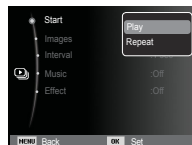
Your camera can display images at pre-set intervals in a slide show. You can view the Multi Slide Show on the camera's LCD screen or connect the camera to an external monitor and view it on the monitor's screen.

1. Press the Play mode button, and then press the menu button.
2. Press the Up / Down button, select the [Multi Slide Show] menu tab, and then press the OK button.

Start the Multi Slide Show

The Multi Slide Show can start only in the Multi Slide Show [Start] menu.

1. Use the Up / Down button to select the [Start] menu, and then press the Right button.
2. Select a desired sub-menu by pressing the Up / Down button.
 - [Play] : The Multi Slide Show stops after one cycle.
 - [Repeat] : The Slide Show repeats until cancelled.



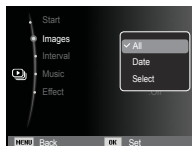
3. Press the OK button and the slide show starts.
 - To pause the slide show while playing it back, press the OK button again.
 - Pressing the OK button again will cause the Multi Slide Show restart.
 - To stop playback of the Multi Slide Show, press the OK button, and then press the Left or Right button.

Starting the Multi Slide Show ()

Selecting Images

You can select images to view in a slide show. [Select] lets collect images into separate groups labeled [Select1], [Select2], or [Select3]. When you play a slide show, you select the group you want to play. To collect images into a group, follow these steps:

1. In the Multi Slide Show menu, use the Up / Down button to select Images, and then press the OK button.
2. Use the Up / Down button to select [Select], and then press the OK button. The Select window appears.
3. Press the Up / Down button to select [New Select] (if necessary), and then press the OK button. The camera displays Processing, and then displays image thumbnails.
4. Press the Up / Down / Up / Down button to highlight an image. Press the OK button to select the image. A check mark appears on the image.
 - The images will appear in the order you select them.
5. Repeat Step 4 for each image you want to included. Press the Fn button when done.



To play a slide show of a group of selected images, follow these steps:

1. On the Multi Slide Show menu, use the Up / Down button to select [Images], and then press the OK button.
2. Use the Up /Down button to select [Select] (or Select 1, 2, or 3, depending on what your camera is displaying), and then press the OK button. The Select window appears.
3. On the Select window, use the Up / Down button to select the group you want to play, [Select 1, 2, or 3]. The thumbnail screen for that group appears.
4. Press the Fn button. You are returned to the Main menu.

5. Select [Multi Slide Show] again, and then press the OK button.
6. Select [Start], and then press the OK button.
7. Select [Play] for single cycle play or [Repeat] for continuous, repetitive play, and then press the OK button. The slide show begins.

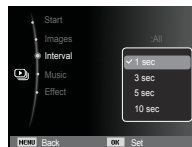


- When you save the first group, it is saved as [Select1]. When you save a second group, that group is saved as [Select1] and the previous group is saved as [Select2]. When you save a third group, that group is saved as [Select1], the previous [Select1] group is saved as [Select2], and the previous [Select2] group is saved as [Select3]. If you save a fourth group, the fourth group supplants the previous [Select1], the previous [Select1] group supplants the [Select2] group, and the [Select2] group supplants the [Select3].

Setting play interval

To set the Multi Slide Show play interval:

1. Select the [Interval] sub-menu by pressing the Up / Down button, and then pressing the Right button.
2. Use the Up / Down button to select the desired interval.
3. Press the OK button to save the configuration.



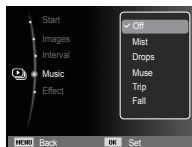
- Image loading time depends on the image size and quality.
- The camera displays only the first frame of a Movie file in a slide show.
- Voice recording files are not displayed in a slide show.
- To set an interval, you must set Effect to [Off] (See page 91).

Starting the Multi Slide Show ()

Setting Background Music

Set the Multi Slide Show music.

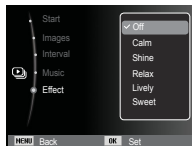
1. Select the [Music] sub menu by pressing the Up / Down button, and then press the Right button.
2. Use the Up / Down button to select the desired Music.
3. Press the OK button to save the configuration.



Configure Multi Slide show effects

You can apply unique screen effects to Multi Slide Shows.

1. Select the [Effect] sub menu by pressing the Up / Down button, and then press the Right button.
2. Use the Up / Down button to select the type of effect.
3. Press the OK button to confirm the setting.



File Options ()

1. Press the play mode button, and then press the menu button.
2. Press the Up / Down button, select the [File Options] menu tab, and then press the OK button.

Deleting images

Use this function to delete images stored in the memory.

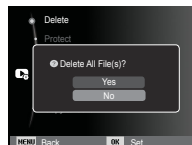
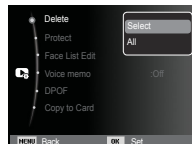
1. Press the Up / Down button and select the [Delete] menu tab. And then press the Right button.
2. Press the Up/Down button to select a desired sub-menu, and then press the OK button.

If you chose [Select], a thumbnail screen appears.

- Use Up/Down/Left/Right to select an image.
- Press the OK button to mark an image for deletion.
- Press the Fn button to display the Delete Confirmation window. Select [Yes], and then press the OK button to delete the marked images.

If you chose [All], the Delete Confirmation window appears. Select [Yes], and then press the OK button to delete all unprotected images. If there are no unprotected images, all images are deleted and the [No Image File] message appears.

3. After the deletion finishes, the screen will be changed to the Play mode screen.



File Options ()



- The Delete function deletes unprotected images permanently. Before you run the Delete function, store all important shots on a computer. The Startup image is stored in the camera's internal memory (i.e., not on the memory card). When you run the Delete function, the camera will not delete it, even if you delete all the files in the memory.

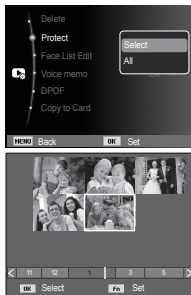
Protecting images

Use this function to protect specific shots from being accidentally erased (Lock) and unprotect images that you have previously protected (Unlock).

1. Press the Up / Down button and select the [Protect] menu tab. And then press the Right button.
2. Press the Up/Down button to select a desired sub-menu, and then press the OK button.

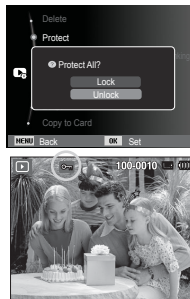
If you chose [Select], a thumbnail screen appears.

- Use Up/Down/Left/Right to select an image.
- Press the OK button to protect an image or remove protection from an image. When you protect an image, a key appears on the image. When you unprotect, the key is removed.
- Press the Fn button to save your changes.



If you chose [All], the Protect All window appears. Select [Lock] to protect all images. Select [Unlock] to remove protection from all images. Press OK to complete the process.

- If you protect an image, the protect icon is displayed on the LCD screen. (An unprotected image has no indicator)
- Locked images are protected from the delete function or [Delete] function, but are NOT protected from the [Format] function.



- You can apply image protection in playback mode by selecting an image, and then pressing the image protection button. ()

File Options ()

Face List Edit

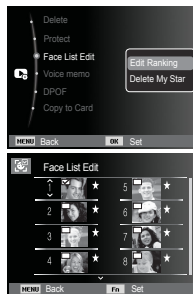
You can arrange or delete portrait images in Smart Album according to their ranking. This feature is available only when you use a memory card.

1. Press the Up / Down button to select the [Face List Edit] menu, and then press the Right/OK button.
2. Select a desired menu by pressing the Up / Down button, and then press the OK button.

[Edit Ranking] : You can change the ranking of the registered images.

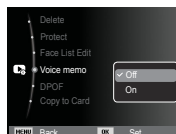
[Delete My Star] : You can delete selected images from the list.

3. Press the MENU button to switch to the Playback mode.



Voice memo

You can add your voice to a stored still image.



[Voice memo menu]



[Ready for recording]



[Voice is recording]

1. Select a picture.
2. Press the Menu button.
3. Use the Up / Down button to select File Options, and then press the OK button.
4. Use the Up / Down button to select Voice Memo, and then press the OK button.
5. Select On, and then press the OK button.
6. Press the Shutter button. The 10 second recording period begins momentarily.
7. To stop recording before the 10 seconds have elapsed, press the Shutter button again.

File Options ()

DPOF

- DPOF(Digital Print Order Format) allows you to embed printing information in your memory card's MISC folder. Select the pictures to be printed and how many prints to make.
- The DPOF indicator will display on the LCD screen when an image that has DPOF information plays back. Images can then be printed on DPOF printers, or at an increasing number of photo labs.
- This function is not available for Movie clips and Voice recording files.
- When the wide angle image is printed as a wide angle print, 8% of the left and right side of the image may not be printed. Check that your printer can support the wide angle image when you print the image. When you get the image printed at a photo lab, request that the image be printed as a wide angle image. (Some photo labs may not support the wide angle size print.)



- Depending on the printer, the image saved in portrait orientation may not be printed in portrait orientation.

■ Standard

This function allows you to embed printing quantity information in a stored image.

1. Press the Up / Down button, select the [DPOF] menu tab, and then press the Right button.
2. Press the Right button again and the [Standard] sub-menu appears.
3. Select a desired sub-menu by pressing the Up / Down button, and then pressing the OK button.

[Select] : The selection window appears.

You can select photos to print.

- Up / Down / Left / Right : Select an image to print.

- Zoom W/T Lever :

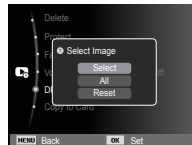
Select the number of prints. The number appears on the thumbnail. You can select the number of prints for multiple photos. Press the Fn button to confirm.

[All] : Configure number of prints for all pictures except movie and voice files. The number appears on the LCD screen. Use the Up/Down button to select a number. Press the OK button to confirm.

- Up / Down button : Select a number of prints.

[Reset] : Cancel the print setup.

4. Press the OK button to confirm the setting. If an image carries DPOF instruction, the DPOF indicator () appears on the image.

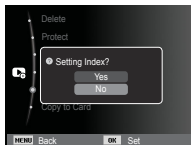


File Options ()

■ Index

Images (except for movie clips and voice files) are printed as index type.

1. Press the Up / Down button, select the [DPOF] menu tab, and then press the Right button.
2. Select the [Index] menu, and then press the Right button again. The sub-menu appears.
3. Select [Yes] or [No] by pressing the Up / Down button.
If [Yes] is selected : The image are printed in index format.
If [No] is selected : Cancel the index print setting.
4. Press the OK button to confirm the setting.



■ Print size

You can specify the print size when printing images stored on the memory card. The [Size] menu is available only for DPOF 1.1 compatible printers.

1. Press the Up / Down button, select the [DPOF] menu tab, and then press the Right button.
2. Select the [Size] menu, and then press the Right button again. The Sub-menu appears.
3. Select a desired sub-menu by pressing the Up / Down button, and then pressing the OK button.

[Select] : The selection window appears.

Lets you choose the print size of images to be printed.

- Up / Down / Left / Right : Select an image.
- Zoom W/T Lever :
Change the print size. The size appears on the thumbnail.
- Fn button : Press to save the sizes you chose. The menu will disappear.

[All] : Change print size of all saved images.

- Up / Down button : Select a print size. The size appears on the LCD screen.

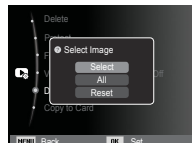
- OK button : Press to confirm the size you chose.

[Reset] : Cancel all of the print size settings.

※ DPOF [Size] secondary menu : Cancel, 3X5, 4X6, 5X7, 8X10



- Depending on the manufacturer and printer model, cancelling the printing may take a little longer for the printer to process.

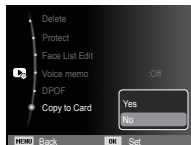


File Options ()

Copy To Card

This enables you to copy image files, movie clips and voice recording files to the memory card.

1. Select the [Copy to Card] menu tab by pressing the Up / Down button, and then press the Right button.
2. Press the Up/ Down button to select [Yes] or [No], and then press the OK button.
 - [No] : Cancels "Copy to Card".
 - [Yes] : Copies all images, movie clips, and voice recording files saved in the internal memory to the memory card after the [Copying] message is displayed. After copying is complete, the screen returns to Playback mode.



- If there is not enough space available in the memory card to copy saved images from the internal memory (About 8MB max), the [Copy to Card] command copies only some of the images and then displays the [Memory Full] message. Then, the camera returns to the Playback mode. Please be sure to delete any unnecessary files on the memory card to free space before inserting the card into the camera.
- When you move the images that are stored in the internal memory to the card using [Copy to Card] to the card, the next number of file names will be created on the card to avoid duplication of the file name.
 - When [File No.] in the Settings menu is set to [Reset], the copied file names start from after the last stored file name.
 - When [File No.] is set to [Series], the copied file names start from after the last captured file name. After completing [Copy to Card], the last stored image of the last copied folder is displayed on the LCD screen.

PictBridge

You can use the USB cable to connect this camera to a printer that supports PictBridge (sold separately) and print the stored images directly. Movie clips and voice files cannot be printed.

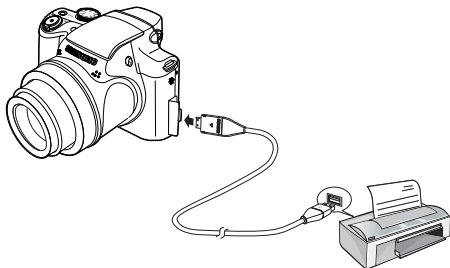
■ Connecting the camera to a Pictbridge compatible printer

1. Connect the camera to the printer with USB cable.
2. Once the camera is turned on, the camera automatically recognizes the printer and completes the connection.

※ If automatic connection fails, set the [USB] menu to [Printer].
(p.73)

※ For a printer that can enable a removable disk, set the [USB] menu to [Printer].

■ Connecting the Camera to a Printer



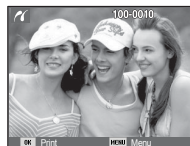
■ Easy printing

When you connect the camera in Playback mode to a Pictbridge, you can print a picture easily.

- Pressing the Left / Right button :
Selects the previous / next image.

- Pressing the OK button :

Prints the currently displayed image
using the printer's default settings.

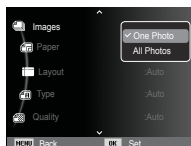


PictBridge : Picture Selection

You can select the images you want to print.

■ Setting the Number of Copies to Print

1. Press the Menu button and the PictBridge menu will appear.
2. Use the Up / Down button to select the [Images] menu, and then press the Right button.
3. Use the Up / Down button to select a desired sub-menu, and then press the OK button.
 - Select [One Photo] or [All Photos]. A screen where you can set the number of copies to print will appear as shown below.



[When [One Photo] is selected]



[When [All Photos] is selected]

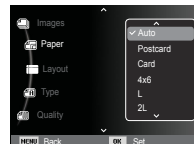
- Press the Up / Down button to select the number of prints.
- When [One Photo] is selected : Use the Left / Right button to select another picture. After selecting another picture, select the number of prints for the other picture.
- After setting the number of prints, press the OK button to save.
- Press the Shutter button to return to the menu without setting the number of prints.

4. Press the play mode button () and images are printed.

PictBridge : Print Setting

You can select the Paper Size, Print Format, Paper Type, Print Quality, Date Print, and File Name Print menus for printed pictures.

1. Press the Menu button and the PictBridge menu will appear.
2. Use the Up / Down button to select the desired menu, and then press the Right button.
3. Use the Up / Down button to select the desired sub-menu value, and then press the OK button.



Menu	Function	Sub menu
Paper	Set the size of the printing paper	Auto, PostCard, Card, 4X6, L, 2L, Letter, A4, A3
Layout	Set the number of pictures to be printed on a sheet of paper	Auto, Full, 1, 2, 4, 8, 9, 16, Index
Type	Set the quality of the printing paper	Auto, Plain, Photo, Fast Photo
Quality	Set the quality of the picture to be printed	Auto, Draft, Normal, Fine
Date	Set whether to print the date	Auto, Off, On
File Name	Set whether to print the file name	Auto, Off, On

- ※ Some menu options are not supported on all printers.
If not supported, the menus are still displayed on the LCD, but are not selectable.

PictBridge : Reset

Resets user-changed configurations.

1. Use the Up / Down button to select the [Reset] menu tab, and then press the Right button.
2. Use the Up / Down button to select [Yes] or [No], and then press the OK button.



If [No] is selected : Settings are not reset.

If [Yes] is selected : All print and image settings are reset.

- ※ Default print settings vary depending on the printer manufacturer.
For your printer's default settings, refer to the user's guide that came with your printer.

Important notes

Be sure to observe the following precautions!

- **This unit contains precision electronic components. Do not use or store this unit in the following locations.**
 - Areas exposed to severe changes in temperature and humidity.
 - Areas exposed to dust and dirt.
 - Areas exposed to direct sunlight or the inside of a vehicle in hot weather.
 - Environments where there is high magnetism or excessive vibration.
 - Areas with high explosives or highly flammable materials.
- **Do not leave this camera in places subject to dust, chemicals (like naphthalene and mothballs), high temperature and high humidity. Keep this camera with silica gel in a hermetically sealed box when not planning to use the camera for a long period of time.**
- **Sand can be particularly troublesome to cameras.**
 - Do not let sand get inside the camera when using it on beaches, coastal dunes, or other areas where there is lots of sand.
 - Doing so may result in failure or may permanently render the camera unusable.
- **Handling the camera**
 - Never drop the camera or subject it to severe shocks or vibrations.
 - Protect the large size LCD screen from an impact. When this camera is not used, keep it in the camera case.
 - Avoid obstructing the lens or the flash when you capture an image.
 - This camera is not waterproof.
To avoid dangerous electrical shocks, never hold or operate the camera with wet hands.
 - If you use this camera in wet places, such as the beach or a pool, do not let water or sand get inside the camera. Doing so may result in failure or may permanently damage the unit.

Important notes

- **Extremes in temperature may cause problems.**

- If the camera is transferred from a cold to a warm and humid environment, condensation can form on the delicate electronic circuitry. If this occurs, turn the camera off and wait for at least 1 hour until all moisture is dispersed. Moisture build-up can also occur on the memory card. If this happens, turn off the camera and remove the memory card. Wait until the moisture has evaporated.

- **Caution on Using the Lens**

- If the lens is subjected to direct sunlight, it could result in the discoloration and deterioration of the image sensor.
- Take care not to get fingerprints or foreign substances on the surface of the lens.

- **If the digital camera is not used for a long period, an electric discharge can occur. It is a good idea to remove the battery and the memory card if you do not intend to use the camera for an extended period of time.**

- **If the camera is exposed to electronic interference, it will turn itself off to protect the memory card.**

- **Camera Maintenance**

- Use a soft brush (available from photo stores) to gently clean the lens and LCD assemblies. If this does not work, lens-cleaning paper with lens cleaning fluid can be used.
Clean the camera body with a soft cloth. Do not allow this camera to come into contact with solvent materials such as benzol, insecticide, thinners etc. This may damage the body shell of the camera and also affect its performance. Rough handling can damage the LCD screen. Take care to avoid damage and keep the camera in its protective carry case at all times when not in use.

- **Do not attempt to disassemble or modify the camera.**

- **Under certain conditions, static electricity can cause the flash unit to fire. This is not harmful to the camera and is not a malfunction.**

- **When images are uploaded or downloaded, the data transfer may be affected by static electricity. In this case, disconnect and re-connect the USB cable before trying the transfer again.**

- **Before an important event or going on a trip, you should check the camera condition.**

- Take a picture to test the camera's condition and prepare an extra battery.
- Samsung cannot be held responsible for camera malfunctions.

- **If the digital camera is not used for a long period, the date and time may return to the default settings because the battery has discharged. In this case, reset the date and time before the recording.**

Warning indicator

There are several warnings that may appear on the LCD display.

[Card Error]

- Memory card error.
 - Turn off the camera power and turn it on again.
 - Insert the memory card again.
 - Insert and format the memory card. (p.68)

[Card Locked]

- The memory card is locked.
 - SD/SDHC memory card : Slide the write protect switch to the top of the memory card.

[Memory Full]

- The memory card or internal memory is full.
 - Insert new memory card.
 - Delete the unnecessary image files.

[No Image File]

- There are no images stored on the memory.
 - Take images.
 - Insert a memory card that is holding some images.

[File Error]

- File error.
 - Delete the file.
- Memory card error.
 - Contact a camera service center.

[Low Battery]

- There is low battery capacity.
 - Insert a charged battery or recharge the battery.

[Power turns off automatically to prevent malfunction due to high temperatures. Wait a minute before use.]

- The power automatically turns off at temperature above 60°C (140°F).
 - If the camera turns off because its internal temperature has increased, let the camera cool off, and then turn it on again.
 - If the camera turns off because of high ambient, external temperatures, turn the camera on in a cooler place.

Before contacting a service center

Please check the following

The camera doesn't switch on

- There is low battery capacity
→ Insert a charged battery or recharge the battery. (p.16)
- Battery is inserted incorrectly with the polarities reversed
→ Insert the battery according to the polarity marks (+, -).

The camera power ceases while in use

- The battery is exhausted
→ Insert a charged battery or recharge the battery.
- The Camera is turned off automatically
→ Turn on the camera power again.
- The camera has stopped working in a cold environment.
→ Take the battery out of the camera and warm both by placing them in your pocket, etc. and then immediately before shooting, place the battery in the camera and then shoot.

Camera does not take images when you press the Shutter button

- There is insufficient memory capacity
→ Delete unnecessary image files
- The memory card has not been formatted
→ Format the memory card (p.68)
- The memory card is exhausted
→ Insert a new memory card
- The memory card is locked
→ Refer to the [Card Locked] error message
- The camera's power is off
→ Turn the camera power on
- The battery is exhausted
→ Insert a charged battery or recharge the battery (p.16)
- The battery is inserted incorrectly with the polarities reversed.
→ Insert the battery according to the polarity marks (+, -)

The camera suddenly stops working while in use

- The camera stopped due to a malfunction
→ Remove /re-insert battery and switch the camera on

The images are unclear

- A picture was taken of the subject without setting an appropriate macro mode
→ Select an appropriate macro mode to take a clear image.
- The picture was taken beyond the flash's range
→ Take a picture within the flash's range
- The lens is smudged or dirty
→ Clean the lens

Before contacting a service center

The flash does not fire

- Flash off mode has been selected
→ Disengage flash off mode
- The camera mode can't use the flash
→ Refer to the FLASH instructions. (p.41)

Incorrect date and time is displayed

- The date and time have been set incorrectly or the camera has adopted the default settings
→ Reset the date and time.

The camera buttons do not operate

- The camera has malfunctioned.
→ Remove/re-insert battery and switch the camera on

A card error has occurred while the memory card is in the camera.

- The memory card format is incorrect.
→ Re-format the memory card

The images don't play back

- Incorrect file name (Violation of DCF format)
→ Do not change the image file name

Color of image is different to the original scene

- White balance or effect setting is incorrect
→ Select the appropriate White balance and effect

Images are too bright

- Exposure is excessive
→ Reset exposure compensation

No image on external screen

- The external screen has not been connected properly to the camera
→ Check the connection cables
- There are incorrect files on the memory card
→ Insert a memory card that has correct files

The [Removable Disk] file does not appear in my computer's file system.

- The cable connection is incorrect
→ Check the connection
- The camera is off
→ Turn the camera on
- The operating system is not Windows XP, Vista, 7 / Mac OS 10.4.
Alternatively the PC does not support USB
→ Install Windows XP, Vista, 7 on a PC or Mac OS 10.4 or later on a computer that supports USB

A part of the LCD screen does not occasionally turn on or a spot appears.

- Although the LCD screen is manufactured with high precision technology, the precision pixels are not occasionally do not light or red, white, and blue spots appear.
→ This phenomenon does not affect the quality of the recorded image and it is not a malfunction.

A vertical line appears on the LCD screen when taking a picture of a bright object.

- If a subject is reflecting a very bright light, a gray, black, red, or purple vertical line may appear.
→ This is a phenomenon called smear and it does not affect the quality of the recorded image. This is not a malfunction.

Specifications

Image Sensor - Type : 1/2.33" CCD
 - Effective Pixel : Approx. 13.8 Mega-pixel
 - Total Pixel : Approx. 14.5 Mega-pixel

Lens - Focal Length : Schneider-Kreuznach Lens
 f = 4.6 ~ 119.6mm (35mm film equivalent : 26 ~ 676mm), 26X Zoom
 - F No. : F2.8(W) ~ F5.0(T)
 - Digital Zoom : Still Image mode : 1.0X ~ 5.0X
 Play mode : 1.0X ~ 13.4X
 (depends on image size)

Image Stabilization - Dual IS (OIS + DIS)
 ※ OIS (Optical Image Stabilization),
 DIS (Digital Image Stabilization)

LCD screen - 3.0"(7.62cm) color TFT LCD (230,000 dots)
 View finder (EVF) : 0.24" color TFT LCD
 (230,000 dot)

Focusing - Type : TTL auto focus
 (Multi AF, Center AF, Selection AF,
 Tracking AF, Face Detection AF)
 - Range

	Normal	Auto Macro	Macro	Super Macro	Manual Focus
Focus range	Wide	Wide	Wide	1cm ~ 10cm	10cm ~ Infinity
	80cm ~ Infinity	10cm ~ Infinity	10cm ~ 80cm		
	Tele	Tele	Tele		
	170cm ~ Infinity	170cm ~ Infinity	80cm ~ 150cm		

Shutter - Program : 1/2 ~ 1/2,000 sec.,
 A-S/Manual/User : 16 ~ 1/2,000 sec.
 (Continuous, AEB : 1/4 ~ 1/2,000 sec.)

Exposure - Control : Program AE
 - Metering : Multi, Spot, Center-weighted,
 Face Detection AE
 - Compensation : ± 2 EV (1/3EV steps)
 - ISO : Auto, 80, 100, 200, 400, 800, 1600, 3200,
 6400 (Up to 3M Size)

Flash - Modes : Auto, Auto & Red-eye reduction, Fill-in
 flash, Slow sync, Flash off, Red Eye Fix
 - Range : Wide: 0.3 ~ 6.0 m (XX ~ XX inches),
 Tele: 0.8 ~ 3.0 m (XX ~ XX inches)
 (ISO Auto)
 - Recharging Time : Approx. 5 sec

Sharpness - Soft+, Soft, Normal, Vivid, Vivid+

White Balance Auto, Daylight, Cloudy, Fluorescent_H,
 Fluorescent_L, Tungsten, Custom

Voice Recording - Voice Recording (maximum 5 hours at once)
 - Voice Memo in Still Image (max. 10 sec.)

Date Imprinting - Date, Date & Time, Off (user selectable)

Shooting - Still Image
 - Mode : Smart Auto, Program, A-S, Manual, Night,
 Beauty Shot, Scene, User1, User2
 - Scene : Frame Guide, Portrait, Children,
 Landscape, Close Up, Text, Sunset, Dawn,
 Backlight, Fireworks, Beach & Snow
 - Smart Auto : Portrait, Night Portrait, Night, Backlight
 Portrait, Backlight, Landscape, White,
 Macro, Macro Text, Tripod, Action,
 Sunset, Blue Sky, Natural Green,
 Macro Color, Macro Portrait

Specifications

- Shooting : Single, Continuous, High Speed, Motion Capture, AEB
- Self-timer : 10 sec., 2 sec., Double
- Movie Clip
 - With Audio or without Audio (user selectable, recording time : max 20min)
 - Size : 1280x720HQ (30FPS & 15FPS), 640x480 (30FPS & 15FPS), 320x240 (60FPS & 30FPS & 15FPS)
 - Movie Editing (Embedded):
Pause during recording, Still Image Capture, Time Trimming

Storage

- Media
 - Internal memory : About 8MB flash memory
 - External memory (Optional) :
SD card (Up to 2GB guaranteed)
SDHC card (Up to 32GB guaranteed)
- File Format
 - Still Image : RAW (DNG1.1), JPEG (DCF), EXIF 2.21, DPOF 1.1, PictBridge 1.0
 - Movie Clip : MP4 (H.264(MPEG4.AVC))
 - Audio : WAV
- Image Size

14m	12m	10m	8m	5m	3m	2m	1m
4288x 3216	4288x 2848	4288x 2416	3264x 2448	2592x 1944	2048x 1536	1920x 1080	1024x 768

- Capacity (1GB Size)

	14m	12m	10m	8m	5m	3m	2m	1m
RAW+SF	29	-	-	-	-	-	-	-
RAW+F	33	-	-	-	-	-	-	-
5F	116	131	154	199	311	487	716	1640
F	191	215	252	324	502	779	1113	2397
n	285	321	375	479	733	1113	1558	3116

※ These figures are measured under Samsung standard conditions and may vary depending on shooting conditions and camera settings.

Effect

- Effect : Photo Style Selector, Smart Filter, Image Adjust (Sharpness, Contrast, Saturation)
- Editing : Resize, Rotate, Photo Style Selector, Smart Filter, Image Adjust (ACB, Face Retouch, Red Eye Fix, Brightness, Contrast, Saturation, Add Noise)

Image Play

- Type : Single image, Thumbnails, Smart Album, Multi slide show, Movie Clip
- ※ Multi slide show : Slide show with Effect & Music

Specifications

Interface	- Digital output connector : USB 2.0 - Audio : Microphone: Stereo, Internal Speaker: Mono - Video output : AV : NTSC, PAL (user selectable) HDMI (Built-in, D-type Standard) - DC power input connector : 4.4 V
Power Source	- Rechargeable battery : SLB-11A, 3.8V (1130mAh) ※ Included battery may vary depending on sales region.
Dimensions (WxHxD)	- 116.1 × 82.8 × 91.1 mm (XX × XX × XX inches) (excluding protrusions)
Weight	- Approx. XX oz. (396 g) (without battery and card)
Operating Temperature	- 32~104°F (0 ~ 40°C)
Operating Humidity	- 5 ~ 85%
Software	- Intelli-studio, Adobe Reader, Samsung RAW Converter

※ Specifications are subject to change without prior notice.

※ All trademarks are the property of their respective owners.

Transferring files to your Windows computer

For Windows users

Transfer files by connecting your camera to your PC.

■ Installing programs

Hardware and software requirements

Item	Requirements
CPU	Intel® Pentium®4 3.2 GHz or higher AMD Athlon™ FX 2.6 GHz or higher
RAM	512 MB or more (1 GB or more recommended)
OS	Windows XP/Vista/7
Others	- USB port - CD-ROM drive - nVIDIA Geforce 7600GT or higher Ati X1600 series or higher - 1024 X 768 pixels, 16-bit color display compatible screen (1280 X 1024 pixels, 32-bit color display recommended) - Microsoft DirectX 9.0c or later



- Using a self-assembled PC or a PC and OS that are not supported may void your warranty.
- The programs may not work properly on 64-bit Edition of Windows XP, Vista, and 7.
- Intelli-studio may not perform correctly on some computers, even when the computer meets the requirements.
- If your computer does not meet the requirements, videos may not play correctly or it may take longer to edit videos.
- Install DirectX 9.0c or above before you use the program.

Transferring files to your Windows computer

1. Insert the installation CD into a compatible CD-ROM drive.
2. When the setup screen is displayed, click Samsung Digital Camera Installer to start installation.



3. Select the programs to install, and then follow the on-screen instructions.
4. Click Exit to complete the installation, and then restart your computer.

■ Transferring files to your PC

Once you connect the camera to your PC, the camera will be recognized as a removable drive.

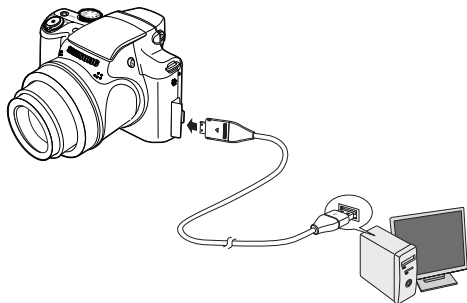


- The battery charges while the camera is connected to a PC with the USB cable.

1. Connect your camera to your PC with the USB cable.



- You must plug the end of the cable with the indicator light (▲) into your camera. If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.



Transferring files to your Windows computer

2. Turn on the camera.

- The computer recognizes the camera automatically.



- If the camera fails to connect, a pop-up window will appear. Select Computer.

3. On your PC, select [My Computer → Removable Disk → DCIM → 100PHOTO].

4. Select the files you want, and then drag or save them to your PC.

■ Disconnecting the camera (for Windows XP)

The way to disconnect the USB cable for Windows Vista / 7 is similar.

1. If the status lamp on your camera is blinking, wait until it stops.

2. Click () on the tool bar at the bottom right of your PC screen.



3. Click the pop-up message.

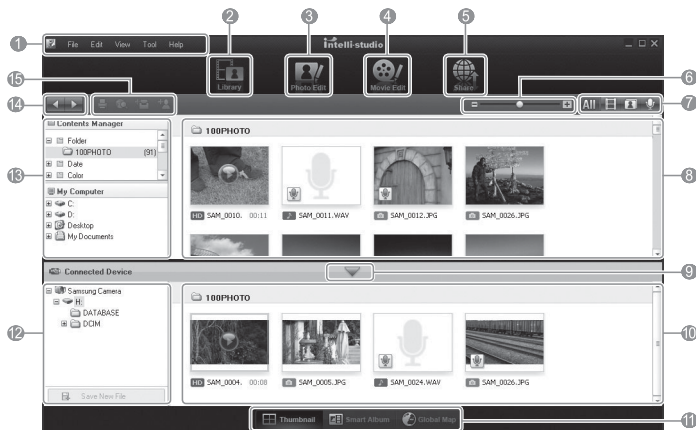
4. Remove the USB cable.

Transferring files to your Windows computer

■ Using Intelli-studio

Once you have installed the Intelli-studio on your PC, the Intelli-studio starts automatically when a camera is connected to your PC. If Intelli-studio does not start after you have connected the camera to your PC, double-click the Intelli-studio icon on your Windows desktop. Intelli-studio allows you to play back and edit files. You can also upload files to websites, such as Flickr or YouTube. For details, select [Menu → Help] in the program.

- You cannot edit files directly on the camera. Transfer files to a folder on your computer before editing.
- You cannot copy files in your computer to the camera.
- Intelli-studio supports the following formats
 - Videos: AVI(MJPEG), MP4 (Video: H.264, Audio: AAC), WMV (WMV 7/8/9)
 - Photos: JPG, GIF, BMP, PNG, TIFF



Transferring files to your Windows computer

Icon	Description
1	Open menus
2	Display files in the selected folder
3	Change to the Photo edit mode
4	Change to the Video edit mode
5	Change to the Sharing mode (You can send files by email or upload files to websites, such as Flickr or YouTube.)
6	Enlarge or reduce the thumbnails in the list
7	Select a file type
8	View files of the selected folder on your computer
9	Show or hide files of the connected camera
10	View files of the selected folder on the camera
11	View files as thumbnails, in Smart Album, or on a map
12	Browse folders in the connected device
13	Browse folders in your computer
14	Move to the previous or next folder
15	Print files, view files on a map, store files in My Folder, or register faces

Transferring files to your Mac computer

For Mac users

When you connect the camera to a Macintosh computer, the computer will recognize the device automatically. You can transfer files directly from the camera to the computer without installing any programs.

■ Installing programs

Hardware and software requirements

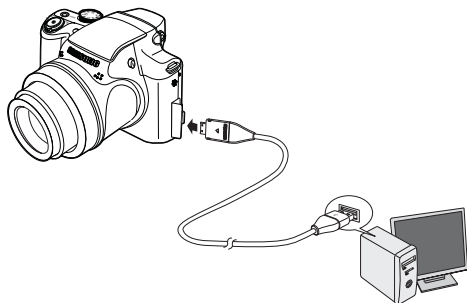
Item	Requirements
CPU	Power Mac G3 or later
RAM	Minimum 256MB RAM
OS	Mac OS 10.4 or higher
Others	- USB port - CD-ROM drive

Transferring files to your Mac computer

1. Connect your camera to a Macintosh computer with the USB cable.



- You must plug the end of the cable with the indicator light (▲) into your camera. If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.



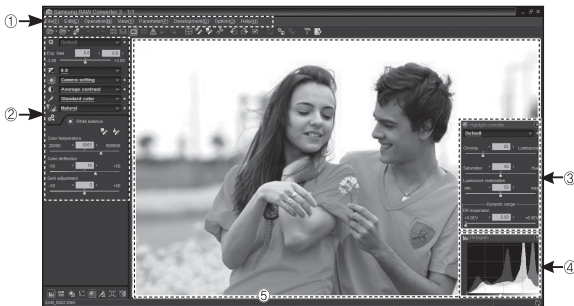
2. Turn on the camera.
 - The computer recognizes the camera automatically and a removable disk icon will be displayed.
3. Double-click the removable disk icon.
4. Transfer photos or videos to the computer.

Using the Samsung RAW Converter

Using the Samsung RAW Converter, you can develop RAW files after editing them as you like. You can also edit JPEG or TIFF files in the same way you edit the RAW files. This software is only compatible with Windows OS. This software is only compatible with Windows XP and Vista.

To start the program, click [Start → All Programs → Samsung RAW Converter → Samsung RAW Converter]

■ Developing the RAW files



- Image edit functions are listed below.

- ① Menu bar
- ② Image editing tools
 - [Exposure bias] : Compensates for the exposure value.
 - [White balance] : Adjusts the white balance value.
 - [Tone] : Adjusts the contrast.
 - [Color] : Changes the color.
 - [Sharpness] : Adjusts the sharpness.
 - [Development] : Lets you preview before the final output.
- ③ Highlight controller
 - Adjusts the saturation and highlights of the selected image.
- ④ Histogram
 - Displays the color layers of the selected image.
- ⑤ Preview window
 - Displays the selected image.

※ Refer to the [Help] menu in Samsung RAW Converter for further information.



- You can download the Samsung RAW Converter program for Macintosh from the Samsung website.

Using the Samsung RAW Converter

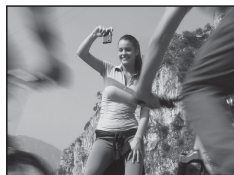
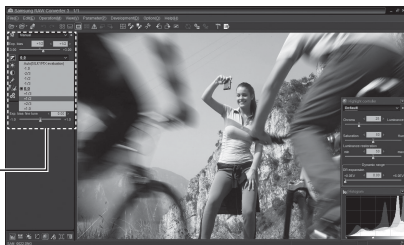
Correcting the exposure

The Samsung RAW Converter lets you retain the best features of an image as you make changes to the RAW file.

The following images show how you can change the exposure of an image using the Samsung RAW Converter.

You can adjust the exposure by using the menu option as shown in the illustration below.

Menu option for adjusting the exposure.

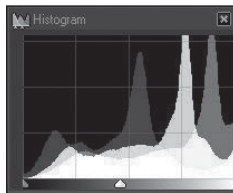


▲ Original image
P Mode, Aperture: f = 2.8,
Shutter Speed: 1/30 sec, ISO = 80

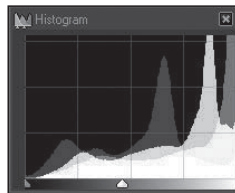


▲ Changed image after
correcting the exposure.

You can see the changed results in the histogram windows as shown images:



▲ Original image



▲ Changed image after
correcting the exposure.

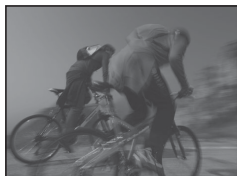
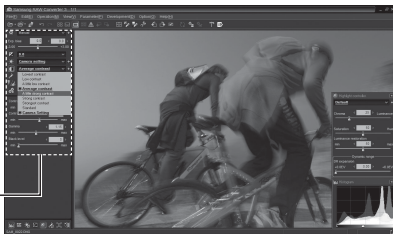
Using the Samsung RAW Converter

Editing JPEG/TIFF files the same as RAW files

Using the Samsung RAW Converter, you can edit JPEG/TIFF files in the same way as RAW files. You can adjust the white balance, sharpness, reduce noise, etc. The images below show how to change the contrast on a TIFF image using the Samsung RAW Converter.

You can adjust the contrast by using the menu option as shown in the picture.

Menu option for adjusting the contrast



▲ Original image
P Mode, Aperture: f = 2.8,
Shutter Speed: 1/30 sec, ISO = 80



▲ Changed image after
correcting the contrast.

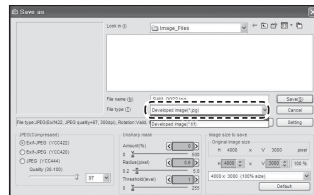
Saving the RAW files into JPEG or TIFF format

You can save the RAW files in JPEG or TIFF format using the Samsung RAW Converter.

1. Choose the image you want to edit and then select [File(F)] → [Development...].



2. Select JPEG or TIFF as the file type, and then click [Save(S)].
- The selected file is saved in JPEG or TIFF format.



FAQ

Please check the following if the USB connection malfunctions.

Case 1 USB cable is not connected or it is not the supplied USB cable.

→ Connect the supplied USB cable.

Case 2 The camera is not recognized by your PC.
Sometimes, the camera may appear under [Unknown Devices] in Device Manager.

→ Turn off the camera, remove the USB cable, plug in the USB cable again, and then turn on the camera.

Case 3 There is an unexpected error during file transfer.

→ Turn the camera power off and on again. Transfer the file again.

Case 4 When using a USB hub.

→ There may be a problem with connecting the camera to the PC through the USB hub if the PC and the hub are not compatible. Wherever possible, connect the camera to the PC directly.

Case 5 Are other USB devices connected to the PC?

→ The camera may malfunction when it is connected to the PC at the same time as another USB device. In this case, disconnect the other USB device, and connect only the camera to your PC.

Case 6 When I open the Device Manager (by clicking Start → (Settings) → Control Panel → (Performance and Maintenance) → System → (Hardware) → Device Manager), there are Unknown Devices or Other Devices entries with a yellow question mark(?) beside them or devices with an exclamation mark(!) beside them.

→ Right-click the entry with the question (?) or exclamation (!) mark, and then select "Remove". Restart the PC and connect the camera again.

Case 7 In some security programs (Norton Anti Virus, V3, etc.), the computer may not recognize the camera as a removable disk.

→ Stop the security programs and connect the camera to the computer. Refer to the security program instructions about how to temporarily disable the program.

Case 8 The camera is connected to the USB port located on the front of the computer.

→ When the camera is connected to the USB port located on the front of the computer, the computer may not recognize the camera. Connect the camera to the USB port located on the back of the computer.

FAQ

- If DirectX 9.0c or later is not installed
 - Install DirectX 9.0c or later.
 - 1) Insert the CD provided with the camera
 - 2) Run Windows Explorer. Select the [CD-ROM drive:\DirectX] folder, and then click the DXSETUP.exe file. Windows installs DirectX. To download and install DirectX, from the Internet, visit the Microsoft website.

- If a PC connected to the camera stops responding while Windows is starting.
 - Disconnect the PC and the camera and Windows will start. If the problem happens continuously, set the Legacy USB Support to disable, and then re-start the PC. The Legacy USB Support is in the BIOS setup menu. (The BIOS setup menu differs between PC manufacturers. Some BIOS menus don't have Legacy USB Support.) If you can't change the menu by yourself, contact to the PC manufacturer or BIOS manufacturer.



Samsung Eco-mark

It is Samsung's own symbol mark is used to effectively communicate Samsung's environmental friendly product activities to the consumers. The mark represents Samsung's continuous effort on development of environmental conscious products.

FCC notice

■ NOTE :

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

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

■ CAUTION :

Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

■ Declaration of Conformity

Trade Name : SAMSUNG ELECTRONICS AMERICA, INC.
Model No. : SAMSUNG HZ50W
Responsible Party : SAMSUNG ELECTRONICS AMERICA, INC.
Address : 105 Challenger Road Ridgefield Park NJ
Telephone No. : 1-800-SAMSUNG(726-7864)

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.



Please refer to the warranty that came with the product you purchased,
or go to our website <http://www.samsung.com/> for after-sales service or inquiries.

