SAMSUNG

Samsung
SMART CAMERA

This user manual includes detailed usage instructions for your camera. Please read this manual thoroughly.

Click a topic

USER MANUAL

MV900F

Health and safety information

Always comply with the following precautions and usage tips to avoid dangerous situations and ensure peak performance of your camera.

⚠ **Warning**—situations that could cause injury to yourself or others

Do not disassemble or attempt to repair your camera.
This may result in electric shock or damage to the camera.

Do not use your camera near flammable or explosive gases and liquids.
This may cause a fire or explosion.

Do not insert flammable materials into the camera or store these materials near the camera.
This may cause a fire or electric shock.

Do not handle your camera with wet hands.
This may result in electric shock.

Prevent damage to subjects' eyesight.
Do not use the flash in close proximity (closer than 1 m/3 ft) to people or animals. If you use the flash too close to your subject's eyes, this can cause temporary or permanent eyesight damage.

Keep your camera away from small children and pets.
Keep your camera and all accessories out of the reach of small children and animals. Small parts may cause choking or serious injury if swallowed. Moving parts and accessories may present physical dangers as well.

Do not expose the camera to direct sunlight or high temperatures for an extended period of time.
Prolonged exposure to sunlight or extreme temperatures can cause permanent damage to your camera's internal components.

Avoid covering the camera or charger with blankets or clothes.
The camera may overheat, which may distort the camera or cause a fire.

Do not handle the power supply cord or go near the charger during a thunderstorm.
This may result in electric shock.

If liquid or foreign objects enter your camera, immediately disconnect all power sources, such as the battery or charger, and then contact a Samsung service center.

Comply with any regulations that restrict the use of a camera in a certain area.
- Avoid interference with other electronic devices.
- Turn off the camera when in an aircraft. Your camera can cause interference with aircraft equipment. Follow all airline regulations and turn off your camera when directed by airline personnel.
- Turn off the camera near medical equipment. Your camera can interfere with medical equipment in hospitals or health care facilities. Follow all regulations, posted warnings, and directions from medical personnel.

Avoid interference with pacemakers.
Maintain a minimum of 15 cm between this camera and all pacemakers to avoid potential interference, as recommended by the manufacturer and the independent research group, Wireless Technology Research. If you have any reason to suspect that your camera is interfering with a pacemaker or other medical device, turn off the camera immediately and contact the manufacturer of the pacemaker or medical device for guidance.

⚠ **Caution**—situations that could cause damage to your camera or other equipment

Remove the batteries from your camera when storing it for an extended period of time.

Installed batteries may leak or corrode over time and cause serious damage to your camera.

Use only authentic, manufacturer-recommended, Lithium-ion replacement batteries. Do not damage or heat the battery.

Inauthentic, damaged, or heated batteries may cause a fire or personal injury.

Use only Samsung-approved batteries, chargers, cables and accessories.

• Using unauthorized batteries, chargers, cables or accessories can cause batteries to explode, damage your camera, or cause injury.
• Samsung is not responsible for damage or injuries caused by unapproved batteries, chargers, cables or accessories.

Use the battery only for its intended purpose.

Misusing the battery may cause a fire or electric shock.

Do not touch the flash while it fires.

The flash is very hot when fired and may burn your skin.

When you use the AC charger, turn off the camera before you disconnect the power to the AC charger.

Failing to do so may result in fire or electric shock.

Disconnect the charger from the wall socket when not in use.

Failing to do so may result in fire or electric shock.

Do not use a damaged power supply cord, plug, or loose outlet when you charge batteries.

This may cause a fire or electric shock.

Do not allow the AC charger to come in contact with the +/- terminals on the battery.

This may cause a fire or electric shock.

Do not drop or subject the camera to strong impacts.

Doing so may damage the screen or external or internal components.

Exercise caution when you connect cables or adapters and install batteries and memory cards.

If you force the connectors, improperly connect cables, or improperly install batteries and memory cards, you can damage ports, connectors, and accessories.

Keep cards with magnetic strips away from the camera case.

Information stored on the card may be damaged or erased.

Never use a damaged charger, battery, or memory card.

This may result in electric shock or camera malfunction or cause a fire.

Do not place the camera in or near magnetic fields.

Doing so may cause the camera to malfunction.

Do not use the camera if the screen is damaged.

If the glass or acrylic parts are broken, visit a Samsung Electronics Service Center to have the camera repaired.

Check that the camera is operating properly before use.

The manufacturer takes no responsibility for any loss of files or damage that may result from camera malfunction or improper use.

You must plug the small end of the USB cable into your camera.

If the cable is reversed, it may damage your files.
The manufacturer is not responsible for any loss of data.

Avoid interference with other electronic devices.

Your camera emits radio frequency (RF) signals that may interfere with unshielded or improperly shielded electronic equipment, such as pacemakers, hearing aids, medical devices, and other electronic devices in homes or vehicles. Consult the manufacturers of your electronic devices to solve any interference problems you experience. To prevent unwanted interference, use only Samsung-approved devices or accessories.

Use your camera in the normal position.

Avoid contact with your camera's internal antenna.

Data transference and your responsibilities

- Data transferred via WLAN could be leaked, so avoid transferring sensitive data in public areas or on open networks.
- The camera manufacturer is not liable for any data transfers that infringe on copyrights, trademarks, intellectual property laws, or public decency ordinances.

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- microSD™, microSDHC™, and microSDXC™ are registered trademarks of the SD Association.
- Wi-Fi®, the Wi-Fi CERTIFIED logo, and the Wi-Fi logo are registered trademarks of the Wi-Fi Alliance.
- Trademarks and trade names used in this manual are the property of their respective owners.

- Camera specifications or contents of this manual may be changed without prior notice due to upgrade of camera functions.
- We recommend using your camera within the country where you purchased.
- Use this camera responsibly and adhere to all laws and regulations concerning its use.
- You are not allowed to reuse or distribute any part of this manual without prior permission.

Outline of the User Manual

Icons used in this manual

Icon	Function
📝	Additional information
⚠	Safety warnings and precautions
[ ]	Camera buttons. For example, [**Shutter**] represents the shutter button.
( )	Page number of related information
→	The order of options or menus you must select to perform a step; for example: Touch **Face Detection** → **Normal** (represents Touch **Face Detection**, and then touch **Normal**).
*	Annotation

Expressions used in this manual

Pressing the shutter

- Half-press [**Shutter**]: Press the shutter halfway down
- Press [**Shutter**]: Press the shutter all the way down

Half-press [**Shutter**]   Press [**Shutter**]
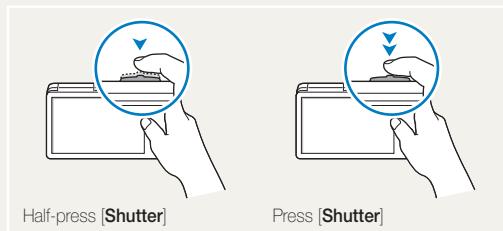
Subject, background, and composition

- **Subject**: The main object in a scene, such as a person, animal, or still life
- **Background**: The objects around the subject
- **Composition**: The combination of a subject and background

Background

Composition

Subject
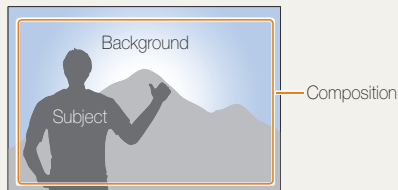
Exposure (Brightness)

The amount of light that enters your camera determines the exposure. You can alter the exposure by changing the shutter speed, aperture value, or ISO sensitivity. By altering the exposure, your photos will be darker or lighter.

▲ Normal exposure   ▲ Overexposure (too bright)

Basic troubleshooting

Learn to solve common problems by setting shooting options.

	The subject's eyes appear red.	Red eye occurs when the subject's eyes reflect light from the camera flash. • Set the flash option to ● **Red-eye** or ✦ **Red-eye Fix**. (p. 65) • If the photo has already been captured, select ✦ **Red-eye Fix** in the edit menu. (p. 102)
	Photos have dust spots.	If dust particles are present in the air, you may capture them in photos when you use the flash. • Turn off the flash or avoid capturing photos in a dusty place. • Set ISO sensitivity options. (p. 67)
	Photos are blurred.	Blurring can occur if you capture photos in low light conditions or hold the camera incorrectly. Use the OIS function or half-press [**Shutter**] to ensure the subject is focused. (p. 35)
	Photos are blurred when shooting at night.	As the camera tries to let in more light, the shutter speed slows. This can make it difficult to hold the camera steady long enough to capture a clear photo and may result in camera shake. • Use the Low Light Shot mode. (p. 47) • Turn on the flash. (p. 65) • Set ISO sensitivity options. (p. 67) • Use a tripod to prevent your camera from shaking.
	Subjects come out too dark because of backlighting.	When the light source is behind the subject or when there is a high contrast between light and dark areas, the subject may appear too dark. • Avoid shooting toward the sun. • Select **Backlight** in Scene mode. (p. 43) • Set the flash option to ⚡ᶠ **Fill in**. (p. 65) • Adjust the exposure. (p. 76) • Set the Auto Contrast Balance (**ACB**) option. (p. 77) • Set the metering option to ▣ **Spot** if a subject is in the center of the frame. (p. 77)

Quick reference

 Capturing photos of people

- Self Shot mode ► 17
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- Beauty Shot mode ► 49
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- ACB (to compensate for subjects against bright backgrounds) ► 77
- Metering ► 77
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Basic functions

Learn about your camera's layout, icons, and basic functions for shooting.

Unpacking

The following items are included in your product box.
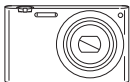
Camera

AC adapter/
USB cable
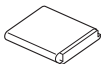
Rechargeable battery

Strap

Quick Start Guide

Optional accessories

Camera case
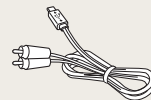
A/V cable
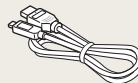
HDMI cable

Memory card/
Memory card adapter

- The illustrations may differ slightly from the items shipped with your product.
- The items included in the box may differ depending on the model.
- You can purchase optional accessories at a retailer or a Samsung service center. Samsung is not responsible for any problems caused by using unauthorized accessories.

Camera layout

Before you start, familiarize yourself with your camera's parts and their functions.

Shutter button

POWER button

Microphone

Flash

AF-assist light/Timer lamp

SAMSUNG

Lens

Internal antenna*
* Avoid contact with the internal antenna while using the wireless network.

Speaker

Tripod mount

HDMI port
Accepts HDMI cable

Battery chamber cover
Insert a memory card and battery

USB and A/V port
Accepts USB cable and A/V cable

Smart Link Button
Start a preset Wi-Fi function.

Zoom button
- **In Shooting mode**: Zoom in or out
- **In Playback mode**: Zoom in on part of a photo or view files as thumbnails

Status lamp
- **Blinking**: When the camera is connecting to WLAN or sending a photo, the image is out of focus, there is a problem charging the battery, or when the camera is saving a photo or video, or the memory is being read by a computer
- **Steady**: When the camera is connected to a computer, charging the battery, or when the image is in focus

Attaching the strap

Display

Home button
Access the Home screen

Playback button
Enter Playback mode

Using the screen

You can take a self-portrait while looking at yourself on the screen by flipping the screen up and using the shutter button on the back of the camera. The screen can flip 180 degrees upward.

180˚ ——— Shutter button
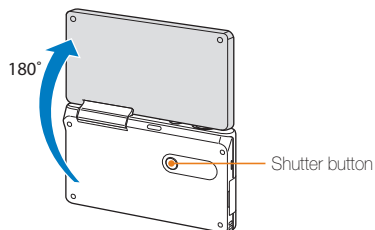
Using the Self Shot mode

In Smart Auto mode and Program mode, flip the screen upward and capture a self portrait while looking at yourself on the screen.

1 On the Home screen, touch 🔵 or SMART.

2 Flip the screen upward.

3 Touch the frame area on the screen.

• After 3 seconds from being focused, the camera automatically release the shutter.
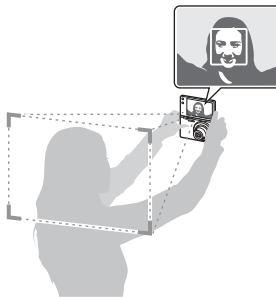
🖉 • Fold the screen when not in use.
• Please do not move the screen by more than 180 degrees, or it may break.
• When the camera is not held by hands and the screen is flipped upward, use a tripod. Otherwise, it may cause damage to your camera.

Using the Smart Link button

You can turn on the Wi-Fi feature conveniently with [**Smart Link**].
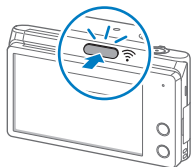
- Press [**Smart Link**] to activate the Wi-Fi function that you have designated. The camera will activate the designated function. Press [**Smart Link**] again to return to the previous mode.

Setting a Smart Link button option

You can select a Wi-Fi function to launch when you press [**Smart Link**].

1 On the Home screen, touch ⊙.

2 Touch **General** → **Smart Link (Wi-Fi Button)**.

3 Select an option. (p. 141)

Inserting the battery and memory card

Learn how to insert the battery and an optional memory card into the camera.
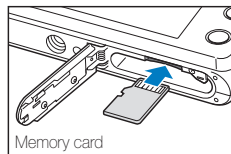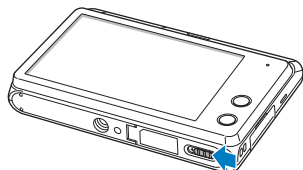
Insert a memory card with the gold-colored contacts facing up.
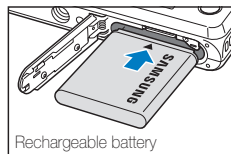
Memory card

Insert the battery with the Samsung logo facing up.
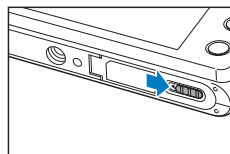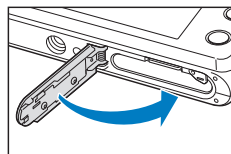
Rechargeable battery
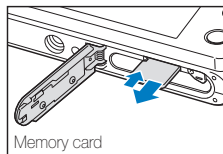
Push the card gently until it disengages from the camera, and then pull it out of the slot.

Memory card
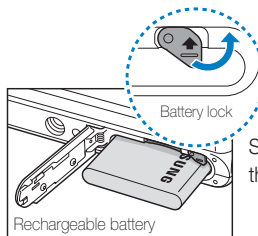
Battery lock

Slide the lock up to release the battery.

Rechargeable battery

Charging the battery and turning on your camera

Charging the battery

Before you use the camera for the first time, you must charge the battery. Plug the small end of the USB cable into your camera, and then plug the other end of the USB cable into the AC adapter.

Status lamp
• **Red light on**: Charging
• **Red light off**: Fully charged
• **Red light blinking**: Error
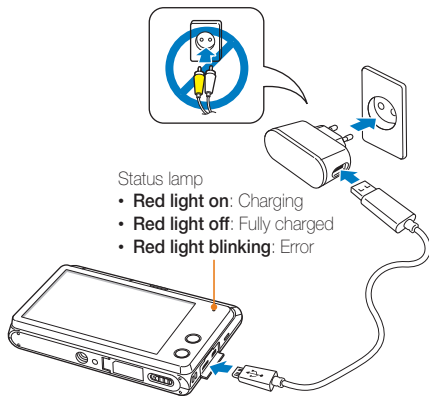
Use only the AC adapter and USB cable supplied with your camera. If you use another AC adapter (such as SAC-48), the camera battery may not charge or work properly.

Turning on your camera

Press [**POWER**] to turn your camera on or off.
• The initial setup screen appears when you turn on the camera for the first time. (p. 21)
• When you turn on the camera, the camera will display the recently accessed shooting mode.
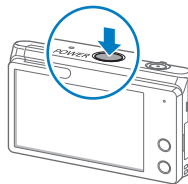
Turning on your camera in Playback mode

Press and hold [▶]. The camera turns on and immediately accesses Playback mode.
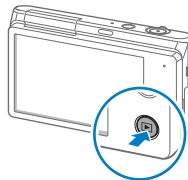
If you turn on your camera by pressing and holding [▶] until the status lamp blinks, the camera does not emit any sounds.

Performing the initial setup

When the initial setup screen appears, follow the steps below to configure the camera's basic settings. The default language is preset for the country or region where the camera is sold. You can change the language as desired by touching **Language**.

1 Touch **Time Zone**.

2 Touch **Home**, and then touch ❮ or ❯ to select a time zone.
   • When you travel to another country, touch **Visit**, and then select a new time zone.

Time Zone

❮ ❯

London
[GMT +00:00] 2012/01/01 12:00 PM ☀   OK

3 Touch **OK** to save.

4 Touch **Date/Time Set**.

5 Touch the up or down arrows to set the date.

Date/Time Set

Month   Day   Year

01   01   2012   ⊕›

↩   OK
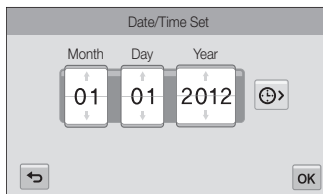
   • The screen may differ depending on the language selected.

6 Touch ⏱, and then touch the up or down arrows to set
   the time.

Date/Time Set		
Hr	Min	DST
12	00 PM	☀
↩		OK
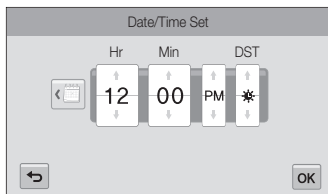
• To set daylight-saving time, touch ☀.

7 Touch **OK** to save.

8 Touch **OK** to save settings.

9 Touch **OK** on a pop-up window.

Learning icons

The icons the camera displays on the screen change according to the mode you select or the options you set.
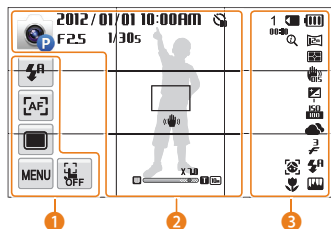
1 Option icons (touch)

Icon	Description
$\frac{\mathbf{4}^{\mathbf{A}}}{}$	Flash option
[AF]	Auto focus option
▣	Burst type option
MENU	Shooting options
$\frac{\overset{\bullet}{\ell}\ell}{\mathsf{OFF}}$	One Touch Shooting option*

* The icon appears only in Smart Auto mode.

2 Status icons

Icon	Description
![mode]	Current shooting mode**
2012/01/01	Current date
10:00AM	Current time
F2.5	Aperture value
1/30s	Shutter speed

Icon	Description
⏱	Timer
☐	Auto focus frame
《◉》	Camera shake
▣▬▬▭	Zoom indicator
X 1.0	Zoom ratio
▣₁₀ₘ	Photo resolution when Intelli zoom is on
╪╪	Grid lines

** Touch the icon to view the brief description of the selected mode.

3 Status icons

Icon	Description
1	Available number of photos
00:10	Available recording time
▣▥	Memory card not inserted***
◀	Memory card inserted
▥	• ▥: Fully charged • ▥ ▭: Partially charged • ▭: Empty (Recharge) • ▤⚡: Charging (Connected with the charger)

Icon	Description
▣₁₂ₘ	Photo resolution
₁₂₀/ₕ₀	Video resolution
▣	Metering
▥₃₀	Frame rate
✋ₒᵢₛ	Optical Image Stabilization (OIS)
ᴬᴸᴵⱽᴱ	Sound Alive is on
▣	Exposure value adjusted
₁₀₀ᴵˢᴼ	ISO sensitivity
☁	White balance
₃	Burst type
$\mathbf{4}^{\mathbf{A}}$	Flash
▥	Image Adjust
🔍	Intelli zoom is on
😊	Face detection
✿	Auto focus

*** You must insert a memory card to save photos.

> 📝 Touch the screen repeatedly to change the display type.

Using the touch screen

Learn how to use the touch screen. You could select menus or options by touching an icons on the screen. The touch screen works best when you touch it with your fingertip.

> Do not use sharp objects, such as pens or pencils, to touch the screen. You can damage the screen.

Touching
Touch an icon to select a menu or option.
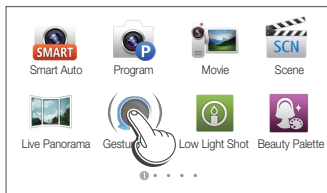
Flicking
Gently flick your finger across the screen.

Dragging
Touch and hold an area on the screen, and then drag your finger.
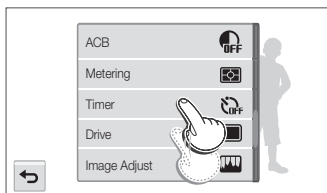
Selecting an option

• Drag the option list up or down until you find a desired option. Touch the option.

ACB	🔇
Metering	🔲
Timer	🔇
Drive	▭
Image Adjust	🎛

↩

• Touch a desired option to turn on or off.

ACB		
🔇 Off	✓	ⓘ
🔒 On		

↩
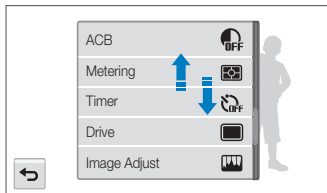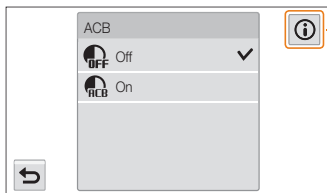
If you touch ⓘ, a pop-up window with information on features and settings will be displayed.

📝 • The touch screen may not recognize your inputs if you touch multiple items at the same time.

• When you touch or drag the screen, discolorations may occur. This is not a malfunction, but a characteristic of the touch screen. Touch or drag lightly to minimize the discolorations.

• The touch screen may not work properly if you use the camera in extremely humid environments.

• The touch screen may not work properly if you apply screen protection film or other accessories to the screen.

• Depending on the viewing angle, the screen may appear dim. Adjust the brightness or viewing angle to improve the resolution.

Using the Home screen

You can select a mode or function, or access the settings menu by touching the icons on the Home screen.

Accessing the Home screen

In Shooting or Playback mode, press [🏠]. Press [🏠] again to return to the previous mode.
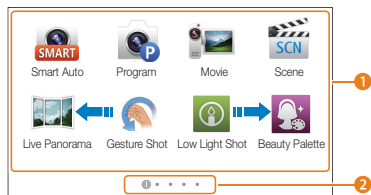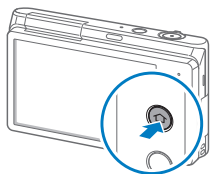
No.	Description
❶	Touch an icon to access a mode or function. • Drag or flick your finger across the screen to scroll to another page.
❷	The number of the current page. (❶ ❷ ❸ ❹ ❺)

Icons on the Home screen

Icon	Description
SMART	**Smart Auto**: Capture a photo with a Scene mode selected automatically by the camera. (p. 38)
P	**Program**: Capture a photo with settings you have adjusted manually. (p. 39)
🎬	**Movie**: Record a video. (p. 41)
SCN	**Scene**: Capture a photo with options that are preset for a specific scene. (p. 43)
🖼	**Live Panorama**: Capture and combine a series of photos to create a panoramic image. (p. 44)
👆	**Gesture Shot**: Capture photos with hand gestures. (p. 46)
💡	**Low Light Shot**: Capture multiple photos in low light conditions without a flash. The camera combines them to create a single image that is brighter and has less blurring. (p. 47)
🎭	**Beauty Palette**: Capture a portrait, and then add various beautifying effects. (p. 47)

Icon	Description
	MobileLink: Send photos or videos to a smart phone. (p. 120)
	Remote Viewfinder: Use a smart phone as a remote shutter release and see a preview on your smart phone of an image from your camera. (p. 121)
	Social Sharing: Upload photos or videos to file sharing websites. (p. 123)
	Email: Send photos or videos stored on the camera via email. (p. 125)
	AllShare Play: Upload photos to AllShare Play online storage or view files on a widescreen TV. (p. 128)
	Auto Backup: Send photos or videos that you captured with the camera to a PC wirelessly. (p. 131)
	Cloud: Upload photos to a cloud server. (p. 133)
	Beauty Shot: Capture a portrait with options to hide facial imperfections. (p. 49)
	HDR Plus: With the High Dynamic Range (HDR) Plus effect, you can capture photos with a greater range of tones. (p. 50)

Icon	Description
	Photo Filter: Capture a photo with various filter effects. (p. 51)
	Movie Filter: Record a video with various filter effects. (p. 52)
	Picture in Picture: Capture a background photo and insert a smaller photo or video into the foreground. (p. 53)
	Split Shot: Capture several photos and arrange them with preset layouts. (p. 55)
	Magic Frame: Capture a photo with various frame effects. (p. 56)
	My Magic Frame: Capture a photo and select an area to make it transparent. Overlay a newly captured photo onto the area. (p. 56)
	Artistic Brush: Capture a photo and save a video that shows the process of how the filter effect is applied. (p. 57)
	Motion Photo: Capture and combine a series of photos, and then select an area to be animated to create a GIF animation. (p. 58)
	3D Photo: Capture a photo with 3D effects for a 3D TV. (p. 59)

Icon	Description
	Album: View files by category in Smart album. (p. 91)
	Photo Editor: Edit photos with various effects. (p. 99)
	Wallpapers: Set wallpaper for the Home screen with a desired image. (p. 29)
	Help: View the help and learn how to use the camera. (p. 30)
	Settings: Adjust settings to match your preferences. (p. 138)

Browsing the Home screen

On the Home screen, rotate [**Zoom**] to the left to display all the pages of the Home screen. Touch a page to display it in full screen view.

Rearranging icons

You can rearrange the icons on the Home screen in any order.

1 Touch and hold an icon.

SMART Smart Auto	Program	Movie	Scene
Live Panorama	Gesture Shot	Low Light Shot	Beauty Palette
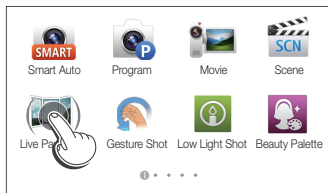
2 Drag it to a new location.
- To move an icon to another page, drag it to the left or right edge of the screen. When you drop the icon to a new location, the other icons will neatly slide out of the way.

SMART Smart Auto	Program	Movie	Scene
		Low Light Shot	Beauty Palette

Setting Wallpaper

Set wallpaper for the Home screen with a desired image.

1 On the Home screen, touch 🖼.

2 Select an option.

Icon	Description
🖼	Select a desired wallpaper from the default gallery.
🖼	Set a photo you have captured as wallpaper. • You can set a specified area as wallpaper.

3 Select a desired wallpaper, and then touch **OK**.

> You can also set the photo you are viewing as wallpaper by touching MENU → **Set Wallpaper** → **OK** in Playback mode.

Using the Help mode

You can view a simple application description and an operation tip in Help mode.

1 On the Home screen, touch 🔳.

Album   Photo Editor   Wallpapers   H...

Settings

• • • • ⊙
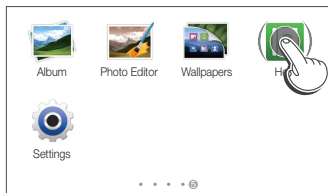
2 Select an option.
  • Select a desired option from the subsection list.

Descriptions for camera functions

Program

↩   ▲ 2/25 ▼   GO
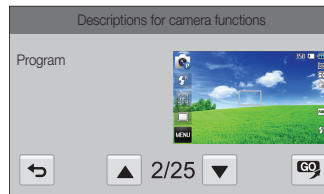
  • Touch ↩ to return to the list.
  • Touch ▲ or ▼ to move from one description or tip to another.

3 While viewing an application description, touch GO to access a mode.

Capturing photos

Learn how to capture photos easily and quickly in Smart Auto mode.

1 On the Home screen, touch [icon].

2 Align your subject in the frame.
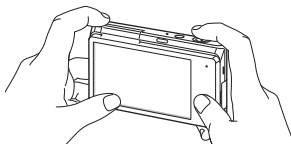
3 Half-press [**Shutter**] to focus.
- A green frame means the subject is in focus.
- A red frame means the subject is out of focus.
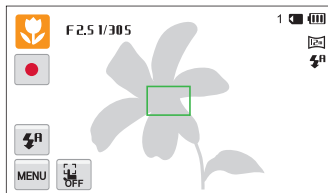
4 Press [**Shutter**] to capture a photo.

5 Press [▶] to view the captured photo.
- To delete the photo, touch [icon] → **Yes**.

6 Press [▶] to return to Shooting mode.

[icon] See page 35 for tips to get clearer photos.

Zooming

You can capture close-up photos by adjusting the zoom.

Zoom ratio

Zoom out   Zoom in

When you rotate the zoom button, the zoom ratio shown on the screen may change inconsistently.

Digital zoom

The Digital zoom is supported by default in Shooting mode. If you zoom in on a subject in Shooting mode and the zoom indicator is in the digital range, your camera is using the Digital zoom. By using both the 5X Optical zoom and 5X Digital zoom, you can zoom in up to 25 times.

Optical range

Zoom
indicator

X25.0

Digital range
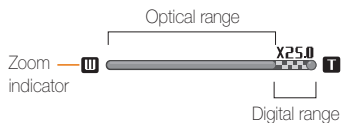
- The Digital zoom is available only in Program and Scene (except **Text**) modes.
- The Digital zoom is not available with the One Touch shooting and Smart Touch AF options.
- If you capture a photo with the Digital zoom, the photo quality may be lower than normal.

Intelli zoom

If the zoom indicator is in the Intelli range, your camera is using the Intelli zoom. Photo resolution varies according to the zoom rate if you use the Intelli zoom. By using both the Optical zoom and Intelli zoom, you can zoom in up to 10 times.

Optical range

Photo resolution when the Intelli zoom is on

Zoom —
indicator

X10.0

Intelli range
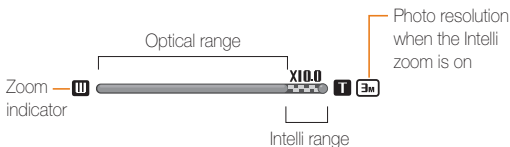
📝 • The Intelli zoom is available only in Smart Auto (4:3 ratio), Program, and Scene (except **Text**) modes.
• The Intelli zoom is not available with the One Touch shooting and Smart Touch AF options.
• The Intelli zoom helps you capture a photo with less quality deterioration than the Digital zoom. However, the photo quality may be lower than when you use the Optical zoom.
• The Intelli zoom is available only when you set a 4:3 resolution ratio. If you set another resolution ratio with Intelli zoom on, the Intelli zoom will be turned off automatically.

Setting Intelli zoom

1 In Shooting mode, touch [MENU].

2 Touch **Intelli Zoom**, and then touch a desired option to turn on or off.

Icon	Description
🔍 OFF	**Off**: The Intelli zoom is deactivated.
🔍	**On**: The Intelli zoom is activated.

Reducing camera shake (OIS)

Reduce camera shake optically in Shooting mode.

▲ Before correction

▲ After correction

1 In Shooting mode, touch 📷.

2 Touch **OIS**, and then touch a desired option to turn on or off.

Icon	Description
🖐	**Off**: OIS is deactivated.
🖐	**On**: OIS is activated.

📝 • OIS may not function properly when:
  - you move your camera to follow a moving subject
  - you use the Digital zoom
  - there is too much camera shake
  - the shutter speed is slow (for example, when you capture night scenes)
  - the battery is low
  - you capture a close-up shot
• If you use the OIS function with a tripod, your images may be blurred by the vibration of the OIS sensor. Deactivate the OIS function when you use a tripod.
• If the camera is hit or dropped, the display will be blurry. If this occurs, turn off the camera, and then turn it on again.

Tips for getting a clearer photo

🙂 Holding your camera correctly
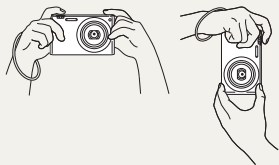
Ensure nothing is blocking the lens, flash, or microphone.

🙂 Reducing camera shake

Set the Optical Image Stabilization option to reduce camera shake optically. (p. 34)

🙂 Half-pressing the shutter button
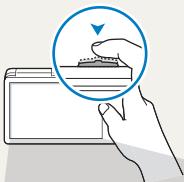
Half-press [**Shutter**] and adjust the focus. The camera adjusts the focus and exposure automatically.
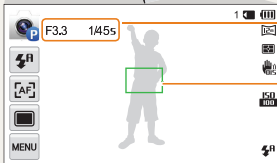
The camera sets the aperture value and shutter speed automatically.

Focus frame
- Press [**Shutter**] to capture the photo if the focus frame appears in green.
- Change the composition and half-press [**Shutter**] again if the focus frame appears in red.

🙂 When 《🖐》 is displayed
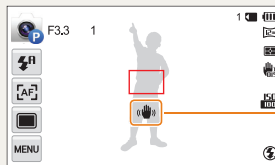
Camera shake

When you shoot in the dark, avoid setting the flash option to **Slow Sync** or **Off**. The aperture remains open longer and it may be harder to hold the camera steady long enough to capture a clear photo.
- Use a tripod or set the flash option to **Fill in**. (p. 65)
- Set ISO sensitivity options. (p. 67)

Preventing your subject from being out of focus

It may be difficult to get your subject in focus when:
- there is little contrast between the subject and background
  (for example, when your subject is wearing clothing that is similar in
  color to the background)
- the light source behind the subject is too bright
- the subject is shiny or reflective
- the subject includes horizontal patterns, such as blinds
- the subject is not positioned in the center of the frame

Using the focus lock
Half-press [**Shutter**] to focus. When the subject is in focus,
you can reposition the frame to change the composition.
When you are ready, press [**Shutter**] to capture your photo.
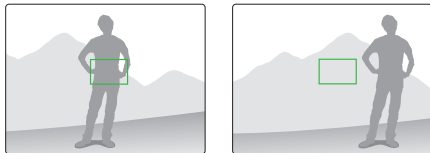
- When you capture photos in low light

Turn on the flash.
(p. 65)

- When subjects are moving rapidly
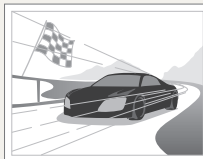
Use the Burst function.
(p. 80)

Extended functions

Learn how to capture a photo and record a video by selecting a mode.

Using shooting modes

Capture photos or record videos by selecting the best shooting mode for the conditions.

Using the Smart Auto mode

In Smart Auto mode, your camera automatically chooses the appropriate camera settings based on the type of scene it detects. The Smart Auto mode is helpful if you are not familiar with the camera settings for various scenes.

1 On the Home screen, touch [icon].

2 Align your subject in the frame.

   • The camera automatically selects a scene. An appropriate scene icon appears at the top left of the screen. The icons are listed below.
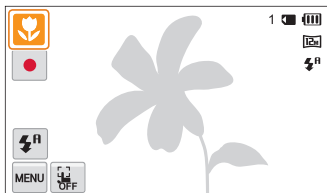
Icon	Description
	Landscapes
	Scenes with bright white backgrounds
	Landscapes at night (when the flash is off)
	Portraits at night
	Landscapes with backlighting
	Portraits with backlighting
	Portraits
	Close-up photos of objects
	Close-up photos of text
	Sunsets
	Indoors, dark
	Partially lit
	Close-up with spot lighting
	Portraits with spot lighting
	Blue skies
	Forested areas

Icon	Description
🌼	Close-up photos of colorful subjects
🎍	Camera is stabilized on a tripod and the subject is not moving for a certain period of time. (when shooting in the dark)
🏃	Actively moving subjects
🎆	Fireworks (when using a tripod)

3 Half-press [**Shutter**] to focus.

4 Press [**Shutter**] to capture the photo.
- Touch ⬚ᵒᶠᶠ → ⬚, and then touch the subject to capture a photo.
- To record a video, touch ●. The camera automatically turns to Smart Movie mode. To stop recording, touch ■.
- While recording a video, touch ❚❚ to pause or touch ● to resume.

- If the camera does not recognize an appropriate scene mode, it uses the default settings for Smart Auto mode.
- 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 the shooting conditions, such as camera shake, lighting, or distance to the subject.
- Even if you use a tripod, the camera may not detect the 🎍 mode if the subject is moving.
- In Smart Auto mode, the camera consumes more battery power, because it changes settings often to select appropriate scenes.

Using the Program mode

In Program mode, you can set most options, except the shutter speed and aperture value, which the camera sets automatically.

1 On the Home screen, touch 🅿.

2 Touch ▭ᴹᴱᴺᵁ, and then set the desired options.
- For a list of options, refer to "Shooting options". (p. 61)
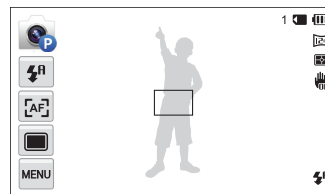
3 Align your subject in the frame, and then half-press [**Shutter**] to focus.

4 Press [**Shutter**] to capture the photo.

Setting the user buttons

In Program mode, you can add shortcuts for your favorite options to the left side of the screen.

1 In Shooting mode, touch [MENU] → **My screen** → **OK**.

2 Select one of the icons on the right and drag the icon into a desired box on the left.

  • To remove shortcuts, drag an icon to the right.

3 Touch **OK** to save.

📝 You can create up to 3 shortcuts.

Using the Movie mode

In Movie mode, you can customize settings to record Full HD videos (1920 X 1080) of up to 20 minutes in length. The camera saves recorded videos as MP4 (H.264) files.

> • H.264 (MPEG-4 part10/AVC) is a high-compression video format established by the international standards organizations ISO-IEC and ITU-T.
> • If you use memory cards with slow write speeds, the camera may not save videos properly. Video recordings may be corrupted or fail to play back correctly.
> • Memory cards with slow writing speeds will not support high-resolution videos and high-speed videos. To record high-resolution or high-speed videos, use memory cards with faster write speeds.
> • If you activate the OIS function while recording a video, the camera may record the operating sound of the OIS function.
> • If you use the zoom function when recording a video, the camera may record the noise of the zoom operating. To decrease zoom noise, use the Sound Alive function. (p. 82)
> • While recording a video, if you perform no operations for 5 minutes, the camera automatically switches to Power save mode. In Power save mode, move the camera, touch the screen, or press a button to continue using the camera. (p. 83)

1 On the Home screen, touch 🎬.

2 Touch 🔲, and then set desired options.
   • For a list of options, refer to "Shooting options". (p. 61)

3 Touch ● to start recording.

4 Touch ■ to stop recording.

Recording high-speed videos

You can record high-speed videos by setting frame rate at 🎬₁₂₀ (10 seconds maximum). High-speed videos will be played in slow motion at 30 FPS, regardless of the frame rate of the video. To record a high-speed video, you need to set the movie size to **QVGA** by touching 🔲 → **Movie Size** → **QVGA**.

> • Memory cards with slow write speeds do not support high-speed videos.
> • The camera does not record audio when recording high-speed videos.
> • The image quality of high-speed video may be lower than normal speed video.
> • You cannot use White Balance options, capture still images, or use zoom functions when recording high-speed videos.

Pause recording

The camera allows you to temporarily pause a video while recording. With this function, you can record separate scenes as a single video.
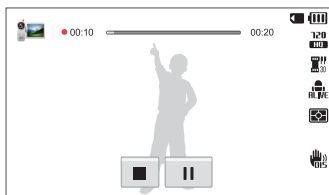
• Touch ❚❚ to pause while recording.
• Touch ● to resume.

Capturing still images while recording a video

You can capture still images while recording a video without switching to the photo shooting modes (up to 6 photos).
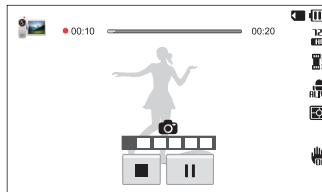
• Press [**Shutter**] to capture images while recording a video.
• Captured images will be saved automatically.

> • The size of the captured image varies, depending on the size of the recorded video.
> • You cannot capture still images while recording high-speed videos.
> • You cannot capture still images when you pause the video recording.
> • The quality of images captured while recording a video may be lower than those captured normally.
> • You cannot capture still images when Smart Movie mode or Movie Filter mode is selected.
> • To change the size of the captured image, touch ⅧⅢ → **Dual Capture Size**.

Using the Scene mode

In Scene mode, you can capture a photo with options that are preset for a specific scene.

1 On the Home screen, touch 🎬.

2 Select a scene.
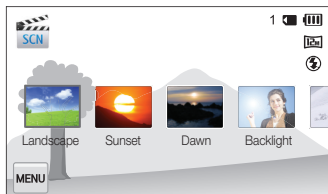
Option	Description
Landscape	Capture still-life scenes and landscapes.
Sunset	Capture scenes at sunset, with natural-looking reds and yellows.
Dawn	Capture scenes at sunrise.
Backlight	Capture backlit subjects.
Beach & Snow	Reduce underexposure of subjects caused by sunlight reflected from sand or snow.
Text	Clearly capture text from printed or electronic documents.

3 Align your subject in the frame, and then half-press [**Shutter**] to focus.

4 Press [**Shutter**] to capture the photo.

Using the Live Panorama mode

In Live Panorama mode, you can capture a wide panoramic scene in a single photo. Capture a 2D-panoramic photo or a 3D-panoramic photo that can be viewed on a 3D TV.

▲ Shooting example

1 On the Home screen, touch ▦.

2 Touch ▦ (2D Panorama mode) or ▦ (3D Panorama mode).

3 Align your subject in the frame, and then half-press [**Shutter**] to focus.
   • Align the camera with the far left or the far right, or very top or bottom, of the scene you want to capture.

4 Press and hold [**Shutter**] to start shooting.

5 With [**Shutter**] pressed, slowly move the camera in the direction that will let it capture the rest of the panorama.
   • If 3D Panorama mode is selected, the panoramic shot can be taken only in a horizontal direction.
   • Arrows toward the direction of motion are displayed, and the entire shooting image is displayed in the preview box.
   • When the viewfinder is aligned with the next scene, the camera captures the next photo automatically.

Shakiness
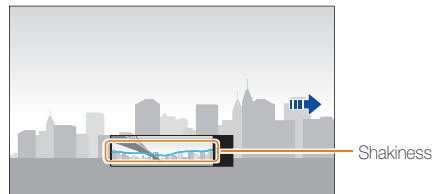
6 When you are finished, release [**Shutter**].
   • When you have captured all the necessary shots, the camera combines them into one panoramic photo.

- For best results when capturing panoramic photos, avoid the following:
  - moving the camera too quickly or too slowly
  - moving the camera too little to capture the next image
  - moving the camera at irregular speeds
  - shaking the camera
  - shooting in dark places
  - capturing moving subjects nearby
  - shooting conditions where the brightness or color of light is changing
- Photos taken are automatically saved, and shooting is stopped under the following conditions:
  - if you change the shooting direction while shooting
  - if you move the camera too rapidly
  - if you don't move the camera
- Selecting Live Panorama mode will disable the digital and optical zoom functions. If you select Live Panorama mode while the lens is zoomed in, the camera automatically zooms out to the default position.
- In Live Panorama mode, some shooting options are not available.
- In Live Panorama mode, your camera may not capture the last scene in its entirety if you stop moving the camera exactly where you want the scene to end. To capture the entire scene, move your camera slightly beyond the point where you want the scene to end.

- In 3D Panorama mode, your camera may not capture the very beginning or end of a scene due to the nature of the 3D effect. To capture the entire scene, move slightly beyond the beginning and end points you want to capture.
- In 3D Panorama mode, photos are captured in both JPEG and MPO file formats.
- You can view an MPO file that supports the 3D effect only on an MPO-compatible display, such as 3D TV or 3D monitor. On your camera's display, you can view only JPEG files.
- Use proper 3D glasses when you view an MPO file on a 3D TV or 3D monitor.

Using the Gesture Shot mode

Control [**Shutter**] and zoom functions with hand gestures.

1 Set your camera on a tripod and flip the screen upward.

2 On the Home screen, touch 🌀.

3 Read the instructions about basic hand gestures and touch **OK**.

- The pop-up disappears when you perform one of the hand gestures even if you do not touch **OK**.

4 Align your subject in the frame.

5 Make the appropriate hand gesture toward the camera.

- To zoom in, move your hand in a clockwise motion ↻.
- To zoom out, move your hand in an anti-clockwise motion ↺.

6 Move your hand up and down twice ↕ to start the timer.

- The camera automatically releases the shutter 3 seconds after recognizing the gesture.

- Ensure the subject is between 50 cm and 5 m from the camera lens.
- Ensure the subject is on the screen. If you perform the hand gestures outside of the screen, the camera may not detect gestures.
- The camera may react to other movements.
- When using hand gestures to control the zoom, the zoom ratio number will turn red and start blinking when it reaches the maximum zoom level.
- Adjust the size of hand gestures based on the zoom ratio. If you perform hand gestures beyond the edge of the screen, the camera cannot detect them.

Using the Low Light Shot mode

In low light conditions, capture multiple photos and combines them into a bright image having less blurring and noise without using the flash.

1 On the Home screen, touch 🔘.

2 Align your subject in the frame, and then half-press [**Shutter**] to focus.

3 Press [**Shutter**] to capture the photo.

> 🖉 • You can set the resolution to ▢▥▥ or lower.
> • Quick View is not available in the Low Light Shot mode.

Using the Beauty Palette mode

In Beauty Palette mode, capture a portrait, and then add various beautifying effects.

1 On the Home screen, touch 🔲.

2 Align your subject in the frame, and then half-press [**Shutter**] to focus.

3 Press [**Shutter**] to capture a photo.
   • To apply a beautifying effect to a saved image, touch 🔳.

4 Touch **Use**.

5 Select a beauty effect.
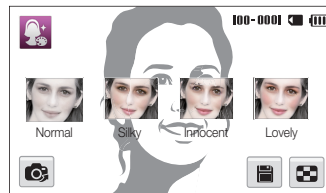
   • To recapture a photo, touch 📷.

6 Touch 💾 to save the photo.

📝 • If the camera fails to detect a face in the photo, you cannot use
      Beauty Palette mode.
    • The camera is only able to detect one face at a time. If there is more
      than one face in the photo, select a face to apply a beauty effect.
    • Depending on the subject's facial structure, the camera may not
      recognize the subject's face.
    • When an image is rotated, the camera can recognize a subject's face
      only when the angle of the face is 90°, 180°, or 270° from normal
      orientation.
    • To increase the face recognition rate, the subject's face size should be
      bigger than 1/12 of the screen.

Using effect modes

Capture photos or record videos with various effects.

Using the Beauty Shot mode

In Beauty Shot mode, you can capture a portrait with options to hide facial imperfections.

1 On the Home screen, touch 🎨.

2 Drag the sliders or touch the **+/-** icons to adjust the **Face Tone** and **Face Retouch**.
   • For example, increase the Face Tone setting to make skin appear lighter.
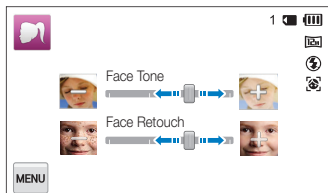
3 Align your subject in the frame, and then half-press [**Shutter**] to focus.

4 Press [**Shutter**] to capture the photo.

When using the Beauty Shot mode, the focus distance will be set to **Auto Macro**.

Using the HDR Plus mode

In High Dynamic Range (HDR) Plus mode, the camera automatically adjusts the exposure or saturation, to produce images with high tonal detail (HDR) or to set an artistic mood (HDR art).

▲ Before 🅷🅳🆁

▲ After 🅷🅳🆁

▲ Before 🅷🅳🆁

▲ After 🅷🅳🆁

1 On the Home screen, touch 🖼.

2 Touch 🅷🅳🆁 (HDR) or 🅷🅳🆁 (HDR art).

3 Align your subject in the frame, and then half-press [**Shutter**] to focus.

4 Press [**Shutter**] to capture the photo.

5 Check the image with the HDR effect.

> In the HDR Plus mode, the final image after applying 🅷🅳🆁 or 🅷🅳🆁 effect is saved.

Using the Photo Filter mode

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

Miniature

Vignetting

Fish-eye

Sketch

1 On the Home screen, touch .

2 Select an effect.

Option	Description
Miniature	Apply a tilt-shift effect to make the subject appear in miniature.
Vignetting	Apply the retro-looking colors, high contrast, and strong vignette effect of Lomo cameras.
Soft Focus	Hide facial imperfections or apply dreamy effects.
Old Film	Apply a vintage film effect.
Half Tone Dot	Apply a halftone effect.
Sketch	Apply a pen sketch effect.
Fish-eye	Distort close objects to imitate the visual effect of a fisheye lens.
Classic	Apply a black and white effect.
Retro	Apply a sepia tone effect.

Option	Description
Oil Painting	Apply an oil painting effect.
Ink Painting	Apply a watercolor painting effect.
Cartoon	Apply a cartoon painting effect.
Cross Filter	Add lines that radiate outward from bright objects to imitate the visual effect of a cross filter.
Zooming Shot	Blur the edges of a photo to emphasize the subjects in the center.

3 Align your subject in the frame, and then half-press [**Shutter**] to focus.

4 Press [**Shutter**] to capture a photo.

☑ • Depending on the option you select, the resolution may change to 🔟 or smaller automatically.
  • To apply filter effects to saved photos, touch 🔳.

Using the Movie Filter mode

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

1 On the Home screen, touch 🎬.

2 Select an effect.

Option	Description
Miniature	Apply a tilt-shift effect to make the subject appear in miniature.
Vignetting	Apply the retro-looking colors, high contrast, and strong vignette effect of Lomo cameras.
Half Tone Dot	Apply a halftone effect.
Sketch	Apply a pen sketch effect.
Fish-eye	Distort close objects to imitate the visual effect of a fisheye lens.
Classic	Apply a black and white effect.
Retro	Apply a sepia tone effect.

Option	Description
Palette Effect 1	Create a vivid look with sharp contrast and strong color.
Palette Effect 2	Make scenes clean and clear.
Palette Effect 3	Apply a soft brown tone.
Palette Effect 4	Create a cold and monotone effect.

3 Touch ● to start recording.

4 Touch ■ to stop recording.

> 🖉 • If you select **Miniature**, playback speed will increase.
> • If you select **Miniature**, you cannot record the video sound.
> • Depending on the option you select, the recording speed may change to 🎞ᴹ and the recording resolution may change to **VGA** or smaller automatically.

Using the Picture in Picture mode

In Picture in Picture mode, you can capture or select a full-sized background photo, and then insert a smaller photo or video into the foreground.

1 On the Home screen, touch 📷.

2 Half-press [**Shutter**] to focus, and then press [**Shutter**] to capture a background photo.
  • To select a background photo from your saved photos, touch 🔳. You cannot select a video file, a photo captured in Live Panorama or 3D Photo mode.

3 Touch **Use** to set the photo as the background image.
  • To recapture a background photo, touch **Retake**.

4 Drag the self-shot screen to move it to a desired location.

5 To adjust the size, touch the self-shot screen, and then drag the corner of the box that appears around it.

6 Flip the screen and take a self-portrait shot.
- The insertion window appears larger when you half-press [**Shutter**], so that you can determine whether or not the subject is in focus.
- To record a video, touch ●. To stop recording and insert the video, touch ■.
- While recording a video, touch ❚❚ to pause or touch ● to resume.
- To recapture a background photo, touch **Exit**.

- In the Picture in Picture mode, the resolution is automatically set to ⌈2m⌉.
- The final Picture-in-picture photos or videos are saved as one combined file and the inserted photos or videos are not saved separately.
- When inserting a video, the resolution for the combined file is automatically set to **VGA**.
- When capturing a background photo, a photo captured in the vertical position does not rotate automatically.
- The maximum size of the insertion window is 320 X 240, and the aspect ratio stays the same when changing the size.
- The maximum length of video that can be inserted is 20 minutes in 4:3 ratio.
- In Picture in Picture mode, the available zoom range may be less than in other shooting modes.
- When you select a background photo from your saved photos, black bars may appear at the edges of the image, depending on the aspect ratio.
- If you flip the screen and take a self-portrait shot, the self-shot image will be flipped horizontally.

Using the Split Shot mode

In Split Shot mode, you can capture several photos and arrange them with preset layouts.

1   On the Home screen, touch ▦.

2   Select a split style.
    •   To adjust the sharpness of the dividing line, touch ▦ →
        Line Blur → a desired value.
    •   To adjust the size of the frame, drag the dividing line.
        Touch ↻ to discard your changes.
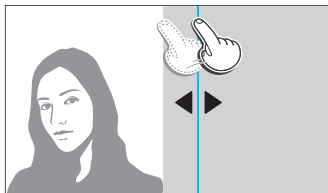
    •   To apply a Smart Filter effect to part of the shot, touch 🖼⁺ →
        an effect → **OK**. You can apply different Smart Filter effects to
        each part of the shot.
    •   To get information about each options, touch ▣.

3   Align your subject in the frame, and then half-press
    [**Shutter**] to focus.

4   Press [**Shutter**] to capture a photo.
    •   Repeat steps 3 and 4 to capture the rest of the photos.
    •   To recapture a photo, touch ↩.

    ☒   •   In Split Shot mode, the resolution is automatically set to ⑤ₘ or smaller.
        •   In Split Shot mode, the available zoom range may be less than in other
            shooting modes.
        •   The typical shooting order is from top to bottom and from left to right.
            If you flip the screen, the order will change from top to bottom and
            right to left.

Using the Magic Frame mode

In Magic Frame mode, you can apply various frame effects to your photos. The shape and the feel of the photos will change according to the frame you select.

1 On the Home screen, touch 🖼.

2 Select a desired frame.
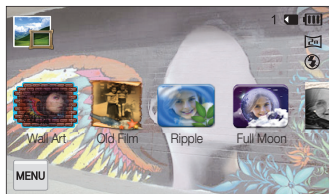
3 Align your subject in the frame, and then half-press [**Shutter**] to focus.

4 Press [**Shutter**] to capture the photo.

> 🖉 In Magic Frame mode, the resolution is automatically set to 2ᴍ.

Using the My Magic Frame mode

In My Magic Frame mode, you can make part of the photo transparent, and then capture a new photo within the transparent area.

1 On the Home screen, touch 🖳.

2 Half-press [**Shutter**] to focus, and then press [**Shutter**] to capture a background photo.

3 Touch **Use**.
   - To recapture a background photo, touch **Retake**.
   - To select a background photo from your saved photos, touch 🖿. You cannot select a video file, a photo captured in Live Panorama or 3D Photo mode.

4 Select a desired frame.
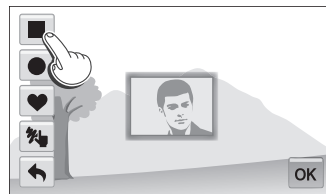
   - To draw a new frame and set the thickness of the pen, touch 🖉.

5 Drag the selected frame to place it to a desired location.

6 To adjust the size, touch the selected frame, and then drag the corner of the box that appears around it.

7 Touch **OK**.

8 Adjust transparency by moving the sliders or touching the **+/-** icons to adjust.

9 Align your subject in the frame, and then half-press [**Shutter**] to focus.

10 Press [**Shutter**] to capture a photo.
   • To recapture a background photo, touch **Exit → Yes**.

> • When using the My Magic Frame mode, limited shooting options are available.
> • As the area to be displayed as transparent increases, it may take longer to save the picture.
> • When using the My Magic Frame mode, the area displayed transparent in the frame is focused.
> • The resolution is fixed at ⬛ in the My Magic Frame mode.

Using the Artistic Brush mode

In Artistic Brush mode, you can capture a photo, and then view a video that shows the process of how the filter effect is applied.

1 On the Home screen, touch 🖌.

2 Select a filter.
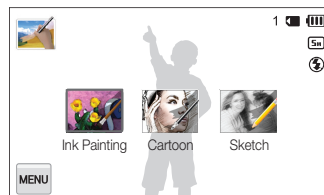
Option	Description
Ink Painting	Apply a watercolor painting effect.
Cartoon	Apply a cartoon painting effect.
Sketch	Apply a pen sketch effect.

3 Align your subject in the frame, and then half-press [**Shutter**] to focus.

4 Press [**Shutter**] to capture a photo.
- After capturing the photo, the video that shows the process of how the filter effect is applied will begin automatically.
- Touch ❙❙ → 🔄 → **Yes** to capture a still image while playing the video in Playback mode.

- 🖉 • In Artistic Brush mode, the resolution is automatically set to 5m or smaller.
  - In Artistic Brush mode, the focus area is automatically set to **Multi AF**.
  - In Artistic Brush mode, both the photo with the filter effect and the video that shows how to apply the filter effect are saved.
  - In Artistic Brush mode, the available zoom range may be less than in other shooting modes.
  - In Artistic Brush mode, it may take longer to save files.
  - You cannot upload a video captured in Artistic Brush mode via the wireless networking feature on your camera.

Using the Motion Photo mode

In Motion Photo mode, you can capture and combine a series of photos, and then select an area to be animated to create a GIF animation.

1 On the Home screen, touch 🖼.

2 Align your subject in the frame, and then half-press [**Shutter**] to focus.

3 Press [**Shutter**] to capture the photo.
- The camera captures multiple photos while the status lamp is blinking.

4 On the screen, draw an area to be animated.
  • To adjust the motion speed, touch +/- icon.
  • To adjust the thickness of the brush, touch ●.
  • To draw the animated area again, touch ↰.
  • To recapture a photo, touch 📷.

5 Touch 💾 to save the photo.
  • The camera saves an animated GIF and one JPG of the first scene from the GIF file. You cannot view the JPG file on your camera. To view it, connect your camera to a PC.

  ✎ • In Motion Photo mode, the resolution is automatically set to VGA.
     • Use a tripod to prevent your camera from shaking.
     • In Motion Photo mode, it may take longer to save files.

Using the 3D Photo mode

You can take 3D pictures in 3D Photo mode that can be viewed on a 3D TV or 3D monitor.

1 On the Home screen, touch 3D.

2 Align your subject in the frame, and then half-press [Shutter] to focus.

3 Press [Shutter] to capture the photo.
  • The camera captures 2 photos in both JPEG and MPO file formats.

  ✎ • When using the 3D Photo mode, limited shooting options are available.
     • An MPO file for 3D effects can only be displayed on devices supporting the MPO format (3D TV and 3D monitor), while the camera can display only regular JPEG files.
     • If you want to see the 3D effect of MPO files on a 3D TV or 3D monitor, you need to wear 3D glasses provided by the manufacturer.
     • The resolution is fixed at 2M in the 3D Photo mode.

About 3D Depth Viewer

The 3D Depth Viewer represents 3D effects with a color gradient for 3D shooting. Touch [MENU] → **3D Depth Viewer** to turn on or off the option.

3D Depth

Far — White

Near — Black

Shooting options

Learn how to set the options in Shooting mode.

Selecting a resolution and quality

Learn how to change the image resolution and quality settings.

Selecting a resolution

As you increase the resolution, your photo or video will include more pixels, so it can be printed on larger paper or displayed on a larger screen. When you use a high resolution, the file size will also increase.

Setting the photo resolution

1 In Shooting mode, touch 🔲 → **Photo Size**.

2 Select an option.

Icon	Description
16ᴍ	**4608 X 3456**: Print on A1 paper.
14ᴍᴘ	**4608 X 3072**: Print on A1 paper in wide ratio (3:2).
12ᴍ	**4608 X 2592**: Print on A1 paper in panorama ratio (16:9) or play back on an HDTV.
10ᴍ	**3648 X 2736**: Print on A2 paper.
5ᴍ	**2592 X 1944**: Print on A4 paper.
3ᴍ	**1984 X 1488**: Print on A5 paper.
2ᴍ	**1920 X 1080**: Print on A5 paper in panorama ratio (16:9) or play back on an HDTV.
1ᴍ	**1024 X 768**: Attach to an email.

Setting the video resolution

1 In Video Shooting mode, touch 🔲 → **Movie Size**.

2 Select an option.

Icon	Description
FULL HD	**1920 X 1080**: High-quality HD files to play back on an HDTV.
720 HD	**1280 X 720 HQ**: High-quality files to Play back on an HDTV.
HD	**1280 X 720**: HD files to play back on an HDTV.
VGA	**640 X 480**: SD files to play back on an analog TV.
QVGA	**320 X 240**: Post on a web page.
240 WEB	**For Sharing**: Post on a website using the wireless network (30 seconds maximum).

Selecting an image quality

Set the photo and video quality settings. Higher image quality settings will result in larger file sizes.

Setting the photo quality

The camera compresses and saves the photos you capture in the JPEG format.

1 In Shooting mode, touch ▧ → **Quality**.

2 Select an option.

Icon	Description
▧	**Super Fine**: Capture photos in super high quality.
▧	**Fine**: Capture photos in high quality.
▧	**Normal**: Capture photos in normal quality.

Setting the video quality

The camera compresses and saves the videos you record in MP4 (H.264) format.

1 In Video Shooting mode, touch ▧ → **Frame Rate**.

2 Select an option.

- As the frame rate increases, action appears more natural, but the file size also increases.

Icon	Description
▧₁₂₀	**120 FPS**: Record 120 frames per second. (120 FPS is available only with 320 X 240)
▧₃₀	**30 FPS**: Record 30 frames per second.
▧₁₅	**15 FPS**: Record 15 frames per second.

Using the timer

Learn how to set the timer to delay shooting.

1 In Shooting mode, touch 🔳 → **Timer**.

2 Select an option.

Icon	Description
⏱	**Off**: The timer is not active.
⏱	**10 Sec**: Capture a photo after a 10-second delay.
⏱	**2 Sec**: Capture a photo after a 2-second delay.
⏱	**Double**: Capture one photo after a 10-second delay and another photo after a 2-second delay.

Available options may differ depending on the shooting conditions.

3 Press [**Shutter**] to start the timer.
 • The AF-assist light/timer lamp blinks. The camera will automatically capture a photo after the specified time has elapsed.

 • Press [**Shutter**] to cancel the timer.
 • Depending on the Face Detection option you have selected, the timer function or some of its options may not be available.
 • Timer options are not available if you set burst options.

Shooting in the dark

Learn how to capture photos at night or in low light conditions.

Preventing red-eye

If the flash fires when you capture a photo of a person in the dark, a red glow may appear in the person's eyes. To prevent this, select **Red-eye** or **Red-eye Fix**. Refer to flash options in "Using the flash."

▲ Before correction

▲ After correction

This option is available in Program and Beauty Shot modes.

Using the flash

Use the flash when you capture photos in the dark or when you need more light in your photos.

1 In Shooting mode, touch ▣ → **Flash**.

Flash

- ⊘ Off
- ⚡ᴬ Auto ✓
- ⦿ Red-eye
- ⚡ᶠ Fill in
- ⚡ˢ Slow Sync
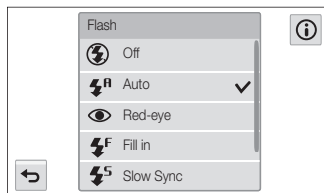
2 Select an option.

Icon	Description
⊘	**Off**: • The flash will not fire. • The camera will display the shake warning 《🖐》 when you are shooting in low light.
⚡ᴬ	**Auto**: The flash will fire automatically when the subject or background is dark.

Icon	Description
◉	**Red-eye**: • The flash will fire twice when the subject or background is dark to reduce the red-eye effect. • There is an interval between the 2 bursts of the flash. Do not move until the flash fires a second time.
⚡ᶠ	**Fill in**: • The flash always fires. • The camera automatically adjusts light intensity.
⚡ˢ	**Slow Sync**: • The flash fires and the shutter stays open longer. • This option is recommended when you want to capture more ambient light to reveal more details in the background. • Use a tripod to prevent your photos from blurring. • The camera will display the shake warning (《🖐》) when you are shooting in low light.
✎	**Red-eye Fix**: • The flash fires twice when the subject or background is dark. The camera corrects red-eyes through its advanced software analysis. • There is an interval between the 2 bursts of the flash. Do not move until the flash fires a second time.

Available options may differ depending on the shooting conditions.

	• Flash options are not available if you set burst options or select **Blink Detection**.
	• Make sure that your subjects are within the recommended distance from the flash. (p. 159)
	• If light from the flash is reflected or there is a substantial amount of dust in the air, tiny spots may appear in your photo.

Adjusting the ISO sensitivity

The ISO sensitivity is the measure of a film's sensitivity to light as defined by the International Organization for Standardization (ISO). The higher ISO sensitivity you select, the more sensitive to light your camera becomes. Use a higher ISO sensitivity to capture better photos and reduce camera shake when not using the flash.

1 In Shooting mode, touch 🔳 → **ISO**.

2 Select an option by dragging the dial on the screen, and then touch 𝗢𝗞.
   • Select 🔳 to use an appropriate ISO sensitivity based on the brightness of the subject and lighting.
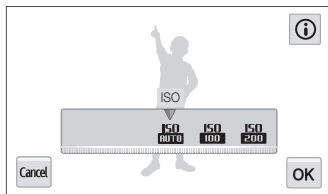
Higher ISO sensitivities may result in more image noise.

Changing the camera's focus

Learn how to adjust the camera's focus to suit the subject and the shooting conditions.

Using macro

Use macro to capture close-up photos of subjects, such as flowers or insects.

📝	• Try to hold the camera firmly to prevent blurry photos.
	• Turn off the flash if the distance to the subject is less than 40 cm.

1 In Shooting mode, touch ▥ → **Focus**.

2 Touch **Macro** to select it.
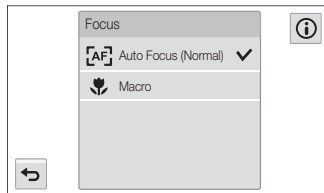
Icon	Description
⟦ᴬᶠ⟧	**Auto Focus (Normal)**: Focus on a subject farther than 80 cm away. Farther than 250 cm away when you use the zoom.
🌷	**Macro**: Focus on a subject that is 5–80 cm from the camera. 100–250 cm when you use the zoom.

Available options may differ depending on the shooting conditions.

Using tracking auto focus

Tracking AF allows you to track and auto focus on your subject, even when you are moving.

1 In Shooting mode, touch **MENU** → **Focus Area**.

2 Touch **Smart Touch AF** to select it.

3 Touch the subject you want to track in the touch area.
  • A focus frame appears on the subject and follows the subject as you move the camera.
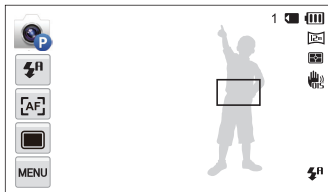
  • The white frame means that your camera is tracking the subject.
  • The green frame means that your subject is in focus when you half-press [**Shutter**].

4 Press [**Shutter**] to capture the photo.

  • If you do not select a focus area, the focus frame will appear in the center of the screen.
  • Tracking a subject may fail when:
    - the subject is too small
    - the subject moves excessively
    - the subject is backlit or you are shooting in a dark place
    - the subject includes horizontal patterns, such as blinds
    - the camera shakes excessively
  • When tracking a subject fails, the focus frame will appear as a white single-line frame (□).
  • If the camera fails to track the subject, you must reselect the subject to track.
  • If the camera fails to focus, the focus frame will change to a red single-line frame (□).
  • If you use this function, you cannot set Face Detection options, Timer options, Burst options, and Intelli zoom.

Using One Touch Shot

You can capture a photo with the touch of your finger.
As you touch on a subject, the camera focuses on the subject automatically and capture a photo.

1 In Shooting mode, touch 🔲 → **Focus Area**.

2 Touch **One Touch Shooting** to select it.

3 Touch the subject to capture a photo.
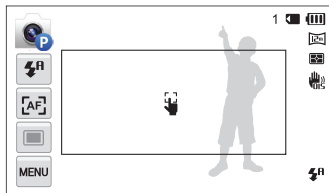
ℹ️ If you use this function, you cannot set Timer, Intelli zoom and Burst options.

Adjusting the focus area

You can get clearer photos by selecting an appropriate focus area according to your subject's location in the scene.

1 In Shooting mode, touch 🔲 → **Focus Area**.

2 Select an option.

Icon	Description
⊡	**Center AF**: Focus on the center of the frame (suitable when subjects are located at or near the center).
⊞	**Multi AF**: Focus on one or more of 9 possible areas.
👆	**One Touch Shooting**: Focus on the subject and capture a photo by touching the image on the screen. (p. 70)
👆	**Smart Touch AF**: Focus on and track the subject that you touch on the screen. (p. 69)

Available shooting options may differ depending on the shooting conditions.

Using Face Detection

If you use Face Detection options, your camera can automatically detect a human face. When you focus on a human face, the camera adjusts the exposure automatically. Use **Blink Detection** to detect closed eyes or **Smile Shot** to capture a smiling face. You can also use **Smart Face Recognition** to register faces and prioritize the focus on them.

Detecting faces

Your camera automatically detects up to 10 human faces in one scene.

1 In Shooting mode, touch 🔲 → **Face Detection**.

2 Touch **Normal** to select it.

3 Press [**Shutter**] to capture the photo.
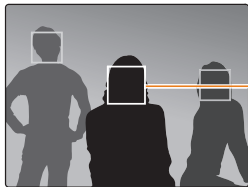
The nearest face appears in a white focus frame and the rest of the faces appear in gray focus frames.

> • The closer you are to the subjects, the quicker your camera will detect faces.
> • To focus on a subject in a gray focus frame, touch the face in the frame.
> • Depending on the shooting options you selected, Face Detection options may not be available.

Capturing a smile shot

The camera automatically releases the shutter when it detects a smiling face.

1 In Shooting mode, touch 🔲 → **Face Detection**.

2 Touch **Smile Shot** to select it.

3 Compose your shot.
   • The camera automatically releases the shutter when it detects a smiling face.
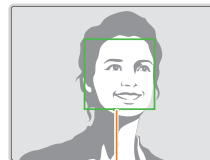
When your subject smiles broadly, your camera can detect the smile more easily.

Detecting eye blinking

If your camera detects closed eyes, it will automatically capture 3 photos in succession.

1 In Shooting mode, touch [MENU] → **Face Detection**.

2 Touch **Blink Detection** to select it.

3 Press [**Shutter**] to capture the photo.
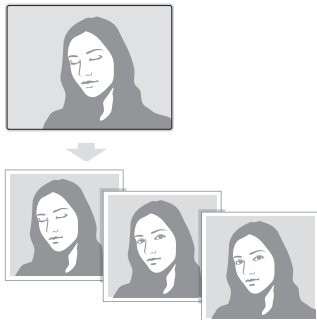
Using Smart Face Recognition

The camera automatically registers faces that you frequently photograph. The Smart Face Recognition feature will automatically prioritize the focus on those faces and on favorite faces.

1 In Shooting mode, touch [MENU] → **Face Detection**.

2 Touch **Smart Face Recognition** to select it.

3 Press [**Shutter**] to capture the photo.
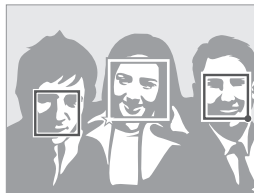
• ⬜ : Faces that you have registered as favorites.
  (To register faces as favorites, refer to page 73.)
• ⬜ : Faces that the camera has automatically registered.

<table>
<tr><td>🖉</td><td>
• The camera may recognize and register faces incorrectly depending on lighting conditions, drastic changes in the subject's pose or face, and whether or not the subject is wearing glasses.

• The camera can automatically register up to 14 faces. If the camera recognizes a new face when 14 faces have already been registered, it will replace the lowest priority face with the new one.

• The camera can detect up to 5 favorite faces in one scene.
</td></tr>
</table>

Registering faces as your favorites (My Star)

You can register your favorite faces to prioritize the focus and exposure on those faces.

1 In Shooting mode, touch [MENU] → **Smart FR Edit**.

2 Touch **My Star** to select it.

3 Align your subject's face with the oval guideline, and then press [**Shutter**] to register the face.
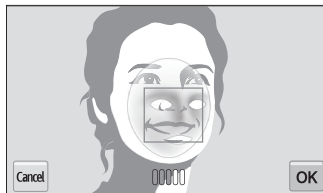
🖉 • Capture photos of one person at a time when registering faces.

• Capture 5 photos of the subject's face for best results: one each from the front, left, right, above, and below.

• When capturing photos from the left, right, above, and below, instruct the subject not to turn his or her face more than 30 degrees.

• You can register a face even if you capture only one photo of the subject's face.

4 Touch ↰ when the face list appears.
- Your favorite faces are indicated with a ★ on the face list.

📝
- You can register up to 6 favorite faces.
- The flash will not fire when you register a favorite face.
- If you register the same face twice, you can delete one of the faces in the face list.

Changing the rank of your favorite faces

1 In Shooting mode, touch ᴹᴱᴺᵁ → **Smart FR Edit**.

2 Touch **Face List** to select it.

3 Touch ★₁₂₃ → **Yes**, and then drag the face to a new location.

4 Touch **OK** to save.

📝 To change the rank of your favorite faces in Playback mode, refer to "Ranking your favorite faces" starting on page 90.

Deleting a favorite face

1 In Shooting mode, touch ᴹᴱᴺᵁ → **Smart FR Edit**.

2 Touch **Face List** to select it.

3 Touch ★🗑 → a face → **OK**.

4 When the pop-up message appears, touch **Yes**.

📝 To delete a favorite face in Playback mode, refer to "Deleting a favorite face" on page 90.

Detecting faces Tips

- When your camera detects a face, it tracks the detected face automatically.
- Face Detection may not be effective when:
  - the subject is far from the camera (The focus frame will appear orange for Smile Shot and Blink Detection.)
  - it is too bright or too dark
  - the subject is not facing the camera
  - the subject is wearing sunglasses or a mask
  - the subject's facial expression changes drastically
  - the subject is backlit or the lighting conditions are unstable
- Face Detection is not available when you set Image Adjustment options or Smart Touch AF.
- Depending on the shooting options you selected, available Face Detection options may differ.
- Depending on the Face Detection options you selected, the timer function may not be available.
- When you set Face Detection options, the AF area is automatically set to Multi AF.
- Depending on the Face Detection options you selected, Burst options may not be available.

- When you set Smart Face Recognition option and capture photos of detected faces, they will be registered in the face list.
- You can view registered faces in order of priority in Playback mode. (p. 91) Even though faces are registered successfully, they may not be classified in Playback mode.
- A face detected with Smart Face Recognition option may not appear in the face list or Smart Album.

Adjusting brightness and color

Learn how to adjust the brightness and color for better image quality.

Adjusting the exposure manually (EV)

Depending on the intensity of the ambient light, your photos may be too bright or dark. In these cases, you can adjust the exposure to get a better photo.

▲ Darker (-)

▲ Neutral (0)

▲ Brighter (+)

1 In Shooting mode, touch 🅼🅴🅽🆄 → **EV**.

2 Select a desired exposure value by moving the slider or touching **+/-** icons, and then touch **OK**.

- The photo will be brighter as the exposure value increases.
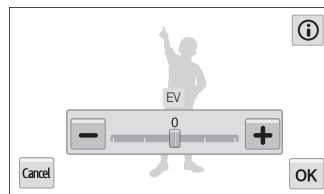
> ☒ • Once you adjust the exposure, the setting will be stored automatically. You may need to change the exposure value later to avoid overexposure or underexposure.
> • If you cannot decide on an appropriate exposure, select the **AEB** (Auto Exposure Bracket) option. The camera will capture 3 consecutive photos, each with a different exposure: normal, underexposed, and overexposed. (p. 80)

Compensating for backlighting (ACB)

When the light source is behind your subject or there is high contrast between your subject and the background, your subject is likely to appear dark in the photo. In this case, set the Auto Contrast Balance (ACB) option.
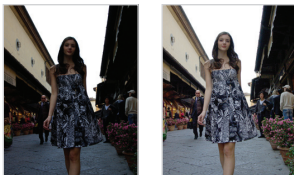
▲ Without ACB   ▲ With ACB

1 In Shooting mode, touch [MENU].

2 Touch **ACB**, and then touch on or off.

Icon	Description
🔦	**Off**: ACB (Auto Contrast Balance) is deactivated.
🔦	**On**: ACB (Auto Contrast Balance) is activated.

- The ACB feature is always on in Smart Auto, Scene (**Beach & Snow**) modes.
- The ACB feature is not available when you set Burst options.

Changing the metering option

The metering mode refers to the way in which a camera measures the quantity of light. The brightness and lighting of your photos will vary depending on the metering mode you select.

1 In Shooting mode, touch [MENU] → **Metering**.

2 Select an option.

Icon	Description
▣	**Multi**: • Your camera divides the frame into several areas, and then measures the light intensity of each area. • Suitable for general photos.
▪	**Spot**: • Your camera measures only the light intensity at the very center of the frame. • If a subject is not in the center of the frame, your photo may be improperly exposed. • Suitable for a subject with backlighting.
▣	**Center-weighted**: • Your camera averages the meter reading of the entire frame with emphasis placed on the center. • Suitable for photos with subjects in the center of the frame.

Selecting a White Balance setting

The color of your photo depends on the type and quality of the light source. If you want the color of your photo to be realistic, select a White Balance setting that is appropriate for the lighting conditions, such as Auto WB, Daylight, Cloudy, or Tungsten.

🔳 Auto WB

☀ Daylight

☁ Cloudy

🔅 Tungsten

1 In Shooting mode, touch MENU → **White Balance**.

2 Touch a desired White Balance option, and then touch **OK**.

Icon	Description
🔳	**Auto WB**: Automatically set the White Balance based on the lighting conditions.
☀	**Daylight**: For outdoor photos on a sunny day.
☁	**Cloudy**: For outdoor photos on a cloudy day or in shadows.
▥	**Fluorescent_H**: For shooting under a daylight fluorescent or 3-way fluorescent light.
▥	**Fluorescent_L**: For shooting under white fluorescent light.
🔅	**Tungsten**: For shooting indoor photos under incandescent bulbs or halogen lamps.
▨	**Custom Set**: To use White Balance settings that you define. (p. 79)

Customizing your own White Balance

You can customize the White Balance by capturing a photo of a white surface, such as a piece of paper, under the lighting conditions in which you intend to capture a photo. The White Balance feature will help you to match the colors in your photo with the actual scene.

1 In Shooting mode, touch MENU → **White Balance**.

2 Touch **Custom Set** to select it.

3 Aim the lens at a piece of white paper, and then press [**Shutter**].
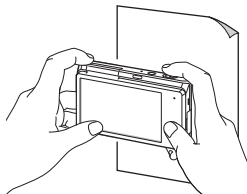
Using burst modes

It can be difficult to capture photos of fast-moving subjects or capture natural facial expressions and gestures of your subjects in photos. Also, it can be difficult to adjust the exposure correctly and select a proper light source. In these cases, select one of the burst options.

1 In Shooting mode, touch 🔲 → **Drive**.

2 Select an option.

Icon	Description
⬛	**Single**: Capture a single photo.
⥤³	**Continuous (3 fps)**: Capture 3 photos per second continuously. (You can capture up to 6 photos in one burst.)
⥤⁵	**Continuous (5 fps)**: Capture 5 photos per second continuously. (You can capture up to 6 photos in one burst.)
⥤¹⁰	**Continuous (10 fps)**: Capture 10 photos per second continuously. (You can capture up to 6 photos in one burst.)
▦	**AEB**: • Capture 3 consecutive photos, each with a different exposure: normal, underexposed, and overexposed. • It may take longer to capture the photo. Use a tripod for best results.

3 Align your subject in the frame, and then half-press [**Shutter**] to focus.

4 Press and hold [**Shutter**].
  • While you are pressing [**Shutter**], the camera captures photos continuously.

 • You can use the flash, timer, ACB and Face Detection options only when you select **Single**.
 • It may take longer to save the photos depending on the memory card capacity and performance.
 • The camera always displays captured photos before returning to Shooting mode.

Shooting options 80

Adjusting images

Adjust the sharpness, contrast, or saturation of your photos.

1 In Shooting mode, touch 🔳 → **Image Adjust**.
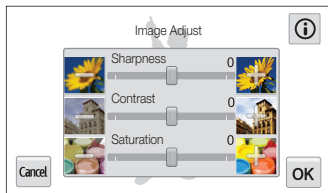
2 Select a desired value by moving the slider or touching **+/-** icons.

Sharpness	Description
-	Soften the edges on your photos (suitable for editing the photos on your computer).
+	Sharpen the edges to improve the clarity of your photos (This may also increase the noise in your photos).

Contrast	Description
-	Decrease the color and brightness.
+	Increase the color and brightness.

Saturation	Description
-	Decrease the saturation.
+	Increase the saturation.

3 Touch **OK** to save your settings.

Select 0 if you do not want to apply any effects (suitable for printing).

Reducing the sound of the zoom

When you use the zoom while recording videos, the camera can record the sound of the zoom. Use the Sound Alive function to reduce the zoom noise.

1 In Video Shooting mode, touch 📷 → **Voice**.

2 Select an option.

Icon	Description
🔊	**Sound Alive On**: Turn on the Sound Alive function to reduce the zoom noise.
🔇	**Sound Alive Off**: Turn off the Sound Alive function. The camera can record the zoom noise.
🎤	**Mute**: Do not record sounds.

> • Do not block the microphone when you use the Sound Alive function.
> • Recordings made with Sound Alive may differ from actual sounds.
> • In Picture in Picture mode, you cannot set the Sound Alive options.

Changing the Power Save Recording Options

While recording a video, if you perform no operations for 5 minutes, the camera automatically switches to Power save mode.

1 In Video Shooting mode, touch [MENU] → **Power Save Rec**.

2 Select an option.

Icon	Description
[OFF]	**Off**: Power Save Recording is deactivated.
[REC]	**On**: Power Save Recording is activated.

- In Power save mode, move the camera, touch the screen, or press a button to continue using the camera.
- The screen will dim 3 minutes after the last operation to save power.

Available shooting options by shooting mode

For details about shooting options, refer to "Shooting options". (p. 61)

	Smart Auto	Program	Movie	Scene	Live Panorama	Gesture Shot	Low Light Shot	Beauty Palette	Beauty Shot	HDR Plus
Resolution	O	O	O	O	□	O	O	O	O	O
Quality	□	O	□	O	□	O	□	O	O	O
Timer	△	O	△	O	-	-	-	-	O	△
Flash	△	O	-	□	-	△	-	△	△	-
ISO sensitivity	-	O	-	-	-	-	-	-	-	-
Macro	-	O	-	-	-	-	-	-	□	O
Focus Area	-	O	-	-	-	-	-	-	-	△
Face detection	-	O	-	-	-	-	□	□	□	-
EV	-	O	O	-	-	-	-	-	-	-
ACB	-	O	-	-	-	-	-	-	-	-
Metering	-	O	O	-	-	-	-	-	-	O
White balance	-	O	O	-	-	-	O	-	-	-
Drive	-	O	-	-	-	-	-	-	-	-
Smart filter	-	-	-	-	-	-	-	-	-	-
Image adjust	-	O	-	-	-	-	-	-	-	-
Sound Alive	-	-	O	-	-	-	-	-	-	-
Digital zoom	-	O	-	△	-	-	-	-	-	-
Intelli zoom	□	△	-	△	-	-	-	-	-	-
OIS	-	O	O	-	-	-	O	-	-	-

O: The option is available in this mode. △: In these modes, some options are limited.
□: In these modes, a certain option is set by default and the default setting is fixed. –: The option is not available in this mode.

	Photo Filter	Movie Filter	Picture in Picture	Split Shot	Magic Frame	My Magic Frame	Artistic Brush	Motion Photo	3D Photo
Resolution	△	△	□	△	□	□	△	□	□
Quality	O	△	□	O	O	O	O	□	□
Timer	O	△	△	△	O	△	△	-	△
Flash	△	-	△	△	△	△	△	-	△
ISO sensitivity	-	-	-	-	-	-	-	-	-
Macro	-	-	-	-	-	-	-	O	-
Focus Area	-	-	-	-	-	-	-	-	-
Face detection	-	-	-	-	-	-	-	-	-
EV	-	-	-	-	-	-	-	-	-
ACB	-	-	-	-	-	-	-	-	-
Metering	-	-	-	-	-	-	-	-	-
White balance	-	-	-	-	-	-	-	-	-
Drive	-	-	-	-	-	-	-	-	-
Smart filter	-	-	-	O	-	-	-	-	-
Image adjust	-	-	-	-	-	-	-	-	-
Sound Alive	-	△	-	-	-	-	-	-	-
Digital zoom	-	-	-	-	-	-	-	-	-
Intelli zoom	-	-	-	-	-	-	-	-	-
OIS	-	-	-	-	-	-	-	-	-

O: The option is available in this mode. △: In these modes, some options are limited.
□: In these modes, a certain option is set by default and the default setting is fixed. – : The option is not available in this mode.

Playback/Editing

Learn how to play back photos or videos, and edit photos or videos. Also, learn how to connect your camera to your computer or TV (HDTV, 3D TV).

Viewing photos or videos in Playback mode

Learn how to play back photos or videos and how to manage files.

Starting Playback mode

View photos or play videos and voice memos stored in your camera.

1 Press [▶].
   - The most recent file will be displayed.
   - If the camera is off, it will turn on and display the most recent file.
   - To view files by category, touch 🖼 on the Home screen. (p. 91)

2 Drag the image left or right to move to another file.

   - To skip files quickly, tilt the camera to the direction you want to flip files. (p. 88)
   - You can also touch and hold the left end or right end of the screen to skip files quickly.
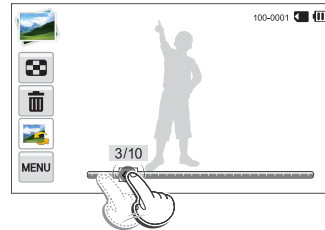
   - You can also drag the slider left or right to move to the previous or next file.

ℹ️ You may not be able to edit or play back files that were captured with other cameras, due to unsupported sizes (image size, etc) or codecs. Use a computer or another device to edit or play back these files.

Viewing files with motion recognition

You can view files by tilting the camera in Playback mode.
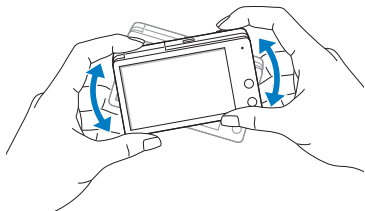
• Motion recognition may not work well if you hold the camera with the screen parallel to the ground.
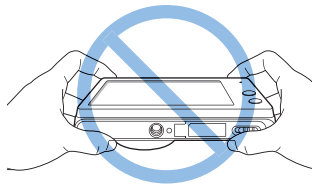
• When you rotate the camera 90° or 180° while you view a photo, the camera will automatically change the orientation of the displayed photo. (p. 142)

• To deactivate motion recognition, touch **MENU** → **Gesture View** → **Off**.

Display in Playback mode
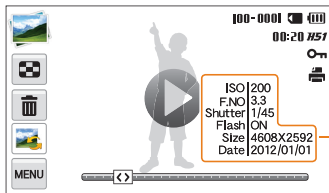
File Information

Icon	Description
00:20	Video length
H5I	Photo captured in a high-speed burst mode (See "Viewing files as a folder", p. 91)
I00-000I	Folder name–File name
⬛	GIF file
🖼	Video includes images captured while recording

Icon	Description
3D	Photo captured in 3D Photo mode
Oⁿ	Protected file
🖶	Print order has been set (DPOF)
🗑	Delete files (p. 93)
▦	View files as thumbnails (p. 92)
🖼	Uploading files to the selected file sharing website or sending files via email (p. 123)
▶	Play videos (p. 97)

To display file information on the screen, touch MENU → **File Information** → **On**.

Ranking your favorite faces

You can rank your favorite faces.

1 In Playback mode, touch 🔲 → **Face List**.
  • In Thumbnail view or Smart album, touch 🔲 → **Face List**.
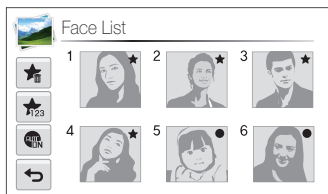
2 Touch ★₁₂₃ → **Yes**, and then drag the face to a new location.

3 Touch **OK** to save your settings.

📝 Touch 📷 to view only your favorite face in the face list.

Deleting a favorite face

You can delete your favorite faces.

1 In Playback mode, touch 🔲 → **Face List**.
  • In Thumbnail view or Smart album, touch 🔲 → **Face List**.

2 Touch ★🗑 → a face → **OK**.

3 When the pop-up message appears, touch **Yes**.

Viewing files as a folder

Photos captured in a high-speed burst mode appear as a folder.

1 In Playback mode, drag the image left or right or move the slider to move to a desired folder.

- The camera will automatically play back photos in the folder.

100-0005
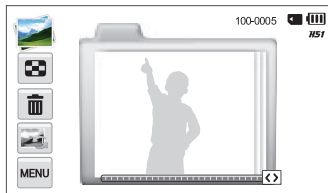
2 Touch the folder to open it.

3 Drag the image left or right or move the slider to move to another file.

4 Touch ↰ to return to Playback mode.

Viewing files by category in Smart Album

View files by category, such as date, face, or file type.

1 On the Home screen, touch 🖼.

- You can also access Smart Album by touching 🔲 or rotating [**Zoom**] to the left in Playback mode.

2 Touch 🗂ALL → a category option.

Icon	Description
🗂ALL	View files normally.
📅	View files by the date they were saved.
👤	View files by recognized faces and favorite faces.
🗂	View files by the file type.

3 Touch a desired list to open it.
- To return to Playback mode, rotate [**Zoom**] to the right.

4 Touch a file to display it in full screen view.

- It may take some time for the camera to open Smart Album, change the category, or reorganize files.
- If you delete a category, all files in the category will be deleted.

Viewing files as thumbnails

Scan thumbnails of files.

In Playback mode, rotate [**Zoom**] to the left to view thumbnails (12 at a time). Rotate [**Zoom**] to the left once or twice more to display more thumbnails (20 or 48 at a time). Rotate [**Zoom**] to the right to return to the previous view.
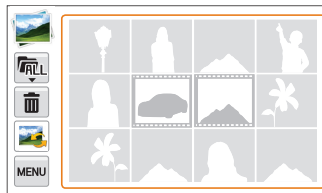
Touch a file to display it in full screen view.

Drag the screen up or down to move to the previous or next page of thumbnails.

Protecting files

Protect your files from accidental deletion.

1 Locate the file you want to protect, and then touch 🔲.

2 Touch **Protect** → **On**.

You cannot delete or rotate a protected file.

Deleting files

Select files to delete in Playback mode.

Deleting a single file

You can select one file, and then delete it.

1 In Playback mode, locate the file you want to delete, and then touch 🗑.

2 When the pop-up message appears, touch **Yes**.

- You can also delete files in Playback mode by touching 🔲 → **Delete** → **Delete** → **Yes**.
  - While viewing files as a folder, touch 🗑 to delete all photos in the folder.
  - To delete a specific photo in a folder, open the folder, select a file, and then touch 🗑.

Deleting multiple files

You can select multiple files, and then delete them at once.

1 In Thumbnail view, touch 🗑.

2 Select the files you want to delete, and then touch 🗑.

3 When the pop-up message appears, touch **Yes**.

> When you sort files by category, deleting a category will delete all files in that category.

Deleting all files

You can select all files, and then delete them at once.

1 In Playback mode, touch MENU → **Delete**.
  • When viewing files in Smart Album or thumbnails view, touch MENU → **Delete** to delete files.

2 Touch **Delete All**.

3 When the pop-up message appears, touch **Yes**.
  • All unprotected files are deleted.

Viewing photos

Enlarge part of a photo or view photos as a slide show.

Enlarging a photo

In Playback mode, rotate [**Zoom**] to the right to enlarge a portion of the photo. Rotate [**Zoom**] to the left to zoom out.

Enlarged area

Drag the screen to see another part of the photo.
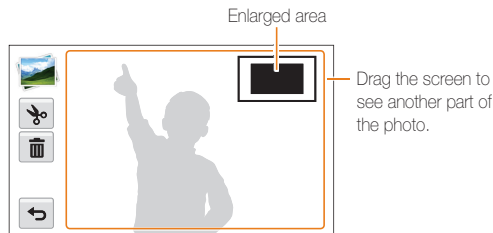
Icon	Description
✂	Crop the photo (the camera will save it as a new file).
🗑	Delete the file.
↩	Return to the original view.

Viewing panoramic photos

View photos captured in Live Panorama mode.

1 In Playback mode, drag the image left or right to move to a desired panoramic photo.
- The entire panoramic photo appears on the screen.

2 Touch ●.
- The camera automatically scrolls through the photo from left to right for a horizontal panoramic photo and from top to bottom for a vertical panoramic photo. The camera then switches to Playback mode.
- While playing back a panoramic photo, touch ▐▐ to pause or touch ▶ to resume.
- When playback of a panoramic photo pauses, drag the image to move the photo horizontally or vertically, depending on the direction you moved when capturing the photo.

3 Touch ⤺ to return to Playback mode.

- ✎ • You can play the panoramic photo by touching ● only if the longest side of the photo is two or more times longer than the shortest side.
  - On your camera's display, a photo captured in 3D Panorama mode appears as a 2D panoramic photo. To see the 3D effect, connect your camera to a 3D TV or 3D monitor. (p. 106)

Viewing animated photos

View animated GIF files repeatedly that were captured in Motion Photo mode.

1 In Playback mode, drag the image left or right to move to a desired GIF file.

2 Touch ●.

3 Touch ↶ to return to Playback mode.

Playing a slide show

Apply effects and audio to a slide show of your photos.
The slide show function does not work for videos and GIF files.

1 In Playback mode, touch MENU.

2 Touch **Slide Show Options**.
 • Skip to step 5 to start a slide show with no effects.

3 Select a slide show effect option.

* Default

Option	Description
Play Mode	Set whether or not to repeat the slide show. (**One Play***, **Repeat**)

* Default

Option	Description
Interval	• Set the interval between photos. (**1 sec***, **3 sec**, **5 sec**, **10 sec**) • You must set the Effect option to **Off** to set the interval.
Music	Set background audio.
Effect	• Set a scene change effect between photos. (**Off**, **Calm***, **Shine**, **Relax**, **Lively**, **Sweet**) • Select **Off** to cancel effects. • When you use the Effect option, the interval between photos will be set to 1 second.

4 Touch ↶.

5 Touch **Start Slide Show**.

6 View the slide show.
 • Touch ❚❚ to pause the slide show.
 • Touch ▶ to resume the slide show.

> • Touch the screen, and then touch ↶ to stop the slide show and return to Playback mode.
> • Touch ◀) to adjust the volume level.

Playing a video

In Playback mode, you can view a video, and then capture or trim parts of the playing video. You can save the captured or trimmed segments as new files.

1 In Playback mode, locate a video, and then touch ▶.

2 View the video.

Icon	Description
▶	Play.
◀◀	Scan backward.
‖/▶	Pause or resume playback.

Icon	Description
▶▶	Scan forward.
◀》	Adjust the volume or mute the sound.
↰	Return to Playback mode.

When playing a movie, the scan forward/scan backward/pause features can be used after 2 seconds.

Trimming a video

1 While viewing a video, touch ❚❚ at the point where you want the trimming to begin.

2 Touch ✂ → ▶.

3 Touch ❚❚ at the point where you want the trimming to end.
   • You can also adjust the scene to be cropped by dragging the handles that appear on the progress bar.
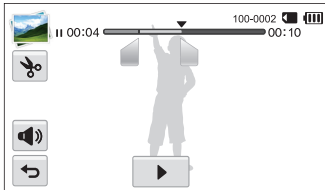
4 Touch ✂.

5 When the pop-up message appears, touch **Yes**.

   ✍ • The original video should be at least 10 seconds long.
      • The camera will save the edited video as a new file and leave the original video intact.

Capturing an image from video

1 While viewing a video, touch ❚❚ at the point where you want to capture an image.

2 Touch 📷.

3 When the pop-up message appears, touch **Yes**.

   ✍ • The resolution of the captured image will be the same as the original video.
      • The captured image is saved as a new file.

Editing a photo

Learn how to edit photos.

📝
- The camera will save edited photos as new files.
- When you edit photos, the camera will automatically convert them to a lower resolution. Photos that you rotate or resize manually are not automatically converted to a lower resolution.
- You cannot edit a photo while viewing a folder. To edit a photo in a folder, touch the folder to open it, and then move to the photo.
- You cannot edit photos captured in some modes such as 3D Panorama mode, 3D Photo mode, and Motion Photo mode.

Resizing a photo

Change the size of a photo and save it as a new file.

1 In Playback mode, locate a photo, and then touch MENU.

2 Touch **Resize**, and then select a size option.

Resize	ⓘ
📷 2688 X 1512	
📷 1920 X 1080	
↩	
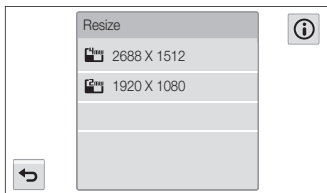
📝 Available resize options differ depending on the original size of the photo.

Rotating a photo

1 On the Home screen, touch 📷.
- The most recent file will be displayed.

2 Touch 🔲, and then select a photo.

3 Touch 🔄, and then select a rotate option.

4 Touch 💾 to save.

	Rotate	ⓘ
OFF	Right 90° Left 90°	180°
Off		
Cancel		💾
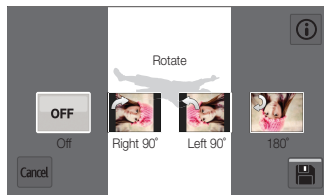
📝
- The camera will overwrite the original file.
- In Playback mode, touch MENU → **Rotate** to rotate a photo.

Cropping a photo

1 On the Home screen, touch 🖼.
   - The most recent file will be displayed.

2 Touch 🎴, and then select a photo.

3 Touch 🗘, and then select an area to drag and crop.

4 Touch 🖫 to save.

Applying Smart Filter effects

Apply special effects to your photos.

1 On the Home screen, touch 🖼.
   - The most recent file will be displayed.

2 Touch 🎴, and then select a photo.

3 Touch 🖾ⁱ.

4 Select a filter, and then touch OK.

Option	Description
Normal	No effect
Miniature	Apply a tilt-shift effect to make the subject appear in miniature.
Vignetting	Apply the retro-looking colors, high contrast, and strong vignette effect of Lomo cameras.

Option	Description
Soft Focus	Hide facial imperfections or apply dreamy effects.
Old Film	Apply a vintage film effect.
Half Tone Dot	Apply a halftone effect.
Sketch	Apply a pen sketch effect.
Fish-eye	Distort close objects to imitate the visual effect of a fisheye lens.
Classic	Apply a black and white effect.
Retro	Apply a sepia tone effect.
Oil Painting	Apply an oil painting effect.
Ink Painting	Apply a watercolor painting effect.
Cartoon	Apply a cartoon painting effect.
Cross Filter	Add lines that radiate outward from bright objects to imitate the visual effect of a cross filter.
Zooming Shot	Blur the edges of a photo to emphasize the subjects in the center.

5 Touch 💾 to save.

Adjusting your photos

Learn how to adjust the brightness, contrast, or saturation or how to correct the red-eye effect. If the center of a photo is dark, you can adjust it to be brighter. The camera will save an edited photo as a new file, but may convert it to a lower resolution.

💡
- You can adjust brightness, contrast, and saturation and apply Smart Filter effects at the same time.
- You cannot apply the ACB, Face Retouch, and Red-eye Fix effects at the same time.

Adjusting brightness, contrast, or saturation

1 On the Home screen, touch 🖼.
  - The most recent file will be displayed.

2 Touch 🔲, and then select a photo.

3 Select an adjusting option.

Icon	Description
☀	Brightness
◑	Contrast
■	Saturation

4 Move the sliders or touch the **+**/**-** icons to adjust the option.

5 Touch **OK**.

6 Touch 💾 to save.

Adjusting dark subjects (ACB)

1 On the Home screen, touch 📷.
  • The most recent file will be displayed.

2 Touch 🔳, and then select a photo.

3 Touch MENU → **ACB**.

4 Touch 💾 to save.

Retouching faces

1 On the Home screen, touch 📷.
  • The most recent file will be displayed.

2 Touch 🔳, and then select a photo.

3 Touch MENU → **Face Retouch**.

4 Move the sliders or touch the **+**/**-** icons to adjust the option.
  • As the number increases, the skin tone becomes brighter and smoother.

5 Touch 💾 to save.

Removing red-eye

1 On the Home screen, touch 📷.
  • The most recent file will be displayed.

2 Touch 🔳, and then select a photo.

3 Touch MENU → **Red-eye Fix**.

4 Touch 💾 to save.

Creating a print order (DPOF)

Select photos to print and save print options in the Digital Print Order Format (DPOF). This information is saved in the MISC folder on your memory card for convenient printing on DPOF-compatible printers.

1 In Playback mode, locate a photo, and then touch [MENU].

2 Touch **DPOF**.

3 Touch the **+/-** icons to select the number of copies, and then touch **OK**.
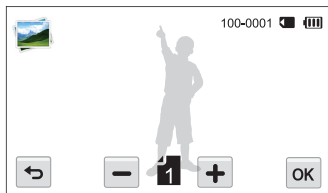
📝 • You can take the memory card to a print shop that supports DPOF (Digital Print Order Format) or you can print photos directly through a DPOF-compatible printer at home.
   • Photos with dimensions that are wider than the paper may be cut off on the left and right edges. Ensure that your photo dimensions are compatible with the paper you select.

Viewing files on a TV (HDTV, 3D TV)

Play back photos or videos by connecting your camera to a TV with the A/V cable.

1 On the Home screen, touch 🔵.

2 Touch **Connectivity** → **Video Out**.

3 Select the video signal output for your country or region. (p. 140)

4 Turn off your camera and TV.

5 Connect your camera to your TV with the A/V cable.
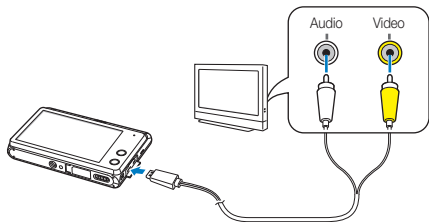
6 Turn on your TV, and then select the A/V video source with the TV remote control.

7 Turn on your camera.
   • The camera automatically enters into Playback mode when you connect it to a TV.

8 View photos or play videos using the camera.

> ☑ • Depending on the TV model, you may see some digital noise or part of an image may not appear.
> • Images may not be centered on the TV screen depending on your TV settings.

(Viewing files on an HDTV)

You can view high-quality and uncompressed photos or videos on an HDTV using the optional HDMI cable. HDMI (High Definition Multimedia Interface) is supported by most HDTVs.

1 On the Home screen, touch 💿.

2 Touch **Connectivity** → **HDMI Size**.

3 Select an HDMI resolution. (p. 141)

4 Turn off your camera and HDTV.

5 Connect your camera to your HDTV using an optional HDMI cable.
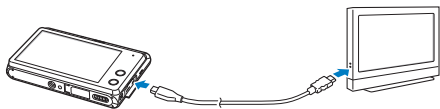
6 Make sure that the HDTV and camera are turned on, and then select the HDMI mode on the HDTV.
- If you have an Anynet+ compatible Samsung HDTV and you have turned on your camera's Anynet+ function, the HDTV turns on automatically and displays the camera screen, while the camera automatically enters Playback mode.
- If Anynet+ is off in your camera or your TV does not have Anynet+, the TV does not turn on automatically. Turn the TV on manually.

7 View the videos and photos using the camera.

🗹 • If your HDTV supports the Anynet+(CEC) profile, turn Anynet+ on in the camera's settings menu (p. 140) to control the camera and TV with the TV's remote control.
- Anynet+ lets you control all connected Samsung A/V devices with the TV remote control.
- The time it takes for the camera to connect to your HDTV may vary with the type of a memory card you use. A faster memory card will not necessarily result in a faster HDMI transfer, because the main function of the card is to improve the transfer rate during shooting.

Viewing files on a 3D TV

You can view photos captured in 3D Photo mode or
3D Panorama mode on a 3D TV.

1 On the Home screen, touch ⊙.

2 Touch **Connectivity** → **HDMI Size**.

3 Select an HDMI resolution. (p. 141)

4 Turn off your camera and 3D TV.

5 Connect your camera to your 3D TV using an optional
HDMI cable.
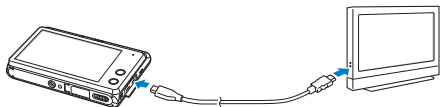
6 Turn on your camera.
   • If you have an Anynet+ compatible Samsung 3D TV and you
     have turned on your camera's Anynet+ function, the 3D TV
     turns on automatically and displays the camera screen,
     while the camera automatically enters Playback mode.
   • If Anynet+ is off in your camera or your TV does not have
     Anynet+, the TV does not turn on automatically. Turn the TV on
     manually.

7 Touch ▼ to switch to **3D TV Mode**.
   • Touch ▼ again to switch to **2D TV Mode**.

8 Turn on your TV's 3D function.
   • Refer to your TV's user manual for more details.

9 View 3D photos with the touch screen on your camera or,
if the TV has Anynet+, the remote control of your 3D TV

   • You cannot view an MPO file in 3D effect on TVs that do not support
     the file format.
   • Use proper 3D glasses when you view an MPO file on a 3D TV.

   Do not view the 3D images captured by your camera on a 3D TV or
   3D monitor for an extended period of time. It may cause unpleasant
   symptoms, such as eyestrain, fatigue, nausea, and more.

Transferring files to the computer

Connect the camera to the computer, to transfer files from the camera's memory card to the computer.

Transferring files to your Windows OS computer

Connect the camera to your computer as a removable disk.

⚠ Your computer must be running Windows XP, Windows Vista, or Windows 7 for you to connect the camera as a removable disk.

1 On the Home screen, touch 　.

2 Touch **Connectivity** → **PC Software** → **Off**.

3 Turn off the camera.

4 Connect the camera to your computer with the USB cable.

⚠ You must plug the small end of the USB cable into your camera. If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.
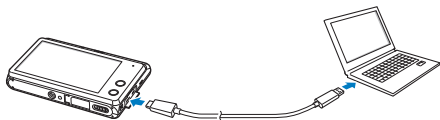
5 Turn on the camera.
   • The computer recognizes the camera automatically.

6 On your computer, select **My Computer** → **Removable Disk** → **DCIM** → **101PHOTO**.

7 Drag or save files to your computer.

(Disconnecting the camera (for Windows XP))

With Windows Vista and Windows 7, the methods for disconnecting the camera are 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 computer screen.

   10:00 AM

3 Click the pop-up message.

4 Click the message box that indicates the camera can be removed safely.

5 Remove the USB cable.

Transferring files to your Mac OS computer

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

Mac OS 10.5 or later is supported.

1 Turn off the camera.

2 Connect your camera to your Mac OS computer with the USB cable.

You must plug the small end of the USB cable into your camera. If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.
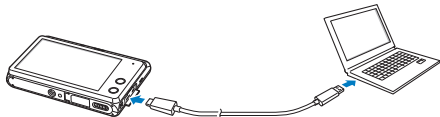
3 Turn on the camera.
• The computer recognizes the camera automatically and displays a removable disk icon.

4 Double-click the removable disk icon.

5 Drag or save files to your computer.

Using programs on the computer

iLauncher allows you to playback files with Multimedia Viewer and provides links so that you can download useful programs.

Installing iLauncher

1 On the Home screen, touch ●.

2 Touch **Connectivity** → **PC Software** → **On**.

3 Turn off the camera.

4 Connect the camera to your computer with the USB cable.

> ⚠ You must plug the small end of the USB cable into your camera. If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.
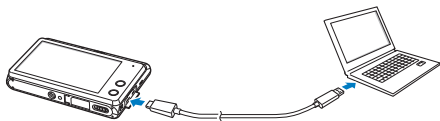
5 Turn on the camera.

6 Select a destination folder on your computer, and then select **Yes**.
   • When you connect the camera to a computer with iLauncher installed, the program will launch automatically.

7 Follow the on-screen instructions to complete the installation.
   • An iLauncher shortcut will appear on the computer.

> ✎ • Before installing the program, ensure that the PC is connected to a network.
> • To install iLauncher on your Mac OS computer, click **Devices** → **iLauncher** → **Mac** → **iLinker**.

Available programs when using iLauncher

Option	Description
Multimedia Viewer	You can view files with Multimedia Viewer. When you connect the camera to a computer with iLauncher installed, Multimedia Viewer will start automatically.
Firmware Upgrade	You can update the firmware of your camera.
PC Auto Backup	iLauncher provides a link for downloading the PC Auto Backup program when you connect the camera to a computer. You can send photos or videos that you captured with the camera to a PC wirelessly.

If you use the Mac OS computer, only Firmware Upgrade is available.

Using iLauncher

iLauncher allows you to play back files with Multimedia Viewer and provides a link to download the PC Auto Backup program.

- • The requirements are recommendation only. iLauncher may not work properly even when the computer meets the requirements, depending on the condition of your computer.
- • If your computer does not meet the requirements, videos may not play correctly.

The manufacturer is not responsible for any damage that results from using unqualified computers such as a computer you assembled yourself.

Windows OS Requirements

Item	Requirements
CPU	Intel® Core™ 2 Duo 1.66 GHz or higher/ AMD Athlon X2 Dual-Core 2.2 GHz or higher
RAM	Minimum 512 MB RAM (1 GB or more recommended)
OS*	Windows XP SP2, Windows Vista, or Windows 7
Hard disk capacity	250 MB or more (1 GB and above recommended)
Others	• 1024 X 768 pixels, 16-bit color display compatible monitor (1280 X 1024 pixels, 32-bit color display recommended) • USB 2.0 port • nVIDIA Geforce 7600GT or higher/ ATI X1600 series or higher • Microsoft DirectX 9.0c or higher

* A 32-bit version of iLauncher will be installed—even on 64-bit editions of Windows XP, Windows Vista, and Windows 7.

Mac OS requirements

Item	Requirements
OS	Mac OS 10.5 or higher
RAM	Minimum 256 MB RAM (512 MB or more recommended)
Hard disk capacity	Minimum 110 MB
Others	USB 2.0 port

Opening iLauncher

On your computer, select **Start** → **All Programs** → **Samsung** → **iLauncher** → **Samsung iLauncher**. Or, click **Applications** → **Samsung** → **iLauncher** on your Mac OS computer.

Using Multimedia Viewer

Multimedia Viewer allows you to play back files. From the Samsung iLauncher screen, double-click **Multimedia Viewer**.

- Multimedia Viewer supports the following formats:
  - Videos: MP4 (Video: H.264, Audio: AAC), WMV (WMV 7/8/9), AVI (MJPEG)
  - Photos: JPG, GIF, BMP, PNG, TIFF, MPO
- Files that have been recorded with other manufacturers' devices may not play back smoothly.

Viewing photos
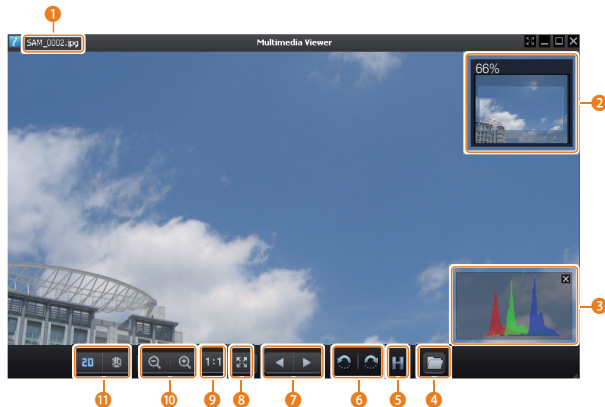
No.	Description
①	File name
②	Enlarged area
③	Histogram
④	Open the selected file.
⑤	Histogram button
⑥	Rotate to the left/ Rotate to the right.
⑦	Move to the previous file/ Move to the next file.
⑧	Fit the photo to the screen.
⑨	View the photo in its original size.
⑩	Zoom in/Zoom out
⑪	Switch between 2D and 3D mode.

Viewing Videos

No.	Description
❶	File name
❷	Adjust the volume.
❸	Open the selected file.
❹	Move to the next file.
❺	Stop
❻	Pause
❼	Move to the previous file.
❽	Progress bar

Updating the firmware

From the Samsung iLauncher screen, double-click **Firmware Upgrade**.

Downloading the PC Auto Backup program

From the Samsung iLauncher screen, double-click **PC Auto Backup**.
For information about installing the PC Auto Backup program, refer to
page 131.

Wireless network

Learn to connect to wireless local area networks (WLANs) and use functions.

Connecting to a WLAN and configuring network settings

Learn to connect via an access point (AP) when you are in a range of a WLAN. You can also configure network settings.

Connecting to a WLAN

1 On the Home screen, touch 🌐, 📧, ▶️, 🎬, or 🌐.

- Press [**Smart Link**] to activate the Wi-Fi function that you have designated. The camera will activate the designated function. (p. 18)

2 Touch MENU → **Wi-Fi Setting**.

- In some modes, touch 🛜 to access the Wi-Fi Setting screen.
- The camera automatically searches for available AP devices.

3 Select an AP.
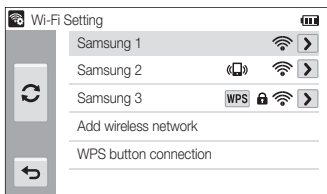
Icon/Option	Description
(📶)	Ad hoc AP
🔒	Secured AP
WPS	WPS AP
📶	Signal strength
❯	Open network setting options.
⟳	Refresh connectable APs.
Add wireless network	Add an AP manually.
WPS button connection	Connect to a WPS AP.

- When you select a secured AP, a pop-up window appears. Enter the required passwords to connect to the WLAN. For information about entering text, refer to "Entering text". (p. 118)
- When a login page appears, refer to "Using the login browser". (p. 117)
- If you select a WPS profile supported AP, select **WPS PIN connection**, and then enter a PIN on the AP device. You can also connect to a WPS profile supported AP by selecting **WPS button connection** on the camera, and then pushing the **WPS** button on the AP device.

Setting network options

1 In the Wi-Fi Setting screen, move to an AP, and then touch ❯.

2 Select each option, and then enter the required information.

Option	Description
Forget Network	Remove the selected AP from the list. (This option appears only when you select a stored AP.)
Authentication	Select a network authentication type.
Data Encryption	Select an encryption type.
Network Key	Enter the network password.
IP Setting	Set the IP address manually.
WPS PIN connection	Enter a PIN on the AP device.

Manually setting the IP address

1 In the Wi-Fi Setting screen, move to an AP, and then touch ❯.

2 Touch **IP Setting** → **Manual**.

3 Select each option, and then enter the required information.

Option	Description
IP	Enter the static IP address.
Subnet Mask	Enter the subnet mask.
Gateway	Enter the gateway.
DNS Server	Enter the DNS address.

Using the login browser

You can enter your login information via the login browser when connecting to some APs, sharing sites, or cloud servers.

Icon	Description
📶	Set the AP.
◀	Move to the previous page.
▶	Move to the next page.
✕	Stop loading the page.
⟳	Reload the page.
Exit	Close the login browser.

- You cannot select some items depending on the page you connected to. This does not indicate a malfunction.
- The login browser may not close automatically after you log into some pages. If this occurs, close the login browser by touching **Exit**, and then proceed with a desired operation.
- It may take longer to load the login page due to the page size or network speed. If this occurs, wait until the login information input window appears.

Network connection tips

- The quality of the network connection will be determined by the AP.
- The further the distance between your camera and the AP, the longer it will take to connect to the network.
- If a nearby device is using the same radio frequency signal as your camera, it may interrupt your connection.
- If your AP name is not in English, the camera may not be able to locate the device or the name may appear incorrectly.
- For network settings or a password, contact your network administrator or network service provider.
- If a WLAN requires authentication from the service provider, you may not be able to connect to it. To connect the WLAN, contact your network service provider.
- Depending on the encryption type, the number of digits in the password may differ.
- A WLAN connection may not be possible in all surroundings.
- The camera may display a WLAN enabled printer on the AP List. You cannot connect to a network via a printer.
- You cannot connect your camera to a network and a TV simultaneously. Also, you cannot view photos or videos on a TV while connected to a network.
- Connecting to a network may incur additional charges. Costs will vary based on the conditions of your contract.
- If you cannot connect to a WLAN, try another AP from the available AP list.

- You can also connect to free WLANs in some foreign countries.
- A login page may appear when you select free WLANs provided by some network service providers. Enter your ID and password to connect to the WLAN. For information about registering or the service, contact the network service providers.
- Be cautious when you enter personal information for an AP connection. Do not enter any payment or credit card information on your camera. The manufacturer is not liable for any problem caused by entering such information.
- Available network connections may differ by country.
- The WLAN feature of your camera must comply with radio transmission laws in your region. To ensure compliance, use the WLAN feature only in the country where you purchased the camera.
- The process for adjusting network settings may differ, depending on network conditions.
- Do not access a network that you are not authorized to use.
- Before you connect to a network, ensure your battery is fully charged.
- When a DHCP server is not available you must make an autoip. txt file and copy it to the inserted memory card to connect to the network using Auto IP.
- You cannot upload or send files captured in 3D Photo and 3D Panorama modes.
- Files that you transfer to another device may not be supported by the device. In this case, use a computer to playback the files.

Entering text

Learn how to enter text. The icons in the table below let you move the cursor, change the case, etc.

Icon	Description
←	Delete the last letter.
◀ ▶	Move the cursor.
⬆	In ABC mode, change the case.
Cancel	Stop entering text and return to the previous page.
¹²³⁄@# /ABC	Switch between Symbol mode and ABC mode.

Icon	Description
.com	Enter ".com".
␣	Enter a space.
Done	Save the displayed text.

- You can use only the English alphabet, regardless of the display language.
- You can enter up to 128 characters.
- The screen may differ depending on the language selected.

Sending photos or videos to a smart phone

The camera connects to a smart phone that supports the MobileLink feature via a WLAN. You can easily send photos or videos to your smart phone.

> • The MobileLink feature is supported by Galaxy series smart phones with the Android 2.2 OS or higher. If your smart phone uses the Android 2.1 OS, upgrade your smart phone to Android 2.2 or higher. This feature is also supported by 7 and 10.1 inch Galaxy Tab.
> • You should install the Samsung MobileLink application on your phone or device before using this feature. You can download the application from Samsung Apps or Play Store.
> • When there are no files in the camera memory, you cannot use this feature.
> • You can view up to 1,000 files and send up to 100 files at a time.
> • Full HD videos that you transfer to another device via MobileLink may not be supported by the device.

1 On the camera's Home screen, touch .
   • If the pop-up message that prompts you to download the application appears, touch **Next**.

2 On the camera, touch **All Images** or **Selected Images** to select files to share with the smart phone.
   • If you selected **Selected Images**, touch **Share** on the camera after selecting files to share.
   • If you selected **Selected Images**, only the selected files will be displayed on the smart phone.

3 On the smart phone, turn on the Samsung MobileLink application.
   • Read the on-screen instructions carefully to select and connect to your camera.
   • The smart phone can connect to only one camera at a time.

4 On the camera, touch **Yes**.

5 On the smart phone, select files to send from the camera to the smart phone.

6 On the smart phone, touch **Copy**.
   • The camera will send the files.

Using a smart phone as a remote shutter release

The camera connects to a smart phone via a WLAN. Use the smart phone as a remote shutter release with the Remote Viewfinder feature. The captured photo will display on the smart phone.

> • The Remote Viewfinder feature is supported by Galaxy series smart phones with the Android 2.2 OS or higher. If your smart phone uses the Android 2.1 OS, upgrade your smart phone to Android 2.2 or higher. This feature is also supported by 7 and 10.1 inch Galaxy Tab.
> • You should install the Remote Viewfinder application on your phone or device before using this feature. You can download the application from Samsung Apps or Play Store.

1 On the camera's Home screen, touch 📷.
   • If the pop-up message that prompts you to download the application appears, touch **Next**.

2 On the smart phone, turn on the Remote Viewfinder application.
   • Read the on-screen instructions carefully to select and connect to your camera.
   • The smart phone can connect to only one camera at a time.

3 On the smart phone, set the following shooting options.

Icon	Description
🔦ᴬ	Flash option
⏱ᴏꜰꜰ	Timer option
🖼	Photo size

   • While using this feature, some buttons are not available on your camera.
   • The zoom button and the shutter button on your smart phone will not function when using this feature.
   • Remote Viewfinder mode supports the 🖼 and 🖼 photo sizes only.

4 On the smart phone, touch and hold 📷 to focus.
   • The focus is automatically set to **Multi AF**.

5 Release 📷 to capture the photo.
   • The photo will be saved in your camera.
   • Touch the photo in the bottom of the screen to save it to the smart phone. The photo will be resized to 640 X 360.

   • When you use this feature, the ideal distance between the camera and the smart phone may vary, depending on your surroundings.
   • The smart phone must be within 7 m of the camera to use this feature.
   • It will take some time to capture the photo after you release 📷 on the smart phone.
   • The Remote Viewfinder function will deactivate when:
     - there is an incoming call on the smart phone
     - either the camera or the smart phone turns off
     - the memory is full
     - either device loses its connection to the WLAN
     - the Wi-Fi connection is poor or unstable

Using photo or video sharing websites

Upload your photos or videos to file sharing websites. Available websites will be displayed on your camera.

Accessing a website

1 On the Home screen, touch 🌐.

2 Select a website.
   • The camera will automatically attempt to connect to a WLAN via the most recently connected AP device.
   • If the camera has not previously been connected to a WLAN, it will search for available AP devices. (p. 115)

3 Enter your ID and password, and then touch **Login** → **OK**.
   • For information about entering text, refer to "Entering text". (p. 118)
   • To select an ID from the list, touch ▼ → an ID.
   • If you have previously logged in to the website, you may be logged in automatically.

> 📝 You must have an existing account on the file sharing website to use this feature.

Uploading photos or videos

1 Access the website with your camera.

2 Select files to upload from the list.
   • You can select up to 20 files. The total size must be 10 MB or less.

3 Touch **Upload**.
   • If you connected to Facebook, touch **Upload** → **Upload**.
   • If you connected to Facebook, you can enter your comments by touching the **Comment** box. For information about entering text, refer to "Entering text". (p. 118)

- You cannot upload files if the file size exceeds the limit. The maximum photo resolution you can upload is 2M, and the longest video you can upload is 30 seconds at **QVGA** resolution or a video recorded using ꜰꜱꜱ. If the selected photo resolution is higher than 2M, it will be automatically resized to a lower resolution.
- The method of uploading photos or videos may differ depending on the selected website.
- If you cannot access a website because of firewall or user authentication settings, contact your network administrator or network service provider.
- Uploaded photos or videos may be automatically titled with the date they were captured.
- The speed of your internet connection may affect how quickly photos upload or web pages open.
- When there are no files in the camera memory, you cannot use this feature.
- You can also upload photos or videos to file sharing websites in Playback mode by touching ᴍᴇɴᴜ → **Share**, and then selecting a desired website. In Playback mode, the icon for the selected website is displayed on the left. You can upload photos and videos simply by touching the icon.

Sending photos or videos via email
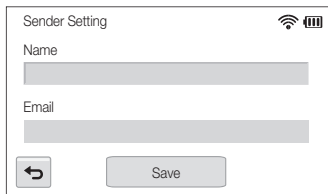
You can change settings in the email menu, and send photos or videos stored on the camera via email.

Changing email settings

In the email menu, you can change settings for storing your information. You can also set or change the email password. For information about entering text, refer to "Entering text". (p. 118)

Storing your information

1. On the Home screen, touch 📧 → MENU.

2. Touch **Sender Setting**.

3. Touch the **Name** box, enter your name, and then touch **Done**.

```
Sender Setting                    📶 🔋
Name
┌──────────────────────────────────┐
│                                  │
└──────────────────────────────────┘
Email
┌──────────────────────────────────┐
│                                  │
└──────────────────────────────────┘
↩                    Save
```

4. Touch the **Email** box, enter your email address, and then touch **Done**.

5. Touch **Save** to save your changes.

Setting an email password

1. On the Home screen, touch 📧 → MENU.

2. Touch **Setting Password** → **On**.
   - To deactivate the password, select **Off**.

3. When the pop-up appears, touch **OK**.
   - The pop-up disappears automatically even if you do not touch **OK**.

4. Enter a 4-digit password.

5. Enter the password again.

6. When the pop-up appears, touch **Confirm**.
   - The pop-up disappears automatically even if you do not touch **Confirm**.

📝 If you lost your password, you can reset it by touching MENU → **Change Password** → **Reset**. When you reset the information, previously saved user's setting information, email address, and recently sent email list will be deleted.

Changing the email password

1 On the Home screen, touch 🔴 → 🔲.

2 Touch **Change Password**.

3 Enter your current 4-digit password.

4 Enter a new 4-digit password.

5 Enter the new password again.

6 When the pop-up appears, touch **Confirm**.
   • The pop-up disappears automatically even if you do not touch **Confirm**.

Sending photos or videos via email

You can send photos or videos stored on the camera via email. For information about entering text, refer to "Entering text". (p. 118)

1 On the Home screen, touch 🔴.
   • The camera will automatically attempt to connect to a WLAN via the most recently connected AP device.
   • If the camera has not previously been connected to a WLAN, it will search for available AP devices. (p. 115)

2 Touch the **Sender** box, enter your email address, and then touch **Done**.
   • If you have previously saved your information, it will be inserted automatically. (p. 125)
   • To use an address from the list of previous senders, touch ▼ → an address.

3 Touch the **Receiver** box, enter an email address, and then touch **Done**.

- To use an address from the list of previous recipients, touch ▼ → an address.
- Touch ✚ to add additional recipients. You can input up to 30 recipients.
- Touch ✖ to delete an address from the list.

4 Touch **OK**.

5 Select files to upload from the list, and then touch **Next**.

- You can select up to 20 files. The total size must be 7 MB or less.

6 Touch the Comment box, enter your comments, and then touch **Done**.

7 Touch **Send**.

- The camera will send the email.

☑ • Even if a photo appears to have transferred successfully, errors with the recipient's email account may cause the photo to be rejected or recognized as spam.

- You may not be able to send an email if no network connection is available or if your email account settings are incorrect.
- You cannot send an email if the file size exceeds the limit. The maximum photo resolution you can send is 2M and the longest video you can upload is 30 seconds at ᴏᴠɢᴀ resolution or a video recorded using ²⁴⁰. If the selected photo resolution is higher than 2M, it will be automatically resized to a lower resolution.
- If you cannot send an email because of firewall or user authentication settings, contact your network administrator or network service provider.
- When there are no files in the camera memory, you cannot use this feature.
- You can also send an email in Playback mode by touching ▧ → **Share** → **Email**.

Using AllShare Play to send files

You can upload files from your camera to AllShare Play online storage or transfer files to AllShare devices.

Uploading photos to online storage

1 On the Home screen, touch ▷.
   - To change the size for uploaded photos, touch MENU →
     Upload Image Size.
   - If you have registered more than one web storage, you can
     select from the list by touching MENU → **Change Web storage**.

2 Touch **Web storage**.
   - If the guide message appears, touch **OK**.
   - The camera will automatically attempt to connect to a WLAN
     via the most recently connected AP device.
   - If the camera has not previously been connected to a WLAN,
     it will search for available AP devices. (p. 115)

3 Enter your ID and password, and then touch **Login**
   → **OK**.
   - For information about entering text, refer to "Entering text".
     (p. 118)
   - To select an ID from the list, touch ▼ → an ID.
   - If you have previously logged in to the website, you may be
     logged in automatically.

   🖉 To use this feature, you must create an AllShare Play account and an
       account with an affiliated online storage service using your PC.
       After finishing creating accounts, add your online storage account to
       AllShare Play.

4 Select files to upload, and then touch **Upload**.

   🖉 • You cannot upload video files to AllShare Play online storage.
       • When there are no files in the camera memory, you cannot use this
         feature.
       • You can upload a total of 10 MB or 20 files to online storage.

Viewing photos or videos on TVs that support AllShare Play

1 On the Home screen, touch ▷.

2 Touch **Nearby Devices**.
   • If the guide message appears, touch **OK**.
   • The camera will automatically attempt to connect to a WLAN via the most recently connected AP device.
   • If the camera has not previously been connected to a WLAN, it will search for available AP devices. (p. 115)

3 Connect your TV to a wireless network via an AP device.
   • Refer to your TV's user manual for more information.

4 On the TV, search for the camera and browse the shared photos or videos.
   • For information about searching for the camera and browsing the photos or videos on the TV, refer to the TV user manual.
   • Videos may not play smoothly depending on the type of TV or network condition. If this happens, re-record the video in **VGA** or **QVGA** quality and play it again. If videos do not play smoothly on your TV over the wireless connection, try connecting the camera to the TV with an A/V cable.

AP
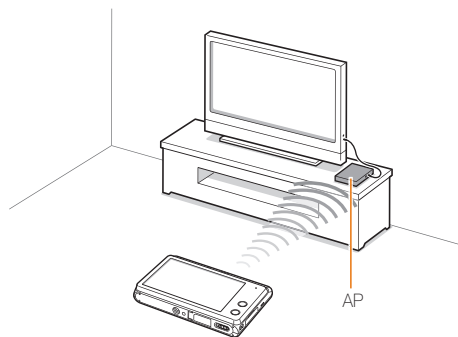
- You can share up to 1,000 photos or videos.
- On a TV screen, you can view only photos or videos captured with your camera.
- The range of the wireless connection between your camera and a TV may vary depending on the specifications of the AP.
- If the camera is connected to 2 TVs, playback may be slower.
- Photos or videos will be shared in their original sizes.
- You can use this feature only with TVs that support AllShare Play.
- Shared photos or videos will not be stored on the TV, but they can be stored in the camera to meet the TV's specifications.
- Transferring photos or videos to the TV may take some time depending on the network connection, the number of files to be shared, or sizes of the files.
- If you power off the camera abnormally while viewing photos or videos on a TV (for example, by removing the battery), the TV considers the camera to still be connected.
- The order of photos or videos on the camera may be different than on the TV.
- Depending on the number of photos or videos you want to share, it may take some time to load your photos or videos and complete the initial set-up process.
- While viewing photos or videos on the TV, continuously using the TV remote or performing additional operations on the TV may prevent this feature from working properly.

- If you reorder or sort files on the camera while viewing them on a TV, you must repeat the initial set-up process to update the list of files on the TV.
- When there are no files in the camera memory, you cannot use this feature.
- We recommend you use a network cable to connect your TV to your AP. This will minimize any video 'Stuttering' you may experience when streaming content.

Using Auto Backup to send photos or videos

You can send photos or videos that you captured with the camera to a PC wirelessly. The Auto Backup feature works only with the Windows OS.

Installing the program for Auto Backup on your PC

1. Install iLauncher on the PC.

2. Connect the camera to the PC with the USB cable.

3. Click **OK** on the pop-up window.
   - The Auto Backup program is installed on the PC.
   Follow the on-screen instructions to complete the installation.

4. Remove the USB cable.

5. Connect the camera to the PC again with the USB cable.
   - The camera stores information about the PC, so that the camera can send files to the PC.

Before installing the program, ensure that the PC is connected to a network.

Sending photos or videos to a PC

1. On the camera's Home screen, touch ▦.
   - You must configure the backup PC information to use the Auto Backup feature. For more details, refer to "Installing the program for Auto Backup on your PC". (p. 131)
   - To turn off your PC automatically after the transfer is complete, touch **Shut down PC after backup**.
   - To view the help for the Auto Backup function, touch ⓘ.

2. Touch **OK** to start the backup.
   - To cancel sending, touch **Cancel**.
   - You cannot select individual files to backup. This function backs up only new files on the camera.
   - The backup's progress will be shown on the PC monitor.
   - When the transfer is completed, the camera will turn off automatically in approximately 30 seconds. Touch **Cancel** to return to the previous screen and prevent the camera from turning off automatically.

- If the PC supports the Wake on LAN (WOL) feature, you can turn on the PC automatically by searching for the PC from your camera. (p. 135)
- When you connect the camera to the WLAN, select the AP that is connected to the PC.
- The camera will search for available access points even if you are connecting to the same access point again.
- If you turn off the camera or remove the battery while sending files, the file transfer will be interrupted.
- You can connect only one camera to the PC at a time for sending files.
- The backup may be canceled due to network conditions.
- Photos or videos can be sent to a PC one time only. Files cannot be sent again even if you reconnect your camera to another PC.
- When there are no files in the camera memory, you cannot use this feature.
- You must turn off Windows Firewall and any other firewalls before using this feature.
- You can send up to 1,000 files.
- On the PC software, the server name must be entered in the Latin alphabet and can contain no more than 48 characters.
- When multiple file types are created at once, only the image files (JPG) will be sent to the PC with this feature.

Uploading photos to a cloud server

You can upload your photos to SkyDrive. To upload photos, you must visit the Microsoft website and register before connecting your camera.

1 On the camera's Home screen, touch 🌐.

2 Touch **SkyDrive**.
   - If the pop-up message that prompts you to create an account appears, touch **OK**.
   - The camera will attempt to connect to a WLAN via the most recently connected AP.
   - If the camera has not previously been connected to a WLAN, it will search for available AP devices. (p. 115)

3 Login with your ID and password.
   - For information about entering text, refer to "Entering text". (p. 118)
   - If you connected to SkyDrive, refer to "Using the login browser". (p. 117)

4 Select files to upload from the list, and then touch **Upload**.

> 🖉 • You can also upload photos to a cloud server in Playback mode by touching ▣ → **Share**, and then select a cloud server.
> • When there are no photos in the camera memory, you cannot use this feature.
> • When you upload photos to SkyDrive, they will be resized to 2M while maintaining its aspect ratio.

Sending photos using Wi-Fi Direct

When the camera connects via a WLAN to a device that supports the Wi-Fi Direct function, you can send photos to the device. This feature may not be supported on some devices.

1 On the device, turn on the Wi-Fi Direct option.

2 On the camera, in Playback mode, select a photo.

3 Touch ▣, and then touch **Share → Wi-Fi Direct**.
   • When in the single image view, you can send only one photo at a time.
   • When in the thumbnails view, you can select multiple photos by touching thumbnails. Touch **Send** when you are finished selecting photos.

4 Select the device from the camera's list of Wi-Fi Direct devices.
   • Ensure that the device's Wi-Fi Direct option is turned on.
   • You can also select your camera from the device's list of Wi-Fi Direct devices.

5 On the device, allow the camera to connect to the device and send the file.
   • The selected photo will be sent to the device.

   ⓜ • You can send up to 20 files at a time.
      • When there are no photos in the camera memory, you cannot use this feature.
      • If you cannot connect to a Wi-Fi Direct device, update the device with the latest firmware. This feature may not be supported on some devices.

About the Wake on LAN (WOL) feature

With the WOL feature, you can automatically turn on or wake up a PC with your camera. This feature has been available for Samsung desktop PCs for the last 5 years (not available for all-in-one PCs).

⚠ Any changes to your PC's BIOS settings other than the ones described below may damage your PC. The manufacturer is not responsible for damage caused by your changing your PC's BIOS settings.

☀ **Setting the PC to wake up from sleep mode**

1 Click **Start**, and then open the **Control Panel**.

2 Configure the network connection.
- Windows 7:
  Click **Network and Internet → Network and Sharing Center → Change adapter settings**.
- Windows Vista:
  Click **Network and Internet → Network and Sharing Center → Manage network connections**.
- Windows XP:
  Click **Network and Internet Connection → Network Connection**.

3 Right click **Local Area**, and then click **Properties**.

4 Click **Configure → the Power manage** tab → **Allow this device to wake the computer**.

5 Click **OK**.

6 Restart the PC.

☺ Setting the PC to turn on

1 Turn on the PC, and then press F2 while the PC is booting.
   • The BIOS setting menu will appear.

2 Select **Advanced** tab → **Power management Setup**.

3 Select **Resume on PME** → **Enabled**.

4 Press F10 to save your changes, and then continue booting.

5 Click **Start**, and then open the **Control Panel**.

6 Configure the network connection.
   • Windows 7:
     Click **Network and Internet** → **Network and Sharing Center** → **Change adapter settings**.
   • Windows Vista:
     Click **Network and Internet** → **Network and Sharing Center** → **Manage network connections**.
   • Windows XP:
     Click **Network and Internet Connection** → **Network Connection**.

7 Select the drivers for the network adapter.

8 Click the **Advanced** tab, and then set the WOL menus.

Ⓜ • You cannot use this feature across a firewall or if a security program has been installed.
   • To turn on the PC with the WOL feature, the PC must have an active connection to the LAN. Ensure that the indicator light on the PC's LAN port is on indicating that the LAN connection is active.
   • Depending on your PC model, the camera may only be able to wake the PC.
   • Depending on your PC's OS or drivers, the names of the WOL setting menu may vary.
     - examples of setting menu names: Enable PME, Wake on LAN, etc.
     - examples of setting menu values: Enable, Magic packet, etc.

Settings

Refer to options to configure your camera's settings.

Settings menu

Learn to configure your camera's settings.

Accessing the settings menu

1 On the Home screen, touch ⊙.

2 Select a menu.
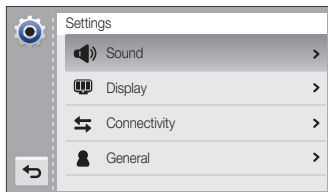
Option	Description
◀)	**Sound**: Set various camera sounds and the volume. (p. 139)
⊞	**Display**: Customize the display settings. (p. 139)
⇄	**Connectivity**: Set the connection options. (p. 140)
▲	**General**: Change the settings for the camera system such as memory format and default file name. (p. 141)

3 Select an item.
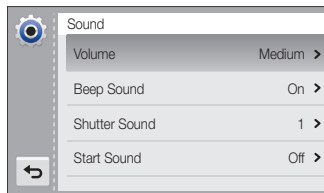
4 Select an option.
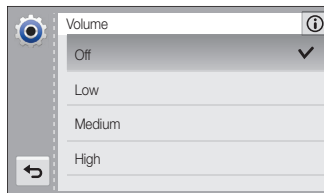
5 Touch ↰ to return to the previous screen.

Sound

* Default

Item	Description
Volume	Set the volume of all sounds. (**Off**, **Low**, **Medium***, **High**)
Beep Sound	Set to emit a sound when you press the buttons or touch the screen. (**Off**, **On***)
Shutter Sound	Set the sound the camera emits when you press the shutter button. (**Off**, **1***, **2**, **3**)
Start Sound	Set the sound the camera emits when you turn on your camera. (**Off***, **Star Flight**, **Laser Show**, **Cloud**)
AF Sound	Set to emit a sound when you half-press the shutter button. (**Off**, **On***)

Display

* Default

Item	Description
Start Image	Set a start image to display when the camera turns on. • **Off***: Display no start image. • **Logo**: Display a default image. • **User Image**: Select User Image from the photos you captured in the memory.
Guide Line	Select a guide to help you compose a scene. (**Off***, **3 X 3**, **2 X 2**, **Cross**, **Diagonal**)
Date/Time Display	Set whether or not to display the date and time on the camera's display. (**Off***, **On**)
Display Brightness	Adjust the brightness of the screen. (**Auto***, **Dark**, **Normal**, **Bright**) ✍ **Normal** is fixed in Playback mode even if you have selected **Auto**.

* Default

Item	Description
Quick View	Set whether or not to review a captured image before returning to Shooting mode. (Off, On*)
Power Save	If you perform no operations for 30 seconds, the camera automatically switches to Power save mode. (Off*, On) In Power save mode, touch the screen or press any button other than [POWER] to resume using the camera.

Connectivity

* Default

Item	Description
Video Out	Set the video signal output for your region. • NTSC: USA, Canada, Japan, Korea, Taiwan, Mexico, etc • PAL (supports only BDGHI): Australia, Austria, Belgium, China, Denmark, England, Finland, France, Germany, Italy, Kuwait, Malaysia, Netherlands, New Zealand, Norway, Singapore, Spain, Sweden, Switzerland, Thailand, etc
Anynet+ (HDMI-CEC)	Turn on to control the camera with a TV remote control when you connect it to an HDTV that supports the Anynet+ (HDMI-CEC) profile. • On*: Control the camera with an HDTV remote control. • Off: View files without using an HDTV remote control.

* Default

Item	Description
HDMI Size	Set the resolution of photos when the camera plays back files on an HDTV via the HDMI cable. • **NTSC**: **1080i***, **720p**, **480p**, **576p** (activates only when **PAL** is selected) 📝 If the HDTV does not support the selected resolution, the HDTV automatically selects the next lower resolution.
PC Software	Set iLauncher to launch automatically when you connect your camera to your computer. (**Off**, **On***)

General

* Default

Item	Description
Network Information	See the Mac address and serial number of your camera.
Language	Set a language for the display text.
Time Zone	Set the time zone for your location. When you travel to another country, select **Visit**, and then select the appropriate time zone. (**Home***, **Visit**)
Date/Time Set	Set the date and time.
Date Type	Set a date format. (**YYYY/MM/DD**, **MM/DD/YYYY***, **DD/MM/YYYY**) 📝 The default date type may differ depending on the language selected.
Smart Link (Wi-Fi Button)	Start a preset Wi-Fi function by pressing [**Smart Link**]. (**MobileLink***, **Remote Viewfinder**, **Social Sharing**, **Email**, **Cloud**, **Auto Backup**, **AllShare Play**)

* Default

Item	Description
File No.	Specify how to name files. • **Reset**: Set the file number to start from 0001 when you insert a new memory card, format a memory card, or delete all files. • **Series***: Set the file number to resume from the previous file number when you insert a new memory card, format a memory card, or delete all files. 🖉 • The default name of the first folder is 100PHOTO and the default name of the first file is SAM_0001. • The file number increases by one, from SAM_0001 to SAM_9999, each time you take a picture. • The folder number increases by one, from 100PHOTO to 999PHOTO, each time a folder is full. • The maximum number of files that can be stored in one folder is 9,999. • The camera defines file names according to the Design rule for Camera File system (DCF) standard. If you intentionally change file names, the camera may not play back the files.

* Default

Item	Description
Auto Rotate	Set to automatically rotate photos as you rotate the camera. (**Off**, **On***)
Imprint	Set whether or not to display the date and time on captured photos. (**Off***, **Date**, **Date & Time**) 🖉 • The date and time will be displayed on the bottom right corner of the photo. • Some printer models may not print the date and time properly. • The photo will not display the date and time if: - you select **Text** in Scene mode - you select Beauty Palette, My Magic Frame, 3D Photo, Live Panorama, Picture in Picture, or Motion Photo
Auto Power Off	Set the camera to automatically turn off when you perform no operations for a specified period. (**Off**, **1 min**, **3 min***, **5 min**, **10 min**) 🖉 • Your settings will not change when you replace the battery. • The camera will not automatically turn off when the camera is connected to a computer or WLAN, and when you are playing a slide show or videos.

* Default

Item	Description
AF Lamp	Set a light to automatically turn on in dark places to help you focus. (**Off**, **On***)
Format	Format the memory card. Formatting will delete all files, including protected files. (**Yes**, **No**) Errors can occur if you use a memory card formatted by another brand of camera, a memory card reader, or a computer. Please format memory cards in the camera before using them to capture photos.
Reset	Reset menus and shooting options. Date and time, language, and video output settings will not be reset. (**Yes**, **No**)
Open source licenses	Show the Open source licenses information.

Appendixes

Get information about error messages, specifications, and maintenance.

Error messages

When the following error messages appear, try these remedies.

Error message	Suggested remedies
Card Error	• Turn off your camera, and then turn it on again. • Remove your memory card, and then insert it again. • Format your memory card.
Card not supported.	The inserted memory card is not supported by your camera. Insert a microSD, microSDHC, or microSDXC memory card.
Connection failed.	• The camera cannot connect to the network using the selected access point. Select another AP and try again. • The camera has failed to connect to the other devices. Try connecting again.
DCF Full Error	File names do not match the DCF standard. Transfer the files from the memory card to your computer and format the card. Then, open the Settings menu and touch **General** → **File No.** → **Reset**. (p. 142)

Error message	Suggested remedies
Device disconnected.	Network connection disconnected while transferring photos. Reselect a device that supports AllShare Play.
File Error	Delete the damaged file or contact a service center.
File system not supported.	Your camera does not support the FAT file structure of the inserted memory card. Format the memory card on the camera.
Initialization failed.	The camera has failed to locate a device that supports AllShare Play. Turn on devices on the network that support AllShare Play.
Invalid password.	The password for transferring files to another camera is wrong. Enter the correct password again.
Low Battery	Insert a charged battery or recharge the battery.
Memory Full	Delete unnecessary files or insert a new memory card.

Error message	Suggested remedies
No Image File	Capture photos or insert a memory card that contains some photos.
Photo transfer failed.	Network connection disconnected while transferring photos. Try restarting the AllShare Play feature.
Transfer failed.	• The camera has failed to send a photo to the other devices. Try sending again. • The camera has failed to send an email or transfer a photo to a device that supports AllShare Play. Check the network connection and try again.

Camera maintenance

Cleaning your camera

Camera lens and display

Use a blower brush to remove dust and wipe the lens gently with a soft cloth. If any dust remains, apply lens cleaning liquid to a piece of lens cleaning paper and wipe gently.
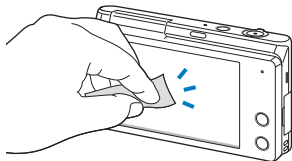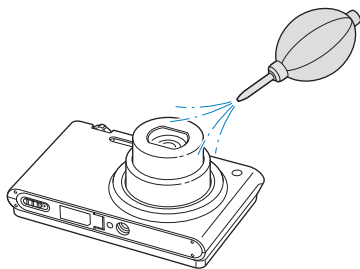
Camera body

Wipe gently with a soft, dry cloth.
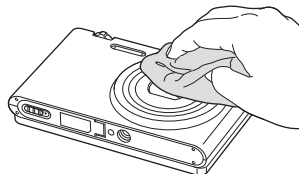
⚠ • Never use benzene, thinners, or alcohol to clean the device. These solutions can damage the camera or cause it to malfunction.
• Do not press on the lens cover or use a blower brush on the lens cover.

Using or storing the camera

Inappropriate places to use or store the camera

- Avoid exposing the camera to very cold or very hot temperatures.
- Avoid using your camera in areas with extremely high humidity, or where the humidity changes drastically.
- Avoid exposing the camera to direct sunlight and storing it in hot, poorly-ventilated areas, such as in a car during summer time.
- Protect your camera and the display from impact, rough handling, and excessive vibration to avoid serious damage.
- Avoid using or storing your camera in dusty, dirty, humid, or poorly-ventilated areas to prevent damage to moving parts and internal components.
- Do not use your camera near fuels, combustibles, or flammable chemicals. Do not store or carry flammable liquids, gases, or explosive materials in the same compartment as the camera or its accessories.
- Do not store the camera where there are mothballs.

Using on beaches or shores

- Protect your camera from sand and dirt when you use it on beaches or in similar areas.
- Your camera is not waterproof. Do not handle the battery, adapter, or memory card with wet hands. Operating the camera with wet hands may cause damage to your camera.

Storing for extended period of time

- When you store the camera for an extended period, place it in a sealed container with an absorbent material, such as silica gel.
- Remove the batteries from your camera when storing it for an extended period. Installed batteries may leak or corrode over time and cause serious damage to your camera.
- Over time, unused batteries will discharge and must be recharged before use.
- The present date and time can be initialized when the camera is turned on after the camera and battery have been separated for over 40 hours.

Using the camera with caution in humid environments

When you transfer the camera from a cold environment to a warm one, condensation can form on the lens or internal components of the camera. In this situation, turn off the camera and wait for at least 1 hour. If condensation forms on the memory card, remove the memory card from the camera and wait until all moisture has evaporated before reinserting it.

Other cautions

- Do not swing your camera by the strap. This may cause injury to yourself or others or damage to your camera.
- Do not paint your camera, as paint can clog moving parts and prevent proper operation.
- Turn off the camera when not using it.

- Your camera contains delicate parts. Avoid impacts to the camera.
- Protect the display from external force by keeping it in the case when not in use. Protect the camera from scratches by keeping it away from sand, sharp implements, or loose change.
- Do not use the camera if the screen is cracked or broken. Broken glass or acrylic could cause injury to your hands and face. Take the camera to a Samsung service center to have it repaired.
- Never place cameras, batteries, chargers, or accessories near, on, or in heating devices, such as microwave ovens, stoves, or radiators. These devices may be deformed and can overheat and cause a fire or explosion.
- Do not expose the lens to direct sunlight, as this may discolor the image sensor or cause it to malfunction.
- Protect the lens from fingerprints and scratches. Clean the lens with a soft, clean, debris-free lens cloth.
- The camera may turn off if struck or dropped. This is to protect the memory card. Turn on the camera to use it again.
- While you use the camera, it may heat up. This is normal and should not affect your camera's lifespan or performance.
- When you use the camera in low temperatures, it may take some time to turn on, the color of the display may be changed temporarily, or after-images may appear. These conditions are not malfunctions and they will correct themselves when the camera is returned to milder temperatures.

- Paint or metal on the outside of the camera may cause allergies, itchy skin, eczema, or swelling for people with sensitive skin. If you experience any of these symptoms, stop using the camera immediately and consult a doctor.
- Do not insert foreign objects into any of your camera's compartments, slots, or access points. Damage due to improper use may not be covered by your warranty.
- Do not allow unqualified personnel to service the camera or attempt to service the camera yourself. Any damage that results from unqualified service is not covered by your warranty.

About memory cards

[Supported memory cards]

Your camera supports microSD (Secure Digital), microSDHC (Secure Digital High Capacity), or microSDXC (Secure Digital eXtended Capacity) memory cards.
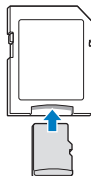
To read data with a PC or memory card reader, insert the memory card into a memory card adapter.

Memory card capacity

The memory capacity may differ depending on shooting scenes, shooting conditions, or a memory card. These capacities are based on a 2 GB microSD card:

Photo

Size	Super Fine	Fine	Normal
16ᴍ	211	409	598
14ᴍᴘ	235	455	663
12ᴍ	279	540	792
10ᴍ	331	629	910
5ᴍ	629	1,151	1,605
3ᴍ	1,000	1,743	2,346
2ᴍ	1,386	2,346	3,211
1ᴍ	2,773	4,068	4,693

Video

Size	120 FPS	30 FPS	15 FPS
FULL HD 1920 X 1080	-	Approx. 11' 19"	Approx. 21' 53"
720 HD 1280 X 720 HQ	-	Approx. 20' 30"	Approx. 41' 01"
HD 1280 X 720	-	Approx. 24' 52"	Approx. 49' 44"
VGA 640 X 480	-	Approx. 55' 38"	Approx. 105' 53"
QVGA 320 X 240	Approx. 55' 26"	Approx. 221' 47"	Approx. 400' 18"
240 WEB For Sharing	-	Approx. 221' 47"	Approx. 400' 18"

The figures above are measured without using the zoom function. Available recording time may vary if you use the zoom. Several videos were recorded in succession to determine the total recording time.

Cautions when using memory cards

- Avoid exposing memory cards to very cold or very hot temperatures (below 0 °C/32 °F or above 40 °C/104 °F). Extreme temperatures can cause memory cards to malfunction.

- Insert a memory card in the correct direction. Inserting a memory card in the wrong direction may damage your camera and memory card.

- Do not use memory cards that have been formatted by other cameras or by a computer. Reformat the memory card with your camera.

- Turn off the camera before you insert or remove the memory card.

- Do not remove the memory card or turn off your camera while the lamp is blinking, as this may damage your data.

- When the lifespan of a memory card has expired, you cannot store any more photos on the card. Use a new memory card.

- Do not bend, drop, or subject memory cards to heavy impact or pressure.

- Avoid using or storing memory cards near strong magnetic fields.

- Avoid using or keeping memory cards in areas with high temperature, high humidity, or corrosive substances.

- Prevent memory cards from making contact with liquids, dirt, or foreign substances. If dirty, wipe the memory card clean with a soft cloth before you insert the memory card into your camera.

- Do not allow liquids, dirt, or foreign substances to come in contact with memory cards or the memory card slot. Doing so may cause memory cards or the camera to malfunction.

- When you carry a memory card, use a case to protect the card from electrostatic discharges.

- Transfer important data to other media, such as a hard disk, CD, or DVD.

- When you use the camera for an extended period, the memory card may become warm. This is normal and does not indicate a malfunction.

⚠ The manufacturer is not responsible for any loss of data.

About the battery

Use only Samsung-approved batteries.

Battery specifications

Specification	Description
Model	BP88B
Type	Lithium-ion battery
Cell capacity	880 mAh
Voltage	3.7 V
Charging time* (when the camera is switched off)	Approximately 210 min

* Charging the battery by connecting it to a computer may take longer.

Battery life

Average shooting time/ Number of photos		Test conditions (when the battery is fully charged)
Photos	Approximately 105 min/ Approximately 210 photos	The battery life was measured under the following conditions: in Program mode, in darkness, [16m] resolution, Fine quality, OIS on. 1. Set the flash option to **Fill in**, take a single shot, and zoom in or out. 2. Set the flash option to **Off**, take a single shot, and zoom in or out. 3. Perform steps 1 and 2, waiting 30 seconds between each step. Repeat the process for 5 minutes, and then turn off the camera for 1 minute. 4. Repeat steps 1 to 3.
Videos	Approximately 70 min	Record videos at **HD** resolution and 30 FPS.

- The figures above are measured by Samsung's standards. Your results may differ, depending on your actual usage.
- Several videos were recorded in succession to determine the total recording time.
- When using network functions, the battery will be depleted more quickly.

Low battery message

When the battery has fully discharged, the battery icon will turn red and the "**Low Battery**" message will appear.

Notes about using the battery

- Avoid exposing batteries to very cold or very hot temperatures (below 0 °C/32 °F or above 40 °C/104 °F). Extreme temperatures can reduce the charging capacity of your batteries.
- When you use the camera for an extended period, the area around the battery chamber may become warm. This does not affect the normal use of the camera.
- Do not pull the power supply cord to disconnect the plug from the power outlet, as this may cause a fire or electric shock.
- In temperatures below 0 °C/32 °F, battery capacity and battery life may decrease.
- Battery capacity may decrease in low temperatures but will return to normal in milder temperatures.

Cautions about using the battery

Protect batteries, chargers, and memory cards from damage

Prevent batteries from making contact with metal objects, as this can create a connection between the + and – terminals of your battery and lead to temporary or permanent battery damage and may cause a fire or electric shock.

Notes about charging the battery

- If the status lamp is off, make sure that the battery is inserted correctly.
- If the camera is on while charging, the battery may not fully charge. Turn off the camera before charging the battery.
- Do not use your camera when you are charging the battery. This may cause a fire or electric shock.
- Do not pull the power supply cord to disconnect the plug from the power outlet, as this may cause a fire or electric shock.
- Let the battery charge for at least 10 minutes before turning on the camera.
- If you connect the camera to an external power source when the battery is depleted, using high energy-consuming functions will cause the camera to turn off. To use the camera normally, recharge the battery.

- If you reconnect the power cable when the battery is fully charged, the status lamp turns on for approximately 30 minutes.
- Using the flash or recording videos depletes the battery quickly. Charge the battery until the red status lamp turns off.
- If the status lamp blinks in red, reconnect the cable, or remove the battery and insert it again.
- If you charge the battery when the cable is overheated or the temperature is too high, the status lamp may blink in red. Charging will start when the battery cools down.
- Overcharging batteries may shorten battery life. After charging is finished, disconnect the cable from your camera.
- Do not bend or place heavy objects on the AC cable. Doing so may damage the cable.

Notes about charging with a computer connected

- Use only the provided USB cable.
- The battery may not charge when:
  - you use a USB hub
  - other USB devices are connected to your computer
  - you connect the cable to the port on the front side of your computer
  - the USB port of your computer does not support the power output standard (5 V, 500 mA)

Handling and disposing of batteries and chargers with care

- Never dispose of batteries in a fire. Follow all local regulations when you dispose of used batteries.
- Never place batteries or cameras on or in heating devices, such as microwave ovens, stoves, or radiators. Batteries may explode when they are overheated.

⚠ Personal injury or death can occur if the battery is handled carelessly or improperly. For your safety, follow these instructions for proper battery handling:

- The battery can ignite or explode if not handled properly. If you notice any deformities, cracks, or other abnormalities in the battery, immediately discontinue use of the battery and contact a service center.
- Use only authentic, manufacturer-recommend battery chargers and adapters and charge the battery only by the methods described in this user manual.
- Do not place the battery near heating devices or expose it to excessively warm environments, such as the inside of an enclosed car in the summertime.
- Do not place the battery in a microwave oven.
- Avoid storing or using the battery in hot, humid places, such as spas or shower enclosures.
- Do not rest the device on flammable surfaces, such as bedding, carpets, or electric blankets for a prolonged period.
- When the device is switched on, do not leave it in any confined space for a prolonged period.
- Do not allow battery terminals to come in contact with metallic objects, such as necklaces, coins, keys, or watches.
- Use only authentic, manufacturer-recommended, Lithium-ion replacement batteries.

- Do not disassemble or puncture the battery with any sharp object.
- Avoid exposing the battery to high pressure or crushing forces.
- Avoid exposing the battery to major impacts, such as dropping it from high places.
- Do not expose the battery to temperatures of 60 °C (140 °F) or above.
- Do not allow the battery to come in contact with moisture or liquids.
- Do not expose the battery to sources of excessive heat such as sunshine, fire or the like.

Disposal guidelines
- Dispose of the battery with care.
- Do not dispose of the battery in a fire.
- Disposal regulations may differ by country or region. Dispose of the battery in accordance with all local and federal regulations.

Guidelines for charging the battery
Charge the battery only by the method described in this user manual. The battery can ignite or explode if not charged properly.

Before contacting a service center

If you are having trouble with your camera, try these troubleshooting procedures before you contact a service center. If you have attempted the suggested remedy and are still having problems with your device, contact your local dealer or service center.

When you leave your camera at a service center, be sure to also leave the other components that may have contributed to the malfunction, such as the memory card and battery.

Situation	Suggested remedies
Cannot turn on the camera	• Ensure that the battery is inserted. • Ensure that the battery is inserted correctly. (p. 19) • Charge the battery.
The power turns off suddenly	• Charge the battery. • Your camera may be in Auto Power Off mode. (p. 142) • The camera may turn off to prevent the memory card from being damaged due to an impact. Turn on your camera again.
The camera is losing battery power quickly	• The battery may lose power more quickly in low temperatures (below 0 °C/32 °F). Keep the battery warm by putting it into your pocket. • Using the flash or recording videos depletes the battery quickly. Recharge if needed. • Batteries are consumable parts that must be replaced over time. Get a new battery if the battery life is diminishing quickly.

Situation	Suggested remedies
Cannot capture photos	• There is no space on the memory card. Delete unnecessary files or insert a new card. • Format the memory card. • The memory card is defective. Get a new memory card. • Make sure that the camera is switched on. • Charge the battery. • Make sure that the battery is inserted correctly.
The camera freezes	Remove the battery and insert it again.
The camera heats up	While you use the camera, it may heat up. This is normal and should not affect your camera's lifespan or performance.
The flash does not work	• The flash option may be set to **Off**. (p. 65) • You cannot use the flash in some modes.

Situation	Suggested remedies
The flash fires unexpectedly	The flash may fire due to static electricity. The camera is not malfunctioning.
The date and time are incorrect	Set the date and time in the display settings. (p. 141)
The display or buttons do not work	Remove the battery, and then insert it again.
The camera display responds poorly	If you use your camera at very low temperatures, it may cause the camera screen to malfunction or discolor. For better performance of your camera screen, use your camera in moderate temperatures.
The memory card has an error	• Turn off your camera, and then turn it on again. • Remove your memory card, and then insert it again. • Format your memory card. See "Cautions when using memory cards" for more detail. (p. 151)
Cannot play back files	If you change the name of a file, your camera may not play the file (the name of the file should meet the DCF standard). If you encounter this situation, play back the files on your computer.

Situation	Suggested remedies
The photo is blurry	• Make sure that the focus option you set is suitable for close-up shots. (p. 68) • Make sure that the lens is clean. If not, clean the lens. (p. 147) • Make sure that the subject is within range of the flash. (p. 159)
The colors in the photo do not match the actual scene	An incorrect White Balance can create unrealistic color. Select the proper White Balance option to suit the light source. (p. 78)
The photo is too bright	Your photo is overexposed. • Turn off the flash. (p. 65) • Adjust the ISO sensitivity. (p. 67) • Adjust the exposure value. (p. 76)
The photo is too dark	Your photo is underexposed. • Turn on the flash. (p. 65) • Adjust the ISO sensitivity. (p. 67) • Adjust the exposure value. (p. 76)

Situation	Suggested remedies
The TV does not display your photos	• Make sure that the camera is correctly connected to the TV with the A/V cable. • Make sure that your memory card contains photos.
Your computer does not recognize your camera	• Make sure that the USB cable is connected correctly. • Make sure that your camera is switched on. • Make sure that you are using a supported operating system.
Your computer disconnects the camera while transferring files	The file transmission may be interrupted by static electricity. Disconnect the USB cable and connect it again.
Your computer cannot play videos	Videos may not play on some video player programs. To play video files captured with your camera, use the Multimedia Viewer program that you can install with the iLauncher program on your computer.

Situation	Suggested remedies
iLauncher is not functioning properly	• End iLauncher and restart the program. • Make sure that **PC Software** is set to **On** in the settings menu. (p. 141) • Depending on your computer's specifications and environment, the program may not launch automatically. In this case, click **Start → All Programs → Samsung → iLauncher → Samsung iLauncher** on your computer. Or, click **Applications → Samsung → iLauncher** on your Mac OS computer.
Your TV or computer cannot display photos and videos that are stored on a microSDXC memory card.	microSDXC memory cards use the exFAT file system. Ensure that the external device is compatible with the exFAT file system before connecting the camera to the device.
Your computer does not recognize a microSDXC memory card.	microSDXC memory cards use the exFAT file system. To use microSDXC memory cards on a Windows XP computer, download and update the exFAT file system driver from the Microsoft website.

Camera specifications

Image sensor

Type	1/2.33" (Approximately 7.76 mm) BSI CMOS
Effective pixels	Approximately 16.31 mega-pixels
Total pixels	Approximately 17.01 mega-pixels

Lens

Focal length	Samsung Lens f = 4.5–22.5 mm (35 mm film equivalent: 25–125 mm)
F-stop range	F2.5 (W)–F6.3 (T)
Zoom	Still image mode: 1.0–5.0X (Optical zoom X Digital zoom: 25.0X, Optical zoom X Intelli zoom: 10.0X)

Display

Type	AMOLED
Feature	3.31" (8.41 cm), WVGA (800 x 480)

Focusing

Type	TTL auto focus (Center AF, Multi AF, One Touch Shooting, Smart Touch AF, Face Detection AF, Smart Face Recognition AF)

		Wide (W)	Tele (T)
Range	Normal (AF)	80 cm–infinity	250 cm–infinity
	Macro	5–80 cm	100–250 cm
	Auto Macro	5 cm–infinity	100 cm–infinity

Shutter speed

- Auto: 1/8–1/2,000 sec.
- Program: 1–1/2,000 sec.
- Night: 8–1/2,000 sec. (AEB, Continuous: 1/4–1/2,000 sec.)

Exposure

Control	Program AE
Metering	Multi, Spot, Center-weighted, Face Detection
Compensation	±2EV (1/3 EV Step)
ISO equivalent	Auto, ISO 100, ISO 200, ISO 400, ISO 800, ISO 1600, ISO 3200

Flash

Mode	Off, Auto, Red-eye, Fill in, Slow Sync, Red-eye Fix
Range	• Wide: 0.2–4.6 m (ISO Auto) • Tele: 0.5–1.2 m (ISO Auto)
Recharging time	Approximately 4–5 sec.

Shake reduction
Optical Image Stabilization (OIS)

Effect	
Photo Shooting mode	• Photo Filter (Smart Filter): Miniature, Vignetting, Soft Focus, Old Film, Half Tone Dot, Sketch, Fish-eye, Classic, Retro, Oil Painting, Ink Painting, Cartoon, Cross Filter, Zooming Shot • Image Adjust: Sharpness, Contrast, Saturation
Video Shooting mode	Movie Filter (Smart Filter): Miniature, Vignetting, Half Tone Dot, Sketch, Fish-eye, Classic, Retro, Palette Effect 1, Palette Effect 2, Palette Effect 3, Palette Effect 4

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

Date Imprinting
Date & Time, Date, Off

Shooting	
Photos	• Modes: Smart Auto (Portrait, Night Portrait, Backlight Portrait, Night, Backlight, Landscape, White, Natural Green, Blue Sky, Sunset, Macro, Macro text, Macro Color, Tripod, Action, Fireworks, Candlelight, Spotlight, Spotlight (Macro), Spotlight (Portrait)), Program, Scene (Landscape, Sunset, Dawn, Backlight, Beach & Snow, Text), Live Panorama, Gesture Shot, Low Light Shot, Beauty Palette, Beauty Shot, HDR Plus, Photo Filter, Picture in Picture, Split Shot, Magic Frame, My Magic Frame, Artistic Brush, Motion Photo, 3D Photo • Burst: Single, Continuous (Continuous (3 fps), Continuous (5 fps), Continuous (10 fps)), AEB • Timer: Off, 10 Sec, 2 Sec, Double (10 Sec, 2 Sec)
Videos	• Modes: Smart Movie (Landscape, Blue Sky, Natural Green, Sunset), Movie, Picture in Picture, Movie Filter • Format: MP4 (H.264) (Max recording time: 20 min) • Size: 1920 X 1080 Full HD, 1280 X 720 HD, 640 X 480 SD, 320 X 240, For Sharing • Frame Rate: 120 FPS, 30 FPS, 15 FPS • Sound Alive: Sound Alive On, Sound Alive Off, Mute • OIS: On, Off • Video editing (embedded): Pause during recording, Still image capture

Playback

Photos	• Type: Single image, Thumbnails, Multi Slide Show with Music and Effect, Movie clip, Smart Album* * Smart Album category: All, Date, Face List, File Type • Edit: Resize, Rotate, Image Adjust, Smart Filter, Crop • Effect: Image Adjust (Brightness, Contrast, Saturation, ACB, Face Retouch, Red-eye Fix), Smart Filter (Normal, Miniature, Vignetting, Soft Focus, Old Film, Half Tone Dot, Sketch, Fish-eye, Classic, Retro, Oil Painting, Ink Painting, Cartoon, Cross Filter, Zooming Shot)
Videos	Edit: Still image capture, Time trimming

Storage

Media	External memory (Optional): microSD card (1–2 GB guaranteed), microSDHC card (up to 32 GB guaranteed), microSDXC card (up to 64 GB guaranteed)
File format	• Still Image: JPEG (DCF), EXIF 2.21, DPOF 1.1, GIF, MPO • Movie Clip: MP4 (Video: MPEG-4.AVC/H.264, Audio: AAC)

	For 2 GB microSD: Number of photos			
		Super Fine	Fine	Normal
Image size	🔳16ᴍ 4608 X 3456	211	409	598
	🔳14ᴹᴾ 4608 X 3072	235	455	663
	🔳12ᴍ 4608 X 2592	279	540	792
	🔳10ᴍ 3648 X 2736	331	629	910
	🔳5ᴍ 2592 X 1944	629	1,151	1,605
	🔳3ᴍ 1984 X 1488	1,000	1,743	2,346
	🔳2ᴍ 1920 X 1080	1,386	2,346	3,211
	🔳1ᴍ 1024 X 768	2,773	4,068	4,693

These figures are measured under Samsung's standard conditions. Your results may vary depending on the shooting conditions and camera settings.

Wireless network

MobileLink, Remote Viewfinder, Social Sharing, Email, AllShare Play, Auto Backup, Cloud, Wi-Fi Direct

Interface

Digital output connector	USB 2.0
Audio input/output	Internal speaker (Mono), Microphone (Mono)
Video output	• A/V: NTSC, PAL (selectable) • HDMI 1.3: NTSC, PAL (selectable)
DC power input connector	4.2 V

Power source

| Rechargeable battery | Lithium-ion battery (BP88B, 880 mAh) |
| Connector type | Micro USB (5 pin) |

The power source may differ depending on your region.

Dimensions (W X H X D)

98.5 X 59.95 X 17.2 mm (without protrusions)

Weight

132 g (without battery and memory card)

Operating Temperature

0–40 °C

Operating Humidity

5–85 %

Software

iLauncher

Specifications may change without notice to improve performance.

Glossary

ACB (Auto Contrast Balance)

This feature automatically improves the contrast of your images when the subject is backlit or when there is a high contrast between your subject and the background.

AEB (Auto Exposure Bracket)

This feature automatically captures several images at different exposures to help you capture a properly-exposed image.

AF (Auto Focus)

A system that automatically focuses the camera lens on the subject. Your camera uses the contrast to focus automatically.

Aperture

The aperture controls the amount of light that reaches the camera's sensor.

Camera shake (Blur)

If the camera is moved while the shutter is open, the entire image may appear blurred. This occurs more often when the shutter speed is slow. Prevent camera shake by raising the sensitivity, using the flash, or using a faster shutter speed. Alternately, use a tripod, the DIS or OIS function to stabilize the camera.

Composition

Composition in photography means arranging objects in a photo. Usually, abiding by the rule of thirds leads to a good composition.

DCF (Design rule for Camera File system)

A specification to define a file format and file system for digital cameras created by the Japan Electronics and Information Technology Industries Association (JEITA).

Depth of field

The distance between the nearest and farthest points that can be acceptably focused in a photograph. Depth of field varies with lens aperture, focal length, and distance from the camera to the subject. Selecting a smaller aperture, for example, will increase the depth of field and blur the background of a composition.

Digital zoom

A feature that artificially increases the amount of zoom available with a zoom lens (Optical zoom). When using the Digital zoom, the image quality will deteriorate as the magnification increases.

DPOF (Digital Print Order Format)

A format for writing printing information, such as selected images and number of prints, on a memory card. DPOF-compatible printers, sometimes available at photo shops, can read the information from the card for convenient printing.

EV (Exposure Value)

All the combinations of the camera's shutter speed and lens aperture that result in the same exposure.

EV Compensation

This feature allows you to quickly adjust the exposure value measured by the camera, in limited increments, to improve the exposure of your photos. Set the EV compensation to -1.0 EV to adjust the value one step darker and 1.0 EV to one step brighter.

Exif (Exchangeable Image File Format)

A specification to define an image file format for digital cameras created by the Japan Electronic Industries Development Association (JEIDA).

Exposure

The amount of light allowed to reach the camera's sensor. Exposure is controlled by a combination of the shutter speed, the aperture value, and ISO sensitivity.

Flash

A speed light that helps to create adequate exposure in low-light conditions.

Focal length

The distance from the middle of the lens to its focal point (in millimeters). Longer focal lengths result in narrower angles of view and the subject is magnified. Shorter focal lengths result in wider angles of view.

H.264/MPEG-4

A high-compression video format established by international standard organizations ISO-IEC and ITU-T and developed by the Joint Video Team (JVT). This codec is capable of providing good video quality at low bit rates.

Image sensor

The physical part of a digital camera that contains a photosite for each pixel in the image. Each photosite records the brightness of the light that strikes it during an exposure. Common sensor types are CCD (Charge-coupled Device) and CMOS (Complementary Metal Oxide Semiconductor).

ISO sensitivity

The sensitivity of the camera to light, based on the equivalent film speed used in a film camera. At higher ISO sensitivity settings, the camera uses a higher shutter speed, which can reduce blur caused by camera shake and low light. However, images with high sensitivity are more susceptible to noise.

JPEG (Joint Photographic Experts Group)

A lossy method of compression for digital images. JPEG images are compressed to reduce their overall file size with minimal deterioration of the image resolution.

LCD (Liquid Crystal Display)

A visual display commonly used in consumer electronics. This display needs a separate backlight, such as CCFL or LED, to reproduce colors.

Macro

This feature allows you to capture close-up photos of very small objects. When using the macro feature, the camera can maintain a sharp focus on small objects at a near life-size ratio (1:1).

Metering

The metering refers to the way in which the camera measures the quantity of light to set the exposure.

MJPEG (Motion JPEG)

A video format which is compressed as a JPEG image.

MPO(Multi Picture Object)

An image file format that contains multiple images in a file. An MPO file provides a 3D effect on MPO-compatible displays, such as 3D TVs or 3D monitors.

Noise

Misinterpreted pixels in a digital image that may appear as misplaced or random, bright pixels. Noise usually occurs when photos are shot with a high sensitivity or when a sensitivity is automatically set in a dark place.

OIS (Optical Image Stabilization)

This feature compensates in real-time for shaking and vibrating while shooting. There is no image degradation compared to Digital Image Stabilization feature.

Optical zoom

This is a general zoom which can enlarge images with a lens and does not deteriorate quality of images.

Quality

An expression of the rate of compression used in a digital image. Higher quality images have a lower rate of compression, which usually results in a larger file size.

Resolution

The number of pixels present in a digital image. High resolution images contain more pixels and typically show more detail than low resolution images.

Shutter speed

Shutter speed refers to the amount of time it takes to open and close the shutter, and it is an important factor in the brightness of a photo, as it controls the amount of light which passes through the aperture before it reaches the image sensor. A fast shutter speed allows less time to let light in and the photo becomes darker and more easily freezes subjects in motion.

Vignetting

A reduction of an image's brightness or saturation at the periphery (outer edges) compared to the center of the image. Vignetting can draw interest to subjects positioned in the center of an image.

White balance (color balance)

An adjustment of the intensities of colors (typically the primary colors red, green, and blue), in an image. The goal of adjusting the white balance, or color balance, is to correctly render the colors in an image.

**Correct Disposal of This Product
(Waste Electrical & Electronic Equipment)**
(Applicable in countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

Correct disposal of batteries in this product
(Applicable in countries with separate collection systems)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

This Class [B] digital apparatus complies with Canadian ICES-003.

PlanetFirst represents Samsung Electronics' commitment to sustainable development and social responsibility through eco-driven business and management activities.

Dispose unwanted electronics through an approved recycler.
To find the nearest recycling location, go to our website:
www.samsung.com/recyclingdirect Or call, (877) 278 - 0799

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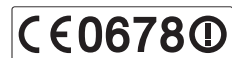
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