

# USER MANUAL



SHOOT **WOW!**  
SHARE **NOW!**



## **NX1**

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

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



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# Health and safety information

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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.**

You can damage the camera and expose yourself to the risk of an electric shock.

## **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 an 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 the charger during a thunderstorm.**

This may result in an 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 safe distance between this camera and all pacemakers to avoid potential interference, as recommended by the manufacturer and research groups. 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 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 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 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.

**Do not expose the lens to direct sunlight.**

This may discolor the image sensor or cause it to malfunction.

**If the camera overheats, remove the battery and allow it to cool down.**

- Prolonged usage of the camera may overheat the battery and raise the internal temperature of the camera. If the camera stops operating, remove the battery and allow it to cool down.
- High internal temperatures may result in noise in your photos. This is normal and does not affect your camera's overall performance.

**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.

### Cautions for using Bluetooth





- The manufacturer is not responsible for the loss, interception, or misuse of data sent or received via the Bluetooth feature.
- Always ensure that you share and receive data with devices that are trusted and properly secured. If there are obstacles between the devices, the operating distance may be reduced.
- Some devices, especially those that are not tested or approved by the Bluetooth SIG, may be incompatible with your device.
- Do not use the Bluetooth feature for illegal purposes (for example, pirating copies of files or illegally tapping communications for commercial purposes). The manufacturer is not responsible for the repercussion of illegal use of the Bluetooth feature.

### Maintaining dust and splash resistance



- Do not expose the camera to water.
- The cameras' dust-proof body is not perfectly sealed. Avoid removing or changing the lens in dusty areas.
- Ensure that the covers for the battery chamber, memory card, or external connector ports are tightly closed. Otherwise, they may not provide protection from water and dust.
- The rubber seal fitted to the covers is an important component of the device. Take care when opening and closing the covers to avoid damaging the rubber seal. Also, ensure that the rubber seal is free from debris, such as sand or dust to prevent damage to the device.

# Indications used in this 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: Select  → <b>Quality</b> (represents select  , and then <b>Quality</b> ).
*	Annotation

## Mode indications

Mode	Indication
Smart Auto	
Program	P
Aperture Priority	A
Shutter Priority	S
Manual	M
Custom1	C <sub>1</sub>
Custom2	C <sub>2</sub>
Smart	



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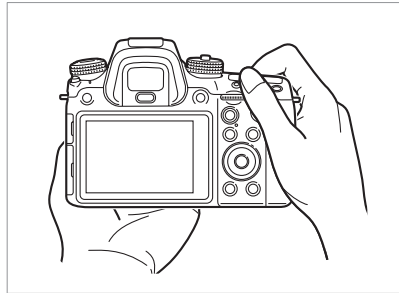
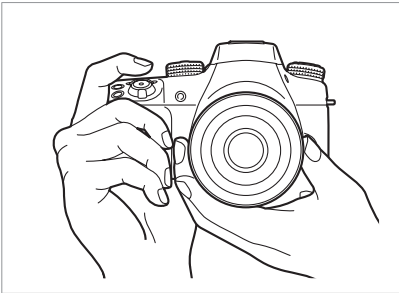
# Concepts in Photography

## Shooting postures

A correct posture for stabilizing the camera is necessary for taking a good photo. Even if you hold a camera correctly, the wrong posture can cause the camera to shake. Stand up straight and remain still to maintain a steady base for your camera. When shooting with a slow shutter speed, hold your breath to minimize body movement.

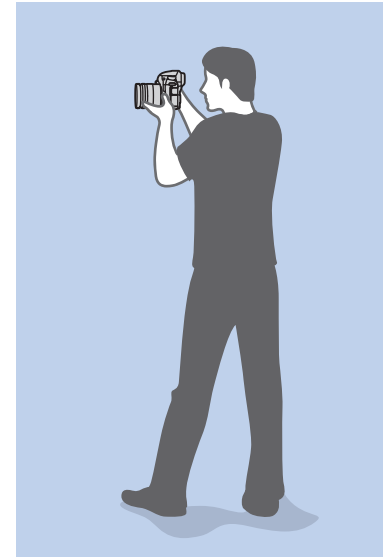
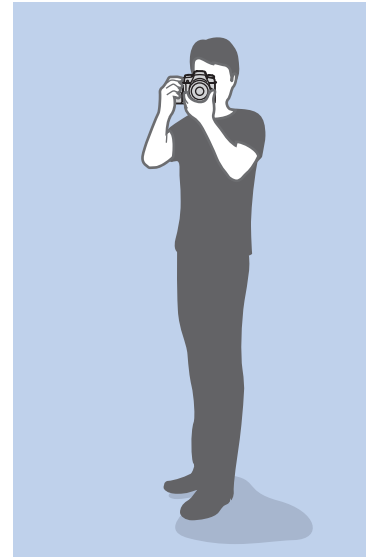
### Holding the camera

Hold the camera with your right hand and place your right index finger on the shutter button. Place your left hand under the lens for support.



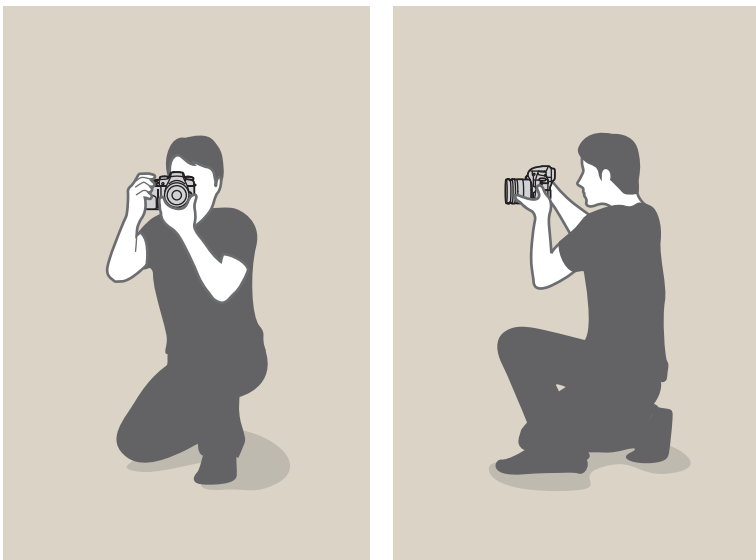
### Standing photography

Compose your shot, stand up straight with your feet shoulder-length apart, and keep your elbows pointed down.



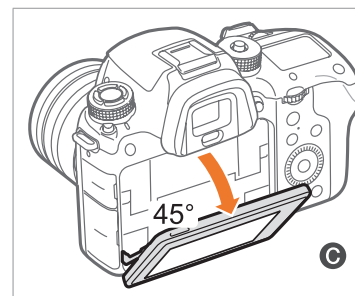
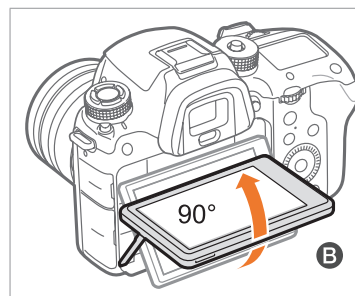
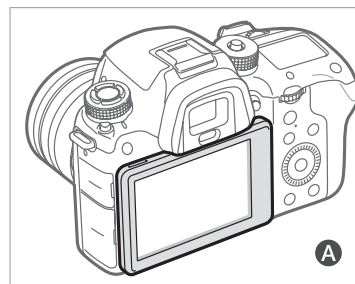
## Crouching photography

Compose your shot, crouch with one knee touching the ground, and keep a straight posture.



## Using the display

To take photos at high or low angles, tilt the display up or down. You can tilt the display up to 90° upwards (B) or 45° downwards (C).

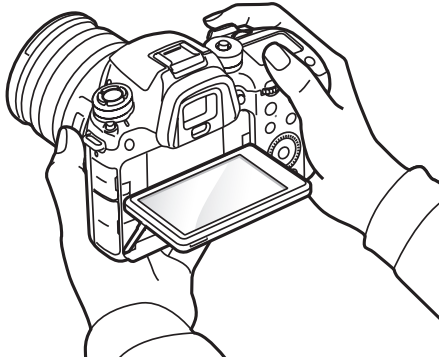


- Keep the display closed (A) when the camera is not in use.
- Tilt the display only within the angle allowed. Failing to do so may damage your camera.



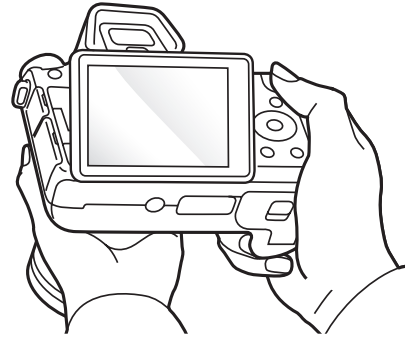
### Low-angle shot

A low-angle shot is a shot from a camera positioned below your eyeline, looking up the subject.



### High-angle shot

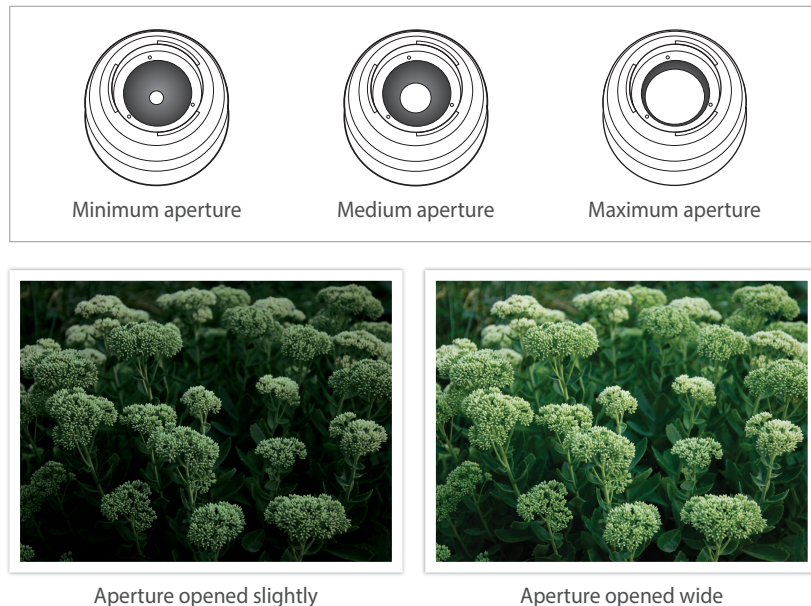
A high-angle shot is a shot from a camera positioned above your eyeline, looking down on the subject.



## Aperture

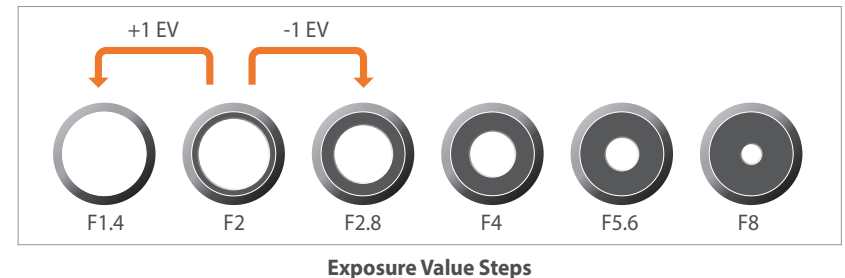
The aperture is one of the three factors that determine the exposure. The aperture housing contains thin, metal plates that open and close to let light through the aperture and into the camera. The size of the aperture is related to the amount of light: a larger aperture allows more light and a smaller aperture allows less light.

### Aperture sizes



The size of the aperture is represented by a value known as an "F-number". The f-number represents the focal length divided by the diameter of the lens. For example, if a lens with a 50 mm focal length has an f-number of F2, the diameter of the aperture is 25 mm. ( $50 \text{ mm} / 25 \text{ mm} = F2$ ) The smaller the f-number, the greater the size of the aperture.

The opening in the aperture is described as the Exposure Value (EV). Increasing the Exposure Value (+1 EV) means the amount of light doubles. Decreasing the Exposure Value (-1 EV) means the amount of light halves. You can also use the exposure compensation feature to fine-tune the amount of light by subdividing exposure values into 1/2, 1/3 EV, and so on.



## Aperture value and the depth of field

You can blur or sharpen the background of a photo by controlling the aperture. It is closely related to the depth of field (DOF), which can be expressed as small or large.



A photo with a large DOF

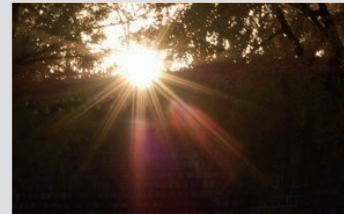


A photo with a small DOF

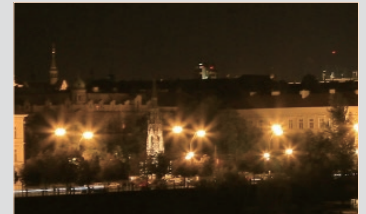


The aperture housing contains several blades. These blades move together and control the amount of light passing through the center of the aperture. The number of blades also affects the shape of light when shooting night scenes. If an aperture has an even number of blades, light divides into an equal number of sections. If the number of blades is odd, the number of sections is double the number of blades.

For example, an aperture with 8 blades divides light into 8 sections and an aperture with 7 blades into 14 sections.



7 blades

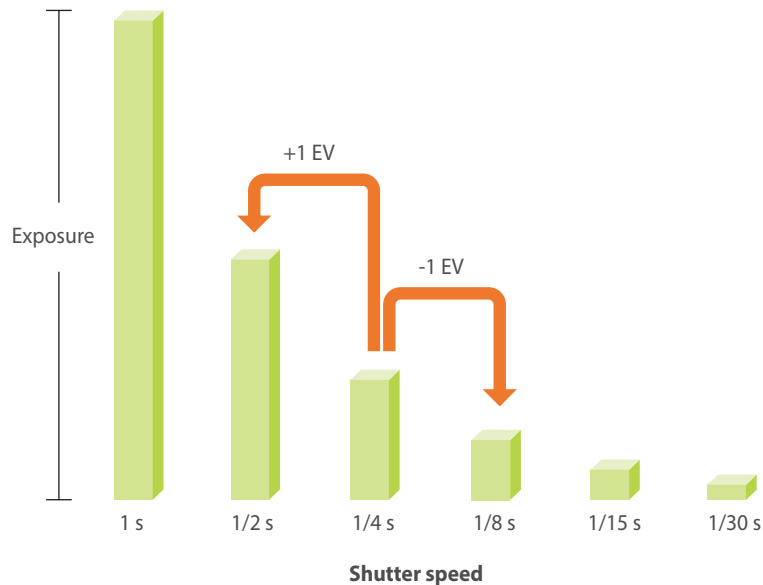


8 blades

## Shutter speed

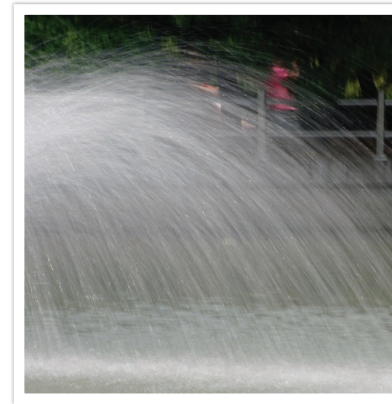
Shutter speed refers to the amount of time it takes to open and close the shutter. It controls the amount of light which passes through the aperture before it reaches the image sensor.

Usually, the shutter speed is manually adjustable. The measurement of the shutter speed is known as the "Exposure Value" (EV), which is marked in intervals of 1 s, 1/2 s, 1/4 s, 1/8 s, 1/15 s, 1/1,000 s, 1/2,000 s, and so on.



Therefore, the faster the shutter speed, the less light will be let in. Likewise, the slower the shutter speed, the more light will be let in.

The photos below illustrate that a slow shutter speed allows more time for light to enter the camera. This adds a motion blurring effect to moving objects. On the other hand, a fast shutter speed allows less time to let light in and the photo more easily freezes subjects in motion.



0.8 s



0.004 s

## ISO sensitivity

The exposure of an image is determined by the sensitivity of the camera. This sensitivity is based on international film standards, known as ISO standards. On digital cameras, this sensitivity rating is used to represent the sensitivity of the digital mechanism that captures the image.

ISO sensitivity doubles as the number doubles. For example, an ISO 200 setting is capable of capturing images at twice the speed of an ISO 100 setting. However, higher ISO settings can result in “noise”—small specks, spots, and other phenomena in a photo that give the shot a noisy or dirty appearance. As a general rule, it is best to use a low ISO setting to prevent noise in your photos, unless you are shooting in darkened environments or at night.



Changes in the quality and brightness according to ISO sensitivity

Because a low ISO sensitivity means the camera will be less sensitive to light, you need more light to have an optimal exposure. When using a low ISO sensitivity, open the aperture more or reduce the shutter speed to allow more light to enter the camera. For example, on a sunny day when light is abundant, a low ISO sensitivity does not require a slow shutter speed. However, in a dark place or at night, a low ISO sensitivity will result in a blurry photo. Therefore, it is recommended to increase the ISO sensitivity by a moderate amount.



A photo captured with a tripod and high ISO sensitivity




A blurred photo with a low ISO sensitivity





## How the aperture setting, shutter speed, and ISO sensitivity control exposure

The aperture setting, shutter speed, and ISO sensitivity are closely interconnected in photography. The aperture setting controls the opening that regulates the light that enters the camera, while the shutter speed determines the length of time that light is allowed to enter. ISO sensitivity determines the speed at which the film reacts to light. Together, these three aspects are described as the triangle of exposure.

A change in shutter speed, aperture value, or ISO sensitivity can be offset by adjustments to the others to maintain the amount of light. The results, however, change according to the settings. For example, shutter speed is useful in expressing movement, aperture can control the depth of field, and ISO sensitivity can control the graininess of a photo.

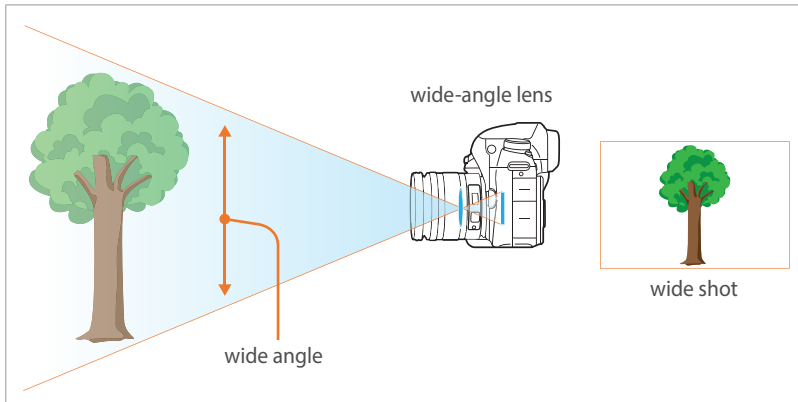
	Settings	Results
<b>Aperture value</b>	Wide aperture = more light Narrow aperture = less light	 <p>Wide = small depth of field Narrow = large depth of field</p>

	Settings	Results
<b>Shutter speed</b>	Fast speed = less light Slow speed = more light	 <p>Fast = still Slow = blurry</p>
<b>ISO sensitivity</b>	High sensitivity = more sensitive to light Low sensitivity = less sensitive to light	 <p>High = more grainy Low = less grainy</p>

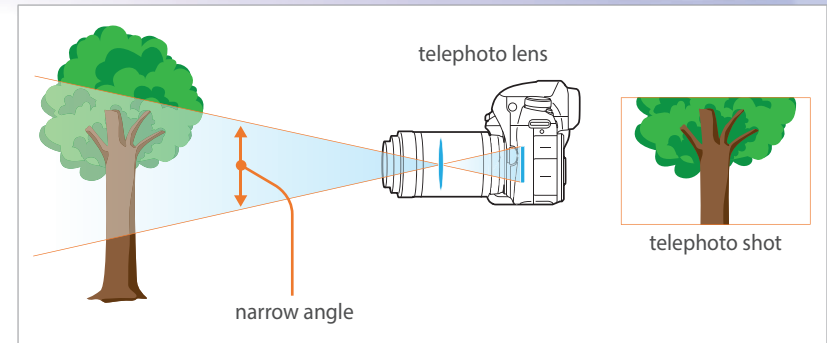
## Correlation between focal length, angle, and perspective

Focal length, which is measured in millimeters, is the distance between the middle of the lens to its focal point. It affects the angle and perspective of captured images. A short focal length translates into a wide angle, which allows you to capture a wide shot. A long focal length translates into a narrow angle, which allows you to capture telephoto shots.

### Short focal length



### Long focal length



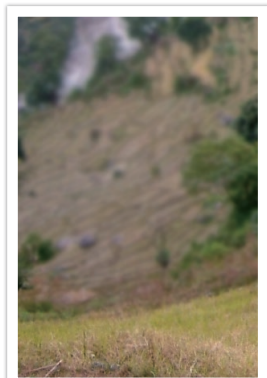
Look at these photos below and compare the changes.



18 mm angle



55 mm angle



200 mm angle



Normally, a lens with a wide angle is suitable for shooting landscapes and a lens with a narrow angle is recommended for shooting sports events or portraits.

## Depth of field

Portraits or still-life photos mostly acclaimed by people are the ones on which the background is out of focus so the subject looks pronounced. Depending on the focused areas, a photo can be blurred or sharpened. This is called 'a low DOF' or 'a high DOF'.

The depth of field is the focused area around the subject. Therefore, a small DOF signifies that the focused area is narrow and a large DOF means the focused area is wide.

A photo with a small DOF, which stresses the subject and makes the rest of it blurred, can be obtained by using a telescope lens or selecting a low aperture value. Conversely, a photo with a large DOF which shows all the elements on the photo sharply focused can be achieved by using a wide angle lens or selecting a high aperture value.



Small Depth of Field



Large Depth of Field

### What controls out-of-focus effects?

#### DOF depends on aperture value

The wider the aperture is (namely the lower the aperture value), the lower the DOF becomes. Under the condition where the focal length is equal, a low aperture value leads to a photo with a low DOF.



55 mm F5.7



55 mm F22



## DOF depends on focal length

The longer the focal length is, the lower the DOF gets. A telescope lens with a longer focal length than a wide-angle lens with a short focal length is better to capture a photo of a low DOF.



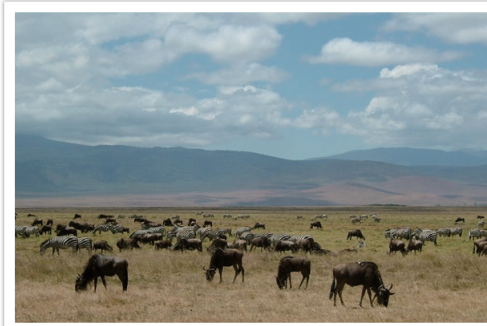
A photo captured with an 18 mm wide-angle lens



A photo captured with a 100 mm telescope lens

## DOF depends on the distance between the subject and the camera

The shorter the distance between the subject and the camera is, the lower the DOF gets. Therefore, taking a photo close to a subject can result in a photo of low DOF.



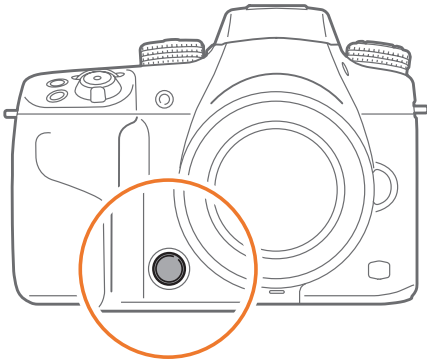
A photo captured with a 100 mm telescope lens



A photo captured close to the subject

### DOF preview

You can press the Preview button to get an idea of what your shot will look like before shooting. The camera adjusts the aperture to the predefined settings and shows the results on the screen. Set the function of the Preview button to **Optical Preview**. (p. 173)



## Composition

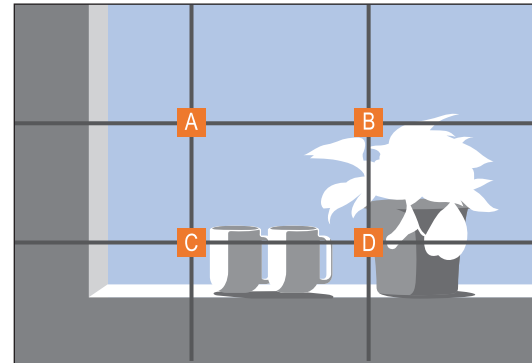
It is fun to capture a photo of the beauty of world with a camera. No matter how the world is beautiful, however, a poor composition cannot capture the beauty of it.

When it comes to composition, it is very important to prioritize subjects.

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

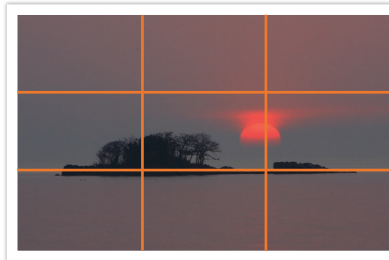
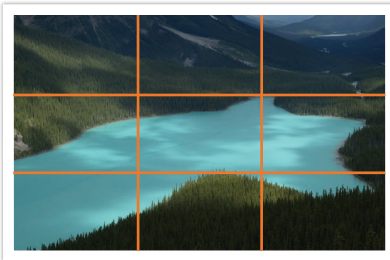
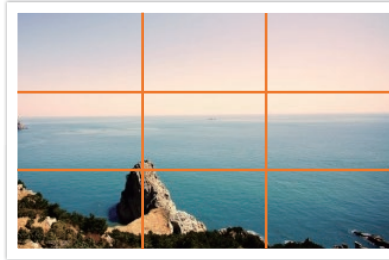
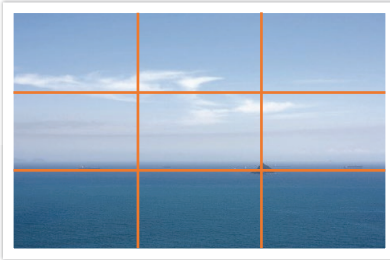
### Rule of Thirds

To use the rule of thirds, divide the image into a 3x3 pattern of equal rectangles.



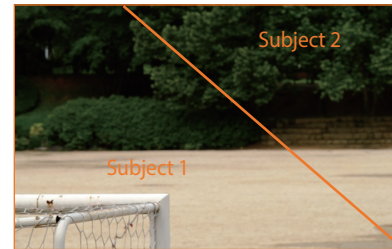
To compose photos that best emphasize the subject, make sure the subject is located at one of the corners of the center rectangle.

Using the rule of thirds will create photos with stable and compelling compositions. Below are a few examples.

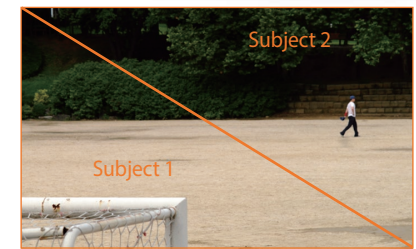


## Photos with two subjects

If your subject is in one corner of the photo, it creates an unbalanced composition. You can stabilize the photo by capturing a second subject in the opposite corner to balance the weight of the photo.



Unstable

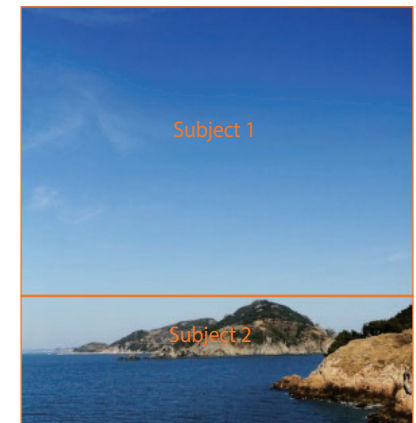


Stable

When taking landscape photos, centering the horizon will create an unbalanced effect. Give more weight to the photo by moving the horizon up or down.



Unstable



Stable

## Flash

Light is one of the most important components in photography. It is not easy, however, to have an enough amount of light anytime and anywhere. Making use of a flash allows you to optimize light settings and create a variety of effects.

Flash, also known as strobe or speed light, helps to create adequate exposure in low-light conditions. It is also useful in light-abundant situations. For example, flash can be used in compensating the exposure of a subject's shadow or capturing clearly both the subject and the background in backlit conditions.



Before correction



After correction

### Flash guide number

The model number of a flash refers to the flash's power, and the maximum amount of light created is represented by a value known as a "guide number". The bigger the guide number, the more light is emitted from the flash. The guide number is achieved by multiplying the distance from the flash to the subject and the aperture value when the ISO sensitivity is set to 100.

**Guide number = Flash to Subject Distance X Aperture value**

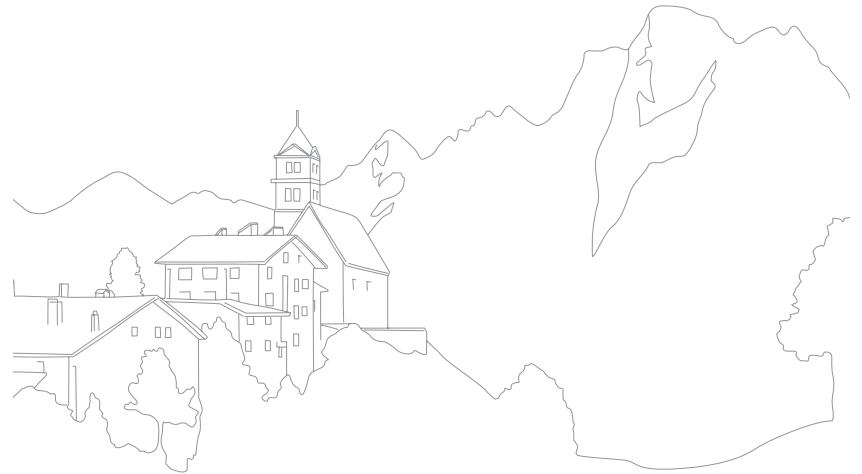
**Aperture value = Guide number/Flash to Subject Distance**

**Flash to Subject Distance = Guide number/Aperture value**

Therefore, if you know the guide number of a flash, you can estimate an optimum flash to subject distance when setting the flash manually. For example, if a flash has a guide number of GN 20 and is 4 meters away from the subject, the optimal aperture value is F5.0.

## Bounce Photography

Bounce photography refers to the method of bouncing light off of the ceiling or walls so that the light spreads evenly over the subject. Normally, photos captured with flash may appear unnatural and cast shadows. Subjects in photos captured with bounce photography cast no shadows and look smooth due to evenly spread light.





# Chapter 1

# My Camera

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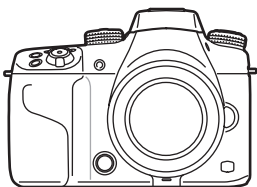
Learn about your camera's layout, display icons, lens, optional accessories, and basic functions.



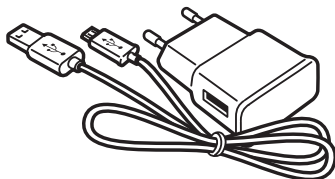
# Getting started

## Unpacking

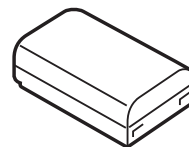
Check your product box for the following items.



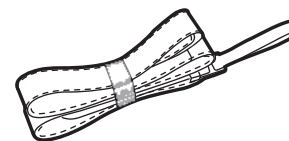
Camera  
(including the body cap, hot-shoe cover, and vertical battery grip connector cover)



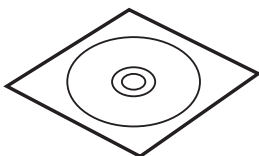
AC adapter/USB cable



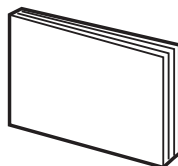
Rechargeable battery



Strap



CD-ROM  
(User manual included)

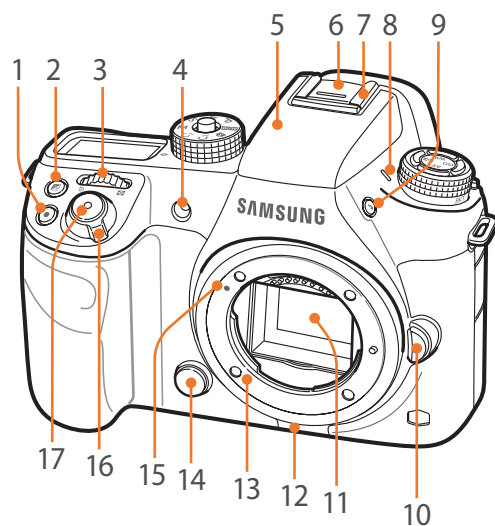


Quick Start Guide



- The illustrations may differ from your actual items.
- 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. For information about accessories, refer to page 213.

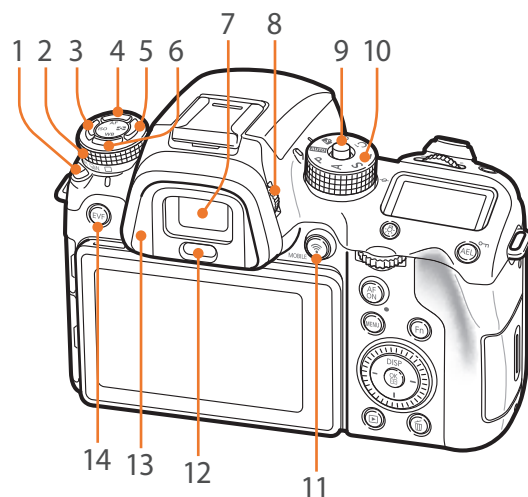
# Camera layout



No.	Name
1	Video recording button
2	<b>EV button</b> Press and hold the button, and then scroll the command dial 2 to adjust the exposure value. (p. 118)
3	<b>Command dial 1</b> <ul style="list-style-type: none"> <li>• <b>In the Menu screen:</b> Move to a desired menu item.</li> <li>• <b>In the Smart panel:</b> Adjust a selected option.</li> <li>• <b>In Shooting mode:</b> Adjust shutter speed or aperture value in some shooting modes or change the size of a focus area.</li> <li>• <b>In Playback mode:</b> View thumbnails or enlarge or reduce a photo. Open or close a folder of continuous shots in Playback mode. Scan backward or forward a video.</li> </ul>
4	AF-assist light/Timer lamp
5	Built-in flash (p. 109)

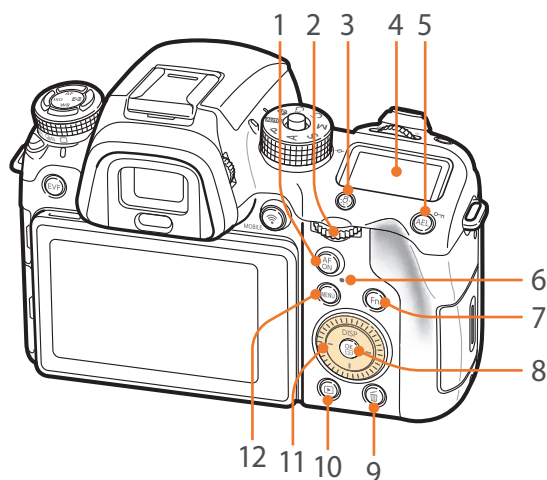
No.	Name
6	Hot-shoe cover
7	Hot-shoe
8	Microphone
9	Flash pop-up button (p. 109)
10	Lens release button
11	Image sensor
12	Speaker
13	Lens mount
14	Preview button (p. 25)
15	Lens mount index
16	Power switch
17	Shutter button





No.	Name
1	Drive dial lock button
2	Drive dial (p. 36)
3	ISO button
4	AF mode button
5	Metering button
6	WB button
7	Viewfinder
8	<b>Diopter adjustment dial</b> If the image is not clear through the viewfinder, rotate the diopter adjustment dial to improve the image.
9	<b>Mode dial lock button</b> Press the lock button to lock the mode dial to prevent it from rotating unintentionally.

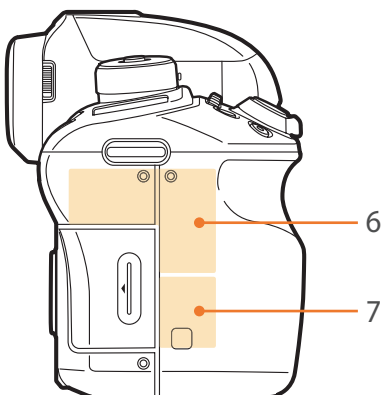
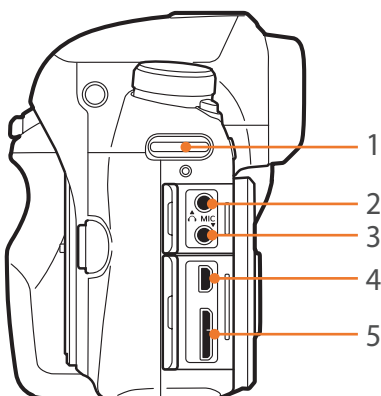
No.	Name
10	<b>Mode dial</b> <ul style="list-style-type: none"> <li><b>AUTO</b>: Smart Auto mode (p. 65)</li> <li><b>P</b>: Program mode (p. 67)</li> <li><b>A</b>: Aperture Priority mode (p. 69)</li> <li><b>S</b>: Shutter Priority mode (p. 70)</li> <li><b>M</b>: Manual mode (p. 71)</li> <li><b>C1</b>: Custom mode 1 (p. 72)</li> <li><b>C2</b>: Custom mode 2 (p. 72)</li> <li><b>S</b>: Smart mode (p. 74)</li> </ul>
11	<b>MOBILE button</b> Select a Wi-Fi function.
12	<b>Proximity sensor</b>
13	<b>Eye-cup</b>
14	<b>EVF button</b> Set to use the viewfinder or display. (p. 36)



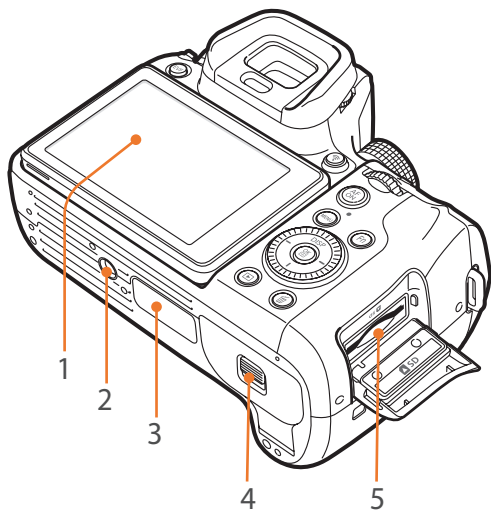
No.	Name
1	<b>AF start button</b> While this button is pressed, the camera adjusts the brightness of the focus area and automatically sets the optimum exposure value and locks the focus.
2	<b>Command dial 2</b> <ul style="list-style-type: none"> <li>• <b>In the Menu screen:</b> Move to a desired menu item.</li> <li>• <b>In the Smart panel:</b> Adjust a selected option.</li> </ul>

No.	Name
2	<ul style="list-style-type: none"> <li>• <b>In Shooting mode:</b> Adjust shutter speed or aperture value in some shooting modes or change the size of a focus area.</li> <li>• <b>In Playback mode:</b> View previous or next file. Scan backward or forward a video.</li> </ul>
3	<b>Status display panel illumination button</b> Illuminate the status display panel.
4	<b>Status display panel</b> View the current AF mode, metering option, battery life, White Balance option, or ISO sensitivity. (p. 56)
5	<b>AEL button (p. 120)</b> <ul style="list-style-type: none"> <li>• <b>In Shooting mode:</b> Lock the adjusted exposure value or focus.</li> <li>• <b>In Playback mode:</b> Protect the selected file.</li> </ul>
6	<b>Status lamp</b> Indicate the status of the camera. <ul style="list-style-type: none"> <li>• <b>Blinking:</b> When saving a photo, shooting a video, sending data to a computer, connecting to WLAN, or sending a photo.</li> <li>• <b>Steady:</b> When there is no data transfer, when data transfer to a computer is complete, or charging the battery.</li> </ul>
7	<b>Fn button</b> Access the Smart panel and fine-tune some settings.

No.	Name
8	<b>OK button</b> <ul style="list-style-type: none"> <li>• <b>In the Menu screen:</b> Save the selected options.</li> <li>• <b>In Shooting mode:</b> Allow you to select a focus area manually in some shooting modes.</li> </ul>
9	<b>Delete button</b> Delete files in Playback mode.
10	<b>Playback button</b> Enter Playback mode to view pictures or videos.
11	<b>Navigation button (Custom wheel)</b> <ul style="list-style-type: none"> <li>• <b>In Shooting mode</b> <ul style="list-style-type: none"> <li>- DISP: Change the information on the display.</li> <li>- <b>←/→</b>: Perform the assigned function. (p. 173)</li> <li>- Rotate the wheel to adjust shutter speed, aperture value, ISO sensitivity, or to change the size of a focus area. (p. 173)</li> </ul> </li> <li>• <b>In other situations</b>  Move up, down, left, right, respectively. (You can also rotate the wheel.)</li> </ul>
12	<b>MENU button</b> Access options or menus.



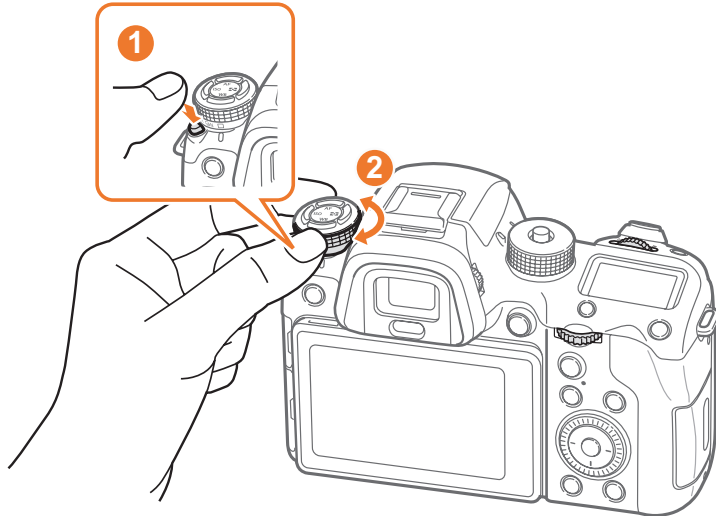
No.	Name
1	<b>Eyelet for camera strap</b>
2	<b>Headset port</b> Insert a 3.5 mm stereo headset.
3	<b>External microphone port</b> Insert a 3.5 mm stereo microphone.
4	<b>HDMI port</b>
5	<b>USB and shutter release port</b> Connect the camera to a computer or shutter release. Use a shutter release cable with a tripod to minimize camera movement.
6	<b>Internal antenna</b> * Avoid contact with the internal antenna while using a wireless network.
7	<b>NFC tag</b>



No.	Name
1	<b>Display (touch screen)</b> <ul style="list-style-type: none"><li>• To take photos at high or low angles, tilt the display up or down. (p. 15)</li><li>• Touch the screen to select a menu or an option. (p. 44)</li></ul>
2	<b>Tripod mount</b>
3	<b>Vertical battery grip connector (cover)</b> <p>Connect the vertical grip (optional) to capture portraits conveniently and extend battery life.</p> <p>* When connecting to a vertical grip, remove the vertical grip battery connector cover and store it in the slot on vertical grip.</p>
4	<b>Battery chamber cover</b> <p>Insert a battery.</p>
5	<b>Memory card slot</b> <p>Insert a memory card.</p>

## Using the drive dial

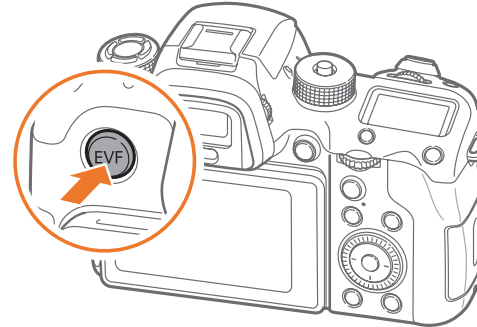
While pressing the drive dial lock button (1), rotate the drive dial (2) to select a shooting method.



Do not rotate the drive dial without pressing the drive dial lock button. Doing so may damage the camera.

## Using the EVF button

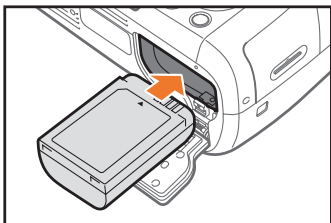
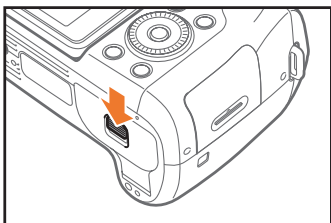
Pressing [EVF] will allow you to view the viewfinder or display.



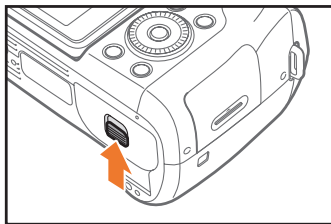
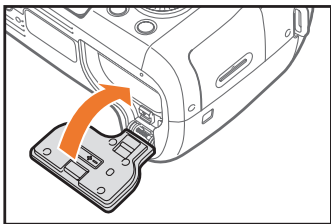
# Inserting the battery and memory card

Learn how to insert the battery and an optional memory card into the camera.

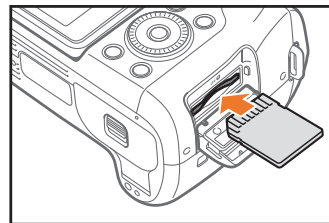
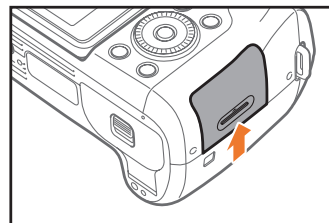
## Inserting the battery



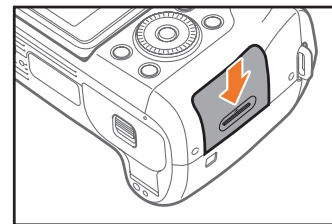
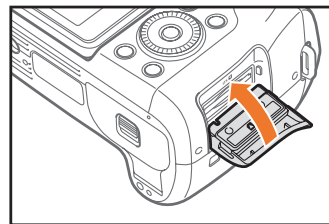
Insert the battery with the Samsung logo facing down.



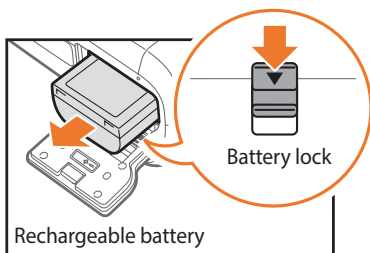
## Inserting a memory card



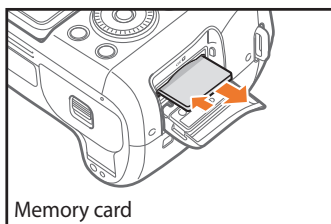
Insert a memory card with the gold-colored contacts facing up.



## Removing the battery and memory card

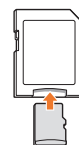


Slide the lock down to release the battery.



Push the card gently until it disengages from the camera, and then pull it out of the slot.

## Using the memory card adapter



To use micro memory cards with this product, a PC, or a memory card reader, insert the card into an adapter.

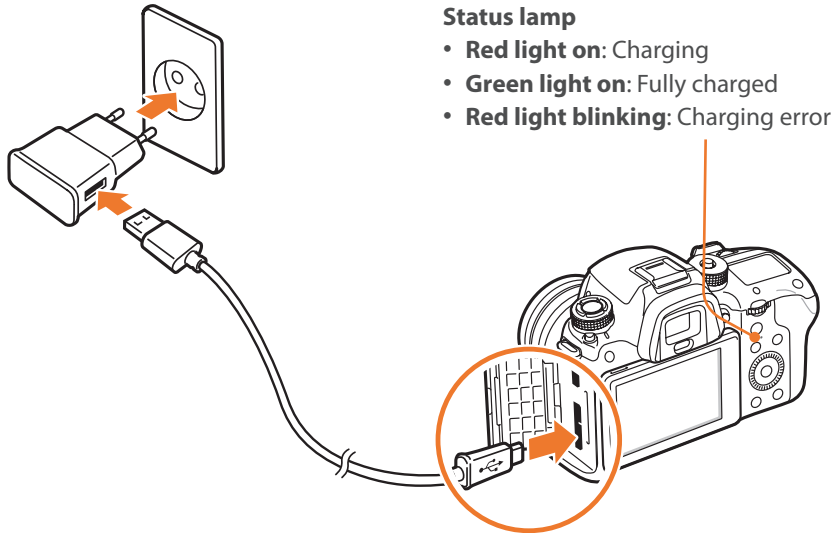


While the status lamp of the camera is blinking, do not remove the memory card or battery. Doing so may damage the data stored on the memory card or your camera.

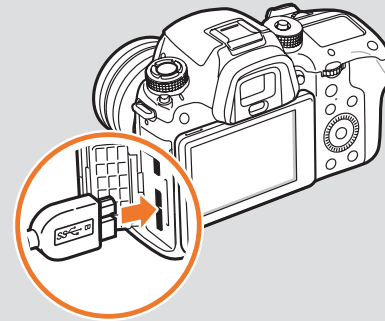
# Charging the battery and turning on your camera

## 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.



- Use only the AC adapter and USB cable supplied with your camera. If you use another AC adapter, the camera battery may not charge or work properly.
- You can capture a photo without inserting a memory card, but the captured photo cannot be transferred to a memory card or a computer.

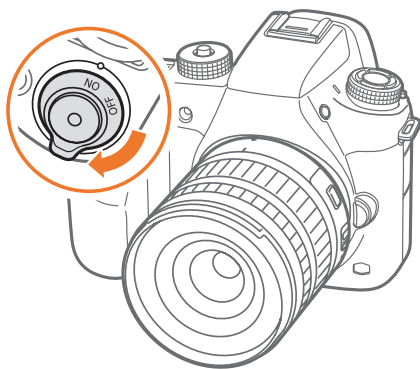




## Turning on your camera

Set the Power switch to **ON**.

- To turn your camera off, set the Power switch to **OFF**.
- The initial setup screen appears when you turn on the camera for the first time. (p. 41)

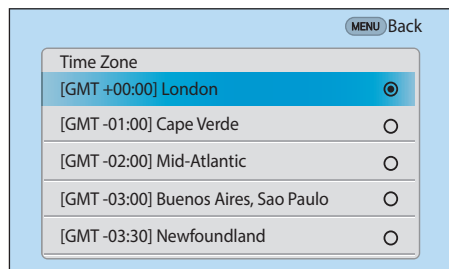


# Performing the initial setup

When you turn on your camera for the first time, the initial setup screen appears. The language is preset for the country or region where the camera is sold. You can change the language as desired. You can also select an item by touching it on the screen.

1 Press [I] to select **Time Zone**, and then press [OK].

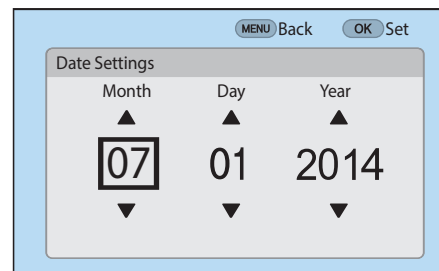
2 Press [DISP/I] to select a time zone, and then press [OK].



3 Press [I] to select **Date Settings**, and then press [OK].

4 Press [—/—] to select an item (Year/Month/Day).

5 Press [DISP/I] to set the option, and then press [OK].

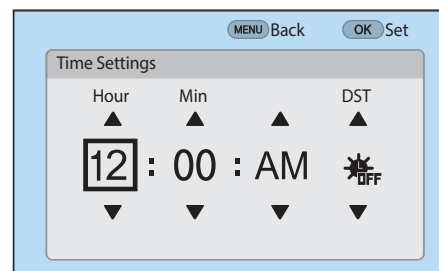


- The screen may differ depending on the language you selected.

6 Press [I] to select **Time Settings**, and then press [OK].

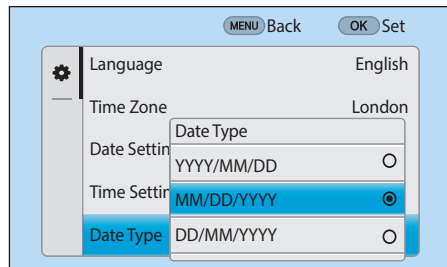
7 Press [—/—] to select an item (Hour/Minute/Summer time).

8 Press [DISP/I] to set the option, and then press [OK].



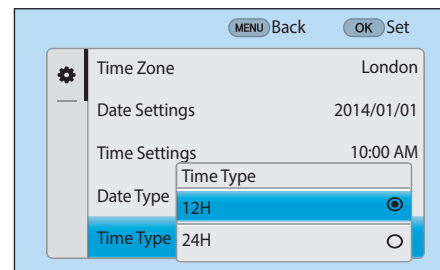
9 Press [I] to select **Date Type**, and then press [OK].

10 Press [DISP/I] to select a date type, and then press [OK].



11 Press [I] to select **Time Type**, and then press [OK].

12 Press [DISP/I] to select a time type, and then press [OK].



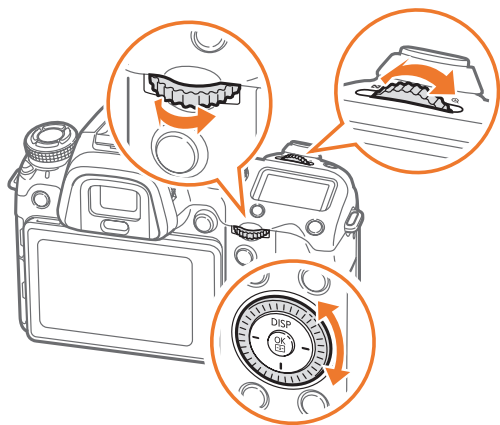
13 Press [MENU] to finish the initial setup.

# Selecting functions (options)

## Selecting with buttons

Use one of the following methods to select an option:

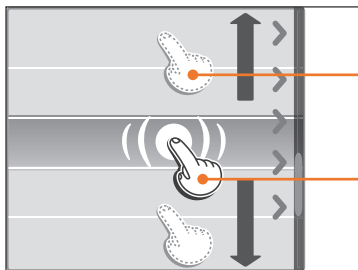
- Rotate the command dial 1, and then press [OK].
- Rotate the command dial 2, and then press [OK].
- Rotate the navigation button, and then press [OK].
- Press [DISP/II/—/—], and then press [OK].



## Selecting by touch

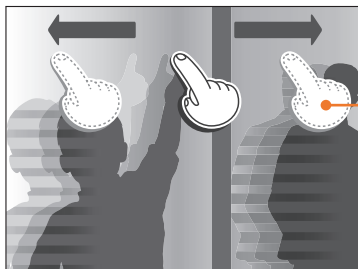


Do not use sharp objects, such as pens or pencils, to touch the screen. You can damage the screen.



**Dragging:** Touch and hold an area on the screen, and then drag your finger.

**Touching:** Touch an icon to select a menu or an option.



**Flicking:** Gently flick your finger across the screen.







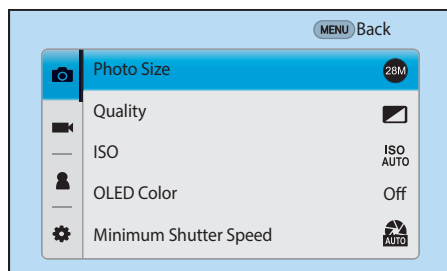
- When you touch or drag the screen, discolorations may occur. This is not a malfunction, but a characteristic of the touch screen. Touch or drag lightly to minimize the discolorations.
- The touch screen may not work properly if you use the camera in extremely humid environments.
- The touch screen 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 MENU

Press [MENU] or touch **MENU** on the screen, and then change shooting options or settings.

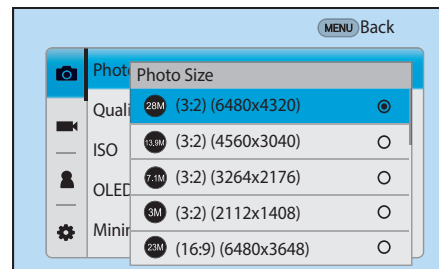
### E.g. Selecting the photo size in P mode

- 1 Rotate the mode dial to P.
- 2 Press [MENU] or touch **MENU**.
- 3 Scroll the command dial 1 or press [DISP/II] to move to , and then press .
  - You can also touch  on the screen.
- 4 Rotate the navigation button or press [DISP/II] to move to **Photo Size**, and then press .
  - You can also drag the option list, and then touch an option.



- 5 Rotate the navigation button or press [DISP/II] to move to an option, and then press .

- You can also drag the option list, and then touch an option.
- Press [MENU] or touch **Back** to go back to the previous menu.



- 6 Press [MENU] or touch **Back** to switch to Shooting mode.

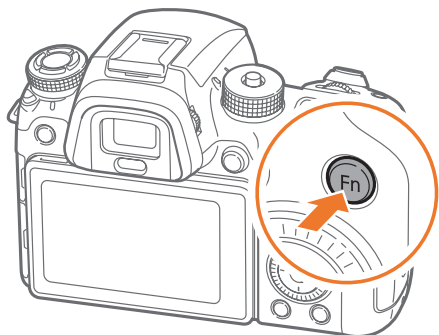
## Using the Smart panel

Press [Fn] or touch **[Fn]** on the screen to access some functions such as Exposure, ISO, and White Balance.

E.g. Adjust the exposure value in P mode

1 Rotate the mode dial to P.

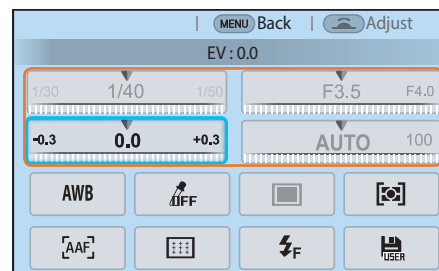
2 Press [Fn] or touch **[Fn]**.



3 Scroll the command dial 2 or rotate the navigation button or press [DISP/I/—/—] to move to **EV**, and then press **[OK]**.

- You can directly select an option by scrolling the command dial 1 without having to press **[OK]**.

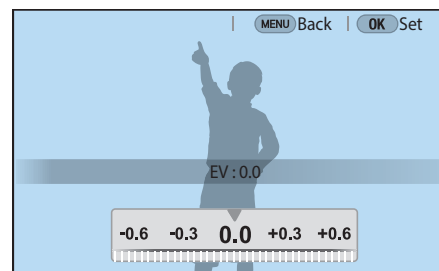
- You can also select an option by touching it.



You can adjust some options by dragging them.

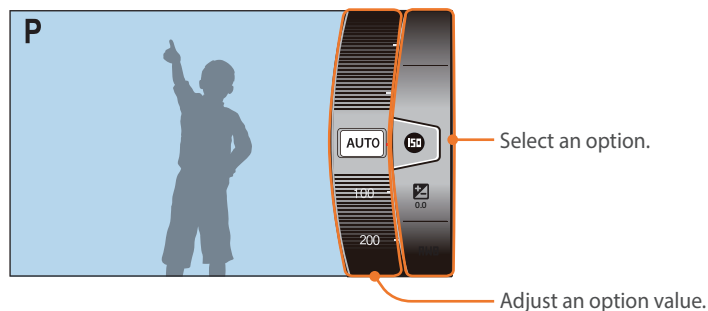
4 Scroll the command dial 1 or command dial 2, or rotate the navigation button, or press **[—/—]** to adjust the exposure value, and then press **[OK]**.

- You can also drag the dial on the screen, and then touch **Set** to adjust the option.



## Using iFn

Press [**i-Function**] on an i-Function lens to manually select and adjust shutter speed, aperture value, exposure value, ISO sensitivity, and White Balance on the lens.

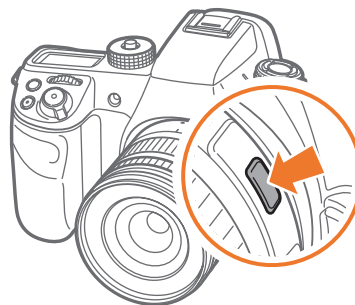


1 Rotate the mode dial to P, A, S, or M.

2 Press [**i-Function**] on the lens to select a setting.

- To select items to appear, select [MENU] → → **iFn Setting** → an item.

- You can also press [**i-Function**], and then press [DISP/I] or drag the screen to select a setting.



Option	Description
<b>Aperture</b>	Adjust the aperture value.
<b>Shutter speed</b>	Adjust the shutter speed.
<b>EV</b>	Adjust the exposure value.
<b>ISO</b>	Adjust the ISO sensitivity.
<b>White Balance</b>	Select a White Balance option.
<b>intelli-Zoom</b>	Zoom in on a subject with less degradation of photo quality than the Digital zoom. However, the photo resolution or size may change compared to when you zoom in by rotating the zoom ring.



### 3 Adjust the focus ring to select an option.

- You can also scroll the command dial 2 or rotate the navigation button or drag the screen to select an option.



### 4 Half-press [**Shutter**] to focus, and then press [**Shutter**] to capture the photo.


### Available options

Shooting mode	P	A	S	M	3D
Aperture	-	O	-	O	-
Shutter speed	-	-	O	O	-
EV	O	O	O	-	O
ISO	O	O	O	O	O
White Balance	O	O	O	O	O
intelli-Zoom	O	O	O	O	O



- This function is not available when you attach a 3D lens and set **3D Auto Mode** in 3D mode.
- intelli-Zoom** is not available when you capture photos in the RAW file format.
- intelli-Zoom** is deactivated when you record videos by pressing the video recording button.

## Using custom buttons and dials

Assign your favorite functions to some buttons and dials. In Shooting mode, press [MENU] →  → **Key Mapping** → an option.

### Available items

Preview button, AEL button, AF start button, Navigation button, Command dial 1/2

**When you frequently adjust AF Area, White Balance, and Picture Wizard (Example)**

**1** In shooting mode, [MENU] →  → **Key Mapping**.

**2** Select a button from the list.

**3** Select a function.

Button	Function	Description
Custom ◀ Key	AF Area	Select the positions of the focus area.
Custom ▶ Key	White Balance	Select the appropriate light source.
Custom ▼ Key	Picture Wizard	Apply different photo styles.

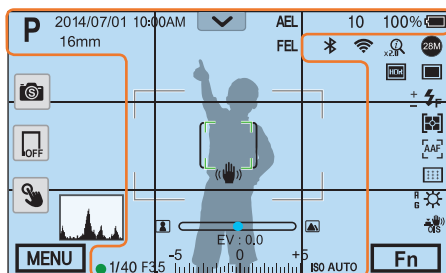
**4** Press [MENU] to move to the previous screen.

# Display icons

## In Shooting mode

### Capturing photos

#### 1. Shooting information



Icon	Description
<b>P</b>	Shooting mode
2014/07/01	Current date
10:00AM	Current time
16mm	Focal length*
	Notification panel bar (Touch)
	Memory card not inserted**
<b>AEL</b>	Auto exposure lock (p. 120)
<b>AFL</b>	Auto focus lock (p. 120)
<b>FEL</b>	Flash intensity lock (p. 113)
<b>10</b>	Available number of photos
100%	Battery percentage
	Auto focus frame
[ ]	Spot metering area
	<ul style="list-style-type: none"> <li>: Fully charged</li> <li>: Partially charged</li> <li> (Red): Empty (recharge the battery)</li> <li>: Charging</li> <li>: Internal battery in use (when the vertical grip is connected)</li> <li>: External battery in use (when the vertical grip is connected)</li> </ul>

Icon	Description
	Camera shake
	Manual focus scale
	Level gauge (p. 52)
	Histogram (p.173)
	Focus
<b>1/40</b>	Shutter speed
<b>F3.5</b>	Aperture value
<b>EV : 0.0</b>	Exposure adjustment value
	Exposure level display
<b>ISO AUTO</b>	ISO sensitivity (p. 85)

\* This icon appears when you attach the Power Zoom lens.

\*\* Photos that were captured without inserting a memory card cannot be transferred to a memory card or a computer.