

## Your device is hot to the touch

When you use applications that require more power or use applications on your device for an extended period of time, your device may feel hot to the touch. This is normal and should not affect your device's lifespan or performance.

## Error messages appear when launching the camera

Your Samsung device must have sufficient available memory and battery power to operate the camera application. If you receive error messages when launching the camera, try the following:

- Charge the battery or replace it with a battery that is fully charged.
- Free some memory by transferring files to a computer or deleting files from your device.
- Restart the device. If you are still having trouble with the camera application after trying these tips, contact a Samsung Service Centre.

## Error messages appear when opening music files

Some music files may not play on your Samsung device for a variety of reasons. If you receive error messages when opening music files on your device, try the following:

- Free some memory by transferring files to a computer or deleting files from your device.
- Ensure that the music file is not Digital Rights Management (DRM)-protected. If the file is DRM-protected, ensure that you have the appropriate licence or key to play the file.
- Ensure that your device supports the file type.

## Another Bluetooth device is not located

- Ensure that the Bluetooth wireless feature is activated on your device.
- Ensure that the Bluetooth wireless feature is activated on the device you wish to connect to, if necessary.
- Ensure that your device and the other Bluetooth device are within the maximum Bluetooth range (10 m).

If the tips above do not solve the problem, contact a Samsung Service Centre.

## **A connection is not established when you connect the device to a computer**

- Ensure that the USB cable you are using is compatible with your device.
- Ensure that you have the proper drivers installed and updated on your computer.
- If you are a Windows XP user, ensure that you have Windows XP Service Pack 3 or higher installed on your computer.
- Ensure that you have Samsung Kies 2.0 or Windows Media Player 10 or higher installed on your computer.

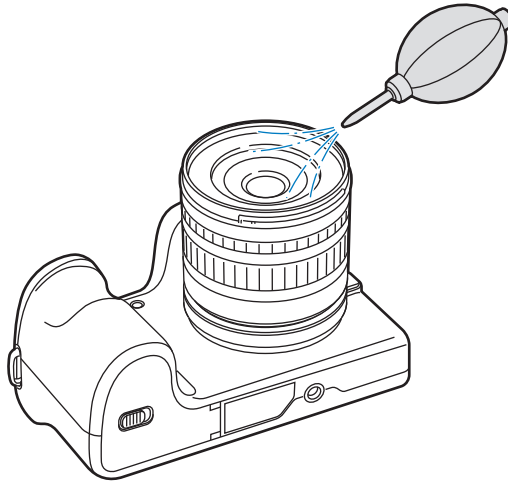
## **A small gap appears around the outside of the device case**

- This gap is a necessary manufacturing feature and some minor rocking or vibration of parts may occur.
- Over time, friction between parts may cause this gap to expand slightly.

# Cleaning the camera

## Camera lens and display

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



## Image sensor

Depending on different shooting conditions, dust may appear in photos because the image sensor is exposed to the external environment. This problem is normal, and the exposure to dust occurs in everyday use of the camera. You can remove dust from the sensor by operating the sensor cleaning function. (p. 92) If dust remains after cleaning the sensor, contact a service center. Do not insert the blower into the mounting opening of the lens.

## Camera body

Wipe gently with a soft, dry cloth.



Never use benzene, thinners, or alcohol to clean the device. These solutions can damage the device or cause it to malfunction.

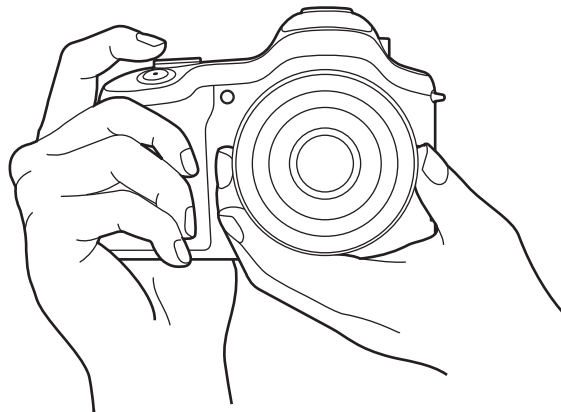
# Concepts in Photography

## Shooting postures

A correct posture for stabilising 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 minimise body movement.

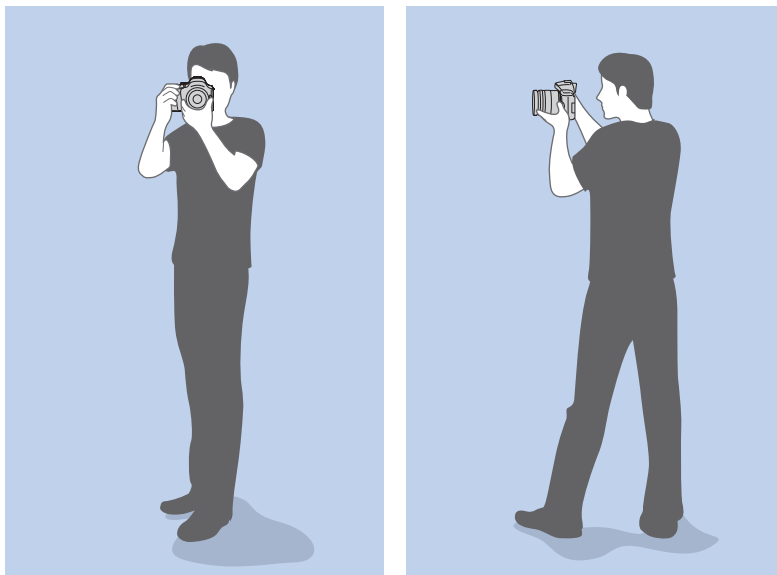
### Holding the camera

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.



## Aperture

The aperture, a hole that controls the amount of light that enters the camera, is one of the three factors that determine the exposure. The aperture housing contains thin and metal plates that open and close to let light through the aperture and into the camera. The size of the aperture is closely related to the brightness of a photo: the larger the aperture, the brighter the photo; the smaller the aperture, the darker the photo.



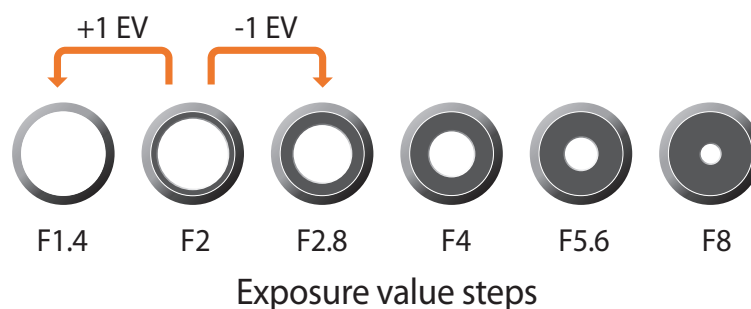
Darker photo  
(aperture opened slightly)



Brighter photo  
(aperture opened wide)

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.



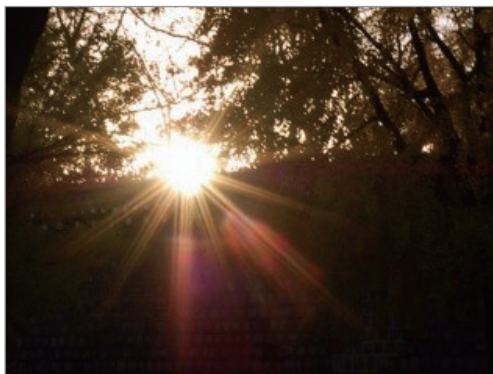
A photo with a large DOF



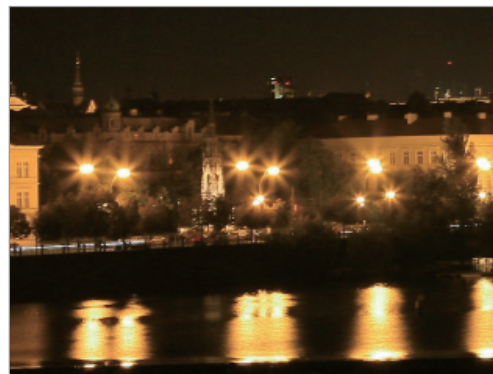
A photo with a small DOF

The aperture housing contains several blades. These blades move together and control the amount of light passing through the centre 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



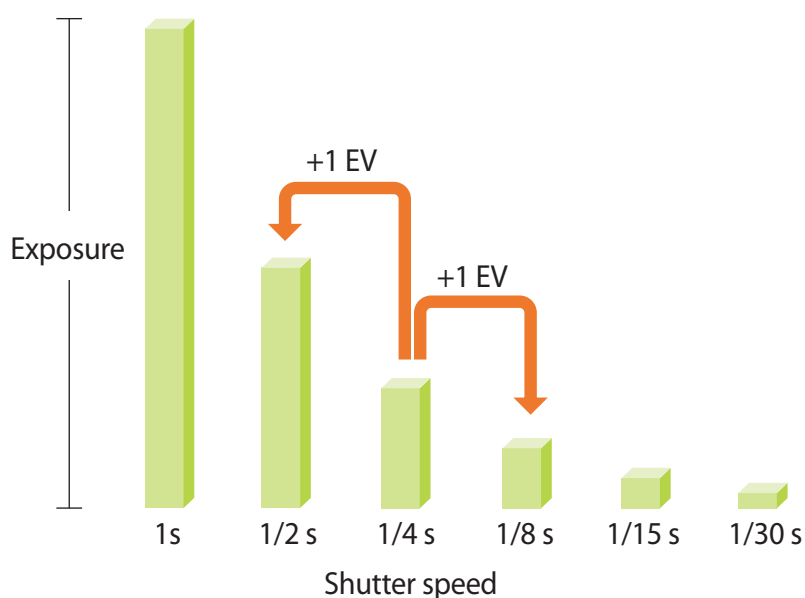
8 blades



## Shutter speed

Shutter speed refers to the amount of time it takes to open and close the shutter, 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.

Usually, the shutter speed is manually adjustable. The measurement of the shutter speed is the exposure value (EV), which is marked in intervals of 1 s, 1/2 s, 1/4 s, 1/8 s, 1/15 s, 1/1000 s, 1/2000 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.

As the photos below illustrate, a slow shutter speed allows more time to let light in, so the photo becomes brighter. On the other hand, a fast shutter speed allows less time to let light in and the photo becomes darker and more easily freezes subjects in motion.



0.8 s



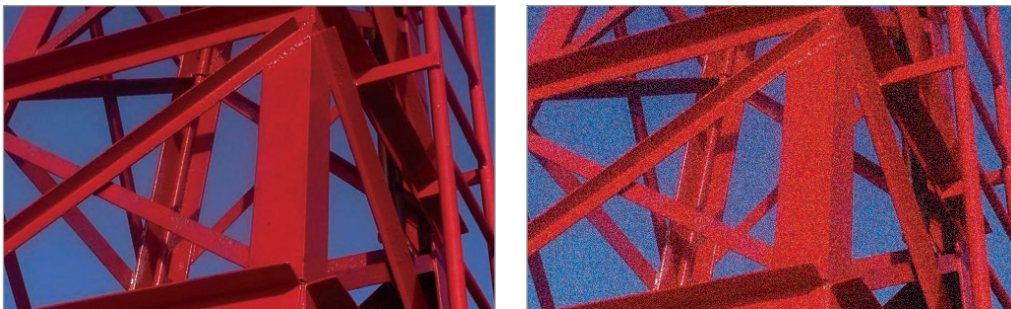
0.004 s



## 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 taking photos at twice the speed of an ISO 100 setting. However, higher ISO settings can result in noise. 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 and a slow shutter speed will result in a blurry photo.



A photo taken 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, the aperture can control the depth of field, and the ISO sensitivity can control the graininess of a photo.


## Aperture value

Setting	Result
<p>Wide aperture = more light</p> <p>Narrow aperture = less light</p>	 <p>Wide = small depth of field</p> <p>Narrow = large depth of field</p>

## Shutter speed

Setting	Result
<p>Fast speed = less light</p> <p>Slow speed = more light</p>	 <p>Fast = still</p> <p>Slow = blurry</p>

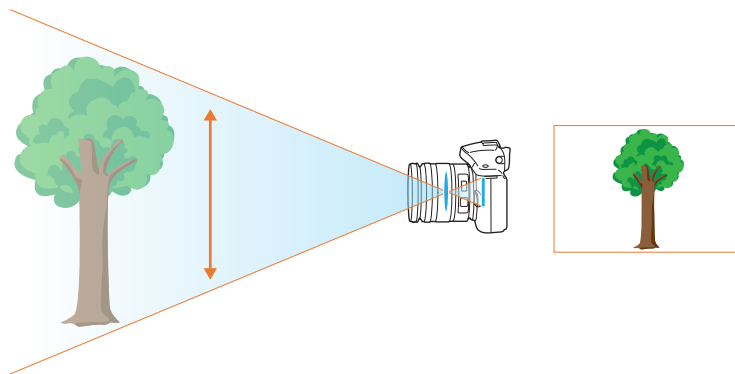
## ISO sensitivity

Setting	Result
<p>High sensitivity = more sensitive to light</p> <p>Low sensitivity = less sensitive to light</p>	 <p>High = more grainy</p> <p>Low = less grainy</p>

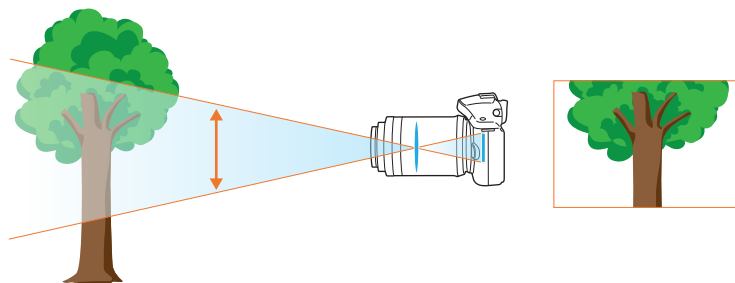
## Correlation between focal length, angle, and perspective

Focal length, which is measured in millimetres, is the distance between the middle of the lens to its focal point. It affects the angle and perspective of taken photos. A short focal length translates into a wide angle, which allows you to take wide shots. A long focal length translates into a narrow angle, which allows you to take telephoto shots.

### Short focal length



### Long focal length



Look at these photos below and compare the changes.



20 mm angle



50 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 other values including the shutter speed and ISO sensitivity are equal, a low aperture value leads to a photo with a low DOF.



50 mm F5.7



50 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 telescope lens with a short focal length is better to take a photo of a low DOF.



A photo taken with a  
20 mm telescope lens



A photo taken 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 taken with a 100 mm  
telescope lens



A photo taken close to the subject



## Composition

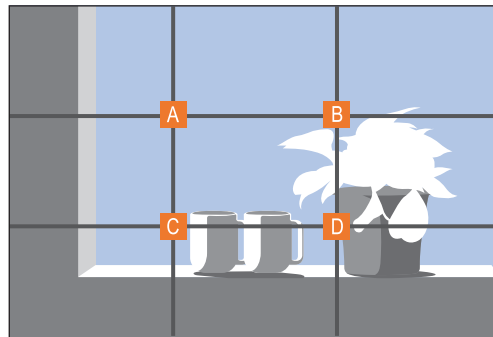
It is fun to take a photo of the beauty of world with a camera. No matter how the world is beautiful, however, a poor composition cannot capture the beauty of it.

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

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

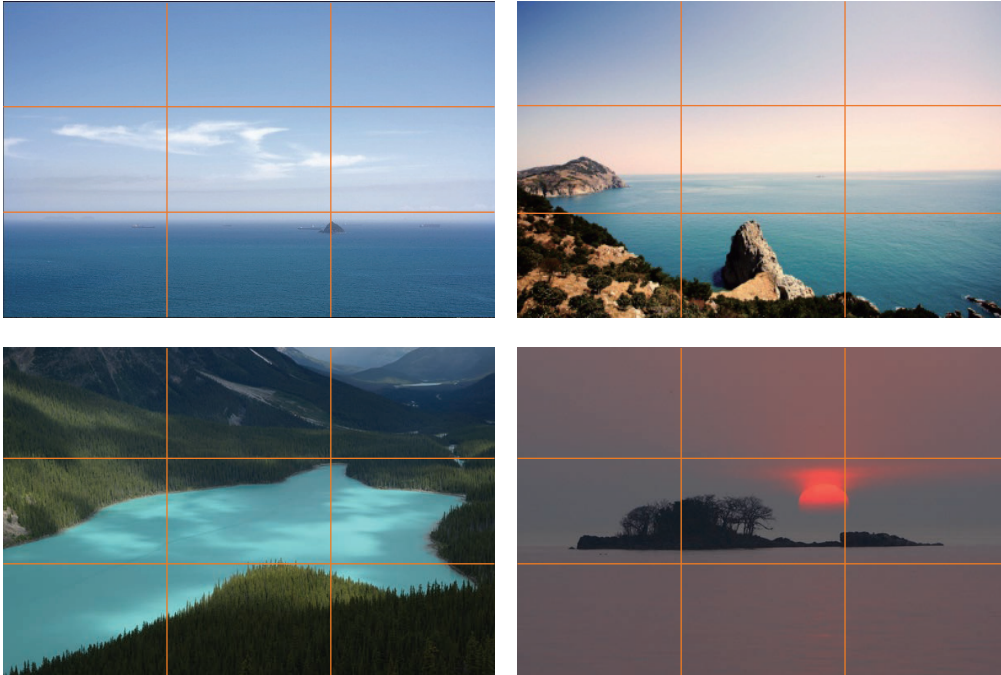
### Rule of thirds

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



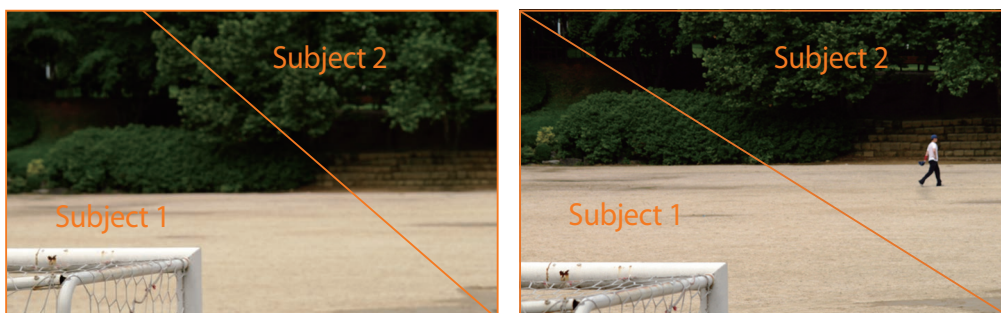
To compose photos that best emphasise the subject, make sure the subject is located at one of the corners of the centre rectangle.

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



### Photos with two subjects

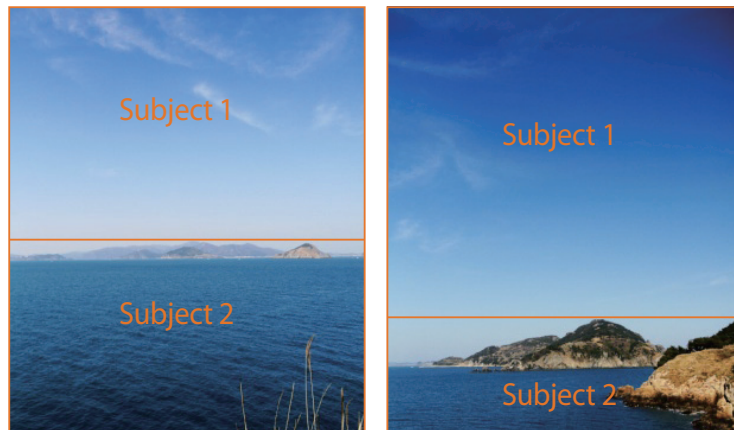
If your subject is in one corner of the photo, it creates an unbalanced composition. You can stabilise the photo by capturing a second subject in the opposite corner to balance the weight of the photo.



Unstable

Stable

When taking landscape photos, centring 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's not easy, however, to have an enough amount of light anytime and anywhere. Making use of a flash allows you to optimise 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 metres 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 taken with flash may appear unnatural and cast shadows. Subjects in photos taken with bounce photography cast no shadows and look smooth due to evenly spread light.



Some content may differ from your device depending on the region, service provider, or software version, and is subject to change without prior notice.



# Safety information

**This safety information contains content for mobile devices. Some content may be not applicable to your device. To prevent injury to yourself and others or damage to your device, read the safety information about your device before using the device.**



## Warning

### **Failure to comply with safety warnings and regulations can cause serious injury or death**

#### **Do not use damaged power cords or plugs, or loose electrical sockets**

Unsecured connections can cause electric shock or fire.

#### **Do not touch the power cord with wet hands or disconnect the charger by pulling the cord**

Doing so may result in electrocution.

#### **Do not bend or damage the power cord**

Doing so may cause electric shock or fire.

#### **Do not use your device while it is charging or touch your device with wet hands**

Doing so may cause electric shock.

#### **Do not short-circuit the charger or the device**

Doing so may cause electric shock or fire, or the battery may malfunction or explode.

#### **Do not use your device outdoor during a thunderstorm**

Doing so may result in electric shock or device malfunction.

#### **Use manufacturer-approved batteries, chargers, accessories, and supplies**

- Using generic batteries or chargers may shorten the life of your device or cause the device to malfunction. They may also cause a fire or cause the battery to explode.
- Use only Samsung-approved battery and charger specifically designed for your device. Incompatible battery and charger can cause serious injuries or damage to your device.
- Samsung cannot be responsible for the user's safety when using accessories or supplies that are not approved by Samsung.

#### **Do not drop or cause an impact to the charger or the device**

#### **Handle and dispose of the device and charger with care**

- Never dispose of the battery or device in a fire. Never place the battery or device on or in heating devices, such as microwave ovens, stoves, or radiators. The device may explode when overheated. Follow all local regulations when disposing of used battery or device.
- Never crush or puncture the device.
- Avoid exposing the device to high external pressure, which can lead to an internal short circuit and overheating.

**Protect the device, battery and charger from damage**

- Avoid exposing your device and battery to very cold or very hot temperatures.
- Extreme temperatures can damage the device and reduce the charging capacity and life of your device and battery.
- Prevent the battery from coming into 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.
- Never use a damaged charger or battery.

**Do not store your device near or in heaters, microwaves, hot cooking equipment, or high pressure containers**

- The battery may leak.
- Your device may overheat and cause a fire.

**Do not use or store your device in areas with high concentrations of dust or airborne materials**

Dust or foreign materials can cause your device to malfunction and may result in fire or electric shock.

**Do not bite or suck the device or the battery**

- Doing so may damage the device or result in an explosion or fire.
- Children or animals can choke on small parts.
- If children use the device, make sure that they use the device properly.

**Do not insert the device or supplied accessories into the eyes, ears, or mouth**

Doing so may cause suffocation or serious injuries.

**Do not handle a damaged or leaking Lithium Ion (Li-Ion) battery**

For safe disposal of your Li-Ion battery, contact your nearest authorised service centre.



**Caution**

**Failure to comply with safety cautions and regulations can cause injury or property damage**

**Do not use your device near other electronic devices**

- Most electronic devices use radio frequency signals. Your device may interfere with other electronic devices.
- Using an LTE data connection may cause interference with other devices, such as audio equipment and telephones.

**Do not use your device in a hospital, on an aircraft, or in an automotive equipment that can be interfered with by radio frequency**

- Avoid using your device within a 15 cm range of a pacemaker, if possible, as your device can interfere with the pacemaker.



- To minimise possible interference with a pacemaker, use your device only on the side of your body that is opposite the pacemaker.
- If you use medical equipment, contact the equipment manufacturer before using your device to determine whether or not the equipment will be affected by radio frequencies emitted by the device.
- On an aircraft, using electronic devices can interfere with the aircraft's electronic navigational instruments. Make sure the device is turned off during takeoff and landing. After takeoff, you can use the device in flight mode if allowed by aircraft personnel.
- Electronic devices in your car may malfunction, due to radio interference from your device. Contact the manufacturer for more information.

### **Do not expose the device to heavy smoke or fumes**

Doing so may damage the outside of the device or cause it to malfunction.

### **If you use a hearing aid, contact the manufacturer for information about radio interference**

The radio frequency emitted by your device may interfere with some hearing aids. Before using your device, contact the manufacturer to determine whether or not your hearing aid will be affected by radio frequencies emitted by the device.

### **Do not use your device near devices or apparatuses that emit radio frequencies, such as sound systems or radio towers**

Radio frequencies may cause your device to malfunction.

### **Turn off the device in potentially explosive environments**

- Turn off your device in potentially explosive environments instead of removing the battery.
- Always comply with regulations, instructions and signs in potentially explosive environments.
- Do not use your device at refuelling points (petrol stations), near fuels or chemicals, or in blasting areas.
- Do not store or carry flammable liquids, gases, or explosive materials in the same compartment as the device, its parts, or accessories.

### **If you notice strange smells or sounds coming from your device or the battery, or if you see smoke or liquids leaking from the device or battery, stop using the device immediately and take it to a Samsung Service Centre**

Failure to do so may result in fire or explosion.

### **Comply with all safety warnings and regulations regarding mobile device usage while operating a vehicle**

While driving, safely operating the vehicle is your first responsibility. Never use your mobile device while driving, if it is prohibited by law. For your safety and the safety of others, use your common sense and remember the following tips:

- Get to know your device and its convenience features, such as speed dial and redial. These features help you reduce the time needed to place or receive calls on your mobile device.
- Position your device within easy reach. Make sure you can access your wireless device without taking your eyes off the road. If you receive an incoming call at an inconvenient time, let your voicemail answer it for you.

## Safety information

- Suspend calls in heavy traffic or hazardous weather conditions. Rain, sleet, snow, ice, and heavy traffic can be hazardous.
- Do not take notes or look up phone numbers. Jotting down a “to do” list or flipping through your address book takes attention away from your primary responsibility of driving safely.
- Dial sensibly and assess the traffic. Place calls when you are not moving or before pulling into traffic. Try to plan calls when your car will be stationary.
- Do not engage in stressful or emotional conversations that may be distracting. Make the person you are talking to aware that you are driving and suspend conversations that could potentially divert your attention from the road.

## Care and use your mobile device properly

### Keep your device dry

- Humidity and liquids may damage the parts or electronic circuits in your device.
- Do not turn on your device if it is wet. If your device is already on, turn it off and remove the battery immediately (if the device will not turn off or you cannot remove the battery, leave it as-is). Then, dry the device with a towel and take it to a service centre.
- Liquids will change the colour of the label that indicates water damage inside the device. Water damage to your device can void your manufacturer's warranty.

### Store your device only on flat surfaces

If your device falls, it may be damaged.

**Do not store your device in very hot or very cold areas. It is recommended to use your device at temperatures from 5 °C to 35 °C**

- Do not store your device in very hot areas such as inside a car in the summertime. Doing so may cause the screen to malfunction, result in damage to the device, or cause the battery to explode.
- Do not expose your device to direct sunlight for extended periods of time (on the dashboard of a car, for example).
- Store the battery at temperatures from 0 °C to 45 °C.

**Do not store your device with metal objects, such as coins, keys, and necklaces**

- Your device may be scratched or may malfunction.
- If the battery terminals come into contact with metal objects, this may cause a fire.

**Do not store your device near magnetic fields**

- Your device may malfunction or the battery may discharge from exposure to magnetic fields.
- Magnetic stripe cards, including credit cards, phone cards, passbooks, and boarding passes, may be damaged by magnetic fields.

**Do not use your device or applications for a while if the device is overheated**

Prolonged exposure of your skin to an overheated device may cause low temperature burn symptoms, such as red spots and pigmentation.

**Do not use your device with the back cover removed**

The battery may fall out of the device, which may result in damage or malfunction.

**If your device has a camera flash or light, do not use it close to the eyes of people or pets**

Using a flash close to the eyes may cause temporary loss of vision or damage to the eyes.

**Use caution when exposed to flashing lights**

- While using your device, leave some lights on in the room and do not hold the screen too close to your eyes.
- Seizures or blackouts can occur when you are exposed to flashing lights while watching videos or playing Flash-based games for extended periods. If you feel any discomfort, stop using the device immediately.
- If anyone related to you has experienced seizures or blackouts while using a similar device, consult a physician before using the device.
- If you feel discomfort, such as a muscle spasm, or disoriented, stop using the device immediately and consult a physician.
- To prevent eye strain, take frequent breaks while using the device.

**Reduce the risk of repetitive motion injuries**

When you repetitively perform actions, such as pressing keys, drawing characters on a touch screen with your fingers, or playing games, you may experience occasional discomfort in your hands, neck, shoulders, or other parts of your body. When using your device for extended periods, hold the device with a relaxed grip, press the keys lightly, and take frequent breaks. If you continue to have discomfort during or after such use, stop using the device and consult a physician.

**Protect your hearing and ears when using a headset**

- Excessive exposure to loud sounds can cause hearing damage.
- Exposure to loud sounds while walking may distract your attention and cause an accident.
- Always turn the volume down before plugging the earphones into an audio source and use only the minimum volume setting necessary to hear your conversation or music.
- In dry environments, static electricity can build up in the headset. Avoid using headsets in dry environments or touch a metal object to discharge static electricity before connecting a headset to the device.
- Do not use a headset while driving or riding. Doing so may distract your attention and cause an accident, or may be illegal depending on your region.

### **Use caution when using the device while walking or moving**

- Always be aware of your surroundings to avoid injury to yourself or others.
- Make sure the headset cable does not become entangled in your arms or on nearby objects.

### **Do not carry your device in your back pockets or around your waist**

You could be injured or damage the device if you fall.

### **Do not paint or put stickers on your device**

- Paint and stickers can clog moving parts and prevent proper operation.
- If you are allergic to paint or metal parts of the device, you may experience itching, eczema, or swelling of the skin. When this happens, stop using the device and consult your physician.

### **Do not use the device if the screen is cracked or broken**

Broken glass or acrylic could cause injury to your hands and face. Take the device to a Samsung Service Centre to have it repaired.

### **Install mobile devices and equipment with caution**

- Ensure that any mobile devices or related equipment installed in your vehicle are securely mounted.

- Avoid placing your device and accessories near or in an airbag deployment area. Improperly installed wireless equipment can cause serious injury when airbags inflate rapidly.

### **Do not drop your device or cause impacts to your device**

- Your device may be damaged or may malfunction.
- If bent or deformed, your device may be damaged or parts may malfunction.

### **Ensure maximum battery and charger life**

- Avoid charging your device for more than a week, as overcharging may shorten battery life.
- Over time, unused device will discharge and must be recharged before use.
- Disconnect the charger from power sources when not in use.
- Use the battery only for their intended purposes.
- Leaving batteries unused over time may reduce their lifespan and performance. It may also cause the batteries to malfunction or explode, or cause a fire.
- Follow all instructions in this manual to ensure the longest lifespan of your device and battery. Damages or poor performance caused by failure to follow warnings and instructions can void your manufacturer's warranty.
- Your device may wear out over time. Some parts and repairs are covered by the warranty within the validity period, but damages or deterioration caused by using unapproved accessories are not.

**When using the device, mind the following**

- Hold the device upright, as you would with a traditional phone.
- Speak directly into the microphone.
- Do not cover the antenna area with your hands or other objects. This may cause connectivity problems or drain the battery.

**Do not disassemble, modify, or repair your device**

- Any changes or modifications to your device can void your manufacturer's warranty. If your device needs servicing, take your device to a Samsung Service Centre.
- Do not disassemble or puncture the battery, as this can cause explosion or fire.
- Turn off the device before removing the battery. If you remove the battery with the device turned on, it may cause the device to malfunction.

**When cleaning your device, mind the following**

- Wipe your device or charger with a towel or an eraser.
- Clean the battery terminals with a cotton ball or a towel.
- Do not use chemicals or detergents. Doing so may discolour or corrode the outside the device or may result in electric shock or fire.

**Do not use the device for anything other than its intended use**

Your device may malfunction.

**Avoid disturbing others when using the device in public****Allow only qualified personnel to service your device**

Allowing unqualified personnel to service your device may result in damage to your device and will void your manufacturer's warranty.

**Handle SIM cards, memory cards, or cables with care**

- When inserting a card or connecting a cable to your device, make sure that the card is inserted or the cable is connected to the proper side.
- Do not remove a card while the device is transferring or accessing information, as this could result in loss of data and/or damage to the card or device.
- Protect cards from strong shocks, static electricity, and electrical noise from other devices.
- Do not touch gold-coloured contacts or terminals with your fingers or metal objects. If dirty, wipe the card with a soft cloth.
- Inserting a card or connecting a cable by force or improperly may result in damage to the multipurpose jack or other parts of the device.

**Ensure access to emergency services**

Emergency calls from your device may not be possible in some areas or circumstances. Before travelling in remote or undeveloped areas, plan an alternative method of contacting emergency services personnel.

### **Protect your personal data and prevent leakage or misuse of sensitive information**

- While using your device, be sure to back up important data. Samsung is not responsible for the loss of any data.
- When disposing of your device, back up all data and then reset your device to prevent misuse of your personal information.
- Carefully read the permissions screen when downloading applications. Be particularly cautious with applications that have access to many functions or to a significant amount of your personal information.
- Check your accounts regularly for unapproved or suspicious use. If you find any sign of misuse of your personal information, contact your service provider to delete or change your account information.
- In the event your device is lost or stolen, change the passwords on your accounts to protect your personal information.
- Avoid using applications from unknown sources and lock your device with a pattern, password, or PIN.

### **Do not distribute copyright-protected material**

Do not distribute copyright-protected material without the permission of the content owners. Doing this may violate copyright laws. The manufacturer is not liable for any legal issues caused by the user's illegal use of copyrighted material.

### **Malware and viruses**


**To protect your device from malware and viruses, follow these usage tips. Failure to do so may result in damages or loss of data that may not be covered by the warranty service**

- Do not download unknown applications.
- Do not visit untrusted websites.
- Delete suspicious messages or email from unknown senders.
- Set a password and change it regularly.
- Deactivate wireless features, such as Bluetooth, when not in use.
- If the device behaves abnormally, run an antivirus program to check for infection.
- Run an antivirus program on your device before you launch newly-downloaded applications and files.
- Install antivirus programs on your computer and run them regularly to check for infection.
- Do not edit registry settings or modify the device's operating system.

### 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.

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.

This EEE is compliant with RoHS.

### 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. 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.

### Disclaimer

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## **FCC Notice and Cautions**

### **FCC Notice**



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

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

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

The Camera may cause TV or radio interference if used in close proximity to receiving

equipment. The FCC can require you to stop using the Camera if such interference cannot be eliminated.

Vehicles using liquefied petroleum gas (such as propane or butane) must comply with the National Fire Protection Standard (NFPA-58). For a copy of this standard, contact the National Fire Protection Association, One Batterymarch Park, Quincy, MA 02269, Attn: Publication Sales Division.

### **Cautions**

Changes or modifications made in the radio Camera, not expressly approved by Samsung, will void the user's authority to operate the equipment.

The use of any unauthorized accessories may be dangerous and void the Camera warranty if said accessories cause damage or a defect to the Camera.

Although your Camera is quite sturdy, it is a complex piece of equipment and can be broken. Avoid dropping, hitting, bending or sitting on it.

### **Other Important Safety Information**

- Only qualified personnel should service the Camera or install the Camera in a vehicle. Faulty installation or service may be dangerous and may invalidate any warranty applicable to the device.
- Check regularly that all wireless Camera equipment in your vehicle is mounted and operating properly.
- Do not store or carry flammable liquids, gases or explosive materials in the

same compartment as the Camera, its parts or accessories.

- For vehicles equipped with an air bag, remember that an air bag inflates with great force. Do not place objects, including both installed or portable wireless equipment in the area over the air bag or in the air bag deployment area. If wireless equipment is improperly installed and the air bag inflates, serious injury could result.
- Switch your Camera off before boarding an aircraft. The use of wireless Camera in aircraft is illegal and may be dangerous to the aircraft's operation.
- Failure to observe these instructions may lead to the suspension or denial of telephone services to the offender, or legal action, or both.
- This device is capable of operating in Wi-Fi mode in the 2.4 and 5 GHz bands. The FCC requires that devices operating within 5.15-5.25 GHz may only be used indoors, not outside, in order to avoid interference with MobileSatellite Services (MSS). Therefore, do not use this device outside as a Wi-Fi hotspot or in Wi-Fi Direct mode outside when using the 5.15-5.25 GHz band.

## **Product Performance**

### **Getting the Most Out of Your Signal Reception**

The quality of each call you make or receive depends on the signal strength in your area. Your Camera informs you of the current signal strength by displaying a number of bars next to the signal strength icon. The more bars displayed, the stronger the signal.

If you're inside a building, being near a window may give you better reception.

### **Understanding the Power Save Feature**

If your Camera is unable to find a signal after 15 minutes of searching, a Power Save feature is automatically activated. If your Camera is active, it periodically rechecks service availability or you can check it yourself by pressing any key.

Anytime the Power Save feature is activated, a message displays on the screen.

When a signal is found, your Camera returns to standby mode.

### **Maintaining Your Camera's Peak Performance**

For the best care of your Camera, only authorized personnel should service your Camera and accessories. Faulty service may void the warranty.

There are several simple guidelines to operating your Camera properly and maintaining safe, satisfactory service.

- Place the Camera's acoustic output next to your ear for proper orientation.
- Do not tamper or alter the Camera's antenna.
- Don't use the Camera if the antenna is damaged.
- Avoid exposing your Camera and accessories to rain or liquid spills. If your Camera does get wet, immediately turn the power off and remove the battery. If it is inoperable, call Customer Care for service.

### **Availability of Various Features/Ring Tones**

Many services and features are network dependent and may require additional subscription and/or usage charges. Not all features are available for purchase or use in all areas. Downloadable Ring Tones may be available at an additional cost. Other conditions and restrictions may apply. See your service provider for additional information.