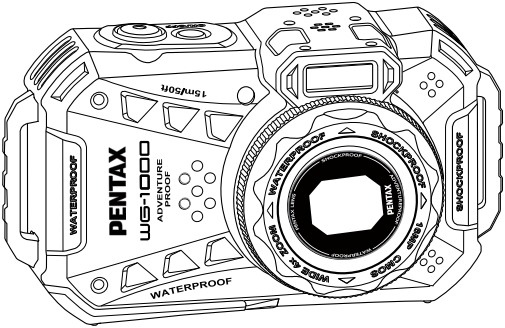
PENTAX WG-1000

Operating Manual



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

Model: R08040

BEFORE YOU START

For Customers in USA

STATEMENT OF FCC COMPLIANCE

Supplier's Declaration of Conformity 47 CFR § 2.1077 Compliance Information

Product Name: PENTAX WG-1000
Model: R08040
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.

Responsible party: RICOH IMAGING AMERICAS CORPORATION
Address: 2 Gatehall Drive Suite 204, Parsippany, New Jersey 07054, U.S.A.
Phone: 800-877-0155
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Part 15 Subpart B Class B

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.

For Customers in Canada

Innovation, Science and Economic Development Canada (ISED) Regulatory Compliance Notice
This Class B digital apparatus complies with Canadian ICES-003 (B).

Pour les utilisateurs au Canada

Avis de conformité à la réglementation d'Innovation, Sciences et Développement économique Canada (ISDE)
Cet appareil numérique de la classe B est conforme à la norme NMB-003 (B) du Canada.

For Customers in Europe

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

1. In the European Union
These symbols on the products, packaging and/or accompanying documents mean that used electrical and electronic equipment and batteries should not be mixed with general household waste.
Used electrical/electronic equipment and batteries must be treated separately and in accordance with legislation that requires proper treatment, recovery and recycling of these products.

By disposing of these products correctly you will help ensure that the waste undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling.
If a chemical symbol is added beneath the symbol shown above, in accordance with the Battery Directive, this indicates that a heavy metal (Hg = Mercury, Cd = Cadmium, Pb = Lead) is present in the battery at a concentration above an applicable threshold specified in the Battery Directive.
For more information about collection and recycling of used products, please contact your local authorities, your waste disposal service or the point of sale where you purchased the products.

2. In other countries outside the EU
These symbols are only valid in the European Union. If you wish to discard used products, please contact your local authorities or dealer and ask for the correct method of disposal.

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

Notice to Users in Countries that Require the CE Marking

This product complies with the essential requirements and provisions of EMC Directive 2014/30/EU.

Importer(CE marking): RICOH IMAGING EUROPE S.A.S.
7-9, avenue Robert Schuman, 94150 RUNGIS, FRANCE

Manufacturer: RICOH IMAGING COMPANY, LTD.
1-3-6, Nakamagome, Ohta-ku, Tokyo 143-8555, JAPAN

CE The CE Mark is a Directive conformity mark of the European Union.

Notice to Users in Countries that Require the UKCA Marking

This product complies with the essential requirements and provisions of Electromagnetic Compatibility Regulations 2016.

Manufacturer: RICOH IMAGING COMPANY, LTD.
1-3-6, Nakamagome, Ohta-ku, Tokyo 143-8555, JAPAN

UK CA The UKCA Mark is a Regulation conformity mark of the United Kingdom.

Batteries: Please dispose of used batteries at designated collection centers.

Packaging: Please follow local regulations for the recycling of packaging.

About this Manual

Thank you for purchasing this RICOH WG-1000.

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

- RICOH IMAGING COMPANY, LTD. reserves all rights of this document. No part of this published manual may be reproduced, transmitted, transcribed, stored in a retrieval system or translated into any language or computer language, in any form, by any means, without the prior written permission of RICOH IMAGING COMPANY, LTD.
- All trademarks mentioned in this manual are used for identification purposes only and are properties of their respective owners.
- This manual provides you with instructions on how to use your new RICOH WG-1000. Every effort has been made to ensure that the contents of this manual are accurate; however RICOH IMAGING COMPANY, LTD. reserves the right to make changes without notice.
- Throughout this manual, the following symbols are used to help you locate information quickly and easily:

  Indicates useful information.

- The following symbols may be used throughout this manual to facilitate your understanding of how to operate the camera:

  [Item properties]: The optional properties in the camera interface are indicated by the [ ] symbol.

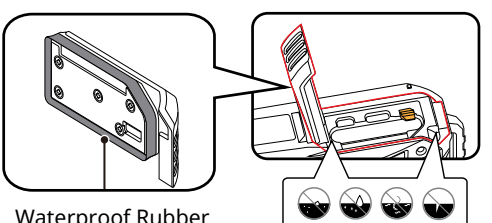
WATERPROOF/DUSTPROOF/SHOCKPROOF

- JIS / IEC waterproof grade 8 (IPX8).
- JIS / IEC dustproof grade 6 (IP6X).
- Height for shockproof rating is 2m (6.6 feet).

Waterproofing Notes:

- Do not use the product below 15 meters (49.2 feet) underwater. The product can remain waterproof for one hour at the depth of 15m (49.2 feet).
- Do not use this product in a geothermal spring or in water at a temperature greater than 40 °C (104°F).
- Please do not open the battery cover underwater.
- If water accidentally comes in contact with the product, please do not open the battery cover. Turn the product off, and dry it with a clean, dry and lint free cloth. Then open the battery cover, and remove the battery and the memory card.
- When opening the battery cover, if there are water drops on the contact surface between the inside of the battery cover and the body, please dry the water drops.
- After using the product in water or near sand, mud or other foreign materials, please rinse it with clean water (close the battery cover before cleaning). After cleaning, dry the product with a clean, dry and lint free cloth.
- If there is dust, sand or other foreign materials on the waterproof rubber of the battery cover and its contact surface, please wipe it with a clean, dry and lint free cloth as soon as possible.
- Before using the product underwater, make sure that there is no damage to or foreign debris on the waterproof rubber gasket. Then close the battery cover tightly to ensure the waterproof capability of the product.

Waterproof rubber with scratches and cracks will allow water to penetrate into the product. Contact customer service immediately for maintenance with replacement of new waterproof rubber.



SAFETY NOTES

Safety Notes for this Camera

- Do not drop the camera or allow it to hit solid objects.
- Do not attempt to disassemble or repair the camera.
- Do not use or store the camera in a hot environment or in direct sunlight.
- Do not use or store the camera near powerful magnetic fields, for example near a magnet or transformer.
- Avoid touching the lens of the camera.
- Do not expose the camera to direct sunlight for a long period of time.
- If water accidentally comes in contact with the interior of the camera, turn the camera off immediately, remove the battery and the memory card and dry it completely within 24 hours.
- When you take the camera from a cold environment to a warmer environment, condensation may occur. Please wait for a reasonable period of time before you turn the camera on.
- Make sure the camera is turned off before you remove the battery and memory card.
- When you clean the body of the camera, do not use abrasive, alcohol-based or organic cleansers or solvents.
- Use a professional lens cleaning cloth and appropriate cleaner to wipe and clean the lens.
- Download your photos and remove the memory card when you are going to store the camera for long periods of time.
- If this camera is not in use for a long period of time, please keep it in a dry and clean storage location.
- Wrapping the strap of the camera around your neck is also dangerous. Please take care that small children do not hang the strap around their necks.
- Don’t place your finger on the flash when it is discharging as there is a risk of burns.

- If any irregularities occur during use, such as smoke or a strange odor, stop use immediately, remove the battery or the power adapter, and contact your nearest service center. Continuing to use the product can cause a fire or electric shock.
- Don’t discharge the flash while it is touching your clothing as there is a risk of discoloring.
- Some portions of the camera heat up during use, so please take care, as there is a risk of low temperature burns if such portions are held for long periods of time.
- Should the LCD be damaged, be careful of glass fragments. Also, be careful not to allow the liquid crystal to get on your skin, in your eyes, or in your mouth.
- Depending on your individual factors or physical condition, the use of the camera may cause itching, rashes or blisters. In case of any abnormality, stop using the camera and get medical attention immediately.

Safety Notes for Battery

- Please use a battery that is the same type as the one included.
- Please use the included USB power adapter to charge the battery inside the camera.
- If battery fluid leaks inside the camera, contact our customer service department immediately. If battery fluid leaks onto your skin, rinse your skin with clean water and seek immediate medical attention.
- Disposal of used batteries should be carried out in accordance with your local (national or regional) regulations.
- To prevent the battery from being damaged, do not drop the battery or allow it to hit solid objects or to be scratched by foreign objects.
- Do not let the battery come in contact with metal objects (including coins) to avoid short circuiting, discharging, excessive heat or possible leakage.

- Do not attempt to disassemble the battery.
- Do not expose the battery to water. Always keep the battery contacts dry.
- Do not heat the battery or throw it into a fire to avoid a possible explosion.
- Do not store the battery in a hot environment or in direct sunlight.
- If the battery overheats during charging or use, stop charging or stop use immediately. Turn off the product, remove the battery carefully and wait until it cools down.
- When the camera is stored for a long period of time, remove the battery and keep it in a safe, dry place that is not accessible to infants and children.
- In colder environments, the performance of the battery could be noticeably reduced.
- When you install the battery, align the battery markings according to the positive and negative markings inside the camera battery compartment. Never force the battery into the battery compartment.
- Replacement of the battery with an incorrect type that can defeat a safeguard. (for example, in the case of some lithium battery type);
- Disposal of the battery into fire or a hot oven, or mechanically crushing or cutting of the battery, that can result in an explosion.
- Leaving the battery in an extremely high temperature surrounding environment that can result in an explosion or leakage of flammable liquid or gas.
- Subjecting the battery to extremely low air pressure that may result in an explosion or leakage of flammable liquid or gas.

Safety Notes for the USB Power Adapter

- Always use the USB power adapter exclusively developed for this product, with the specified power and voltage. Using a power adapter not exclusive to this product, or using the exclusive power adapter with an unspecified power or voltage can cause a fire, electric shock, or camera breakdown. The specified voltage is 100- 240V AC.
- Do not disassemble or modify the product. This can cause a fire or electric shock.
- Do not subject the product to strong impacts or allow it to drop onto a hard surface. This can cause a malfunction.
- Do not short or touch the output terminals of the product while it is still plugged in.
- If water should happen to get inside the product, consult your nearest service center. Continuing to use the product can cause a fire or electric shock.
- If the generation of smoke or strange odor from the product or other abnormality occurs, immediately discontinue its use and consult your nearest service center. Continuing to use the product can cause a fire or electric shock.
- Do not use the power adapter to charge a battery other than the rechargeable lithium-ion battery D-LI96. This can cause overheating, explosion, or power adapter failure.
- Do not plug in the USB power adapter with wet hands. This can cause an electric shock.
- Do not place heavy objects on the USB cable, allow heavy objects to drop onto it or allow it to become damaged due to excessive bending. If the USB cable becomes damaged, consult our customer service center.

Safety Notes for Memory Cards

- The memory card referred to in this user manual is a SD/SDHC/SDXC memory card that is Class 6 or higher.
- We highly suggest buying only well-known, name brand memory cards to ensure peak performance and reliability.
- Format the memory card using the camera before you use it to store photo or video files or when you insert a new memory card.
- Do not drop the memory card or allow it to hit solid objects to avoid damaging it.
- Do not attempt to disassemble or repair the memory card.
- Do not expose the memory card to water. Always keep it dry.
- Do not remove the memory card when the camera is turned on. Otherwise, the memory card and photo/video files could be permanently damaged.
- Do not directly edit the data on the memory card. Copy the data to your computer before you edit files.
- When the camera is stored for long periods of time, be sure to download your photos and remove the memory card. Store the memory card in a dry environment.
- Do not modify the name of the files or folders of the memory card using your computer. Modifying the file names may cause the files to not be recognized on the camera or a possible permanent error may occur.
- A photo taken with the camera will be stored in the folder that is automatically generated on the memory card. Do not store photos that are not taken using this camera in these folders as the pictures cannot be recognized during playback.
- When you insert the memory card, make sure the notch of the card matches the markings on the top of the camera card slot.

Other Safety Notes

- Do not disconnect the power or turn the camera off during the updating process. Doing so may cause incorrect data to be written and the camera may not power on later.
- When using your camera on an airplane, observe the relevant rules specified by the airline and FAA regulations.
- Due to the limitations of manufacturing technology, the monitor may have a few dead or bright pixels. These pixels do no effect the quality or performance of the camera, photos or video.
- If the monitor is damaged, pay particular attention to the liquid crystal in the screen. If any of the following situations arise, take the recommended immediate action indicated below:
  1. If liquid crystal comes in contact with your skin, please wipe with a dry cloth, wash thoroughly with soap, and rinse with plenty of clean water.
  2. If liquid crystal gets into your eye, flush the eye immediately with plenty of clean water for at least 15 minutes and then seek for medical assistance.
  3. If liquid crystal is swallowed, immediately flush your mouth thoroughly with clean water and induce vomiting. Seek for medical assistance.
- Be sure to keep the camera and its accessories out of the reach of small children.
  1. Injuries may result from the product falling or from unexpected movement.
  2. Suffocation may result from wrapping the strap around the neck.
  3. Small accessories such as battery or a SD Card may be swallowed. Seek medical attention immediately if an accessory is accidentally swallowed.

WARNING

- Altering, tampering or modifying the any parts of RICOH WG-1000 are unauthorized and will void the manufacturer's warranty and "could" void Federal and/or State Compliance.

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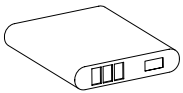
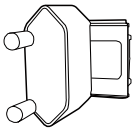
Accessories Included

Your camera box should contain the camera model you purchased along with the following accessories. If anything is missing or appears to be damaged, please contact your retailer first or our customer service center. (The Power plug of the USB power adapter may be a little different in shape due to the difference of countries or regions this type of cameras are sold to, and are subject to matching the physical product).

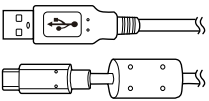


Rechargeable lithium-ion battery D-LI96

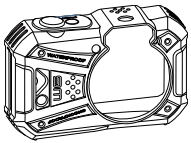


Power plug

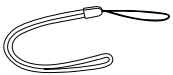
USB power adapter



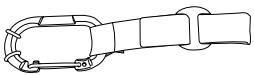
USB cable



Silicone case



Strap



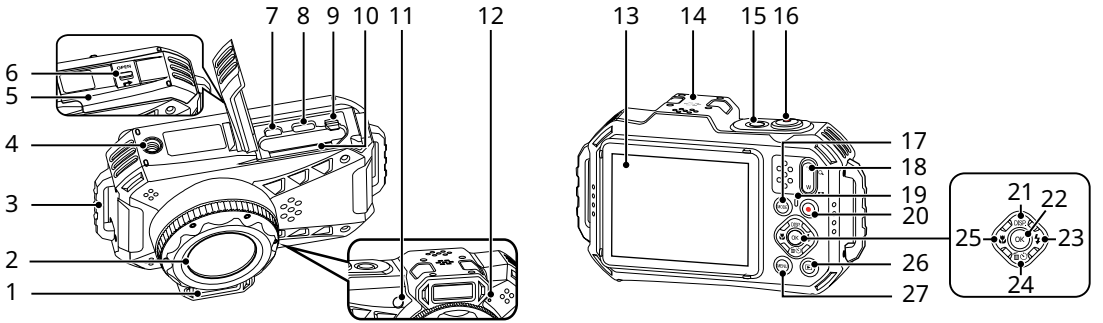
Carabiner strap

Quick start guide

Battery operating manual

Warranty card

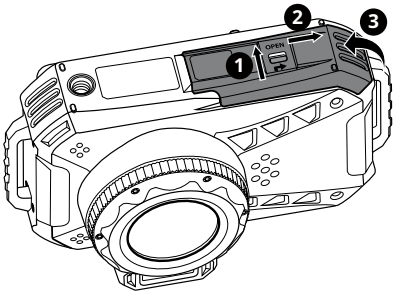
Part Names



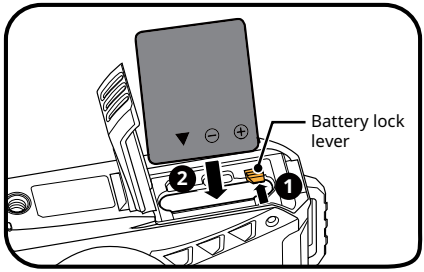
1 Flash	8 USB terminal	16 Shutter button	23 Flash button/ Arrow button (Right)
2 Lens	9 Battery lock lever	17 MODE button	
3 Strap attachment	10 Card slot	18 Zoom button	24 Delete button/Self-timer button/ Arrow button (Down)
4 Tripod socket	11 AF assist light	19 Indicator lamp	
5 Battery cover	12 Microphone	20 Movie button	25 Macro button/Arrow button (Left)
6 Battery cover lock lever	13 Monitor	21 DISP. button/ Arrow button (Up)	
7 HDMI micro output terminal (Type D)	14 Speaker		26 Playback button
	15 Power button	22 OK button	27 MENU button

Installing Battery and Memory Card

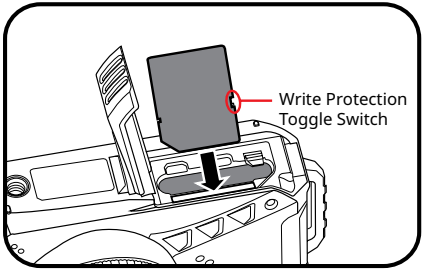
1. Push the Battery cover lock lever as shown in step ①, push the battery cover as shown in step ② to open the battery cover.



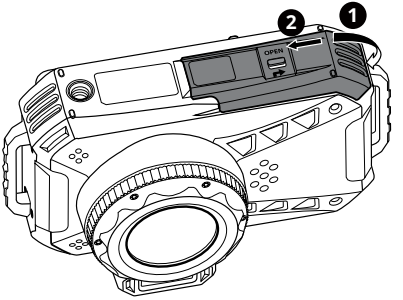
2. While checking the positive and negative of the battery, use the side of the battery to release the battery lock lever in the direction of the arrow to install the battery correctly.



3. Insert the memory card into the memory card slot as shown in the figure, push exposed edge of the memory card fully into the slot with your fingertip.



4. Close the battery cover as shown in step ① and slide the battery cover as shown in step ②. Make sure that a red mark appears on the battery cover lock lever and that the battery cover is securely closed.



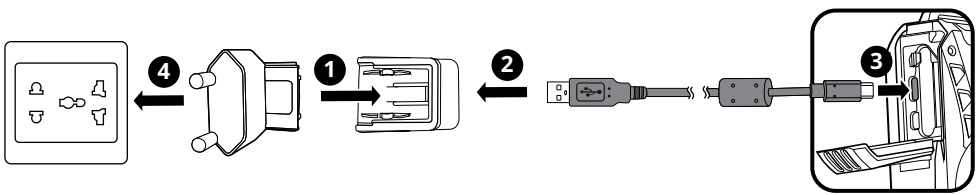
A memory card (SD / SDHC / SDXC) is necessary to store photos and videos and not included in all camera packaging. It needs to be purchased separately. Please use a memory card which is Class 6 or higher and has a capacity of 4 GB to 512 GB.

To remove your memory card, open the Battery cover, gently press the memory card to eject it and remove it carefully.

Charging the Battery

Before you charge your battery, make sure the camera is off and the battery is inserted correctly.

1. Insert the Power plug to the USB power adapter as show in ❶.
2. Connect the camera to the USB power adapter using the supplied USB cable as show in ❷, ❸.
3. Insert the Power plug into the wall outlet to charge the battery as show in ❹.

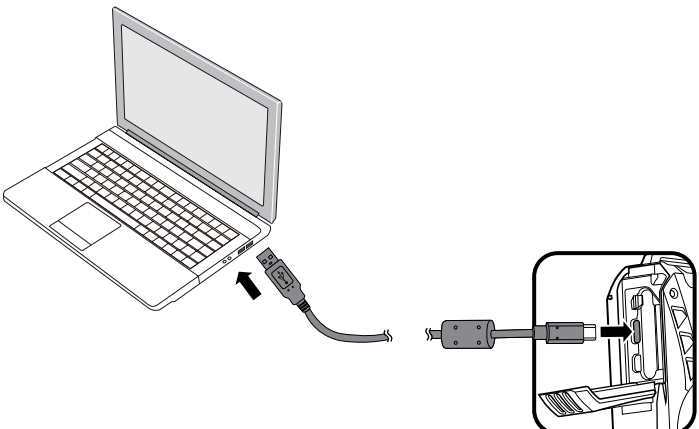


The charger is for indoor use only.

During charging, the Indicator lamp lights orange and displays [Charging...] on the monitor, and turns off after 5 seconds. You can press any button of your camera to display [Charging...]. When the charging is complete, the Indicator lamp lights up green, [100%] is displayed on the monitor, and the camera turns off after 5 seconds.
Please charge the battery at least 4 hours for the first time after purchase.

After the battery is stored for long periods of time, use the supplied power charger to fully charge the battery prior to use.

When the camera is turned off, you can also connect the camera to your PC using a USB cable to charge the battery.

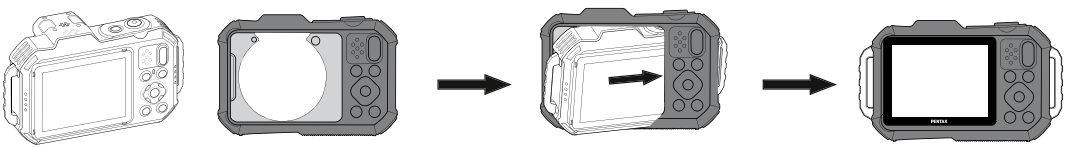


Please charge the battery indoors between 0°C and 40°C (32°F and 104°F).

Installing Silicone Case

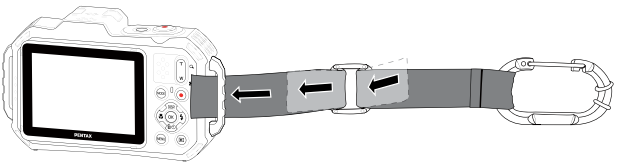
To protect the main body, please confirm that the Silicone case is clean, free of sand, dust, eg. or other foreign objects inside.

1. Thread the side with buttons protection of the Silicone case through the strap attachment of the main body.
2. Match the shape of the main body's lens and pass the other strap attachment part.

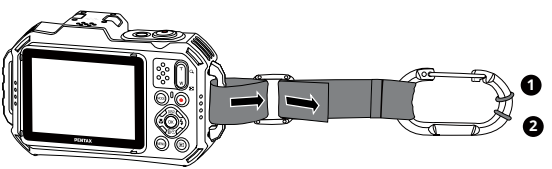


Attaching the Carabiner Strap

1. Pass the tip of the carabiner strap through the strap attachment part of the main body as shown in the figure and fix it to the fastener.

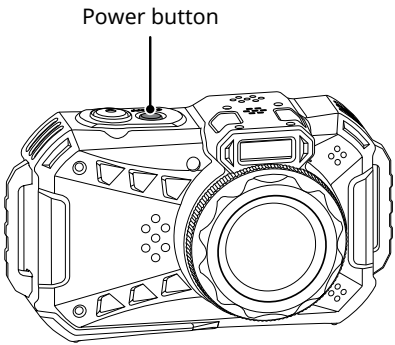


2. In order to prevent scratches when the carabiner strap and the main body against each other, please adjust the position of the rubber rings so that they do not influence each other.



Turning Camera On and Off

Press the Power button, the Indicator lamp and monitor will light up. Please follow the steps of Page 27 to 28 to set the language, date and time which displayed by the monitor. Press the Power button again, the the Indicator lamp and monitor will be turned off.



When the power is off, press and hold the play button to power on and enter Playback mode.

How to Take Pictures

1. Hold the camera with both hands, being careful to not block the flash and lens with fingers.
2. Point the Lens toward the object you want to take a picture of, then frame it with the monitor.
3. Use the Zoom button to select Tele or Wide position to zoom in or out on your subject(s).
4. Gently press the Shutter button half-way down to focus on your subject(s). When the focus frame turns green, press the Shutter button completely down to take your photo.

Set your Language, Date/Time

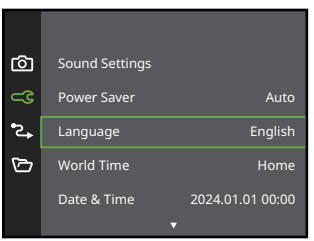
Set your Language, Date/Time after the First Power-On

1. When you turn the camera on for the first time, the language selection screen appears.
2. Press the [▲DISP.]/[▼🗑⏲]/[◄🌷]/[►⚡] buttons to select your desired language.
3. After you press the (OK) button to confirm your language selection, the Date/Time settings screen will appear.
4. Press the [◄🌷]/[►⚡] buttons to select the Date/Time to be adjusted: Time is displayed in YYYY.MM.DD/HH:MM.
5. Press the [▲DISP.]/[▼🗑⏲] buttons to adjust the value for the desired Date/Time.
6. Press the (OK) button to confirm the time settings and the snapshot screen will appear.

Resetting your Language

After you set your language for the first time, follow the instructions below to reset your desired language.

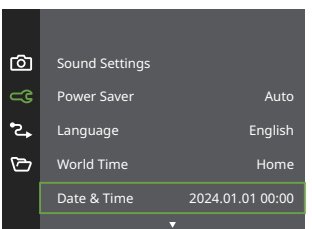
1. Press the (MENU) button and press the [▲ DISP.]/[▼ 🗑⏲] buttons to select . Press the (OK) button to enter the menu.
2. Press the [▲ DISP.]/[▼ 🗑⏲] buttons to select , and press the (OK) / [► ⚡] button to enter the menu.
3. Press the [▲ DISP.]/[▼ 🗑⏲] buttons to select [Language] and press the (OK) / [► ⚡] button to enter the menu.
4. Press the [▲ DISP.]/[▼ 🗑⏲]/[◄ 🌷]/[► ⚡] buttons to select your desired language and press the (OK) button to confirm.
5. Press the (MENU) button and the snapshot screen will appear.

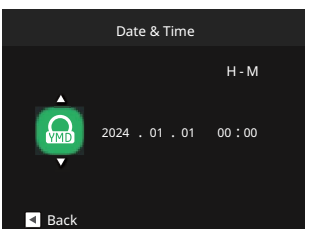


Resetting Date/Time

After you set your Date/Time for the first time, follow the instructions below to reset date and time.

1. Press the (MENU) button and press the [▲ DISP.]/[▼ 🗑⏲] buttons to select ☰ . Press the (OK) button to enter the menu.
2. Press the [▲ DISP.]/[▼ 🗑⏲] buttons to select ⊂⊃ , and press the (OK) / [►⚡] button to enter the menu.
3. Press the [▲ DISP.]/[▼ 🗑⏲] buttons to select [Date & Time] and press the (OK) / [►⚡] button to enter the menu.
4. Press the [◄🌷]/[►⚡] buttons to select the Date/Time to be adjusted: Time is displayed in YYYY.MM.DD/ HH:MM.
5. Press the [▲ DISP.]/[▼ 🗑⏲] buttons to press the value for your selected entry. After you finish your settings, press the (OK) button to confirm.
6. Press the (MENU) button and the following snapshot screen will appear.

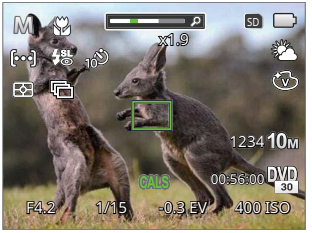




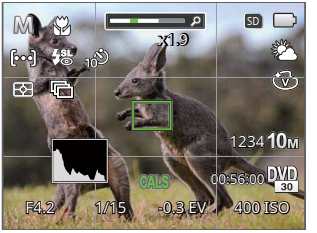
Display Setting

Press the [▲ DISP.] button to display the settings: Classic, Full, Off.

Classic: Displays the camera parameters on screen



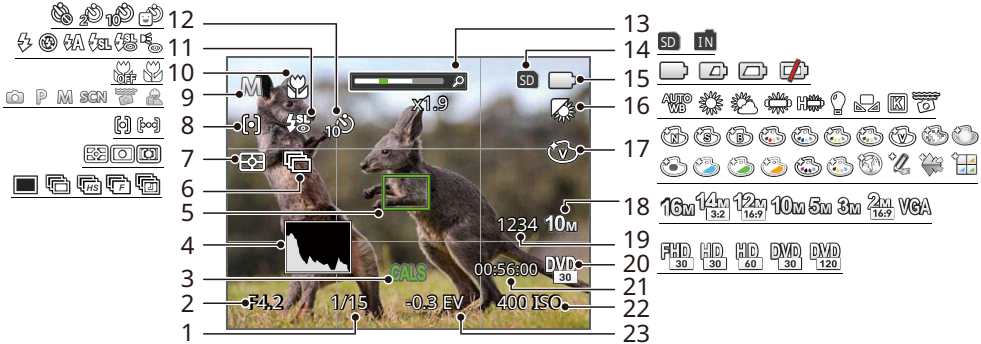
Full: Camera parameters with Grid and Histogram



Off: Does not display any additional icons on screen

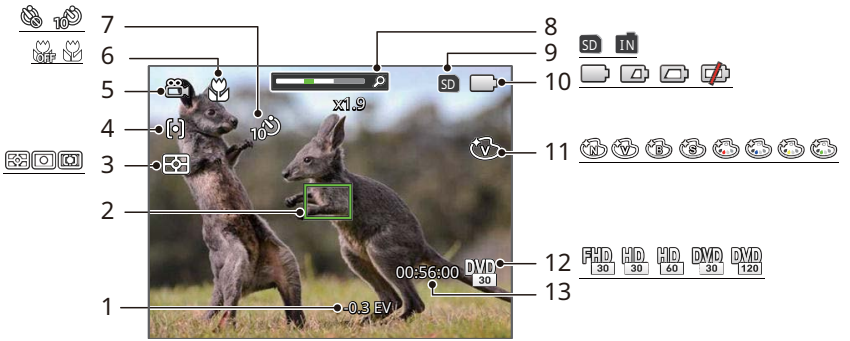
Monitor Display

Overview of the Screen Icons in Photo Shooting Mode



1	Shutter Speed	7	Expo Metering	13	Zoom Display	18	Image Size
2	Aperture Value	8	Auto Focus (AF) Mode	14	Memory Card/ Built-In Memory	19	Number of Remaining Shots
3	CALS Mode	9	Shooting Mode			20	Video Quality
4	Histogram	10	Macro Mode	15	Battery Status	21	Remaining Recording Time
5	Focus Frame	11	Flash Mode	16	White Balance	22	ISO Value
6	Continuous Shot	12	Self-timer	17	Color Effect	23	Exposure Compensation

Overview of the Screen Icons in Movie Mode

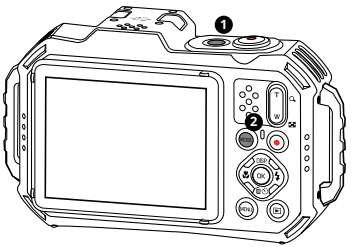


1	Exposure Compensation	6	Macro Mode	11	Color Effect
2	Focus Frame	7	Self-timer	12	Video Quality
3	Expo Metering	8	Zoom Display	13	Remaining Recording Time
4	Single-AF	9	Memory Card/Built-In Memory		
5	Movie Mode	10	Battery Status		

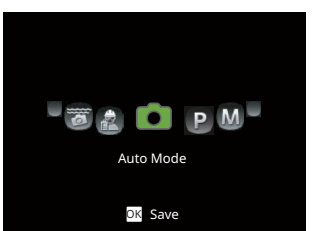
Using the MODE button

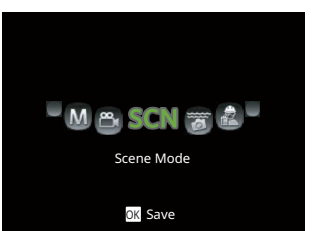
This camera provides a convenient MODE button (MODE) that allows you to switch easily between different modes.

1. Press the Power button to turn the camera on. Press the (MODE) button to enter the Mode Selection Menu.



2. Press the [◄]/[►] buttons to choose the selected mode. Press the (OK) button to confirm your selection.





Auto Mode

Auto mode is the most common and easiest mode to take photos. While operating in this mode, the camera automatically optimizes numerous camera settings to take photos and videos with the best possible results.

1. Hold the camera steadily and aim at the subject. The optimum scene mode will be selected automatically.
2. Compose your picture in the monitor and press the Shutter button halfway down to focus on your subject(s).
3. The monitor will show a green focus frame when the subject is in focus.
4. Fully press down the Shutter button to take your photo.

The camera will automatically detect the most suitable scene to capture the best pictures.

Mode Name	Description
Auto Mode	The camera automatically adjusts the exposure and focus to ensure the best possible pictures.
Landscape Mode	For landscapes, automatically adjusts the exposure and reproduces vivid green and blue colors.
Backlit Portrait	When the sun or any other light source is behind you, automatically adjusts the foreground exposure to produce the best pictures possible.
Macro Mode	The macro setting is ideal for shooting small objects or close-up photos.
Night Landscape Mode	For night scenes, automatically increases the ISO value to compensate for low light.
Portrait Mode	Most suitable for capturing people with focus on their faces.
Night Portrait	When you take portraits at night, or in low light conditions, automatically adjusts the exposure for people and night scenes.

Macro ON/OFF and flash are automatically controlled, users cannot change the settings.

Program AE P

Under different scenes, the user can switch the ISO and EV value according to personal preference, the camera can automatically set the shutter speed and aperture value.

Manual Mode M

Aperture, Shutter Speed and ISO can be configured manually in this mode.

Movie Mode

Switch to this mode to record videos.

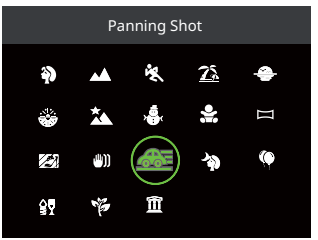
1. Press down the Shutter button to start recording.
2. Once you are finished, press the Movie button or the Shutter button to stop recording and return to the shooting screen.

In the recording process, you can push the Zoom buttons to Zoom in or out on the subject.

Scene Mode SCN

You can select an appropriate mode from the 18 scene modes according to the type of environment you are shooting in. The camera then automatically configures the most appropriate settings for the best possible photos.

1. Press the [▲DISP.]/[▼🗑⏲]/[◄🌷]/[►⚡] buttons to select a scene and press the (OK) button to confirm.



2. To change to a different scene, press the (MENU) button and then the (OK) button and finally the [▲DISP.]/[▼🗑⏲]/[◄🌷]/[►⚡] buttons to to reselect the scene.

Portrait

Most suitable for capturing people, focusing on their face.

Landscape

For landscapes and outdoor shots. Vivid reproduction of greens and blues.

Sport

For fast-moving subjects. Captures sharp, action shots with minimal blur. This mode is not recommended for shooting indoors.

Beach

For taking pictures in areas with strong sunlight.

Sunset

For sunsets. Captures subjects in strong sunlight. Use of a tripod is recommended with this setting.

Fireworks

For fireworks at night. Use of a tripod is recommended with this setting.

Night Landscape

For night scenes. Use of a tripod is recommended with this setting.

Snow

For snowy conditions. Reproduces natural, clear, white scenes.

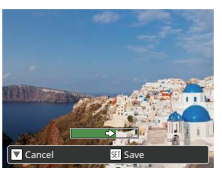
Children

Turns flash off automatically. Avoids disturbing the subject and is suitable for taking photos of children and pets.

Panorama Mode

This feature allows you to capture a panoramic view that will have significantly more content than a single photograph. Follow the arrow while keeping the camera steady to seamlessly shoot an ultra-wide scene of up to 360 degrees.

1. Press the [▲ DISP.]/[▼ 🗑 ⏲]/[◄ 🌷]/[► ⚡] buttons to select a desired shooting direction. Should you not select a direction, the default shooting direction is “right.”. 2 seconds later, the camera will be ready to take pictures. You can also press the (OK) button or press the Shutter button halfway down to get ready to take panaramic pictures.
2. Compose your shot on the monitor and half press the Shutter button to focus on the subject. After focusing, fully press the Shutter button down to take the first picture. At this time, the process dialog of panorama mode stitching appears on the screen.



3. Pan the camera according to the set direction. When the range of motion does not exceed the range that the camera can detect, the progress bar behind the arrow partially turns green. When it completely turns green, panorama mode shooting is finished.

In Panorama Mode, the Flash, Self-timer, Macro Modes and Exposure Compensation are not available. Focus Adjustment is also not available at this time.

During Panorama Mode shooting, press the (OK) button to interrupt shooting and save the current pictures. Press the [▼ 🗑 ⏲] button to cancel shooting and delete previously taken pictures.

During panorama mode shooting, when the moving direction of the camera is wrong or the angle deviates from the internal settings, the monitor shows a warning message [Improper alignment. Please try again.] and the current pictures taken are saved.

Panoramic image can be played back by the method of flash playing. Please see the animation panoramic playback on page 55.

Glass

For objects behind transparent glass.

Anti-shake

This mode can help reduce photo blur caused by shakiness of hands, low light and/or slow shutter speed.

Use Anti-Shake mode in dark environments or when using a slower shutter speed.

Shooting in a windy or unstable environment (such as a moving vehicle) may cause blurry images.

Panning Shot

Suitable for capturing fast moving objects to have a clear subject with a blurred background.

Night Portrait

For portraits against night scenery.

Party

Suitable for taking indoor party pictures, even under complicated lighting conditions.

Indoor

For indoor settings. Reduces blur and improves color accuracy.

Leaf

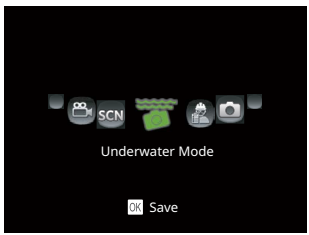
For plants. Captures brilliant shots of greenery and blossoms.

Museum

For museums or flash-free areas. Retains color and reduces blur.

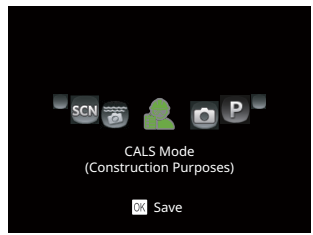
Underwater Mode

When you are in the water, you can select Underwater Mode in the Mode Selection Menu to take pictures under water.



CALS Mode

Records in a size suitable for electronic delivery in accordance with construction CALS.



This product has excellent water resistance, dust resistance, and impact resistance, and can be photographed even in harsh environments such as construction sites.

In CALS Mode, there are three options for Image Size:

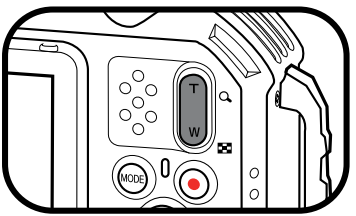
1M: 1280 x 960 (Initial value)

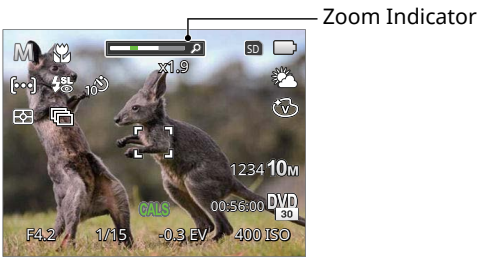
2M: 1600 x 1200

3M: 2048 x 1536

Using the Zoom Function

Your camera is equipped with two types of Zoom Functions: Optical Zoom and Digital Zoom. Press the Zoom button of the camera to zoom in or out on the subject while taking pictures.



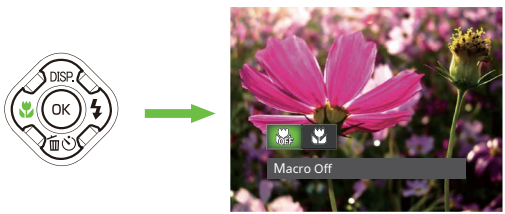


When the Optical Zoom reaches the threshold as Digital Zoom, release and turn the Zoom button to T to switch between the Optical Zoom and Digital Zoom.

Macro Mode

The Macro Setting is ideal for shooting small objects or close-up photos. This mode allows you to focus on subjects very close to the camera.

1. Press the [◄] button to enter the Macro Menu.



2. Press the [◄]/[►] buttons to select the following 2 modes:

   - Macro Off
     Select this option to disable Macro.

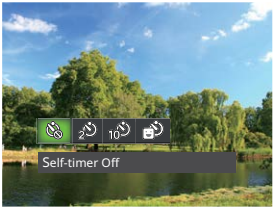
   - Macro On
     Select this to focus on subjects 5cm from the lens.

3. Press the (OK) button to confirm the settings and exit the menu.

Self-timer Setting

Use this function to take pictures at pre-set intervals. The camera shutter speed can be set to 2 seconds, 10 seconds or when a smile is detected.

1. Press the [▼ 🗑⏲] button to enter the Self-timer Menu.



2. Press the [◄ 🌷]/[► ϟ] buttons to select the following 4 modes:

   - Self-timer Off
     Disables the Self-Timer.
   - Self-timer 2sec
     A single picture is shot 2 seconds after the Shutter button is pressed.
   - Self-timer 10sec
     A single picture is shot 10 seconds after the Shutter button is pressed.
   - Self-timer Smile
     Press the Shutter button and a picture will be taken immediately after a smile is detected.

3. Press the (OK) button to confirm the settings and exit the menu.

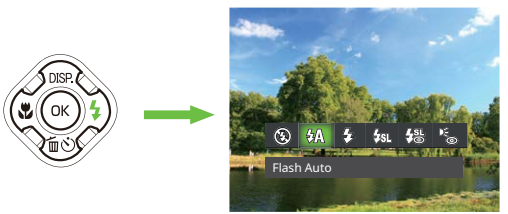
When enabling the Self-Timer, pressing the Shutter button or the [▼ 🗑⏲] button will select the highlighted Self-Timer option and return to the shooting screen, and keep the Self-Timer setting.

When enabling the smile detection, pressing the Shutter button or the (OK) button will select the Self-Timer smile option (if highlighted) and return to the shooting screen, and keeping the Self-Timer smile setting.

Flash Mode

The flash provides supplemental light for scenes. The flash is usually used when shooting against the light to highlight the object; it is also suitable for metering and shooting in darker scenes to improve the exposure.

1. Press the [►⚡] button to enter the Flash Settings Menu.



2. Press the [◄]/[►⚡] buttons to select the following 6 modes:

   - Force Off
     Flash is turned off.
   - Flash Auto
     Camera flash goes off automatically based on lighting conditions.
   - Fill Flash
     The flash will engage with each shot even, supplementing the existing light in a scene and helping to eliminate shadows.
   - Slow Sync.
     This allows you to take pictures of people at night that clearly show both your subjects and the night time backdrop. The use of a tripod is recommended when shooting with this setting.
   - Slow Sync.+Red-Eye
     Use this mode for slow synchrony shots with red-eye reduction.
   - Red-Eye Reduction
     The camera emits a brief pre-flash before the picture is taken to reduce red-eye effects.

3. Press the (OK) button to confirm the settings and exit the menu.

EV Setting

The EV function menu of the camera includes functions, such as EV (Exposure Value) Adjustment, ISO, Shutter Adjustment, Aperture Adjustment, etc. Using the appropriate function settings can improve your pictures.

1. Press the (OK) button to display the Settings screen.
2. Press the [◄ 🌷]/[► ϟ] buttons to select the Setting options.

3. Press the [▲ DISP.]/[▼ 🗑⏲] buttons to adjust the option values.
4. Press the (OK) button to complete the setting and enter Shooting Mode.

Exposure Compensation

Set up to adjust the picture brightness. In the case of a very high contrast between the photographed object and the background, the brightness of the picture can be appropriately adjusted.

The adjustable range of exposure value is from EV -3.0 to EV +3.0.

ISO

ISO allows you to set the sensitivity of the camera sensor. Please use a higher ISO value in darker places and a lower value in brighter conditions.

The camera's ISO settings include: Auto, 100, 200, 400, 800, 1600 and 3200.

Shutter Adjustment

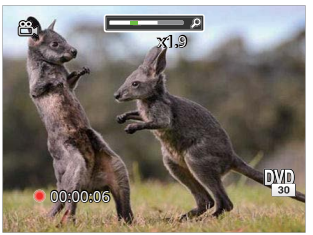
For shutter speed, the camera may automatically set the aperture value corresponding to the manually set shutter speed to obtain the most suitable exposure value. The movement of objects may be shown by adjusting the shutter speed. High shutter value can help you more clearly capture fast moving objects, while low shutter value can better show the movement of objects.

Aperture Adjustment

You can adjust the aperture size value. Selecting a large aperture opening will emphasize the point of focus and show a blurry background. A small aperture opening will keep both the background and main object in clear focus.

Using Quick Recording

While in the Photo Shooting Mode, press the Movie button ⊙ to begin recording a video.



Once you are finished, press the Movie button ⊙ or the Shutter button to stop and store the video. The camera's Memory Card will store the video and return to the shooting screen.

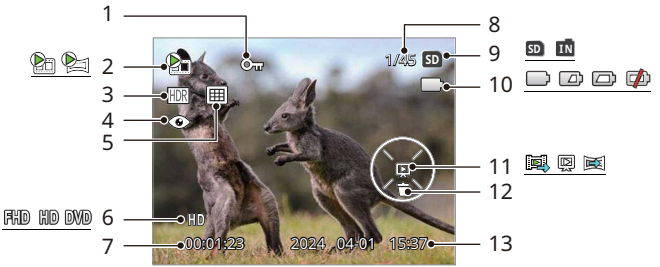
• Options in the shooting mode (✓: Available)

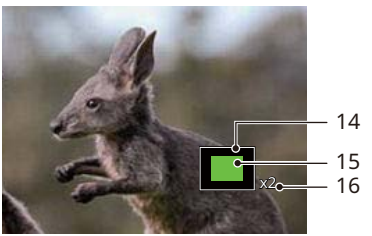
Options	Shooting Mode										
					SCN						
									Others		
Macro	＊1	✓	✓	✓	✓			✓		✓	✓
Self-timer	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
Flash	＊2	✓	✓	X	✓		✓			✓	✓
Aperture			✓								
Shutter Speed			✓								
EV		✓		✓						✓	✓
ISO		✓	✓								✓

＊1: If the camera detects the shooting distance, it will automatically switch to Macro Mode.

＊2: The camera will automatically determine the shooting scene, and the flash will automatically light up in case of insufficient exposure.
When the camera determine the scence is Macro or Night Landscape, the flash willn't light up.

Overview of the Screen Icons in Playback Mode





1	File Protection	6	Video Quality	11	Playback Type
2	Movies /Animated panoramas	7	Record Time	12	Deletion
		8	Memory space (indicating the current number of photos and total number of photos)	13	Shooting Date
3	HDR			14	Image Zone
4	Red-Eye Reduction	9	Memory Card/Built-In Memory	15	Zoom Magnification Are
5	Date Folder	10	Battery Status	16	Image Zoom Ratios

Switching Screen

Press the [▲ DISP.] button to switch among 3 screens.

Mode: ▶

Press the ⊙ button to display the playback screen, press the [▲ DISP.] button to switch among 3 screens.

Function Message Display

Detailed Message Display

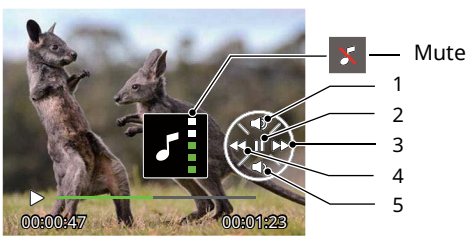
No Message Display

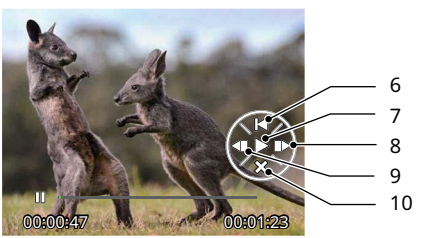
Viewing Photos and Videos

To view captured photos and video clips on the monitor:

1. After pressing the button, the last photo or video clip taken will be displayed on the monitor.
2. Use the [◄]/[►] buttons to scroll through the photos or video clips stored on the built-in memory or on the Memory Card in the camera.
3. To play a selected video clip, press the button to enter the Movie Playback Mode.

An operation guide appears on the screen when playing back a video. Press the appropriate buttons to enable the corresponding functions.

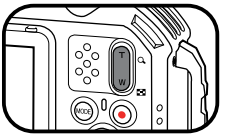




1	Increase Volume	6	Return back to the beginning of the video
2	Pause	7	Play
3	Fast Forward	8	Frame Forward
4	Rewind	9	Frame Backward
5	Decrease Volume	10	Cancel Playback

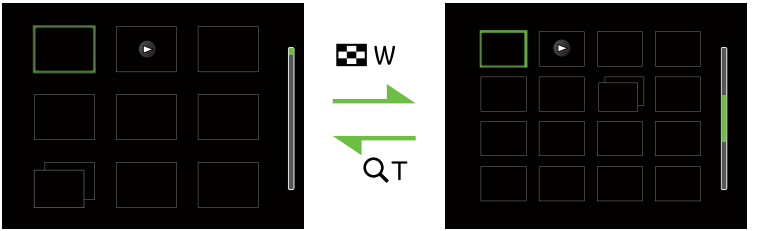
When in Playback Mode, press the W on the Zoom button to display thumbnail images of photos and videos on the screen.

W Zoom Out

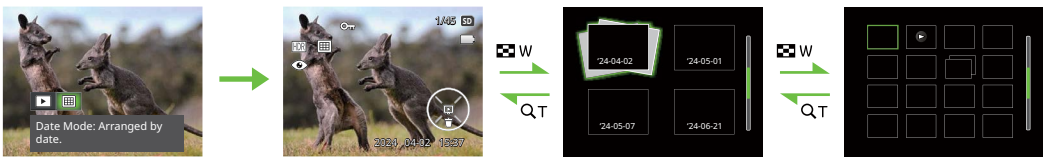


T Zoom In

- **For Normal Mode**
  1. Slide the Zoom button to switch between 3 x 3 and 4 x 4 thumbnails.
  2. When a 3 x 3 or 4 x 4 thumbnail is displayed, press the [▲ DISP.]/[▼ 🗑 ⏲]/[◄ 🌷]/[► ϟ] buttons to select the picture or video clip to view. Press the (OK) button to restore it to the original size.



- **For Date Mode**
  1. Press the (▶) button to enter playback screen and press the (MENU) button to enter Menu screen.
  2. Select [▶] and press the (OK) button to confirm.
  3. Press the [◀ 🌷]/[▶ ϟ] buttons to select [▦].
  4. Slide the Zoom button to switch between 2 x 2 and 4 x 4 thumbnails.
  5. When a 2 x 2 or 4 x 4 thumbnail is displayed, press the [▲ DISP.]/[▼ 🗑 ⏲]/[◀ 🌷]/[▶ ϟ] buttons to select the picture or video clip to view. Press the (OK) button to restore it to the original size.



If the ▷ indicator appears on the monitor, then a movie file is currently being displayed.

Press the (OK) button to restore a preview icon to its original image size.

Using Zoom Playback (for Still Pictures Only)

When playing back photos, you can also use the Zoom button to zoom in on the photos, 2 to 8 times their original magnification.

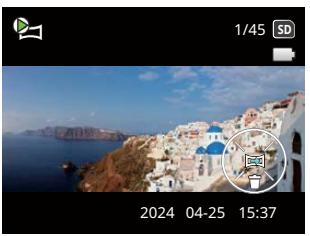
1. Press the [◄ 🌷]/[► ϟ] buttons to select the picture on which to use the zoom feature.
2. Press the T on the Zoom button to zoom in.
3. The bottom right corner of the screen will display the amount zoomed in as well as the area of the photo shown.
4. Press the [▲ DISP.]/[▼ 🗑 ⏲]/[◄ 🌷]/[► ϟ] buttons to navigate and select the desired portion of the photo to be zoomed in on.
5. Press the (OK) button to return the image to its original scale.

Movie images cannot be magnified.

Animation Panorama Play

Panoramic Animation Playing is when full size images are played in accordance with the shooting direction. After playing, it will automatically return to the initial panorama screen.

1. Press the button to enter Playback Screen.
2. Press the [◄]/[►] buttons to select animated panoramic photos.
3. Press the button to play in selected shooting direction.



Video Panorama

Playing

Pause

	Pause
	Cancel Play

In the process of panoramic animation playback, press the [▼] button to stop playing and return to the playback screen.

Slideshow

This setting allows you to view all the stored pictures as a slideshow.

1. Press the ▶ button to enter playback screen.
2. Press the OK button to enter slide option.
3. Press the [◄ 🌷]/[► ϟ] buttons to select slideshow playing or [Cancel] to return to the playback screen.

- Play Slide Show Effect 1 Fade in and out
- Play Slide Show Effect 2 Left and right interlaced
- Play Slide Show Effect 3 Animated photo tile effect

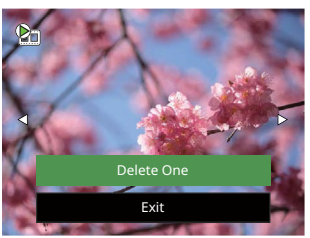
4. Press the OK button to confirm the setting.

Deleting Photos and Videos

In Playback Mode, press the [▼ 🗑⏲] button to select your desired photos and videos.

To delete photos or videos:

1. Press the ▶ button to switch to Playback Mode.
2. Press the [◀ 🌷]/[▶ ⚡] buttons to select the photos and videos to be deleted.
3. Press the [▼ 🗑⏲] button and the deletion screen is displayed.



4. Press the [▲ DISP.]/[▼ 🗑⏲] buttons to select [Delete One] or [Exit] and press the OK button to confirm.

Erased photos/video clips cannot be recovered.

Please refer to page 79 for instructions on deleting more than one image at a time.

Shooting Menu

Mode: P M SCN

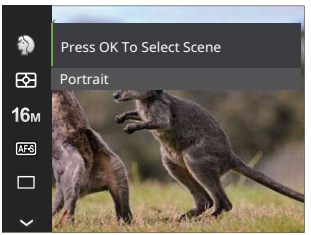
1. In Shooting Mode, press the MENU button to enter the Shooting Menu.
   - Scene
   - Expo Metering
   - Image Size
   - Video Quality
   - Cont. AF
   - Continuous Shot
   - Focus Setting
   - White Balance
   - Color Effect
   - Menu

Functions that can be enabled are different under each mode. For more details, please refer to P67 of this manual.

2. Press the [▲ DISP.]/[▼ 🗑 ⏲] buttons to select the Shooting Menu and settings.
3. Press the [◄ 🌷]/[► ϟ] buttons to select the Shooting Menu to be set and press the OK button to confirm.

Scene

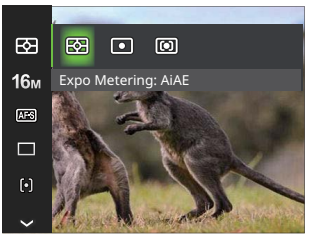
Select a scene under Scene Mode .



For more details, please refer to the “Scene Mode" section on P36 of this manual.

Expo Metering (Exposure Metering)

Use this setting to select the “target” size of the camera’s field of view to be metered.

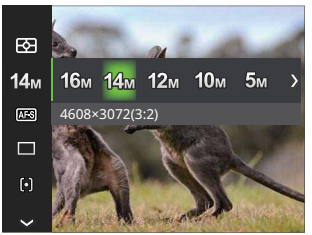


There are 3 options:

- AiAE (Artificial Intelligence AE)
  Evaluates the light intensity at multiple points in the frame and automatically determines the best value for the light meter.
- Spot
  Metering targets a small area in the center of the camera’s field of view.
- Center
  Metering targets a slightly larger area in the center of the camera’s field of view.

Image Size

The size setting refers to the image resolution in pixels. A higher image resolution allows you to print that image in larger sizes without degrading the photo image quality.



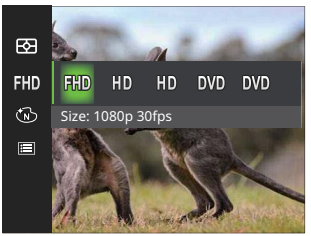
•	16M	4608×3456 (4:3)	•	3M	2048x1536 (4:3)
•	14M	4608×3072 (3:2)	•	2M	1920x1080 (16:9)
•	12M	4608x2592 (16:9)	•		1600x1200 (4:3) (( ))
•	10M	3648x2736 (4:3)	•	1M	1280x960 (4:3) ( )
•	5M	2592x1944 (4:3)	•	0.3M	640x480 (4:3)

The bigger the number of recorded pixels is, the better the image quality becomes. As the number of recorded pixels lessens, you will be able to record more images on a memory card.

Under CALS Mode, the aspect ratio of the still image is fixed at 4:3, and the image size can only be selected from 1M, 2M and 3M. The default value is 1M.

Video Quality

Set the image resolution used during video recording.



The speed requirements for reading and writing high resolution image pixel images to an SD card are as follows:

No.	Image Pixels	Frames	Recording Time (32GB) About
1	1920 x 1080 *	30	247 Minutes
2	1280 x 720 *	60	268 Minutes
3	1280 x 720 *	30	482 Minutes
4	640 x 480	30	865 Minutes
5	640 x 480	120	441 Minutes

* The recording limit is 29 minutes at one time.

If the recorded video segment/file exceeds 4GB(Use FAT 32 memory card):

1) The camera will automatically generate a new separate file(s) sequentially and will continue recording until the SD memory card is full.
2) Each sequential recorded file of 4GB (max) will be a separate file and cannot be played back continuously.
   To playback files, please manually select each one to view.

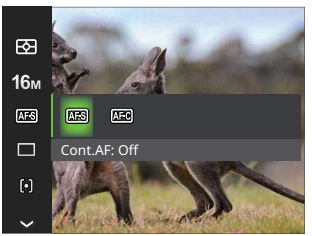
When recording in higher pixel resolutions for extended periods of time, this can cause the camera to generate heat. This is not a camera malfunction.

When the video format is set as 640 x 480 (120fps), shooting time is 30 seconds, playback time is 2 minutes.

Sound recording is disabled when 640 x 480 (120fps) is chosen.

Continuous Auto Focus (Cont. AF)

Use the Continuous AF setting to be able to continuously focus automatically when taking pictures.

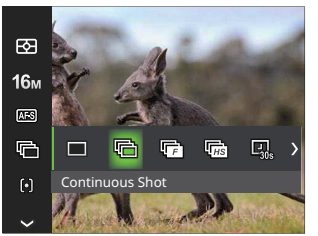


There are 2 options:

- AF-S Cont.AF: Off
- AF-C Cont.AF: On

Continuous Shot

Use this setting to perform continuous shooting. After entering this mode, you can shoot multiple images by continuously holding the Shutter button down.



There are 8 options:

- Single
  Capture a single shot only.
- Continuous Shot
  Take several pictures at a time.
- Cont.Shot-Fast (4M)
  For continuous shot with 4M pixels.
- Cont.Shot-High Speed (VGA)
  For continuous shot with VGA pixel.

- Time-Lapse 30sec
- Time-Lapse 1min
- Time-Lapse 5min
- Time-Lapse 10min

Press the Shutter button to start shooting.

In Continuous Shot mode, the flash is automatically set to Force Off in order to achieve quick succession of shots.

Cont.Shot-Fast (4M) and Cont.Shot-High Speed (VGA) only can be enabled in P / M / mode.

Focus Setting

This setting allows you to select different modes for optimum focus.

There are 2 options:

- Single-AF
  The focus frame appears on the center of the monitor to help you focus on the subject.
- Multi-AF
  The camera automatically focuses the subject in a wider area to find the focal point.

White Balance Setting

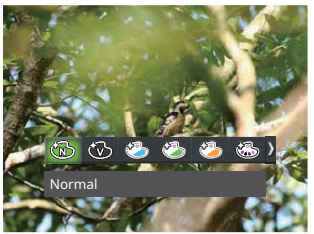
The white balance setting allows you to adjust the color temperature for different lighting conditions to ensure the most accurate color reproduction.

P M mode

- AWB
- Daylight
- Cloudy
- Fluorescent
- Fluorescent CWF
- Incandescent
- Manual WB
  Fully press the Shutter button to detect the white balance value.
- Color Temp. (1900K~10000K)
  Press the [▲DISP.]/[▼] buttons to "Adjust the K value"; Press the [◀] button left to exit the K value.
- Underwater

Color Effect

The Image Color Setting allows you to select different color effects.



P M Mode

- Normal
- Vivid
- Japan Style
- Italian Style
- French Style
- Punk
- Black and White
- Sepia
- Partial Color-Red
- Partial Color-Blue
- Partial Color-Yellow
- Partial Color-Green
- Negative
- Dreamy
- Vignetting
- Salon
- Fish Eye
- Reflection
- 4 Grids - Stylish (2M)
- Sketch

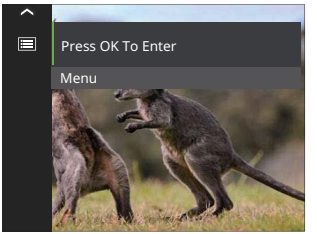
Activate Continuous Shot (P Mode)

- Normal
- Vivid
- Japan Style
- Italian Style
- French Style
- Black and White
- Sepia
- Partial Color-Red
- Partial Color-Blue
- Partial Color-Yellow
- Partial Color-Green
- Negative

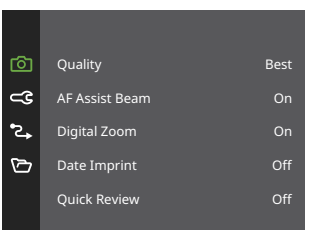
Mode

- Normal
- Vivid
- Black and White
- Sepia
- Partial Color-Red
- Partial Color-Blue
- Partial Color-Yellow
- Partial Color-Green

Menu



Press the OK button to enter the menu.



• Options in the shooting mode (✓: Available)

Menu	Shooting Mode									
					SCN					
								Others		
Scene					✓					
Expo Metering	✓	✓	✓	✓	✓		✓	✓	✓	✓
Image Size	✓	✓	✓		✓		✓	✓	✓	✓
Video Quality				✓						
Cont. AF		✓	✓		✓				✓	✓
Continuous Shot		✓	✓		✓		✓		✓	✓
Focus	✓	✓	✓							✓
White Balance		✓	✓						✓	✓
Color Effect	X	✓	✓	✓						
Menu	✓	✓	✓	✓	✓				✓	✓

Playback Menu

Mode: ▶

1. Press the (▶) button to display the playback screen and press the (MENU) button to enter the menu.
   - Display Mode
   - HDR (High Dynamic Range)
   - Red-Eye Reduction
   - Rotate
   - Resize
   - Color Effect
   - Menu
2. Press the [▲ DISP.]/[▼ 🗑⏲] buttons to select the playback desired menu and press the (OK) button to enter.
3. Press the [◀ 🌷]/[▶ ⚡] buttons to select an option and press the (OK) button to confirm.

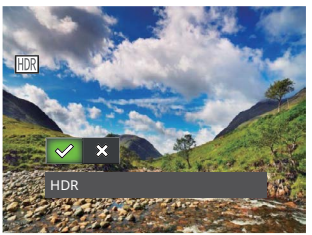
Display Mode

- ▶ Normal Mode: Display all images.
- ▦ Date Mode: Arranged by date.

The Date Folder is displayed in date order based on photo shooting date/time.

HDR (High Dynamic Range)

With the HDR function, pictures that are overexposed may be corrected to optimize the highlights and lowlights captured to more accurately represent the actual scene.

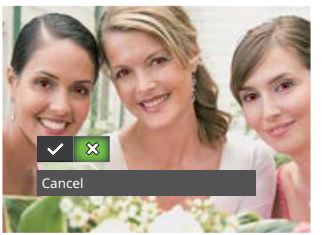


- HDR
- Cancel

After using the HDR function, the image will be saved as a new file and the original file is still stored on the memory card.

Red-Eye Reduction

You can use this setting to reduce the red-eye of the picture.

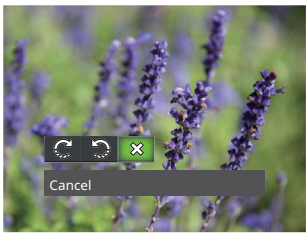


- Red-Eye Reduction
- Cancel

This setting is not available for videos.

Rotate

You can use this setting to change the orientation of the picture.



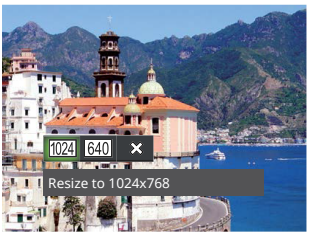
- Turn Right
- Turn Left
- Cancel

Videos and panoramic pictures cannot be rotated.

The rotated picture file will replace the original photo.

Resize

This setting allows you to resize a picture to a particular resolution and saves it as a new picture.



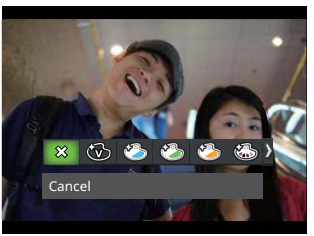
- 1024 Resize to 1024x768
  Resize to 1024x680
  Resize to 1024x576
- 640 Resize to 640x480
  Resize to 640x424
  Resize to 640x360
- Cancel

This function can only be used to downsize photos to a lower resolution.

Sizes of photos taken in panorama mode and sizes of rotated photos cannot be adjusted.

Color Effect

This setting allows you to change the picture color effect. The file is saved as a new photo and stored in memory together with the original photo.



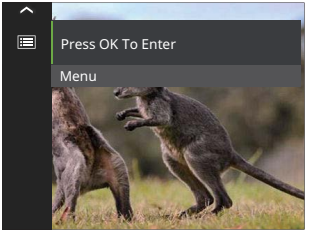
There are 19 options available:

- Cancel
- Vivid
- Japan Style
- Italian Style
- French Style
- Punk
- Black and White
- Sepia
- Partial Color-Red
- Partial Color-Blue
- Partial Color-Yellow
- Partial Color-Green
- Negative
- Dreamy
- Vignetting
- Salon
- Fish Eye
- Reflection
- 4 Grids - Stylish (2M)

USING THE MENUS BUTTON

Mode: P M SCN

In each mode, press the MENU button, press the [▲DISP.]/[▼🗑⏲] buttons to select ☰ and then press the OK button to enter the menu.



Press the [▲DISP.]/[▼🗑⏲] buttons to select the item to be set and then press the OK / [►⚡] button to enter the menu.

Menus of Shooting Mode

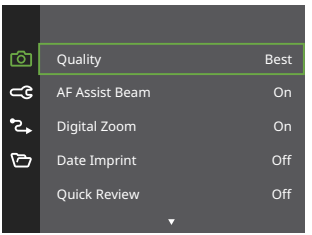
- Shoot Settings
- General Settings
- Connection Settings
- File Settings

Menus of Playback Mode (▶)

- Playback Settings
- General Settings
- Connection Settings
- File Settings

Shoot Settings

1. Press the (OK) / [► ϟ] button to enter the menu.

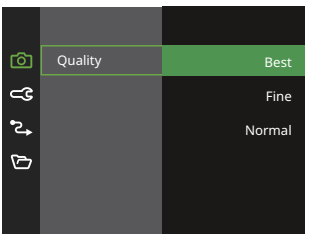


Functions that can be enabled are different under each mode.

2. Press the [▲ DISP.]/[▼ 🗑 ⏲] buttons to select the item to be set and press the (OK) / [► ϟ] button to enter the menu.
3. Press the [▲ DISP.]/[▼ 🗑 ⏲] buttons to select an option and press the (OK) button to confirm.

Quality

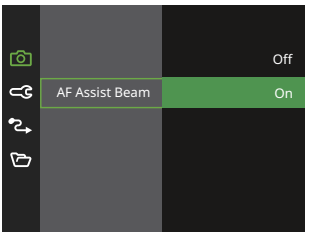
The quality setting can be used to adjust the image compression ratio.



- Best (16M Average File Size: 5.5MB)
- Fine (16M Average File Size: 3.5MB)
- Normal (16M Average File Size: 3.0MB)

AF Assist Beam

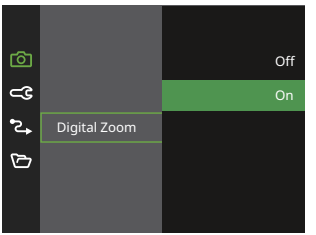
In a darker environment, the AF assist beam setting can be turned on for better focus.



When AF assist beam is turned on, press the Shutter button halfway and the camera will project the AF assist beam onto the subject, making it easier to focus.

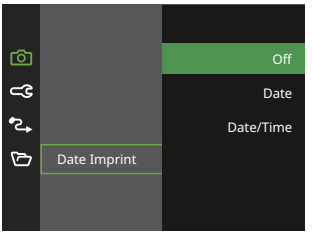
Digital Zoom

This setting is for adjusting digital zoom. If this function is disabled, only optical zoom can be used.



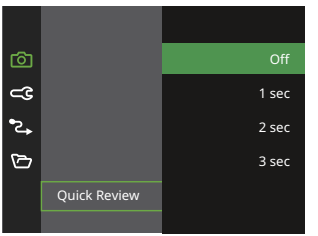
Date Imprint

Include a Date/Time stamp on the photo image.



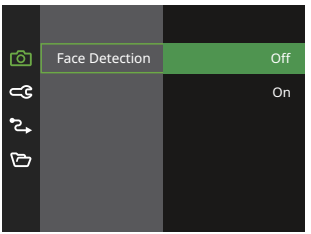
Quick Review

This option allows quick review of the photos immediately after they are taken. Each photo is displayed on the monitor based on the selected time.

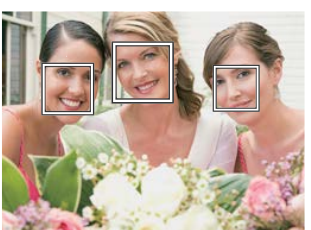


Face Detection

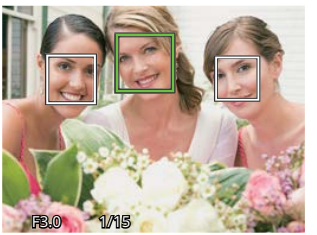
Detects and focuses on faces to make all faces as clear as possible in Photo Mode.



1. Hold the camera steadily and then focus on the object to detect its face. A focus frame will appear at the face on the screen when a face is detected.



2. Press the Shutter button half-way down to focus. The LCD will show a green focus frame when the subject is in focus.

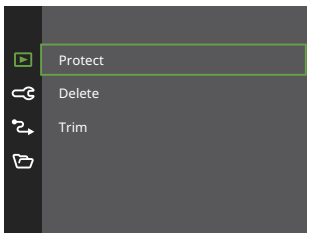


3. Press the Shutter button all the way down to take pictures.

The closed eyes detection is usually on. If the camera detects in the course of quick review there is a face with eyes closed, a prompt of closed eyes will appear .

Playback Settings

1. Press the (OK) / [►ϟ] button to enter the menu.



2. Press the [▲DISP.]/[▼🗑⏲] buttons to select the item to be set and press the (OK) / [►ϟ] button to enter the menu.
3. Press the [▲DISP.]/[▼🗑⏲] buttons to select an option and press the (OK) button to confirm.

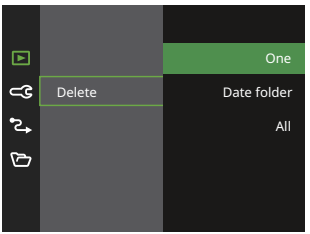
Protect

To prevent any pictures or videos from being accidentally erased, use this setting to lock one or all of the files.

• One:	Lock the selected photo or video if they are unprotected; unlock the selected photo or video if they are protected.
• Date Folder:	Protect all photos in the Date Folder.
• All:	Lock all photos or videos.
• Reset:	Cancel all locked photos or videos.

Delete

You can delete one or all photo/video files.



- One: Delete one photo or video.
- Date Folder: Delete all photos in the Date Folder.
- All: Delete all photos or videos.

The indicator means a file is protected. File protection must be removed before a file can be deleted.

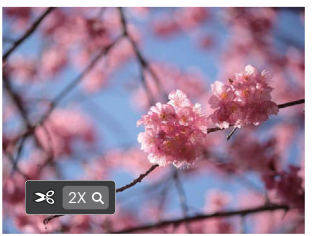
Deleted files will be permanently deleted and will not be able to be recovered or restored.

When one photo Date Folders is protected, it will be kept but any other photos will be deleted.

Trim

The Trim setting allows you to crop photos and save them as new pictures.

1. Select [Yes] to confirm trim. Select a section of the photo to be trimmed using the Zoom button and [▲ DISP.]/[▼ 🗑 ⏲]/[◄ 🌷]/[► ⚡] buttons to trim a photo.



2. Press the (OK) button and the [Save change?] prompt appears. Select [✓] to change and save the picture. Select [✗] to cancel changes and return to the trim prompt screen.

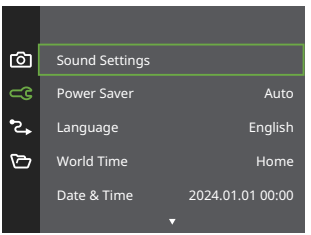
The image cannot be clipped/trimmed again once it has been clipped to 640 X 480.

A trimmed picture cannot be trimmed again.

The images which have be rotated and resized cannot be cropped.

General Settings

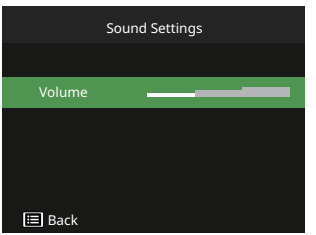
1. Press the (OK) / [► ϟ] button to enter the menu.



2. Press the [▲ DISP.]/[▼ 🗑 ⏲] buttons to select the item to be set and press the (OK) / [► ϟ] button to enter the menu.
3. Press the [▲ DISP.]/[▼ 🗑 ⏲] or [◄ 🌷]/[► ϟ] buttons to select an option and press the (OK) button to confirm.

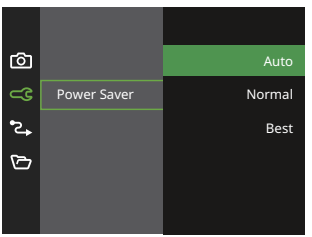
Sound Settings

With this setting you may adjust the sound volume.



Power Saver

This setting allows you to save power and get the maximum possible running time for your camera's battery. Follow the steps below to turn the monitor and camera off automatically after a consecutive period of inactivity.



Power Saver	Monitor power off time	Turn off time
Auto	3 min	5 min
Normal	1 min	3 min
Best	30 sec	1 min

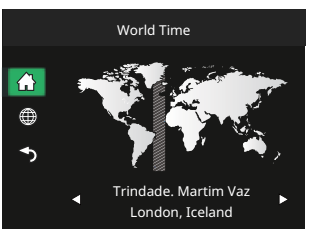
Language

Refer to the "Resetting your Language" section on page 27.

World Time

The World Time setting is a useful function for your overseas trips. This feature enables you to display the local time on the monitor while you are abroad.

1. Press the [▲DISP.]/[▼] buttons to select the departure place ( ) and destination ( ) fields.
2. Press the [◄]/[►] buttons to select a city located in the same time zone as that of the field. Press the (OK) button to confirm settings.

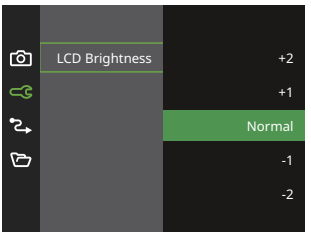


Date & Time

Refer to the "Resetting Date/Time" section on page 28.

LCD Brightness

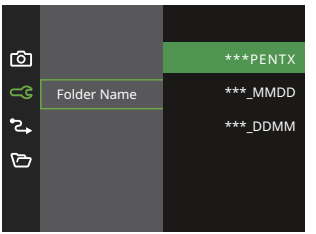
Use this setting to adjust the brightness of your monitor.



Setting and adjusting your camera's LCD brightness to the lowest setting will help conserve your camera's battery life and longevity. Using the monitor on the brightnest setting will drain your batteries more quickly.

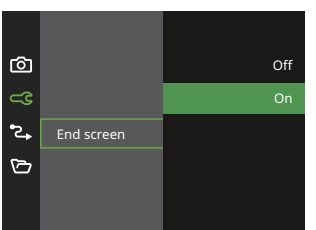
Folder Name

Select the saved folder name for the picture taken by the camera.



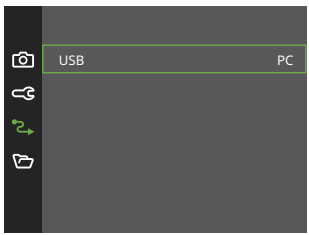
End screen

Displays the end screen. Select [On] will display the end screen before shutting down. Select [Off] will directly turn off the camera with black screen.



Connection Settings

Press the (OK) / [►ϟ] button to enter the menu.



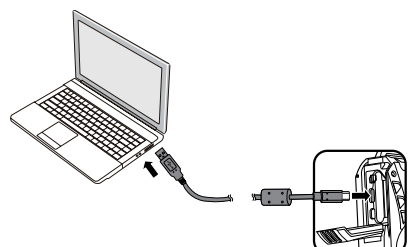
Transferring Files to Your Computer

You can use a USB cable to connect the camera and copy (transmit) photos to a computer or other device.

The computer will automatically detect the camera as a removable drive. Double-click the "My Computer" icon on the desktop to locate the removable drive and to copy folders and files in the drive to a directory on your PC as you would copy any typical folder or file.

Follow the steps below to connect the camera to a computer:

1. Make sure both the camera and computer are turned on.
2. Connect one end of the supplied USB cable to the USB terminal on your camera.
3. Connect the other end of the cable to an available USB terminal on your computer.
4. After the transmission is complete, disconnect the USB cable according to your computer manufacturer's instructions specifying how to safely remove USB devices.



The battery will drain when connected to a PC. If you want to connect to a PC for a long time, please use a memory card reader (sold separately).

Viewing Images on Computer

Display transferred images on a standard image viewer etc. that an OS has. For details about viewing images, see the help menu on the viewer.

Supported OS==>Windows: Windows® 11 / Windows® 10 / Windows® 8.1

Macintosh: Mac OS X 10.15, OS X 11 / 12 / 13 / 14

If a memory card is inserted in the product, only files in the memory card will be read. If needing to read the files in the internal memory, please pull out the memory card before connecting to the computer.

HDMI Connected TV Output

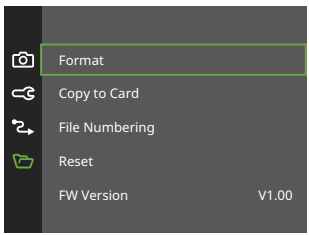
The product is capable of realizing movie and photo playback on a TV through an HDMI cable.

Steps:

1. Open the battery/card cover of the product, connect one end of an HDMI cable (not included) to a TV which is up to the HDMI standard (the TV and the product both need to be turned on) and the other end to the cable to the HDMI port of the product;
2. The product will automatically enter the playback mode after the connection is complete. The operating method is the same as [Viewing Photos and Videos] on page 51.

File Settings

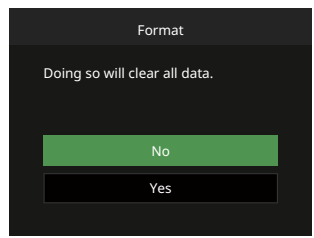
1. Press the (OK) / [►ϟ] button to enter the menu.



2. Press the [▲DISP.]/[▼🗑⏲] buttons to select the item to be set and press the (OK) / [►ϟ] button to enter the menu.
3. Press the [▲DISP.]/[▼🗑⏲] buttons to select an option and press the (OK) button to confirm.

Format

Please Note: formatting enables you to delete all contents on the memory card and camera's built-in memory, including protected photo and movie files.

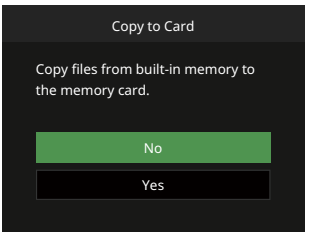


If you select [Yes] the camera will format its memory.

If there is no memory card in the camera, the built-in memory will be formatted; if there is a memory card, only the memory card will be formatted.

Copy to Card

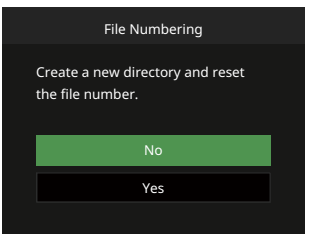
Use this setting to copy the files stored in the camera's built-in memory to a memory card.



If there is no card available in the camera, this function will not be displayed.

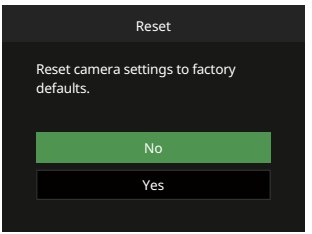
File Numbering

After you take a picture or video clip, the camera will automatically save it with a sequential number. You can use this to reset the file numbering to 1.



Reset

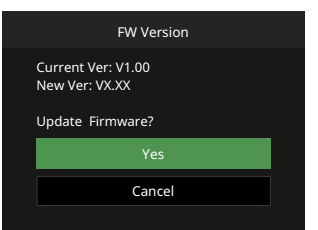
Use this setting to restore the camera to its original factory default settings.



FW Version

Use this setting to view the current camera firmware version.

When there is a new firmware version saved on the SD card, select [Yes] to update.



When the battery is low, the firmware cannot be updated.

Specifications

Design and specifications are subject to change without notice.

Image Sensor	Type	1/2.3" BSI CMOS
	Effective Pixels	16.35 Megapixels
	Total Pixels	16.76 Megapixels
Lens	Focal Length	4.9mm (Wide) — 19.6mm (Tele)
	35mm Film Equivalent	27mm (Wide) — 108mm (Tele)
	F Number	F3.0 (Wide) — F6.6 (Tele)
	Lens Construction	7 groups 7 elements
	Optical Zoom	4x
	Focusing Range	Normal: (Wide) 60cm ~ ∞ (Tele) 100cm ~ ∞ Macro: 5cm ~ ∞ (Wide Only)
Autofocus System		TTL Autofocus
Anti-Handshake		Digital Image Stabilization
Digital Zoom		6x Digital Zoom (Combined Zoom: 24x)

Number of Recording Pixels	Still Image	(4:3) 16MP: 4608 x 3456 10MP: 3648 x 2736 5MP: 2592 x 1944 3MP: 2048 x 1536 2MP: 1600 x 1200 1MP: 1280 x 960 0.3MP: 640 x 480	(3:2) 14MP: 4608 × 3072	(16:9) 12MP: 4608 x 2592 2MP: 1920 x 1080
	Movie	1920 x 1080 (30fps), 1280 x 720 (60/30fps), 640 x 480 (30fps), High-Speed Movie: 640 x 480 (120fps)		
File Format	Still Image	Exif 2.3 (JPEG)		
	Movie	MOV [Image: H.264; Audio: Linear PCM (Monaural)]		
Shooting Modes		Auto Mode, Program AE, Manual Mode, Movie Mode, Scene Mode, Underwater Mode, CALS Mode		
Scene Mode		Portrait, Landscape, Sport, Beach, Sunset, Fireworks, Night Landscape, Snow, Children, Panorama Mode, Glass, Anti-Shake, Panning Shot, Night Portrait, Party, Indoor, Leaf, Museum		
Detection Features		Face, Smile, Blink		
Waterproof		Up to 15m		

Shockproof	Up to 2m
Dustproof	Equivalent to JIS/IEC (IP6X)
Red-Eye Removal	Yes
HDR	Yes (Post-Processing)
Panorama	Up to 360°
Monitor Display	2.7 inch (230k Pixels)
ISO Sensitivity	Auto, ISO 100/200/400/800/1600/3200
AF Method	Single-AF, Multi-AF (TTL 25-point), Face Detection
Exposure Metering Method	AiAE, Spot, Center, Face AE
Exposure Control Method	Program AE (AE-Lock Available)
Exposure Compensation	±3 EV in 1/3 Step Increments
Shutter Speed	1/2000 ~ 4 Seconds (Manual: 30 Seconds)
Burst Mode	Up to 6 fps at Full Resolution
Playback Modes	Slide Show, HDR, Red-Eye Reduction, Rotate, Resize, Color (※19 options), Trim
White Balance Control	AWB, Daylight, Cloudy, Fluorescent, Fluorescent CWF, Incandescent, Manual WB, Color Temp.(1900k-10000k), Underwater

Flash	Flash Method	Internal
	Flash Modes	Force Off, Flash Auto, Fill Flash, Slow Sync., Slow Sync.+Red-Eye Reduction, Red-Eye Reduction
Recording Media		Internal Memory: Approx. 29MB
		SD/SDHC/SDXC Card (Up to 512GB Support)
Multi-Language Support		26 Languages
Jacks		USB2.0 TypeC, Micro HDMI (Type D)
Power		Rechargeable lithium-ion battery D-LI96, 3.7v 890mAh
Battery Performance		Number of shots: Approx. 300 Shots * Based on CIPA Standards and varies depending on the usage conditions. Playback time: Approx. 150 minutes * Based on our measurement conditions and varies depending on the shooting conditions. Video recording time: Approx. 90 minutes * Based on our measurement conditions and varies depending on the shooting conditions.
Operation Environment		Temperature: 0 ~ 40°C, Humidity: 0 ~ 90%
Dimensions (W×H×D)		Approx. 116 × 68.5 × 50.5 (Excluding protrusions)
Weight		Approx. 200g (Body Only)

USB power adapter D-PA180	
Power Supply	100 to 240V AC(50/60 Hz), 0.2A
Output	5.0V DC, 1.0A, 5.0W
Average Active Efficiency	75%
No-Load Power Consumption	35mW
Operating Temperature	0 to 40 °C *
Storage Temperature	-20 to 60 °C
Dimensions	34.5 mm (W) × 47 mm (H) × 26.5 mm (D) (1.4 in. (W) × 1.9 in. (H) ×1.1 in. (D) (excluding the power plug)
Weight	Approx. 40 g (1.4 oz) (excluding the power plug)
* Depends on the temperature of the camera's movable property.	

Rechargeable lithium-ion battery D-LI96	
Nominnal Voltage	3.7V
Rated Capacity	890mAh, 3.293Wh
Operating Temperature	-20 to 60 °C *
Storage Temperature	-20 to 45 °C
Dimensions	Approx. 39.8 × 34.2 × 6.8 mm (H/W/T) (1.57" × 1.35" × 0.27")
Weight	Approx. 20 g (0.7 oz.)
* Depends on the operating temperature of the camera body.	

Prompts and Warning Messages

Message	Description	Action
Warning! Battery exhausted.	The camera battery is depleted. It is a warning indicating that the camera is going to shut off.	Charge battery or replace with a charged battery. The camera will shut down in 2 seconds.
Lens obstruction, Re-start Camera.	The lens is jammed or some foreign object is preventing the lens from functioning properly.	Turn the camera off and restart it to reset the lens.
Suggest using tripod.	When Fireworks, Sunset, Night Landscape is enabled, this prompt message is displayed when the photo shooting screen is displayed for the first time	The message will disappear after 2 seconds.
Battery temperature is too high.	Battery temperature is too high.	Let the batteries cool before attempting to use the camera again. This message will disappear after 2 seconds.
Built-in memory error!	An error has occurred in the internal memory.	Try shutting off the camera and turning it on again. This message will disappear after 2 seconds.
Improper alignment. Please try again.	The offset is too big for panorama shooting.	Keep the camera steady while shooting to maintain alignment.

Message	Description	Action
Warning! Do not turn off your camera during update!	The message appears during the firmware update process.	The message disappears after the camera update and restart.
Connection Failed!	Failure to connect to your PC, TV.	Remove USB cable, reinsert cable, and retry connection.
Please update firmware after the battery is fully charged!	The firmware cannot be updated when power is insufficient.	Charge the battery fully before reattempting to update firmware.
Card Full !	Indicates that the memory card is full.	Replace memory card with another that has available memory or delete photos or videos to create more room on the card. This message will disappear after 2 seconds.
Memory Full !	Indicates that the camera memory is full.	Erase files or insert a memory card that has available memory. It will disappear after 2 seconds.
Card Error !	During power-on, the memory card cannot be recognized or a read/write error has occurred.	Format the memory card. WARNING: Formatting the memory card will erase all data on the card. Copy the data from the memory card to another storage, such as a computer. Otherwise, all data will be erased during formatting. This message will disappear after 2 seconds.

Message	Description	Action
Card is not formatted.	When an error occurs in the memory card, the message "Not Formatted" will appear.	Format the memory card. WARNING: Formatting the memory card will erase all data on the card. Copy the data from the memory card to another storage, such as a computer. Otherwise, all data will be erased after the format.
Cannot write to SD card.	The photo shooting or video recording has been interrupted, so recording cannot continue.	Turn the camera off. Then remove and reinsert the memory card and turn on the camera to restart.
Slow access	When a memory card lower than Class 4 is used to record a HD movie, the writing speed will be slower and recording will not continue.	Replace the memory card with a card that is Class 6 or higher. This message will disappear after 2 seconds.
No Red-Eye Detected!	Red eyes have not been detected in the image.	The message will disappear after 2 seconds.
This image cannot be edited.	The file format does not support editing or the edited file cannot be edited again.	The message will disappear after 2 seconds.

Message	Description	Action
This image cannot be edited.	The file format does not support editing or the edited file cannot be edited again.	The message will disappear after 2 seconds.
Too many pictures for fast processing.	During the playback by date, the images exceed specifications so that it is not possible to play by date.	The message disappears after 2 seconds and the camera returns to normal playback mode.
Unable to recognize files.	The format of the file to be viewed is not supported or the file is corrupted so it cannot be properly read.	The message disappears only after the file is deleted.
No Picture!	No image files exist in the camera or on memory card.	The message disappears after 2 seconds and returns to the photo shooting screen.
Protected! Undeletable!	The file is protected. The message appears when you go into delete mode.	If you want to delete a protected file, first unlock the selected photo or video (see page 79). This message will disappear after 2 seconds.

Troubleshooting

Problem	Possible causes	Solution
Camera does not turn on	■ The battery has been depleted. ■ The battery is not inserted correctly.	■ Replace the battery. ■ Correctly reinstall the battery.
Camera turns off suddenly during operation	■ The battery has been depleted.	■ Replace the battery. ■ Charge the battery. ■ Make sure the camera is actually shutting off and not entering Power Save Mode, where the monitor will turn off after the camera has been idle for a period of time.
The picture is blurred	■ Camera movement while taking a picture.	■ Turn on Anti-Shake mode.
Images and video files cannot be saved	■ The memory card is full.	■ Use another memory card or delete unnecessary files.

Problem	Possible causes	Solution
Saving data to memory card is slow	■ Using a memory card below Class 4 may result in slower recording times.	■ Use a memory card with Class 6 or higher to improve performance.
Too many movies to process	■ The number of pictures or folders in the memory card exceed the specifications, so the playback can not be displayed.	■ Delete unwanted files.
The flash ⚡ flashes on the monitor.	■ Current shooting environment requires flash.	■ Turn on flash.

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- Procedure During 12-month Warranty Period Any camera which proves defective during the 12-month warranty period should be returned to the dealer from whom you purchased the camera or to the manufacturer. If there are no representatives of the manufacturer in your country, send the camera to the manufacturer, with postage prepaid. In this case, it will take a considerable length of time before the camera can be returned to you owing to the complicated customs procedures required. If the camera is covered by warranty, repairs will be made and parts replaced free of charge, and the camera will be returned to you upon completion of servicing. If the camera is not covered by warranty, regular charges of the manufacturer or of its representatives will apply. Shipping charges are to be borne by the owner. If your camera was purchased outside of the country where you wish to have it serviced during the warranty period, regular handling and servicing fees may be charged by the manufacturer’s representatives in that country. Notwithstanding this, your camera returned to the manufacturer will be serviced free of charge according to this procedure and warranty policy. In any case, however, shipping charges and customs clearance fees to be borne by the sender.

To prove the date of your purchase when required, please keep the receipt or bills covering the purchase of your camera for at least a year. Before sending your camera for servicing, please make sure that you are sending it to the manufacturer's authorized representatives or their approved repair shops, unless you are sending it directly to the manufacturer. Always obtain a quotation for the service charge, and only after you accept the quoted service charge, instruct the service station to proceed with the servicing.

- This warranty policy does not affect the customer's statutory rights.
- The local warranty policies available from our distributors in some countries can supersede this warranty policy. Therefore, we recommend that you review the Warranty card supplied with your product at the time of purchase or contact our distributor in your country for more information and to receive a copy of the warranty policy.

RICOH IMAGING COMPANY, LTD.
1-3-6, Nakamagome, Ohta-ku, Tokyo 143-8555, JAPAN
(https://www.ricoh-imaging.co.jp)

RICOH IMAGING EUROPE S.A.S.
7-9, avenue Robert Schuman, 94150 RUNGIS, FRANCE
(https://www.ricoh-imaging.eu)

RICOH IMAGING AMERICAS CORPORATION
2 Gatehall Drive Suite 204, Parsippany, New Jersey 07054, U.S.A.
(https://www.us.ricoh-imaging.com)

RICOH IMAGING CANADA INC.
5560 Explorer Drive Suite 100, Mississauga, Ontario, L4W 5M3, CANADA
(https://www.ricoh-imaging.ca)

RICOH IMAGING CHINA CO., LTD.
Room A 23F Lansheng Building, 2-8 Huaihaizhong Road, Huangpu District, Shanghai, 200021, CHINA
(http://www.ricoh-imaging.com.cn)

https://www.ricoh-imaging.co.jp/english/

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