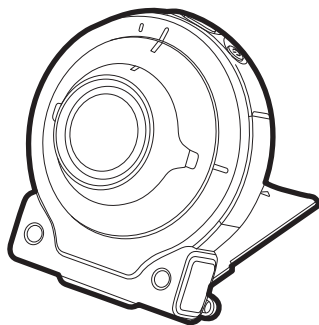# CASIO®

EN

Digital Camera

EX-FR100CA
User's Guide

Thank you for purchasing this CASIO product.
- Before using it, be sure to read the precautions contained in this User's Guide.
- Keep the User's Guide in a safe place for future reference.
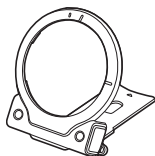- For the most up-to-date information about this product, visit the official EXILIM Website at http://www.exilim.com/
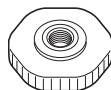
EXILIM

Accessories

As you unpack your camera, check to make sure that all accessories shown below are included. If anything is missing, contact your original retailer.
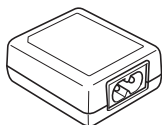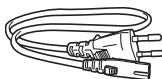
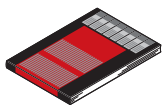|		
Camera (EX-FR100)	Hinge Unit • Comes pre-attached to the camera.	Tripod nut
USB-AC adaptor (AD-C53U)	Power cord*	Micro USB cable
Basic Reference		

* The shape of the power cord plug varies according to the country or geographic area where the camera is sold.

Read this first!

- The contents of this manual are subject to change without notice.
- The contents of this manual have been checked at each step of the production process. Feel free to contact us if you notice anything that is questionable, erroneous, etc.
- Any copying of the contents of this User's Guide, either in part or its entirety, is forbidden. Except for your own personal use, any other use of the contents of this manual without the permission of CASIO COMPUTER CO., LTD. is forbidden under copyright laws.
- CASIO COMPUTER CO., LTD. shall not be held liable for any damages or lost profits suffered by you or any third party due to the use or malfunction of this product.
- CASIO COMPUTER CO., LTD. shall not be held liable for any damages, lost profits, or claims by third parties arising out of the use of the EXILIM Connect application software.
- CASIO COMPUTER CO., LTD. shall not be held liable for any damages or lost profits caused by loss of memory contents due to malfunction, repair, or any other reason.
- Note that the example screens and product illustrations shown in this User's Guide may differ somewhat from the screens and configuration of the actual camera.

Charge batteries before use.

The camera has a built-in rechargeable lithium ion battery. The battery is not charged when you purchase the camera, so you will need to charge the camera before using it.

Take test shots

Before shooting your final image, shoot a test shot to ensure that the camera is recording correctly.

Using This Camera for the First Time

Before using this camera for the first time, you need to establish a connection between it and a smartphone (page 24). Then you will need to use the EXILIM Connect app (installed on the smartphone) to configure the camera's time and date settings (page 18), and to format its memory card (page 21).

Using This Camera with Another (Separately Available) Camera

This camera supports Bluetooth wireless technology connection with the separately available cameras shown below. After establishing a connection, you will be able to control this camera with the controller that comes with the other camera, to use the Multi Camera Mode for virtually unlimited imaging versatility, and much more.
• For information about how to connect and operate the other camera, refer to the user documentation that comes with it.

■ Connectible Camera Models
• EX-FR100
• EX-FR200

Contents

Using the Camera with a Computer 36

Appendix 46

General Guide

The numbers in parentheses indicate the pages where each item is explained.
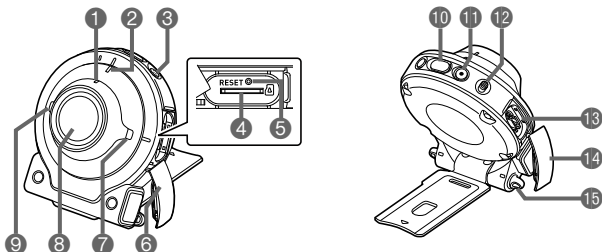
❶Wireless LAN connection lamp (page 30)
❷Operation lamp (pages 13, 15)
❸[⏻] (Power) (page 17)
❹Memory card slot (page 20)
❺[RESET] button (page 76)
Press this button if the camera will not turn on or turn off for some reason.

❻[CARD] cover (page 20)
❼Speaker
❽Lens (page 11)
❾Microphone (page 11)
❿Shutter button (page 22)
⓫[●] (Movie) (page 22)
⓬[FREE] lever (page 10)
⓭[USB] port (pages 12, 14)
⓮[USB] cover (pages 12, 14)

⓯Strap holes

Quick Start Basics

What you can do with your CASIO camera

This section explains the basic functions of the camera.

■ Shooting
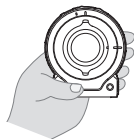
A variety of shooting styles

The hinge unit and tripod nut make it possible to shoot from a variety of different angles.

→ See page **9** for more information.

■ Connecting the Camera to a Smartphone
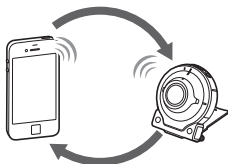
Wireless Connection

Turn your smartphone into a camera remote controller to configure camera settings and send camera images to your phone.

→ See page **24** for more information.

■ Simultaneous Use of Two Cameras
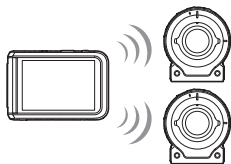
Multi Camera Mode

This camera can be operated using the controller that comes with another (separately available) CASIO camera, and even shoot with two cameras at the same time.
For details about the Multi Camera mode, refer to the user documentation that comes with the other camera.

Using the Attachment

You can use the hinge unit that comes with this camera to attach various other optionally available attachments. This way you can configure the camera to suit your specific needs.

※ **IMPORTANT!**

• Never touch the lens with your fingers. Finger smudges, dirt, and other foreign matter on the lens can interfere with proper operation of the camera. Use a blower or other means to keep the lens and flash window free of dirt and dust, and wipe gently with a soft, dry cloth.

Hinge Unit

■ To use the hinge unit as a stand
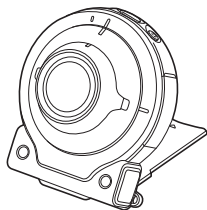
■ To change the shooting direction by 90 degrees

1. **While pulling down on the camera's [FREE] lever, rotate the camera clockwise 90 degrees until you hear a click.**

 • Align the camera's operation lamp with the C mark on the hinge unit.
 • The indentations in the lens ring indicate the orientation of the long dimension of the image being shot.

[FREE] lever

A B C

Indentations

Lens ring
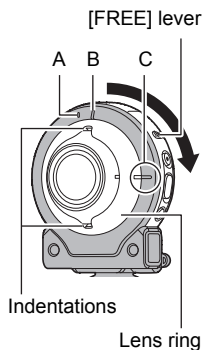
■ To remove the hinge unit from the camera

1. While pulling down on the camera's [FREE] lever, rotate the camera counterclockwise about 15 degrees until its operation lamp is aligned with the A mark on the hinge unit.

A

[FREE] lever
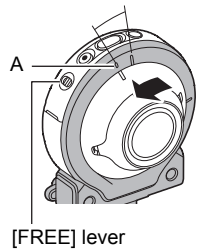
2. Remove the hinge unit from the camera.
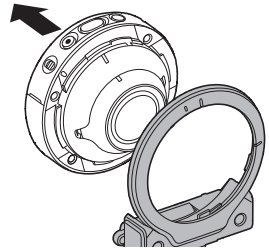
■ To attach the hinge unit to the camera

1. Align the camera's operation lamp with the A mark on the hinge unit.

2. Rotate the camera clockwise about 15 degrees until its operation lamp is aligned with the B mark on the hinge unit.

A   B
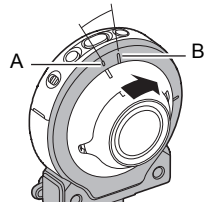
Tripod nut

1. **Use the tripod nut to secure a tripod (commercially available) to the hinge unit.**

Tripod nut

Tripod (commercially available)
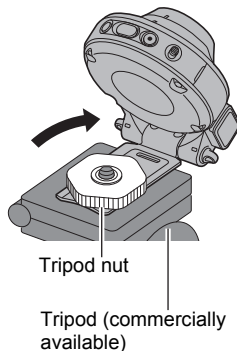
NOTE

• When shooting hold the camera still. Carefully press the shutter button and take care to avoid all movement as the shutter releases and for a few moments after it releases.
• Take care that your fingers and the strap do not cover any of the areas indicated in the illustration.
• Never swing the camera around by its strap.

Microphone

Lens
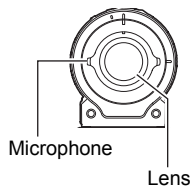
First, charge the battery prior to use.

The camera has a built-in rechargeable lithium ion battery. The battery is not charged when you purchase the camera, so you will need to charge the camera before using it.
You can use either of the two following methods to charge the battery.
• USB-AC adaptor
• USB connection to a computer (Using the included micro USB cable.)

■ To charge with the USB-AC adaptor

While the camera is turned off, connect in the sequence shown below.
Charging time : Approximately 2 hours 15 minutes
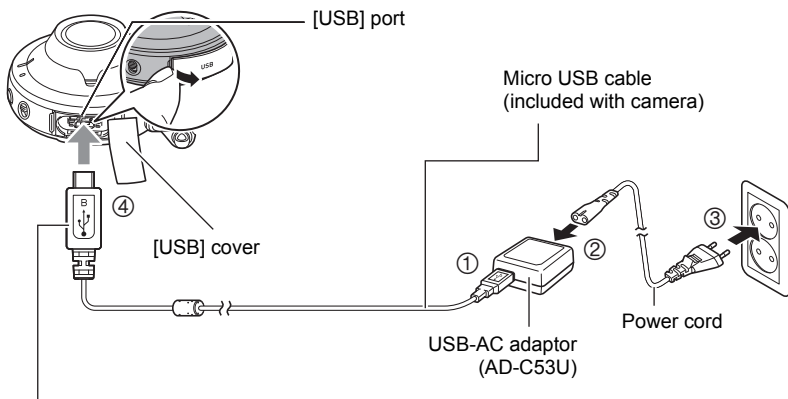
[USB] port

Micro USB cable
(included with camera)

[USB] cover

USB-AC adaptor
(AD-C53U)

Power cord

Connect the cable so the ⟵⟶ mark on the small (micro USB) connector is facing the lens side of the camera when inserted.

• When disconnecting the USB-AC adaptor from the camera, be sure to disconnect from the camera first.

NOTE

• If you turn on the camera while charging with the USB-AC adaptor, you will be able to perform normal recording operations. In this case, however, charging of the camera will be stopped while it is turned on.

■ Operation Lamp Indications

While power is off

Operation Lamp Status	Meaning
Lit red	Charging
Flashing red	Charging stopped due to abnormal internal temperature, USB-AC adaptor problem, battery problem (page 70), timer operation.
Unlit	Charging complete

While power is on

Operation Lamp Status	Meaning	
Lit green	Camera turned on	Charging stopped
Slow red-amber flashing	In sleep state	Charging
High speed red-green flashing		Charging stopped due to abnormal internal temperature, USB-AC adaptor problem, battery problem (page 70), timer operation.
Slow green flashing		Charging complete

- A battery that has not been used for a long time and/or ambient temperature can cause charging to take longer than normal. These conditions may also cause the operation lamp to flash red. If this happens, refer to page 70.
- The USB-AC adaptor will become warm during charging. This is normal and does not indicate malfunction.
- The shape of the power plug depends on each country or geographic area.

If the operation lamp is not lit or flashing during charging, check the orientation of the USB cable connector.
- Make sure that you insert the cable connector into the USB port until you feel it click securely into place. Failure to insert the connector fully can result in poor communication or malfunction.
- Note that even while the connector is fully inserted, you still will be able to see the metal part of the connector as shown in the illustration.
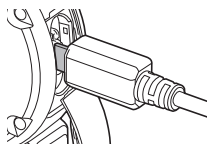
■ To charge using a USB connection to a computer

While the camera is turned off, connect in the sequence shown below (①, ②).
Charging time： Approximately 2 hours 55 minutes
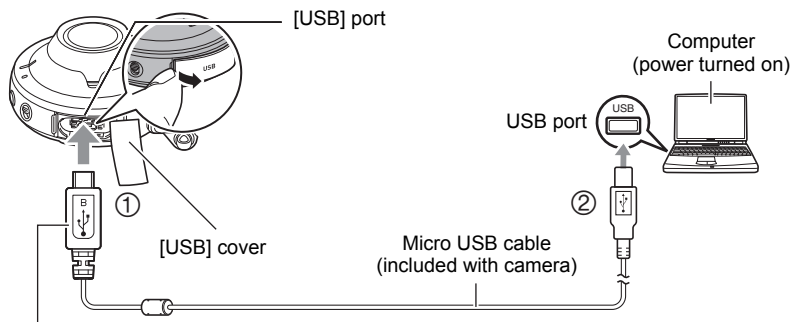
[USB] port

Computer
(power turned on)

USB port

[USB] cover

Micro USB cable
(included with camera)

Connect the cable so the ⟶⟵ mark on the small (micro USB) connector is facing the lens side of the camera when inserted.

- If the camera is on, hold down [⏻] (Power) for about two seconds to turn it off before connecting to the computer.

NOTE

• If you turn on the camera while charging over a USB connection to a computer is in progress, the camera will establish a USB connection with the computer. Charging will continue. Note that certain types of computers or connection environments may stop charging if supply power is low.

■ Operation Lamp Indications

While power is off

Operation Lamp Status	Meaning
Lit red	Charging
Flashing red	Charging stopped due to abnormal internal temperature, USB-AC adaptor problem, battery problem (page 70), timer operation.
Unlit	Charging complete

While power is on

Operation Lamp Status	Meaning
Lit amber	Charging
High speed red-green flashing	Charging stopped due to abnormal internal temperature, USB-AC adaptor problem, battery problem (page 70), timer operation.
Lit green	Charging complete

IMPORTANT!

- The first time you connect the camera to your computer with the USB cable, an error message may appear on your computer. If this happens, disconnect and then reconnect the USB cable.
- A battery that has not been used for a long time, certain types of computers, and connection conditions can cause charging to take longer than normal. These conditions may also cause the operation lamp to flash red. If this happens, refer to page 70.
- For faster charging, use of the supplied USB-AC adaptor is recommended.
- Charging is not performed while the connected computer is in the hibernate mode.

Other Charging Precautions
- With the two charging methods described above, you can charge the battery. Never use any other type of charger device. Attempting to use a different charger can result in unexpected accident.
- This model can be charged only via from USB 2.0 specification USB port.
- USB charging devices and power supply devices are subject to fixed standards. Use of an inferior device or a device that is not up to standard can cause malfunction and/or failure of your camera.
- Operation is not guaranteed in the case of a computer built or modified by you. Even in the case of a commercially available computer, certain USB port specifications may make it impossible to charge via the USB cable.
- A battery that is still warm immediately after normal use may not charge fully. Give the battery time to cool before charging it.
- A battery discharges slightly while it is loaded in the camera. Because of this, it is recommended that you charge the battery immediately before you need to use it.
- Charging the battery may cause interference with TV and radio reception. If this happens, plug the USB-AC adaptor into an outlet that is further away from the TV or radio.
- Actual charging time depends on current battery capacity and charging conditions.
- Do not use the USB-AC adaptor with any other device.
- Never use the power cord with another device.
- Use only the USB-AC adaptor and USB cable specified in this manual for charging. Use of any other type of devices may result in improper charging.
- Leaving the camera with a dead battery for about eight days will cause its date and time to be reset to their initial defaults. If this happens, use EXILIM Connect or the controller that comes with a separately available CASIO camera (page 4) to configure date and time settings. For details, refer to the user documentation that comes with EXILIM Connect and the other camera.

Turning Power On and Off

■ To turn on power

Press [♢] (Power).

• Turning on the camera causes the operation lamp to light green. This indicates that image recording is enabled.

[♢] (Power)
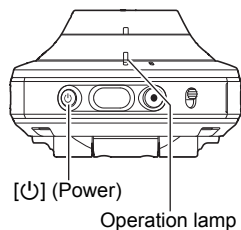
Operation lamp

Sleep Mode

If you do not perform any operation for more than 30 seconds after turning on power, it will enter a Sleep Mode.

The operation lamp slowly flashes green while the camera is in the sleep mode.

You can exit the sleep mode by pressing the shutter button or [●] (Movie) button.

NOTE

• If you have a controller from another (separately available) CASIO camera that is connected with this camera, you can put this camera into the sleep mode by pressing the controller's [♢] (Power) button.

■ To turn off power

On the camera, hold down [♢] (Power) for about two seconds.

• The camera will emit a sound when the camera is turned off. The camera turns off when the power down process is complete.

Establishing a Connection between the Camera and a Smartphone

To configure camera settings using the EXILIM Connect app, you need to establish a connection between the camera and a smartphone that has EXILIM Connect installed.
Use the procedure under "Controlling the Camera with a Smartphone" (page 24) to install EXILIM Connect on the smartphone, and then establish a connection between the camera and smartphone.

Configuring the camera's date and time settings

While there is a connection between the camera and a smartphone, use the EXILIM Connect app (page 26) to configure time settings.

1. **On the smartphone, go to the EXILIM Connect TOP screen and tap "✿".**

2. **On the smartphone, tap "Setting up the camera".**

3. **On the smartphone, tap "Adjust".**

4. **Tap "Run".**

NOTE

• Using the EXILIM Connect app to configure camera time settings automatically causes the camera's time zone to change to the connected smartphone's time zone.
• You can also use the controller of another (separately available) CASIO camera to configure the date and time settings manually. For details, refer to the user documentation that comes with your camera.

Preparing a Memory Card

Though the camera has built-in memory that can be used to store images and movies, you probably will want to purchase a commercially available memory card for greater capacity. The camera does not come with a memory card. Images recorded while a memory card is loaded are saved to the memory card. When no memory card is loaded, images are saved to built-in memory.

• Snapshots and movies stored in built-in memory cannot be copied to a memory card.
• For information about memory capacities, see page 79.

Supported Memory Cards

– microSD Memory Card
– microSDHC Memory Card
– microSDXC Memory Card

• The above are supported memory card types as of June 2016.
• This camera supports use of microSD memory cards of the following types and capacities: microSD memory cards up to 2GB; microSDHC memory cards greater than 2GB, up to 32GB; microSDXC memory cards greater than 32GB, up to 2TB. Note that the ability to use any particular card with this camera, even if it satisfies the above capacity and type requirements, is not guaranteed.

⚠ Warning!

● Memory cards are small and present a risk of accidentally being swallowed by infants and young children. Keep memory cards out of the reach of infants and young children. If a memory card is ever swallowed accidentally, contact a physician immediately.

■ Memory Card Handling Precautions

Certain types of memory cards can slow down processing speeds. In particular, high-quality movies may not be able to be stored correctly. A slow memory card can take too much time to record data and result in breaks in the image and/or audio during playback.

To load a memory card

1. On the camera, hold down [⏻] (Power) for about two seconds to turn off power, and then open the [CARD] cover.
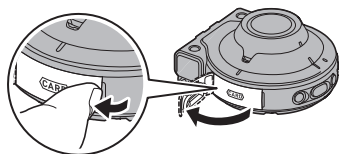
2. Load a memory card.

Positioning the memory card so its back is facing upwards (towards the lens side of the camera), slide it into the card slot all the way in until you hear it click securely into place.

Back

Front   Back
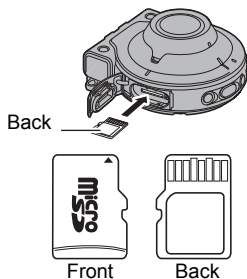
3. Close the [CARD] cover.
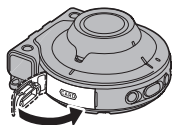
☀ IMPORTANT!

• Never insert anything besides a supported memory card (page 19) into the memory card slot.
• Should water or any foreign object ever get into the card slot, immediately turn off the camera, and contact your retailer or nearest CASIO authorized service center.

■ To replace the memory card

Press the memory card and then release it. This will cause it to pop out of the memory card slot slightly. Pull the card out the rest of the way and then insert another one.

• Turn off the camera before replacing the memory card. Replacing the card while the camera is on can result in recorded images not being saved and even damage the memory card.
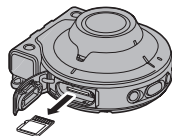
To format (initialize) a new memory card

Before using a memory card with this camera, establish a connection between the camera and a smartphone and use the EXILIM Connect app (page 26) to format it.

1. **On the smartphone, go to the EXILIM Connect TOP screen and tap "✿".**

2. **On the smartphone, tap "Setting up the camera".**

3. **On the smartphone, tap "Format".**

4. **Tap "OK" twice.**

IMPORTANT!

• Formatting a memory card that already has snapshots or other files on it, will delete its contents. Normally you do not need to format a memory card again. However, if storing to a card has slowed down or if you notice any other abnormality, re-format the card.

• Be sure to use EXILIM Connect or a controller that came with another (separately available) CASIO camera to format the memory card. Formatting a memory card on a computer can result on non-compliance with the SD standard, extremely slow processing speed, and other compatibility problems.

• For details about the formatting operation using the controller, refer to the user documentation that comes with the other camera.

Shooting with the Camera

You can use the camera as a stand-alone unit to shoot snapshots and movies.

1. Turn on the camera (page 17).

This causes the camera to start up on the REC mode.

2. Point the camera at the subject.

3. Press the camera shutter button.

The camera will automatically adjust exposure and focus, and then shoot the snapshot.

• Normally, shooting a snapshot will cause the operation lamp to flash red once.

Operation lamp

Shutter button
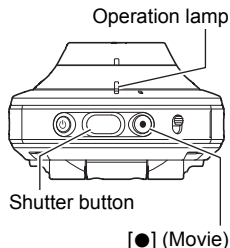
[●] (Movie)

Shooting a Movie

Press [●] (Movie) on the camera to start movie recording.

Recording will stop if you press [●] (Movie) again.

• The operation lamp flashes red while movie recording is in progress.
• Each movie can be up to 29 minutes or 4 GB long. Movie recording also will stop automatically if memory becomes full before you stop movie recording.

IMPORTANT!

• Spending a long time using movie recording will cause the camera to become slightly warm to the touch. This is normal and does not indicate malfunction.
• Movie recording also records audio. Note the points below when shooting a movie.
  – Take care that the microphone is not blocked by your fingers, etc.
  – Good audio recording results are not possible when the camera is too far away from what you are trying to record.

Microphone

• Shooting movies for long periods in areas where temperature is relatively high can cause digital noise (dots of light) to appear in the movie image. A rise in the camera's internal temperature also may force movie recording to stop automatically. If this happens, stop recording and allow the camera to cool down, which should cause normal operation to resume.
• Use of the camera's built-in memory or certain types of memory cards can slow down processing speeds. In particular, high-quality movies may not be able to be stored correctly. A slow memory card can take too much time to record data and result in breaks in the image and/or audio during playback.
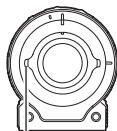
NOTE

• You can change shooting settings using the EXILIM Connect app or a controller that comes with a separately available CASIO camera. For details, refer to the user documentation that comes with EXILIM Connect and the other camera.

Snapshot Shooting Precautions

Operation
• If unwanted light is shining onto the lens, shade the lens with your hand when shooting an image.

Shooting Indoors under Fluorescent Lighting
• Minute flickering of fluorescent lighting can affect the brightness or color of an image.

Other Precautions
• Due to the characteristics of the CMOS imaging element used by the camera, very fast moving subjects may cause distortion of the recorded image.

■ Auto Focus Restrictions

• Any of the following can make proper focus impossible.
  – Solid color wall or other very low contrast subject
  – Strongly back lit subject
  – Very shiny subject
  – Blinds or other subject with a repeating horizontal pattern
  – Multiple subjects at varying distances from the camera
  – Subject in a dark location
  – Camera movement while shooting
  – Fast-moving subject
  – Subjects outside the focus range of the camera
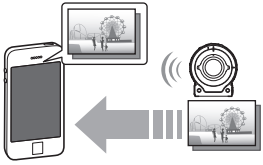
Controlling the Camera with a Smartphone

Controlling Your Camera with a Smartphone

Your camera has both Bluetooth wireless technology and wireless LAN capabilities built in. After establishing a wireless connection with a smartphone, you can perform the operations described in the table below. Requires installation of the EXILIM Connect app on your smartphone.

• Your camera is a Bluetooth® Smart device.
• Your camera can connect using Bluetooth wireless technology with a smartphone that supports Bluetooth Smart. Note that the Bluetooth wireless technology that connects your camera with a smartphone is different from the Bluetooth wireless technology that connects the camera with the controller.

With this function:	You can do this:
Auto Send	Images can be automatically sent to a smartphone that has been Bluetooth paired with the camera (page 32).
Shoot with phone	Use a smartphone to configure camera settings and shoot a snapshot or movie with the camera from a remote location (page 31).
View on phone	Use a smartphone to view snapshots and movies recorded with the camera, and to delete them.

✸ IMPORTANT!

• Inside an aircraft or anywhere else where use of wireless communication is restricted or prohibited, do not use this camera.
• Some smartphone models may not be able to play back movie files from your camera.
• Depending on your smartphone model, its operating system version, and/or its remaining storage capacity can cause failure of a movie or snapshot save operation. Receiving a camera file, perform the required operation on your smartphone to check if the file was stored properly.
• A movie received on an Android ™ terminal:
  – Movies are not displayed by Gallery app. Movies are stored in a folder named EXILIM Connect.
  – A separate movie player is required to playback movies (whose files have the file name extension MOV).
  – Depending on your movie player, you may not be able to playback movies and/ or audio.
• While this camera is connected with a smartphone, recording will not be performed when the camera's shutter button or [●] (Movie) button is pressed.
• Images recorded on another manufacturer's camera cannot be sent using this function.

NOTE

• Note that using wireless functions requires more battery power usage than normal. Make sure that the camera battery is sufficiently charged before starting a wireless LAN operation.
• The operating range depends on the local communication environment and on the type of smartphone you are connected to.

Controlling the Camera with a Smartphone

■ About EXILIM Connect

For detailed information about EXILIM Connect, refer to the EXILIM Connect User's Guide (which you can download at the website below).

http://www.exilim.com/manual/

• Note that to view the EXILIM Connect User's Guide (PDF), you will have to install Adobe Reader. Consult CASIO authorized service center if you are unable to open to display the PDF format User's Guide.

• Note that EXILIM Connect User's Guides may not be available in all languages. If you cannot find a EXILIM Connect User's Guide in your native language, please use a version in another language.

Getting Ready to Establish a Connection between a Smartphone and Your Camera

Installing the EXILIM Connect Smartphone app on your smartphone makes it possible to remotely control the camera from your smartphone and to send images recorded with the camera to your smartphone. Search the EXILIM Connect app on Google Play ™ or App Store and install it on your smartphone.

For information about OS versions (Android and iOS) supported by the EXILIM Connect app, visit the Google Play or the App Store download site, or the Official CASIO Digital Camera Website (http://www.exilim.com/).

■ App operation guarantees

No guarantees are made concerning the ability to operate the EXILIM Connect app on any particular smartphone or tablet.

※ IMPORTANT!

• App functions and the required operating environment are subject to change without notice.

Installing the EXILIM Connect App on Your Smartphone

■ Android terminal

1. **Open "Play Store" (Google Play).**

2. **In the search field, type "EXILIM Connect".**

3. **Install "EXILIM Connect".**

■ iPhone (iOS)

1. **Open "App Store".**

2. **In the search field, type "EXILIM Connect".**

3. **Install "EXILIM Connect".**

Controlling the Camera with a Smartphone

Establishing a Wireless Connection for the First Time

The first time you establish a wireless connection between the camera and a smartphone, you need to use the procedure below to configure wireless connection settings. This operation is required for the first connection only.

■ Smartphone that supports Bluetooth Smart

Connecting the camera to a smartphone using Bluetooth wireless technology (pairing) makes it simple to configure wireless connection settings.

※ **IMPORTANT!**

• Performing this operation automatically configures your smartphone's wireless LAN connection settings (page 30).
• Your camera can be paired with a single smartphone at one time.
• Some smartphone models may not be compatible with this camera.
• If you want to re-pair the camera with the smartphone it is already paired with, first unpair them and then pair again. Re-pairing the camera and smartphone will result in all pending unsent images to remain unsent.

Camera Operation

1. **On the camera, hold down [⏻] (Power) for about two seconds to turn off power.**

2. **On the camera, hold down [⏻] (Power) for at least six seconds.**
The camera's operation lamp will flash amber.

Smartphone Operation

3. **Start up the "EXILIM Connect" app.**

4. **Tap "Pairing".**

5. **On the smartphone, tap the camera's name you want to pair with.**
This completes pairing of the camera and smartphone, and establishes a Bluetooth wireless technology connection.
• In the case of an Android terminal, wireless LAN connection settings are also configured automatically. In this case, advance to step 9 of this procedure. If the screen shown in step 9 is not displayed, use the smartphone's Wi-Fi settings to select the SSID displayed on the camera and establish a wireless LAN connection between the camera and smartphone.
• In the case of an iPhone (iOS), you need to configure wireless LAN settings (install a profile) next. Advance to step 6 of this procedure.

_6._ On the smartphone, tap "Install".

Follow the instructions that appear on the smartphone to install the profile required for wireless LAN setup.

• On some smartphone models, the passcode input screen may appear. If this happens, input your smartphone's passcode.

_7._ After installation of the profile is complete, tap "Done" on the smartphone.

_8._ On the smartphone screen, tap the "EXILIM Connect" icon.

This establishes a wireless LAN connection between the camera and smartphone.

• If you are using an iPhone (iOS) and there is no wireless LAN connection between the camera and smartphone, use the smartphone's Wi-Fi settings to select the camera's SSID to establish a wireless LAN connection between the camera and smartphone.

_9._ On the smartphone, tap "OK".

_10._ Follow the instructions that appear on the smartphone to complete the pairing operation.

NOTE

• "Auto Send" (page 32) will be turned on after you configure wireless connection settings on the camera and smartphone.
• Turning off the camera also terminate the Bluetooth wireless technology connection.
• You can configure advanced Auto Send settings using the controller of another (separately available) CASIO camera. For details, refer to the user documentation that comes with the other camera.

■ Smartphone that does not support Bluetooth Smart

Configure smartphone wireless LAN connection settings (input the camera SSID and password).

1. **On the camera, hold down [⏻] (Power) for about two seconds to turn off power.**

2. **On the camera, while holding down [●] (Movie), hold down [⏻] (Power) for more than one second.**
The camera's wireless LAN connection lamp will flash blue.

3. **For the smartphone's Wi-Fi settings, enter the camera's SSID and password to establish a wireless LAN connection between the camera and smartphone.**
When the smartphone establishes a wireless LAN connection with the camera, the camera's wireless LAN connection lamp lights blue.
- What you need to do to establish a wireless LAN connection depends on the type of smartphone you are using. For details about how to establish a wireless LAN connection see the user documentation that comes with your smartphone.
- The camera SSID (which cannot be changed) and password (initial default) are shown below.
  SSID: Refer to the separate "[Important] About the camera's SSID" sheet that comes with the camera.
  Password: 00000000

4. **On the smartphone, start up "EXILIM Connect".**

■ What to do if you are unable to establish a wireless LAN connection between the camera and a smartphone.

This problem may be caused when the smartphone is already wirelessly connected to one of the networks or devices below. Go to your smartphone's Wi-Fi settings and select this camera's SSID.
– Household wireless LAN
– Public wireless LAN
– Portable wireless LAN device

Using a Smartphone as a Camera Remote Controller (Shoot with phone)

This function lets you remotely shoot a snapshot or movie with the camera using a smartphone. In addition to shooting snapshots and movies, you can also use a smartphone to perform zoom and other operations, and to configure camera settings.

■ Bluetooth Wireless Technology Connection

1. **Allow the camera to enter the sleep mode (page 17).**
   The camera will enter the sleep mode automatically if you do not perform any operation for about 30 seconds after turning it on. The sleep mode is indicated when the camera's operation lamp is slowly flashing green.

2. **On the smartphone, start up the "EXILIM Connect" app.**

3. **On the smartphone, tap "Remote Capture".**

4. **Compose the image on the smartphone's screen as you shoot.**

For information about how to use "Shoot with phone", refer to the EXILIM Connect manual (page 26).

■ Cannot Connect with Bluetooth Wireless Technology

1. **On the camera, hold down [⏻] (Power) for about two seconds to turn off power.**

2. **On the camera, while holding down [●] (Movie), hold down [⏻] (Power) for more than one second.**
   The camera's wireless LAN connection lamp will flash blue.

3. **For the smartphone's Wi-Fi settings, enter the camera's SSID and password to establish a wireless LAN connection between the camera and smartphone.**
   The camera SSID (which cannot be changed) and password (initial default) are shown below.
   • SSID: Refer to the separate "[Important] About the camera's SSID" sheet that comes with the camera.
   • Password: 00000000

4. **On the smartphone, start up the "EXILIM Connect" app.**

5. **Compose the image on the smartphone's screen as you shoot.**

For information about how to use "Shoot with phone", refer to the EXILIM Connect manual (page 26).

Viewing Snapshots and Movies in Camera Memory on a Smartphone (View on phone)

You can use the procedures in this section to view snapshots stored in camera memory on a smartphone, and to copy snapshots and movies to the smartphone. For details about the operation, refer to the EXILIM Connect user documentation (page 26).

Having Images Shot with the Camera Sent to a Smartphone Automatically (Auto Send)

Auto Send automatically sends images to a paired smartphone as they are shot. Images are sent to the smartphone while the camera is in the sleep mode. If there is no wireless connection between the camera and smartphone, the images will be sent as soon as a connection is established.

• The camera's wireless LAN connection lamp will be flashing or lit while an image send operation is in progress. The lamp will go out after the image send operation is complete.

NOTE

• Auto Send can be used only with a smartphone that supports Bluetooth Smart. Both a Bluetooth and wireless LAN connection are required between the camera and smartphone to auto send camera images.
• You can use the smartphone apps below to view snapshots after sending them.
  – iPhone: Camera Roll
  – Android terminal: Gallery, Photo, or another photo browser app
• You can configure advanced Auto Send settings using the controller of another (separately available) CASIO camera. For details, refer to the user documentation that comes with the other camera.

Unpairing the Camera from a Smartphone (Unpair)

To use the camera with a different smartphone, first unpair it from the current smartphone and delete the pairing information from the camera.
To unpair, hold down the camera's [●] (Movie) button and shutter button, as you hold down the [⏻] (Power) button for six seconds. Unpairing is complete when the camera's operation lamp goes out.

▍ NOTE

• Performing the above operation returns the wireless LAN password to its initial default setting. For information about the initial default password, see page 30.
• When performing the unpairing operation, you will also need to perform the required unpairing steps on the smartphone. For details, refer to the EXILIM Connect user documentation (page 26).

Operating the Camera with the Controller of Another (Separately Available) CASIO Camera

Establishing a connection between this camera and the controller that comes with another (separately available) CASIO camera makes it possible to operate the camera and to configure camera settings from the controller. This section explains how to establish a connection with a controller. For details about operations and settings, refer to the user documentation that comes with the other camera.

■ Wireless Connection with the Controller that Comes with a Separately Available CASIO Camera

This camera connects with the controller of another (separately available) CASIO camera using Bluetooth wireless technology.

Bluetooth®

> ✸ **IMPORTANT!**
>
> • Your camera has Bluetooth wireless technology communication functionality built in. Avoid operating the camera (including camera standalone operations) inside of aircraft or anywhere else where wireless data communication is restricted.

Registering This Camera on a Controller

This camera needs to be registered on a controller in order to establish a connection between them.

1. **If there is a memory card loaded in the camera, remove it (page 20).**

2. **While holding down the shutter button, hold down [⏻] (Power) for at least one second.**
This will cause the camera's operation lamp to flash amber.

3. **While holding down the controller shutter button, hold down [⏻] (Power) for at least six seconds.**
This will cause the controller's operation lamp to flash amber to indicate that camera registration has started.

Printing

Professional Print Service

You can take a memory card that contains the images you want
to print to a professional print service and have them printed.

Printing on a Home Printer

You can use a printer equipped with a memory card slot
to print images directly from a memory card. For details,
see the user documentation that comes with your
printer.

Printing with a Computer

After transferring the images to your computer, use
commercially available software to print.
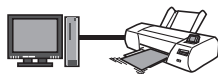
Printing with a Computer

There are a variety of different ways to print images stored on a computer. This
section shows one standard printing example.

■ Printing on a Windows Computer

1. **Use the procedure under "Viewing and Storing Images on a Computer"
(page 37) to store the image you want to print, and then display the
image on your computer screen.**

2. **Click "Print" and then "Print".**

3. **Configure the desired print settings and then click "Print".**

■ Printing on a Macintosh

1. **Use the procedure under "Connecting the Camera to Your Computer
and Saving Files" (page 40) to store the image you want to print, and
then display the image on your Macintosh screen.**

2. **Click "File" and then "Print".**

3. **Configure print settings and then click "Print".**
This will print the selected image.

Using the Camera with a Computer

Things you can do using a computer...

You can perform the operations described below while the camera is connected to a computer.

Save images to a computer and view them there		• Save images and view them manually (USB connection) (pages 37, 40).
Play back and edit movies		• You can play back movies (pages 39, 42). • To edit movies, use commercially available software as required.

The procedures you need to perform are different for Windows and the Macintosh.

• Windows users should refer to "Using the Camera with a Windows Computer" on page 36.
• Macintosh users should refer to "Using the Camera with a Macintosh" on page 40.

Using the Camera with a Windows Computer

When you want to do this:	Operating System Version	Required Software
Save images to a computer and view them there manually	Windows 10, Windows 8.1, Windows 7, Windows Vista	Installation not required.
Play movies	Windows 10, Windows 8.1, Windows 7	Windows Media Player 12
	Windows Vista	Software that can play movie files with the file name extension MOV. You may need to download the software on the Web.

• The above recommended computer system environments do not guarantee proper operation.
• The type of computer being used, certain settings, and other installed software may interfere with proper operation.

Viewing and Storing Images on a Computer

You can connect the camera to your computer in order to view and store images (snapshot and movie files).

Never use your computer to modify, delete, move, or rename any image files that are in the camera's built-in memory or on its memory card.
Doing so can cause problems with the camera's image management data, which will make it impossible to play back images on the camera and can drastically alter remaining memory capacity. Whenever you want to modify, delete, move, or rename an image, do so only on images that are stored on your computer.

⚡ IMPORTANT!

• Never unplug the USB cable, or operate the camera while viewing or storing images. Doing so can cause data to become corrupted.

NOTE

• You also can use your computer's card slot (if it has one) or a commercially available card reader to access image files directly from the camera's memory card. For details, see the user documentation that comes with your computer.

■ To connect the camera to your computer and save files

1. **On the camera, hold down [⏻] (Power) for about two seconds to turn off power. Next, use the micro USB cable that comes with the camera to connect it to your computer's USB port.**

   • For details about connecting to the camera and precautions when connecting, see page 14.

[USB] port

Micro USB cable
(included with camera)

2. **Press [⏻] (Power) to turn on the camera.**

When you turn on the camera, check to make sure that the color of its operation lamp changes from red to green or amber (page 15).

   • The first time you connect the camera to your computer with the USB cable, an error message may appear on your computer. If this happens, disconnect and then reconnect the USB cable.

3. **Windows 10 users: Click "Start" and then "Explorer". Next, in the sidebar, click "PC".**
Windows 8.1 users: Click "Desktop" and then "Explorer".
Windows 7, Windows Vista users: Click "Start" and then "Computer".

4. **Double-click "Removable Disk".**
   • Your computer recognizes the memory card loaded in the camera (or built-in memory if there is no card) as a removable disk.

5. **Right-click the "DCIM" folder.**

6. **On the shortcut menu that appears, click "Copy".**

7. **Windows 10, Windows 8.1 users: Click "Documents".**
Windows 7, Windows Vista users: Click "Start" and then "Documents".
   • If you already have a "DCIM" folder in "Documents", the next step will overwrite it. If you want to keep the existing "DCIM" folder, you need to change its name or move it to a different location before performing the next step.

8. **Windows 10, Windows 8.1 users: On the "Documents" menus, click "Home" and then "Paste".**
Windows 7, Windows Vista users: On the "Documents" menu, click "Organize" or "Edit", and then "Paste".
This will paste the "DCIM" folder (and all the image files it contains) into your "Documents" folder. You now have a copy of the files that are in camera memory on your computer.
   • After copying images, it is recommended that you right-click the DCIM folder and change its name to something else.

9. **After you finish copying images, disconnect the camera from the computer.**
After the copy or read progress dialog on the computer's screen indicates that the process is complete, close the displayed image and then disconnect the USB cable.

■ **To view images you copied to your computer**

1. **Double-click the copied "DCIM" folder to open it.**

2. **Double-click the folder that contains the images you want to view.**

3. **Double-click the image file you want to view.**
   • For information about file names, see "Memory Folder Structure" on page 44.

■ **Movie Playback Precautions**
• To play back a movie, first save it to your computer and then double-click the movie file. Proper movie playback may not be possible for data accessed over a network, from a memory card, etc.
• Proper movie playback may not be possible on some computers. If you experience problems, try the following.
   – Quit any other applications you have running, and stop resident applications.

Using the Camera with a Macintosh

When you want to do this:	Operating System Version	Required Software
Save images to your Macintosh and view them there manually	OS X	Installation not required.
Save images to your Macintosh automatically/ Manage images	OS X	Photos or iPhoto, which comes bundled with some Macintosh products.
Play movies	OS X 10.5 or higher	QuickTime Player (installed on computer)

• The above recommended computer system environments do not guarantee proper operation.
• Proper operation depends on the level of performance of the computer you are using.

Connecting the Camera to Your Computer and Saving Files

Never use your computer to modify, delete, move, or rename any image files that are in the camera's built-in memory or on its memory card.
Doing so can cause problems with the camera's image management data, which will make it impossible to play back images on the camera and can drastically alter remaining memory capacity. Whenever you want to modify, delete, move, or rename an image, do so only on images that are stored on your computer.

IMPORTANT!

• Never unplug the USB cable, or operate the camera while viewing or storing images. Doing so can cause data to become corrupted.
• The camera does not support operation with Mac OS X 10.0 to 10.4. Operation is supported with Mac OS 10.5 to 10.11 (using the OS standard USB driver) only.

NOTE

• You also can use your computer's card slot (if it has one) or a commercially available card reader to access image files directly from the camera's memory card. For details, see the user documentation that comes with your computer.

■ **To connect the camera to your computer and save files**

1. **On the camera, hold down [⏻] (Power) for about two seconds to turn off power. Next, use the micro USB cable that comes with the camera to connect it to your computer's USB port.**

 • For details about connecting to the camera and precautions when connecting, see page 14.

[USB] port

Micro USB cable (included with camera)

2. **Press [⏻] (Power) to turn on the camera.**

When you turn on the camera, check to make sure that the color of its operation lamp changes from red to green or amber (page 15).
In this mode, your Macintosh recognizes the memory card loaded in the camera (or the camera's built-in memory if it does not have a memory card loaded) as a drive. The appearance of the drive icon depends on the Mac OS version you are using.
 • The first time you connect the camera to your Macintosh with the USB cable, an error message may appear on your computer. If this happens, disconnect and then reconnect the USB cable.

3. **Double-click the camera's drive icon.**

4. **Drag the "DCIM" folder to the folder to which you want to copy it.**

5. **After the copy operation is complete, drag the drive icon to Trash.**

6. **Disconnect the camera from the computer.**

After the copy or read progress dialog on the computer's screen indicates that the process is complete, close the displayed image and then disconnect the USB cable.

■ To view copied images

1. Double-click the camera's drive icon.

2. Double-click the "DCIM" folder to open it.

3. Double-click the folder that contains the images you want to view.

4. Double-click the image file you want to view.

• For information about file names, see "Memory Folder Structure" on page 44.

■ Movie Playback Precautions

• To play back a movie, first save it to your computer and then double-click the movie file. Proper movie playback may not be possible for data accessed over a network, from a memory card, etc.
• Proper movie playback may not be possible on some Macintosh models. If you experience problems, try the following.
  – Shut down other applications that are running.

Files and Folders

The camera creates a file each time you shoot a snapshot, record a movie, or perform any other operation that stores data. Files are grouped by storing them in folders. Each file and folder has its own unique name.
- For details about how folders are organized in memory, see "Memory Folder Structure" (page 44).

Name and Maximum Number Allowed	Example
File	
Each folder can contain up to 9999 files named CIMG0001 through CIMG9999. The extension on the file name depends on the file type.	26th file name: CIMG0026.JPG Extension Serial number (4 digits)
Folders	
Folders are named from 100CASIO to 999CASIO. There can be up to 900 folders in memory.	100th folder name: 100CASIO Serial number (3 digits)

- You can view folder and file names on your computer.
- The total number of folders and files allowed depends on the image size and quality, and capacity of the memory card being used for storage.

Memory Card Data

The camera stores images you shoot in accordance with the Design Rule for Camera File System (DCF).

■ About DCF

The following operations are supported for DCF-compliant images. Note, however, that CASIO makes no performance guarantees concerning these operations.

• Transferring this camera's DCF-compliant images to another manufacturer's camera and view them.
• Printing this camera's DCF-compliant images on another manufacturer's printer.
• Transferring another camera's DCF-compliant images to this camera and view them.

■ Memory Folder Structure

```
☐ DCIM                          DCIM Folder
    └─☐ 100CASIO                 Recording Folder
         CIMG0001.JPG            Image File
         CIMG0002.MOV            Movie File
                ⋮
    ├─☐ 101CASIO                 Recording Folder
    └─☐ 102CASIO                 Recording Folder
                ⋮
☐ EXILIM                        Recording information
    └─☐ HL_DATA *
         └─☐ MD2016
               MD01010E.CMI
               MD01010T.CMI
                    ⋮
         └─☐ MD2017
                    ⋮
```
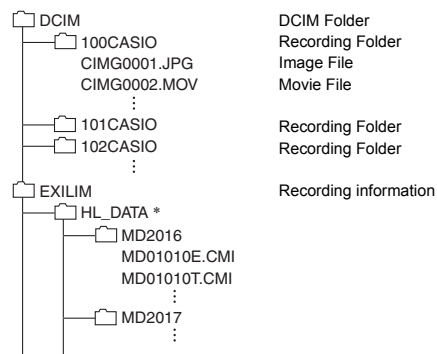
* Used when creating a Highlight Photo or Highlight Movie. (These settings can be changed only by using the controller that comes with a separately available CASIO camera.)

■ Supported Image Files

• Image files shot with this camera
• DCF-compliant image files

This camera may not be able to display an image, even if it is DCF-compliant. When displaying an image recorded on another camera, it may take a long time for the image to appear on this camera's monitor screen.

■ Built-in Memory and Memory Card Data Handling Precautions

• Whenever copying memory contents to your computer, you should copy the DCIM folder and all of its contents. A good way to keep track of multiple DCIM folders is to change their names to dates or something similar after you copy them to your computer. If you later decided to return a DCIM folder to the camera, however, be sure to change its name back to DCIM. The camera is designed to recognize only a root file with the name DCIM. Note the camera also will not be able to recognize the folders inside the DCIM folder unless they have the names they originally had when you copied them from the camera to your computer.

• Folders and files must be stored in accordance with the "Memory Folder Structure" shown on page 44 in order for the camera to be able to recognize them correctly.

Appendix

Safety Precautions

⚠ DANGER
This symbol indicates information that, if ignored or applied incorrectly, creates the danger of death or serious personal injury.

⚠ WARNING
This indication stipulates matters that have the risk of causing death or serious injury if the product is operated incorrectly while ignoring this indication.

⚠ CAUTION
This indication stipulates matters that have the risk of causing injury as well as matters for which there is the likelihood of occurrence of physical damage only if the product is operated incorrectly while ignoring this indication.

Symbol Examples

This circle with a line through it (⊘) means that the indicated action must not be performed. Indications within or nearby this symbol are specifically prohibited. (The example at left indicates that disassembly is prohibited.)

The black dot (●) means that the indicated action must be performed. Indications within this symbol are actions that are specifically instructed to be performed. (The example at left indicates that the power plug must be unplugged from the electrical socket.)

⚠ DANGER
■ Built-in Rechargeable Battery
• To charge the battery, use only the method specifically described in this manual. Attempting to charge the battery by an unauthorized means creates the risk of battery overheating, fire, and explosion.
• Do not expose or immerse the battery in fresh water or salt water. Doing so can damage the battery, and cause deterioration of its performance and loss of service life.
• The battery is intended for use with a CASIO Digital Camera only. Use with any other device creates the risk of the battery damage, or deterioration of battery performance and service life.

⚠ DANGER

- Failure to observe any of the following precautions creates the risk of battery overheating, fire, and explosion.
  - Never use or leave the battery near open flame.
  - Do not expose the battery to heat or fire.
  - Make sure the battery is oriented correctly when charging it.
  - Never carry or store the battery together with items that can conduct electricity (necklaces, pencil lead, etc.).
  - Never disassemble the battery, pierce it with a needle, or expose it to strong impact (hit it with a hammer, step on it, etc.), and never apply solder to it. Never place the battery into a microwave oven, dehumidifier, high-pressure generating device, etc.
  - Never remove the outer sticker from the battery.
- Do not use or leave the battery under direct sunlight, in an automobile parked in the sun, or in any other area subject to high temperatures. Doing so can damage the battery, and cause deterioration of its performance and loss of service life. Also, these conditions can cause the battery to swell to the point that you may not be able to remove it.
- Battery fluid can damage your eyes. Should battery fluid get into your eyes accidentally, immediately rinse them with clean tap water and then consult a physician.

⚠ WARNING

■ Smoke, abnormal odor, overheating, and other abnormalities

• Continued use of the camera while it is emitting smoke or strange odor, or while it is overheating creates the risk of fire and electric shock. Immediately perform the following steps whenever any of the above symptoms are present.
1. Turn off the camera.
   * If the camera will not turn off for some reason, press the [RESET] button (page 7).
2. If you are using the USB-AC adapter to power the camera, unplug the power plug from the power outlet.
3. Contact your retailer or nearest CASIO authorized service center.

■ Keep Away From Fire

• Never expose the camera to fire, which can cause it to explode and creates the risk of fire and personal injury.

■ Avoid Use While In Motion

• Never use the camera to record or play back images while operating an automobile or other vehicle, or while walking. Looking at the monitor while in motion creates the risk of serious accident.

■ USB-AC Adapter

• Misuse of USB-AC adapter creates the risk of fire and electric shock. Be sure to observe the following precautions.
  – Use only the specified USB-AC adapter.
  – Never use the USB-AC adapter with another device.
  – Use a power outlet that matches the power supply specified for the USB-AC adapter.
  – Never plug the USB-AC adapter or power cord into a wall outlet that is shared by other devices, or into a shared extension cord.
  – Never locate the USB-AC adapter near a stove or other heating device.
• Misuse of the USB-AC adapter can cause them to become damaged, creating the risk of fire and electric shock. Be sure to observe the following precautions.
  – Never place heavy objects on the USB-AC adapter or subject it to direct heat.
  – Do not modify the USB-AC adapter, allow it to become damaged, or forcibly bend it.
  – Do not twist or pull on the power cord.
  – When in use, locate the cord where it will not be tripped over.

⚠ WARNING

- Never touch the power plug while your hands are wet. Doing so creates the risk of electric shock.

- Should the power cord or power plug become damage, contact your retailer or nearest CASIO authorized service center.

- Do not use the USB-AC adapter in areas where liquids* might spill on them. Liquids create the risk of fire and electric shock.
  * Liquids: Water, sports drinks, seawater, animal or pet urine, etc.

- Do not place a flower vase or any other liquid container on top of the USB-AC adapter. Water creates the risk of fire and electric shock.

- Do not touch the camera or USB-AC adapter during lightning storms.

If a power cord was included with your camera

- The power cord that comes with the camera is designed for use in the country where the camera was purchased. If you use the camera in another country, be sure to use a power cord that conforms to that country's ratings and power supply voltage. Use of an improper power cord creates the risk of fire and electric shock.

- Before going out, be sure to unplug the USB-AC adapter from the power outlet and put in a place away from objects used by animals and pets. An animal or pet chewing on the power cord can cause it short, leading to the risk of fire.

■ Water and Foreign Matter

- Water, other liquids, or foreign matter (especially metal) getting inside the camera creates the risk of fire and electric shock. Immediately perform the following steps whenever any of the above symptoms are present. Particular care is required when using the camera where it is raining or snowing, near the ocean or other body of water, or in a bathroom.
  1. Turn off the camera.
     * If the camera will not turn off for some reason, press the [RESET] button (page 7).
  2. If you are using the USB-AC adapter to power the camera, unplug the power plug from the power outlet.
  3. Contact your retailer or nearest CASIO authorized service center.

■ Disassembly and Modification

- Except when disposing of the camera, never try to take it apart or modify it in any way. Doing so creates the risk of electric shock, burn injury, and other personal injury. Be sure to leave all internal inspection, maintenance, and repair up to your retailer or nearest CASIO authorized service center.

⚠ WARNING

■ Dropping and Rough Treatment

• Continued use of the camera after it is damaged by dropping or other rough treatment creates the risk of fire and electric shock. Immediately perform the following steps whenever any of the above symptoms are present.
   1. Turn off the camera.
      * If the camera will not turn off for some reason, press the [RESET] button (page 7).
   2. If you are using the USB-AC adapter to power the camera, unplug the power plug from the power outlet.
   3. Contact your retailer or nearest CASIO authorized service center.

■ Memory Cards

• Memory cards are small and present a risk of accidentally being swallowed by infants and young children. Keep memory cards out of the reach of infants and young children. If a memory card is ever swallowed accidentally, contact a physician immediately.

■ Precaution when Camera is On

• Do not touch the camera for long periods while it is on. The camera becomes warm when on, and long term contact creates the risk of low-temperature burns.

■ Interference with other digital devices

• Should you notice radio interference or other problems on other devices is being caused while using this product, do not use the wireless functions of this product. Use of wireless functions creates the risk of radio interference and abnormal operation of other devices.

• When in a medical facility or aircraft, comply with instructions of personnel in charge. Electromagnetic waves and other signals emitted by the camera's wireless function create the risk of accident.

• Do not use the camera's wireless function while in the vicinity of high precision digital devices or digital devices that use weak signals. Doing so can interfere with proper operation of such digital devices and create the risk of accident.

• When using the camera's wireless function, keep it away from any person wearing a pacemaker. Magnetism emitted by the camera may affect cardiac pacemakers and other medical devices. Should you ever notice any abnormality, immediately move away from the product and contact a physician.

• On a crowded train or any other crowded location where there is the possibility of being in the vicinity of a person wearing a cardiac pacemaker, turn off the camera. Radio waves emitted by the camera's wireless function may affect pacemaker operation.

Appendix

⚠ CAUTION

■ USB-AC Adapter

• Misuse of the USB-AC adapter creates the risk of fire and electric shock. Make sure you observe the following precautions.
  – Never cover the USB-AC adapter or power cord with a quilt, blanket, or other cover while it is in use, and do not use it near a heater. Doing so can interfere with heat radiation and cause the area around them to become hot.
  – Do not use detergent when cleaning the power cord, the USB-AC adapter, or the USB cable (especially the plugs and jacks).
  – Insert the power plug into the wall outlet as far as it will go.
  – Unplug the power plug from the wall outlet before leaving the camera unattended for long periods, such as when leaving on a trip, etc.
  – At least once a year, use a cloth or vacuum cleaner to clean any dust build up on the prongs of the power plug and in the area around them.
  – (Power cord included with your camera) When unplugging from the wall outlet, never pull on the power cord. Grasp the power plug and pull.

■ Built-in Rechargeable Battery

• If battery charging does not end normally within the specified charging time, stop charging anyway and contact your local CASIO authorized service center. Continued charging creates the risk of battery overheating, fire, and explosion.

• Be sure to read the user documentation that comes with the camera before using or charging the battery.

• Store batteries in a location that cannot be reached by infants and young children. When using a battery where infants and young children are present, be on guard to ensure that they do not have the chance to remove the battery from the camera.

• Do not leave batteries near areas used by pets. A pet chewing on a battery can lead to accidents caused by the battery leaking, overheating, or exploding.

• Should fluid from a battery accidentally get onto clothing or your skin, immediately rinse it off with clean tap water. Prolonged contact with battery fluid can cause skin irritation.

■ Connections

• Never plug any devices that are not specified for use with this camera into connectors. Connecting a non-specified device creates the risk of fire and electric shock.

■ Unstable Locations

• Never place the camera on an unstable surface, on a high shelf, etc. Doing so can cause the camera to fall, creating the risk of personal injury.

⚠ CAUTION

■ Locations To Be Avoided

- Never leave the camera in any of the following types of locations. Doing so creates the risk of fire and electric shock.
  – Areas subject to large amounts of humidity or dust
  – Food preparation areas or other locations where oil smoke is present
  – Near heaters, on a heated carpet, in areas exposed to direct sunlight, in a closed vehicle parked in the sun, or other areas subject to very high temperatures

■ Backing Up Important Data

- Always keep backup copies of important data in camera memory by transferring it to a computer or other storage device. Note that data can be deleted in the case of camera malfunction, repair, etc.

Shock resistant, Splashproof, Dustproof

This camera is designed to be shock resistant, splashproof, and dustproof as described below.

● Shock resistant:
Passes testing based on CASIO independent standards*1 formulated according to MIL-Standard 810F Method 516.5-Shock.*2
  *1 Drop testing from a height of 1.7 meters (5.58 feet) onto plywood (lauan), 10 directions (6 faces, 4 corners)
  *2 Though the camera is designed to withstand the effects of impact occurring during normal daily use, very strong impact due to very rough handling such as throwing the camera or dropping it from excessive heights can result in serious damage. Even if a drop does not result in functional problems, it can cause scratching and other cosmetic damage to the camera.
● Splashproof:
Splashproof equivalent to IEC/JIS Class 8 (IPX8)*3 and Class 6 (IPX6). Allows continuous use during immersion in water to a depth up to 1.5 meters (4.92 feet) for 60 minutes*4 and protection against jet spray from all directions.*5
  *3 Signifies underwater use when immersed for a duration and at a pressure specified by CASIO.
  *4 Test conditions defined by CASIO.
  *5 Use during high-speed travel on water during motor sports, while riding a personal watercraft, etc. is not supported.
● Dustproof:
Corresponds to IEC/JIS Protection Class 6 (IP6X) dustproofing.

IMPORTANT!

• The shock resistance, splashproofing, and dustproofing of this product are based on CASIO test results, and do not constitute any guarantee that the product will perform, will not be damaged, or will not malfunction under such conditions.

■ Precautions before Underwater Use

This camera can be used to shoot images underwater up to a depth of 1.5 meters (4.92 feet). However, the following precautions should be kept in mind before using the camera underwater.
• When shooting in water or in an area where water droplets are getting on the camera, the lens may fog while shooting or the next time you use the camera to record images. This can be avoided by placing the camera, with its covers open, into a plastic bag along with commercially available silica gel before shooting. This will dry the interior of the camera and avoid lens fogging.
• Check the contact surfaces of the [CARD] cover and [USB] cover gaskets for dirt, sand, and any other foreign matter. Clean contact surfaces by wiping them with a soft, clean, dry cloth. Note that a single strand of hair or a single grain of sand can allow water to leak into the camera.
• Check the [CARD] cover and [USB] cover splashproofing gaskets are free of cracks, scratches, and other damage.
• Close the [CARD] cover and [USB] cover securely into place.

- Never open or close the [CARD] cover or [USB] cover while near water or in an area exposed to sea breezes. Also avoid opening or closing the covers while your hands are wet. Such conditions can cause fogging of the lens when shooting.
- This camera will sink if dropped underwater. Use the strap or some other means to avoid dropping.
- The splashproofing of this camera protects it against salt water and fresh water only. Protection is not provided against hot spring water.
- Never leave the camera for long periods in a location subjected to very low temperatures or very high temperatures in excess of 40°C (104°F). In particular, avoid leaving the camera in areas exposed to strong direct sunlight, in a motor vehicle on a hot day, etc. Any of these conditions can result in a deterioration of splashproofing.
- Wireless communication with wireless LAN or Bluetooth wireless technology is not supported under water. Connection between a submerged camera and a non-submerged smartphone is also not supported.

■ Precautions during Underwater Use

- The camera is designed for use at depths no greater than 1.5 meters (4.92 feet) and at water temperatures within the range of 0°C to 40°C (32°F to 104°F).
- Do not leave the camera submerged for more than 60 minutes.
- When repeatedly immersing the camera for underwater user, allow at least 15 minutes to elapse between immersions.
- Never open the [CARD] cover or [USB] cover while the camera is submerged.
- Do not dive into water while holding the camera. Also, do not use the camera in rapids, under a waterfall, or in any other rough water condition. Exposing the camera to strong water pressure can cause leaking and malfunction.
- Take care that you do not drop the camera into water or allow it to strike the surface of the water. Doing so can cause leaking.

■ Precautions after Underwater Use

- Before opening the [CARD] cover and [USB] cover, use a clean, dry, soft cloth to wipe the camera free of all moisture and dirt.
- If you open the [CARD] cover and [USB] cover while the camera is wet, be sure to wipe its inside surfaces free of all moisture before closing it. Allowing the covers to remain wet can cause fogging of the lens when shooting.

■ Cleaning after Use

Perform the following steps to clean the camera after using it under water or after it becomes soiled with sand, dirt, or mud. Note that the [CARD] cover and [USB] cover must be closed securely when performing these steps.

1. **Immerse the camera in fresh water.**
- Fill a bucket or other container with tap water or other fresh water, and immerse the camera for about 10 minutes. Gently wipe dust, dirt, sand, and other matter from the camera with your fingers.
- Do not rub the lens surface while dirty.

2. **Wipe off all moisture.**
- Use a clean, dry, soft cloth to wipe the camera dry. Moisture may remain on the [CARD] cover and [USB] cover, even after you finish wiping the camera dry. With the covers open, leave the camera in the shade in a well-ventilated location to dry thoroughly. Closing the covers while they are still wet can cause fogging of the lens when shooting.

✸ IMPORTANT!

- The temperature of the water used to wash the camera should be no greater than 30°C (86°F). Never use detergent, hot water, or strongly running water to clean the camera. Doing so creates the risk of leaking and malfunction.
- Never swing the camera around to remove water, and never use a dryer or other intense heat to dry it.
- Never place the camera in a washing machine to wash it.

■ Precautions after Use

- Do not leave the camera in an area exposed to extreme heat (40°C (104°F) or greater) or cold (less than –5°C (23°F)). Doing so can cause loss of splashproofing.
- Never use chemical agents for the purpose of cleaning, rust proofing, moisture proofing, etc. Doing so can cause loss of splashproofing.
- Use fresh water to clean the camera within 60 minutes after using it underwater. Failure to do so can cause deterioration of the exterior finish and splashproofing properties.
- In order to maintain splashproofing, replacement of the camera's gaskets is recommended once each year. Note that you will be charged for gasket replacement. Contact a CASIO authorized service center or your original retailer for gasket replacement.

■ Other Precautions

- The accessories that come with the camera are not splashproof.
- Subjecting the camera to extreme impact can cause loss of splashproofing.
- Moisture on the camera can freeze in very cold environments. Ice left on the camera can lead to malfunction. Do not allow moisture to remain on the camera under cold conditions.
- Should water ever leak into the camera and cause malfunction due to improper use, CASIO COMPUTER CO., LTD. will not be held liable for any damage to internal components (battery, recording media, etc.), loss of recorded data, or any expenses incurred to shoot lost images.
- CASIO COMPUTER CO., LTD. shall not be held liable for any accident that may occur while the camera is being used underwater.
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Precautions During Use

■ Data Error Precautions

Your digital camera is manufactured using precision digital components. Any of the following creates the risk of corruption of data in camera memory.

– Removing the memory card while the camera is performing some operation
– Removing the memory card while the operation lamp is lit green after turning off the camera
– Disconnecting the USB cable while communication is in progress
– Other abnormal operations

■ Operating Environment

• Operating Temperature Requirements: –5 to 40°C (23 to 104°F)
• Operating Humidity: 10 to 85% (non condensation)
• Do not place the camera in any of the following locations.
   – In an area exposed to direct sunlight, or large amounts of moisture, dust, or sand
   – Near heating or cooling devices, or in other areas subjected to extreme changes in temperature or humidity
   – Inside of a motor vehicle on a hot day, or in an area subjected to strong vibration

■ Condensation

• Sudden and extreme temperature changes, such as that which occurs when moving from the outdoors on a cold winter day into a warm room, can cause water droplets called "condensation" to form on interior and exterior surfaces, creating the risk of malfunction. To prevent condensation from forming, seal the camera in a plastic bag before changing locations. Leave the bag sealed to allow the air inside to naturally change to the same temperature as the air in the new location. After that, remove the camera from the bag and leave it in the new environment for a few hours.
• Opening and closing a camera cover in an area while in a warm room or an area where moisture is high can result in warm or moist air getting into the camera, and clouding of the lens when shooting. This can be avoided by placing the camera, with its covers open, along with commercially available silica gel, into a plastic bag to dry the interior of the camera before shooting.

■ Lens

• Never apply too much force when cleaning the surface of the lens. Doing so can scratch the lens surface and cause malfunction.
• You may sometimes notice some distortion in certain types of images, such as a slight bend in lines that should be straight. This is due to the characteristics of lenses, and does not indicate malfunction of the camera.

■ Caring for your camera

• Never touch the lens with your fingers. Finger smudges, dirt, and other foreign matter on the lens can interfere with proper operation of the camera. Use a blower or other means to keep the lens and flash window free of dirt and dust, and wipe gently with a soft, dry cloth.
• To clean the camera, wipe it with a soft, dry cloth.

■ Closing the camera's [CARD] cover or [USB] cover

When closing a cover, press down with your thumbs on the left and right, applying equal force. Pressing down on either end with one hand only may not close the cover completely and leave one end out of position.

[CARD] cover or [USB] cover
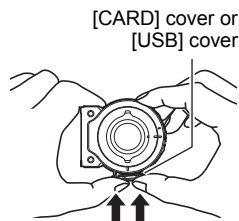
■ Precautions During Wireless Function (Wireless LAN, Bluetooth Wireless Technology) Use

Operation of this product may affect or may be affected by nearby devices that use wireless functionality.

Radio transmission interception

The radio waves that are used to send and receive data can be intercepted by third parties.

Unauthorized access

CASIO COMPUTER CO., LTD. shall be held in no way liable for any unauthorized access and/or use of the access point equipped on this product if the product is ever lost or stolen.

Use as a wireless device

Use the wireless function of this product only as specifically described in this manual. Any other use is unintended use, and CASIO COMPUTER CO., LTD. shall be held in no way liable for any damages arising out of unintended use.

Magnetism, electrostatic charge, and radio interference

Do not use this product near a microwave oven or any other area where magnetism, electrostatic charge, or radio interference is generated. Radio wave reception may be poor in certain environments.

Also note that other devices using the same 2.4GHz band used by this product may cause reduced processing speeds in both devices.

Connection to a public LAN

This product does not support wireless LAN connection over a public wireless LAN environment.

Intended Areas of Use

This camera is intended for use in countries or areas listed at the website linked below.

http://world.casio.com/r-law/dc/

Even if you are in a country or area whose name is included in the list at the website linked above and even if your camera model is the same at the one described in this manual, your camera may not comply with radio laws and other laws in your area or country if you purchased a model intended for another country or area on the Internet, etc. In this case, it is up to you to determine if your camera can be used legally in your country or area.

Use of this camera in a country or area other than where it was originally purchased runs the risk of being in violation of local radio laws and other laws. Note that CASIO COMPUTER CO., LTD. shall not be held in any way liable for any such violations.

■ Other Precautions

- The camera becomes slightly warm during use. This is normal and does not indicate malfunction.
- The maximum range for shooting with the controller's shutter button is around 10 meters (32.8'). The maximum range for viewing the image on the controller's monitor screen is around five meters (16.4').

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OpenVG 1.1 Reference Implementation

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END OF TERMS AND CONDITIONS

Power Supply

Charging

■ If the camera operation lamp starts flashing red...

If the camera operation lamp starts flashing red during charging, it means that further charging is not possible for one of the reasons below. Perform the actions described below to correct the problem and then try charging again.

Ambient temperature or the temperature of the battery is abnormally high or low

Unplug the USB cable from the camera and wait for a while until the camera is within the temperature range of 15°C to 35°C (59°F to 95°F), and then try charging again.

Safety timer activated

A battery that has not been used for a long time, certain types of computers, and connection conditions can cause charging to take longer than normal. If charging takes for about five hours, a safety timer will terminate it automatically, even if the battery is not fully charged. If the battery has not been used for a very long time, charging may terminate automatically after only about 60 minutes.

1) Using a battery that has not been used for a long time.
   Disconnect and then reconnect the USB cable to resume charging.
2) Insufficient power supply when connected to computer
   The camera can be charged only via a USB 2.0 standard USB port. Connect directly to a USB port what supplies a current of 500mA.

For details about the power supply capacity of a computer's USB port, contact the manufacturer of the computer. Though disconnecting and then reconnecting the USB cable will resume charging, you may need to do so repeatedly if the power supply capacity of the computer is low.

If problems persist after you perform the above steps or if the battery fails to charge after 5 hours, it could mean that the battery is faulty. Contact your nearest CASIO authorized service center.

Battery Precautions

■ Precautions during Use

• Operation provided by a battery under cold conditions is always less than operation under normal temperatures. This is due to the characteristics of the battery, not the camera.
• Charge the battery in an area where the temperature is within the range of 15°C to 35°C (59°F to 95°F). Outside this temperature range charging can take longer than normal or even fail.

■ Storage Precautions

• Storing the battery for a long time while it is charged can cause deterioration of battery characteristics. If you do not plan to use a battery for some time, fully use up its charge before storing it.
• To prevent over discharging of an unused battery, fully charge it, and then load it in the camera and fully use up the charge about once every six months.

Using the Camera in another Country

■ Precautions during Use

• The bundled USB-AC adaptor is designed for operation with any power supply in the range of 100V to 240V AC, 50/60Hz. Note, however, that the shape of the power plug depends on each country or geographic area. Before taking the camera and USB-AC adaptor along on a trip, check with travel agent about the power supply requirements in your destination(s).
• Do not connect the USB-AC adaptor to a power supply through a voltage converter or similar device. Doing so can lead to malfunction.

Disposing of the Camera

When disposing of the camera, be sure to first remove its built-in lithium ion battery and send it in for recycling.

✹ IMPORTANT!

• The battery of this camera is built-in and cannot be replaced by you. Contact your retailer or a CASIO authorized service center to have the battery replaced.
• Make sure that the camera is turned off before removing the battery.
• The edges of the back cover are sharp. Take care not to cut your fingers when removing it.
• When removing screws, use a precision Phillips tip screwdriver.

1. **Remove the four screws that secure the back of the camera.**
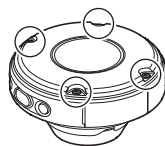
2. **Remove the back cover.**
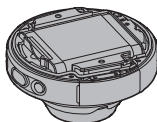
3. **Hook your fingertip at the location indicated in the illustration and remove the battery.**
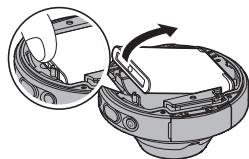
■ Old Rechargeable Battery Handling Precautions

• Insulate the positive and negative terminals with tape, etc.
• Do not peel the covering off of the battery.
• Do not try to take the battery apart.

Using a Memory Card

See page 19 for information about supported memory cards and how to load a memory card.

■ Using a Memory Card

• If a memory card starts to behave abnormally during image playback, you can restore normal operation by reformatting it (page 21). However, it is recommended that you always take along multiple memory cards whenever using the camera far away from the home or office.
• As you record data to and delete data from a memory card a number of times, it loses its ability to retain data. Because of this, periodic re-formatting of a memory card is recommended.
• Electrostatic charge, electrical noise, and other phenomena can cause data to become corrupted or even lost. Make sure that you always back up important data on other media (CD-R, CD-RW, hard disk, etc.).

■ Memory Card Handling Precautions

Certain types of memory cards can slow down processing speed. Whenever possible use an Ultra High-Speed Type memory card. Note, however, that not all operations can be guaranteed even if an Ultra High-Speed Type memory card is used. Certain movie quality settings can result in too much time being required to record data, which can result in breaks in the image and/or audio during playback.

Reset Initial Default Settings

The tables in this section show the initial default settings that are returned to when a reset operation is performed using the EXILIM Connect app or a controller that comes with a separately available CASIO camera.
• A dash (–) indicates an item whose setting is not reset or an item for which there is no reset setting.

❈ IMPORTANT!

• Some menu items may not be available, depending on the recording mode being use.

■ REC Menu

Make-up*	Skin Tone: 0 (Off) Smooth Skin: 0 (Off)
Movie Anti Shake	Standard
Image Size	12M
Movie Quality	FHD(30p)
Brightness*	0.0
White Balance*	Auto WB

ISO*	Auto
Focus*	AF
Wind Noise Cut*	Off

Default setting depends on country or geographic region.

■ Setup Menu

Rotation Lock*	Off
Camera Sound	🔊
Adjust	–

■ **Wireless settings**

Auto Send	Off
Auto Send File Settings∗	▣ Only
Resize When Sending∗	3M
WLAN password	–
Unpairing∗	–

∗ These settings can be changed only by using the controller of another (separately available) CASIO camera. For details, refer to the user documentation that comes with the other camera.

When things don't go right...

Troubleshooting

Problem	Possible Cause and Recommended Action
Power Supply	
Power does not turn on.	1)The battery of new camera is not charged. Charge the battery before using the camera. 2)The camera battery may be dead. Charge the battery (page 12). If this does not resolve the problem, contact your retailer or a CASIO authorized service center.
The camera suddenly powers down.	1)The battery may be dead. Charge the battery (page 12). 2)The camera's protection function may have activated because camera temperature is too high. Turn off the camera and wait until it cools down before trying to use it again. 3)If, after you turn on power, the operation lamp flashes red and power turns off, it could mean a lens error or some other error occurred. Check to make sure that the battery is charged and try turning power on again a number of times. If power still does not turn on, contact your retailer or a CASIO authorized service center.
Power will not turn off. Nothing happens when a button is pressed.	Use a thin object to press the [RESET] button (page 7) near the camera's memory card slot to turn the camera off and then turn on the camera again.
Charging	
The operation lamp does not light red and the battery won't charge.	1)Unplug the USB cable from the camera, and then plug it back in again. 2)Make sure the camera is turned off when you connect the USB cable. Charging may not start if you connect the USB cable while power is turned on.
Image Recording	
Image is not recorded when the shutter button is pressed.	If the message "Memory Full" appears on the controller that comes with another (separately available) CASIO camera, transfer images to your computer and then delete images you no longer need, or use a different memory card.
Images are out of focus.	1)If the lens is dirty, clean it off. 2)You may be moving the camera when shooting. When shooting, place the camera on a tabletop or some other stable surface, or find some way to fix the camera in place.

Problem	Possible Cause and Recommended Action
There is digital noise in images.	Sensitivity may have been increased automatically for a dark subject, which increases the chance of digital noise. Use a light or some other means to illuminate the subject.
A recorded image was not saved.	Camera power may have been turned off before the save operation was complete, which will result in the image not being saved.
Though available lighting is bright, the faces of people in the image are dark.	Not enough light is reaching the subjects.
Subjects are too dark when shooting images in a seashore or ski area.	Sunlight reflected by water, sand, or snow, can cause underexposure of images.
The image is out of focus during movie recording.	1) Focusing may not be possible because the subject is outside the focus range. Shoot within the allowable range. 2) The lens may be dirty. Clean the lens (page 58). 3) Focus is fixed during movie recording, so the image can go out of focus if there is a big change in the distance between the camera and subject during recording.
Wireless Connection	
I can't establish a wireless connection. The wireless LAN connection is broken.	1) The camera cannot connect with a smartphone if they are too far apart from each other. 2) The smartphone may be connected with another wireless device. Check the smartphone's Wi-Fi settings and confirm that the camera is selected for wireless LAN connection (page 30). 3) Connection may have been lost due to interference caused by a nearby microwave oven, cordless phone, or other wireless device. Move the camera away from the device causing the problem.
I forgot my password.	While holding down [●] (Movie) and the shutter button on the camera, hold down [⏻] (Power) for more than six seconds. The camera's operation lamp will go out and then the password will be returned to its initial default setting. Note that initializing the password unpairs the camera and smartphone, so you will need to pair them again. For information about the initial default password settings, see page 30.

Problem	Possible Cause and Recommended Action
Other	
Images cannot be transferred over a USB connection.	1) The USB cable may not be connected securely to the camera. Check all connections. 2) If the camera is not turned on, turn it on. 3) Your computer may not be able to recognize the camera if you connect via a USB hub. Always connect directly to the computer's USB port.
Buttons are not responsive right after the power has been turned on.	With large capacity memory cards there is a delay after the power has been turned on before the buttons become responsive.

Number of Snapshots/Movie Recording Time

Snapshot

Image Size (Pixels)	Approximate File Size	Built-in Memory[1] Recording Capacity	microSD Memory Card[2] Recording Capacity
12M (4000×3000)	4.13 MB	7	2286
5M (2560×1920)[3]	2.99 MB	14	4283

Movies

Image Size / Pixels (Audio)	Approximate Data Rate (Frame Rate)	Maximum File Size	Built-in Memory[1] Recording Capacity	Maximum Recording Time with microSD Memory Card[2]	File Size of 1-minute Movie
FHD(30p) 1920×1080 (Monaural)	14.2 Megabits/ second (30 frames/ second)	29 minutes or 4 GB	26 seconds [4]	2 hours 14 minutes	106.5 MB
STD[3] 640×480 (Monaural)	3.8 Megabits/ second (30 frames/ second)		1 minute 40 seconds	8 hours 33 minutes	29.3 MB
HS240[3] 512×384 (No audio)	40.0 Megabits/ second (240 frames/ second)		9 seconds	48 minutes	300.0 MB

*1 Built-in memory capacity after formatting (Approx. 49.9MB)
*2 When using a 16GB microSDHC memory card (SanDisk Corporation). Number of image and recording time values depend on the memory card you are using.
*3 To configure this setting, you must have the EXILIM Connect smartphone app installed on your smartphone.
*4 The data transfer rate of built-in memory is not sufficient for FHD(30p) movies. Whenever possible use an Ultra High-Speed Type memory card (pages 19, 22).

• Snapshot and movie recording capacity values are approximate and intended for reference only. Actual capacity depends on image contents.
• File size and data rate values are approximate and intended for reference only. Actual values depend on the type of image being shot.
• When using a memory card with a different capacity, calculate the number of images as a percentage of 16GB.
• The time it takes to play back a high speed movie will be different from the time it takes to record it. If you record a high speed movie for 10 seconds, for example, it will take 80 seconds to play it back.

Specifications

File Format	Snapshots: JPEG (Exif Version 2.3; DCF 2.0 standard) Movies: MOV format, H.264/AVC standard, IMA-ADPCM (monaural)
Recording Media	Built-in Memory (Image Storage Area: 49.9MB*) microSD/microSDHC/microSDXC * Built-in memory capacity after formatting
Recorded Image Sizes[1]	Snapshots: 12M (4000×3000), 5M (2560×1920) Movies: FHD(30p) (1920×1080 30 fps), STD (640×480 30 fps), HS240 (512×384 240 fps)
Effective Pixels	10.2 Megapixels
Imaging Element	Size: 1/2.3-inch CMOS (backlit) Total Pixels: 12.76 Megapixels
Lens/Focal Distance	F2.8 f = 2.87 mm (equivalent to 16 mm in 35 mm format)
Zoom[1]	Up to 4.0X when Digital zoom is used
Focusing	Contrast Detection Auto Focus • Focus Modes: Auto Focus, Pan Focus • AF Area[2]: Intelligent, Multi
Approximate Focus Range[1] **(Snapshot) (From Lens Surface)**	Auto Focus: 10 cm to ∞ (3.9" to ∞) Pan Focus : 55 cm to ∞ (21.7" to ∞)
Communication function	Bluetooth: • Communication standard: Bluetooth ver2.1+EDR Output class: Class 2 Bluetooth Smart Wi-Fi: • Standard: IEEE 802.11b/g/n • Operation frequency range: 1 to 11ch • Encryption: WPA2
External connection terminal	Micro USB port (Hi-Speed USB compliance, USB charging/USB powered operation)
Microphones	Monaural
Speaker	Monaural
Power Requirements	Built-in rechargeable lithium ion battery

*1 To configure this setting, you must have the EXILIM Connect smartphone app installed on your smartphone.

*2 The AF Area changes automatically in accordance with the recording mode.

Approximate Battery Life

All of the values provided below represent the approximate amount of time under normal temperature (23°C (73°F)) before the camera turns off. These values are not guaranteed. Low temperatures shorten battery life.

Number of snapshots (Operating Time)	235 shots*[1] (When connected with a controller) 285 shots*[2] (Camera stand-alone operating time)
Actual movie recording time (FHD(30p) movie)*[1]	55 minutes (When connected with a controller / Camera stand-alone operating time)
Approximate continuous movie recording time (FHD(30p) Movie)*[2]	1 hour 20 minutes (When connected with a controller / Camera stand-alone operating time)
Approximate continuous movie recording time (High speed movie HS240)*[2]	1 hour 30 minutes (When connected with a controller / Camera stand-alone operating time)
Continuous Playback (Snapshots)*[3]	4 hours 10 minutes (When connected with a controller)

• Temperature: 23°C (73°F)
• Battery: NP-150 (Rated Capacity: 950 mAh)
• Recording Medium: 16GB microSDHC memory card (SanDisk Corporation UHS-I series)
• Connection with a controller that comes with a separately available CASIO camera

*1 In accordance with CIPA (Camera and Imaging Products Association) standards
*2 In accordance with CASIO standards
*3 One-image scroll approximately every 10 seconds

• The above values are based a new battery, starting from a full charge. Repeated charging shortens battery life.
• The above values are for reference only. They do not guarantee that the specified battery life will be attained under actual operating conditions.
• The type of smartphone, connection conditions, how much time power is left on, other settings, and temperature during use all greatly affect recording time and the number of shots image that can be recorded.

Power Consumption	5 V DC, Approximately 3.6 W
Dimensions	60.9 (W) $\times$ 69.3 (H) x 38.7 (D) mm (2.4" (W) $\times$ 2.7" (H) x 1.5" (D)) (including hinge unit) 60.9 (diameter) $\times$ 33.3 (D) mm (2.4" (diameter) $\times$ 1.3" (D)) (excluding hinge unit)

| **Weight** | Approximately 111 g (3.9 oz) (including hinge unit, including memory card)
Approximately 76 g (2.7 oz) (excluding hinge unit, including memory card) |

■ USB-AC adaptor (AD-C53U)

Input	100 to 240 V AC, 50/60 Hz, 100 mA
Output	5.0 V DC, 650 mA
Operating Temperature Requirements	5 to 35°C (41 to 95°F)
Dimensions	53 (W) × 21 (H) × 45 (D) mm (2.1" (W) × 0.83" (H) × 1.8" (D)) (excluding projections)
Weight	Approximately 37 g (1.3 oz)

• Power cord precautions for use in Singapore
  The power cord set is not supplied. The power cord used must comply with
  relevant national and/or international standards.

Appendix

Declaration of Conformity According to EU Directive

CE

Manufacturer:
CASIO COMPUTER CO., LTD.
6-2, Hon-machi 1-chome, Shibuya-ku, Tokyo 151-8543, Japan

Responsible within the European Union:
Casio Europe GmbH
Casio-Platz 1, 22848 Norderstedt, Germany
www.casio-europe.com

To comply with the relevant European RF exposure compliance requirements, this EX-FR100 must not be co-located or operating in conjunction with other transmitter.

Note: This equipment is intended to be used in all EU and EFTA countries.
Outdoor use may be restricted to certain frequencies and/or may require a license for operation.
For more details, contact your customer service representative.

Frequency band and maximum output power
• EX-FR100
    – IEEE802.11b/g/n(2.4GHz)≤14.5dBm
    – Bluetooth(2.4GHz)≤4dBm
    – Bluetooth LE(2.4GHz)≤4dBm

Hereby, Casio Europe GmbH, Casio-Platz 1, 22848 Norderstedt, Germany, declares that the radio equipment type Digital Camera Model EX-FR100 is in complaiance with Directive 2014/53/EU.
The full text of the EU declaration of conformity is available at the following internet address:http://doc.casio.com

CAUTION
Risk of explosion if battery is replaced by an incorrect type.
Dispose of used batteries according to the instructions.

FCC marking is a standard conformity mark in the United States.
GUIDELINES LAID DOWN BY FCC RULES FOR USE OF THIS UNIT IN THE U.S.A. (not applicable to other areas).

NOTICE

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.

CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
Proper connectors must be used for connection to host computer and/or peripherals in order to meet FCC emission limits.

Caution Exposure to radio frequency radiation
This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 0 mm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Declaration of Conformity

Model Number: EX-FR100
Trade Name: CASIO
Responsible party: Industrial Handheld Division
                          Casio America, Inc.
Address: 570 Mt. Pleasant Avenue, Dover, New Jersey 07801, USA
Telephone number: 973-361-5400

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.

CASIO

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