
Digital Still Camera / Instruction Manual

GB

數位照相機 / 使用說明書

CT

Cyber-shot



Learning more about the camera (“Help Guide”)

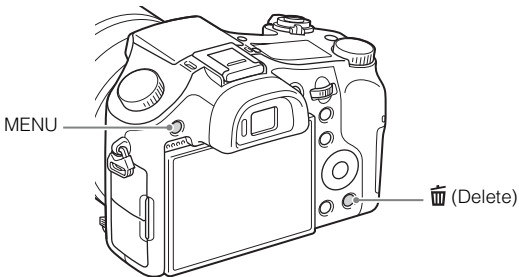


“Help Guide” is an on-line manual. Refer to it for in-depth instructions on the many functions of the camera.

- ① Access the Sony support page.
<http://www.sony.net/SonyInfo/Support/>
- ② Select your country or region.
- ③ Search for the model name of your camera within the support page.
 - Check the model name on the bottom of your camera.


Viewing the Guide

This camera is equipped with a built-in instruction guide.



In-Camera Guide

The camera displays explanations for MENU items and the setting values.

- ① Press the MENU button or the Fn (Function) button.
- ② Select the desired item, then press the  (Delete) button.

Owner's Record

The model and serial numbers are located on the bottom. Record the serial number in the space provided below. Refer to these numbers whenever you call your Sony dealer regarding this product.

Model No. WW808143 (DSC-RX10)

Serial No. _____

Model No. AC-UB10/AC-UB10B/AC-UB10C/AC-UB10D

Serial No. _____

GB

DSC-RX10 Model No. WW808143

WARNING

To reduce fire or shock hazard, do not expose the unit to rain or moisture.

IMPORTANT SAFETY INSTRUCTIONS -SAVE THESE INSTRUCTIONS DANGER TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, CAREFULLY FOLLOW THESE INSTRUCTIONS

If the shape of the plug does not fit the power outlet, use an attachment plug adaptor of the proper configuration for the power outlet.

CAUTION

Battery pack

If the battery pack is mishandled, the battery pack can burst, cause a fire or even chemical burns. Observe the following cautions.

- Do not disassemble.
- Do not crush and do not expose the battery pack to any shock or force such as hammering, dropping or stepping on it.
- Do not short circuit and do not allow metal objects to come into contact with the battery terminals.
- Do not expose to high temperature above 60°C (140°F) such as in direct sunlight or in a car parked in the sun.
- Do not incinerate or dispose of in fire.

- Do not handle damaged or leaking lithium ion batteries.
- Be sure to charge the battery pack using a genuine Sony battery charger or a device that can charge the battery pack.
- Keep the battery pack out of the reach of small children.
- Keep the battery pack dry.
- Replace only with the same or equivalent type recommended by Sony.
- Dispose of used battery packs promptly as described in the instructions.

AC Adaptor

Use the nearby wall outlet (wall socket) when using the AC Adaptor. Disconnect the AC Adaptor from the wall outlet (wall socket) immediately if any malfunction occurs while using the apparatus.

For Customers in the U.S.A. and Canada

RECYCLING LITHIUM-ION BATTERIES

Lithium-Ion batteries are recyclable.

You can help preserve our environment by returning your used rechargeable batteries to the collection and recycling location nearest you.

For more information regarding recycling of rechargeable batteries, call toll free

1-800-822-8837, or visit <http://www.call2recycle.org/>



Caution: Do not handle damaged or leaking Lithium-Ion batteries.

Battery pack

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.

CAN ICES-3 B/NMB-3 B

This equipment complies with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65 and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that are deemed to comply without testing of specific absorption ratio (SAR).

For Customers in the U.S.A.

UL is an internationally recognized safety organization.
The UL Mark on the product means it has been UL Listed.

If you have any questions about this product, you may call:

Sony Customer Information Center
1-800-222-SONY (7669)

The number below is for the FCC related matters only.

GB

Regulatory Information

Declaration of Conformity

Trade Name: SONY
Model No.: WW808143
Responsible Party: Sony Electronics Inc.
Address: 16530 Via Esprillo,
San Diego, CA 92127 U.S.A.
Telephone No.: 858-942-2230

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

This equipment must not be co-located or operated in conjunction with any other antenna or transmitter.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The supplied interface cable must be used with the equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

For Customers in Canada

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

For Customers in Europe

| Notice for the customers in the countries applying EU Directives

Manufacturer: Sony Corporation, 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan
For EU product compliance: Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany



Hereby, Sony Corporation, declares that this WW808143 Digital Still Camera is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. For details, please access the following URL:
<http://www.compliance.sony.de/>

| Notice

If static electricity or electromagnetism causes data transfer to discontinue midway (fail), restart the application or disconnect and connect the communication cable (USB, etc.) again.

This product has been tested and found compliant with the limits set out in the EMC regulation for using connection cables shorter than 3 meters (9.8 feet).

The electromagnetic fields at the specific frequencies may influence the picture and sound of this unit.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)



This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product,

please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

GB

Disposal of waste batteries (applicable in the European Union and other European countries with separate collection systems)



This symbol on the battery or on the packaging indicates that the battery provided with this product shall not be treated as household waste. On certain batteries this symbol might be used in combination with a chemical symbol. The chemical symbols for mercury (Hg) or lead (Pb) are added if the battery contains more than 0.0005% mercury or 0.004% lead. By ensuring these batteries are disposed of correctly, you will help prevent

potentially negative consequences for the environment and human health which could otherwise be caused by inappropriate waste handling of the battery. The recycling of the materials will help to conserve natural resources.

In case of products that for safety, performance or data integrity reasons require a permanent connection with an incorporated battery, this battery should be replaced by qualified service staff only. To ensure that the battery will be treated properly, hand over the product at end-of-life to the applicable collection point for the recycling of electrical and electronic equipment.

For all other batteries, please view the section on how to remove the battery from the product safely.

Hand the battery over to the applicable collection point for the recycling of waste batteries. For more detailed information about recycling of this product or battery, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

For Customers in Singapore

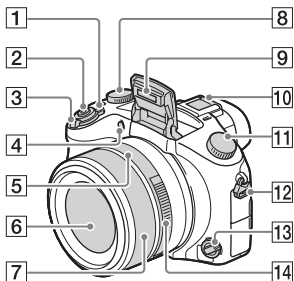
Complies with
IDA Standards
DB00353


Checking the supplied items



The number in parentheses indicates the number of pieces.

- Camera (1)
- Rechargeable Battery Pack NP-FW50 (1)
- Micro USB Cable (1)
- AC Adaptor AC-UB10/UB10B/UB10C/UB10D (1)
- Power Cord (mains lead) (not supplied in the USA and Canada) (1)
- Shoulder Strap (1)
- Lens Cap (1)
- Lens Hood (1)
- Shoe Cap (1) (Attached on the camera)
- Eyepiece Cup (1) (Attached on the camera)
- Instruction Manual (this manual) (1)

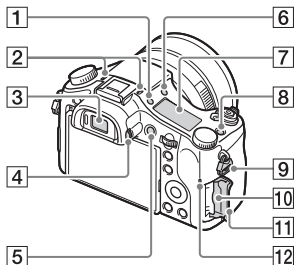
Identifying parts





- 1 ON/OFF (Power) switch
- 2 Shutter button
- 3 For shooting: W/T (zoom) lever
For viewing:  (Index) lever/
Playback zoom lever
- 4 Self-timer lamp/AF illuminator
- 5 Aperture index
- 6 Lens
- 7 Manual ring
 - You can zoom using the manual ring when in Auto Focus mode.
 - You can adjust the focus using the manual ring when in Manual Focus mode or Direct Manual Focus mode.
- 8 Exposure compensation dial
- 9 Flash
- 10 Multi interface shoe*

- 11 Mode dial
 - AUTO** (Auto Mode)/
 - P** (Program Auto)/
 - A** (Aperture Priority)/
 - S** (Shutter Priority)/
 - M** (Manual Exposure)/
 - 1/2** (Memory recall)/
 -  (Movie)/ (Sweep Panorama)/**SCN** (Scene Selection)
- 12 Hook for Shoulder Strap
- 13 Focus mode dial
- 14 Aperture ring

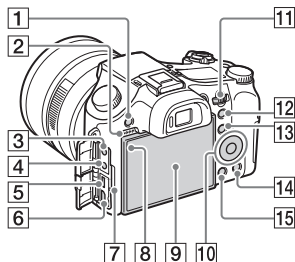
GB









- 1  (Display panel illumination) button
- 2 Microphone
- 3 Viewfinder
- 4 Diopter-adjustment dial
- 5 **MOVIE** (Movie) button
- 6  (Flash pop-up) button
- 7 Display panel
- 8 **C** (Custom) button
- 9 Hook for Shoulder Strap

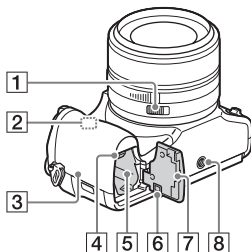
GB
9

- 10** Memory card slot
- 11** Memory card cover
- 12** Access lamp



- 1** MENU button
- 2** Speaker
- 3**  (Microphone) jack
 - When an external microphone is connected, the camera switches from the internal microphone to the external microphone. If the external microphone is a plug-in-power type, the power of the microphone is supplied by the camera.
- 4**  (Headphones) jack
- 5** Multi Terminal
 - Supports Micro USB compatible device.
- 6** HDMI micro jack
- 7** Charge lamp
- 8** Light sensor
- 9** LCD screen
- 10** Control wheel
- 11** Control dial

- 12** For shooting: AEL (AE lock) button
For viewing:  (Playback zoom) button
- 13** For shooting: Fn (Function) button
For viewing:  (Send to Smartphone) button
- 14**  (Delete/In-Camera Guide) button
- 15**  (Playback) button



- 1** Aperture Click Switch
 - Set the Aperture Click Switch to OFF when shooting movies. If you change the aperture value while shooting a movie with the Aperture Click Switch set to ON, the sound of the aperture ring will be recorded.
- 2** Wi-Fi sensor (built-in)

3 **N** (N Mark)

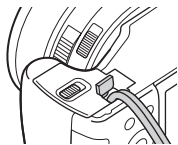
- Touch the mark when you connect the camera to a smartphone equipped with the NFC function.
- NFC (Near Field Communication) is an international standard of the short-range wireless communication technology.

4 Battery eject lever

5 Battery insertion slot

6 Connection plate cover

Use this when using an AC-PW20 AC Adaptor (sold separately). Insert the connection plate into the battery compartment, and then pass the cord through the connection plate cover as shown below.



- Make sure that the cord is not pinched when you close the cover.

7 Battery cover

8 Tripod socket hole

- Use a tripod with a screw less than 5.5 mm (7/32 inches) long. Otherwise, you cannot firmly secure the camera, and damage to the camera may occur.

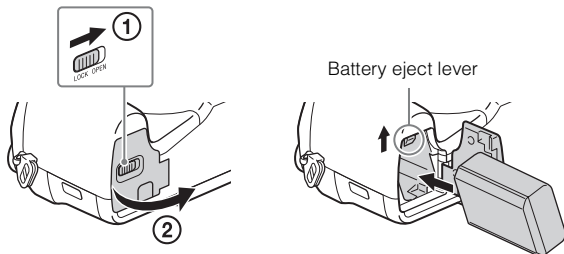
* For details on compatible accessories for the multi interface shoe, visit the Sony web site, or consult your Sony dealer or local authorized Sony service facility. You can also use accessories that are compatible with the accessory shoe. Operations with other manufacturers' accessories are not guaranteed.

ni Multi
Interface Shoe

Accessory Shoe

GB

Inserting the battery pack



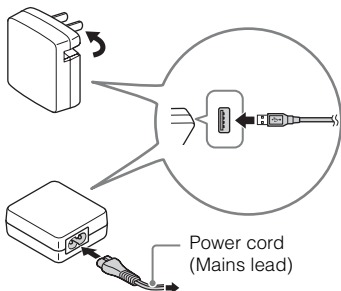
1 Open the cover.

2 Insert the battery pack.

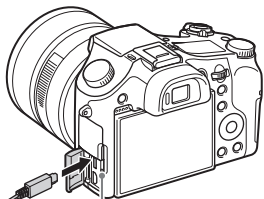
- While pressing the battery eject lever, insert the battery pack as illustrated. Make sure that the battery eject lever locks after insertion.
- Closing the cover with the battery inserted incorrectly may damage the camera.

Charging the battery pack

For customers in the USA
and Canada



For customers in countries/regions
other than the USA and Canada



GB

Charge lamp
Lit: Charging
Off: Charging finished
Flashing:
Charging error or
charging paused
temporarily because the
camera is not within the
proper temperature range

- 1 Connect the camera to the AC Adaptor (supplied), using the micro USB cable (supplied).
- 2 Connect the AC Adaptor to the wall outlet (wall socket).
The charge lamp lights orange, and charging starts.
 - Turn off the camera while charging the battery.
 - You can charge the battery pack even when it is partially charged.
 - When the charge lamp flashes and charging is not finished, remove and re-insert the battery pack.

Notes

- If the charge lamp on the camera flashes when the AC Adaptor is connected to the wall outlet (wall socket), this indicates that charging is temporarily stopped because the temperature is outside the recommended range. When the temperature gets back within the appropriate range, the charging resumes. We recommend charging the battery pack in an ambient temperature of between 10°C to 30°C (50°F to 86°F).
- The battery pack may not be effectively charged if the terminal section of the battery is dirty. In this case, wipe any dust off lightly using a soft cloth or a cotton swab to clean the terminal section of the battery.
- Connect the AC Adaptor (supplied) to the nearest wall outlet (wall socket). If malfunctions occur while using the AC Adaptor, disconnect the plug from the wall outlet (wall socket) immediately to disconnect from the power source.
- When charging is finished, disconnect the AC Adaptor from the wall outlet (wall socket).
- Be sure to use only genuine Sony brand battery packs, micro USB cable (supplied) and AC Adaptor (supplied).
- Power is not supplied during shooting/playback if the camera is connected to a wall outlet with the supplied AC adaptor. To supply power to the camera during shooting/playback, use the AC-PW20 (sold separately) AC adaptor.

■ Charging time (Full charge)

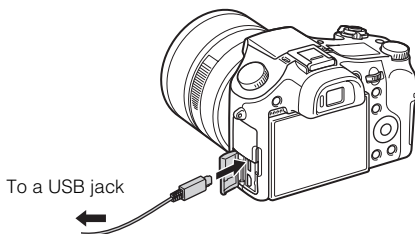
The charging time is approximately 310 min. using the AC Adaptor (supplied).

Notes

- The above charging time applies when charging a fully depleted battery pack at a temperature of 25°C (77°F). Charging may take longer depending on conditions of use and circumstances.

■ Charging by connecting to a computer

The battery pack can be charged by connecting the camera to a computer using a micro USB cable.



GB

Notes

- Note the following points when charging via a computer:
 - If the camera is connected to a laptop computer that is not connected to a power source, the laptop battery level decreases. Do not charge for an extended period of time.
 - Do not turn on/off or restart the computer, or wake the computer to resume from sleep mode when a USB connection has been established between the computer and the camera. That may cause the camera to malfunction. Before turning on/off, or restarting the computer or waking the computer from sleep mode, disconnect the camera and the computer.
 - No guarantees are made for charging using a custom-built computer or a modified computer.

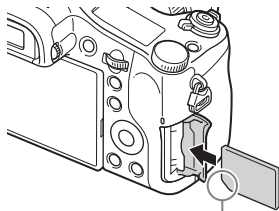
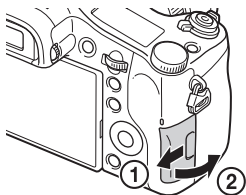
Battery life and number of images that can be recorded and played back

		Battery life	Number of images
Shooting (still images)	LCD screen	Approx. 210 min.	Approx. 420 images
	Viewfinder	Approx. 170 min.	Approx. 340 images
Typical movie shooting	LCD screen	Approx. 70 min.	—
	Viewfinder	Approx. 70 min.	—
Continuous movie shooting	LCD screen	Approx. 145 min.	—
	Viewfinder	Approx. 145 min.	—
Viewing (still images)		Approx. 315 min.	Approx. 6300 images

Notes

- The above number of images applies when the battery pack is fully charged. The number of images may decrease depending on the conditions of use.
- The number of images that can be recorded is for shooting under the following conditions:
 - Using Sony “Memory Stick PRO Duo” (Mark2) media (sold separately)
 - The battery pack is used at an ambient temperature of 25°C (77°F).
 - [Display Quality] is set to [Standard]
- The number for “Shooting (still images)” is based on the CIPA standard, and is for shooting under the following conditions: (CIPA: Camera & Imaging Products Association)
 - DISP is set to [Display All Info.].
 - Shooting once every 30 seconds.
 - The zoom is switched alternately between the W and T ends.
 - The flash strobes once every two times.
 - The power turns on and off once every ten times.
- The numbers of minutes for movie shooting are based on the CIPA standard, and are for shooting under the following conditions:
 - [Record Setting]: 60i 17M(FH)/50i 17M(FH)
 - Typical movie shooting: Battery life based on repeatedly starting/stopping shooting, zooming, turning on/off, etc.
 - Continuous movie shooting: Battery life based on non-stop shooting until the limit (29 minutes) has been reached, and then continued by pressing the MOVIE button again. Other functions, such as zooming, are not operated.

Inserting a memory card (sold separately)



GB

Ensure the notched corner faces correctly.

1 Open the cover.

2 Insert the memory card (sold separately).

- With the notched corner facing as illustrated, insert the memory card until it clicks into place.

3 Close the cover.

Memory cards that can be used

	Memory card	For still images	For movies
A	Memory Stick XC-HG Duo	✓	✓
	Memory Stick PRO Duo	✓	✓ (Mark2 only)
	Memory Stick PRO-HG Duo	✓	✓
B	Memory Stick Micro (M2)	✓	✓ (Mark2 only)
C	SD memory card	✓	✓ (Class 4 or faster)
	SDHC memory card	✓	✓ (Class 4 or faster)
	SDXC memory card	✓	✓ (Class 4 or faster)
D	microSD memory card	✓	✓ (Class 4 or faster)
	microSDHC memory card	✓	✓ (Class 4 or faster)
	microSDXC memory card	✓	✓ (Class 4 or faster)

- In this manual, the products in the table are collectively referred to as follows:
 - A:** “Memory Stick PRO Duo” media
 - B:** “Memory Stick Micro” media
 - C:** SD card
 - D:** microSD memory card

Notes

- When using “Memory Stick Micro” media or microSD memory cards with this camera, make sure to use with the appropriate adaptor.

To remove the memory card/battery pack

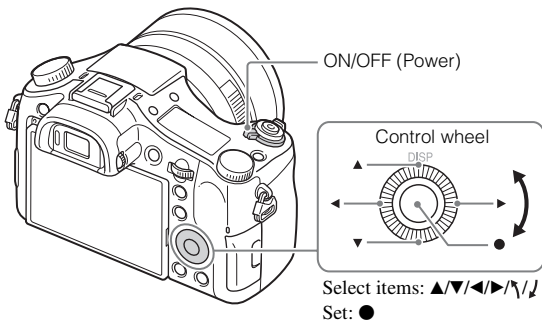
Memory card: Push the memory card in once to eject the memory card.

Battery pack: Slide the battery eject lever. Be sure not to drop the battery pack.

Notes

- Never remove the memory card/battery pack when the access lamp (page 9) is lit. This may cause damage to data in the memory card.

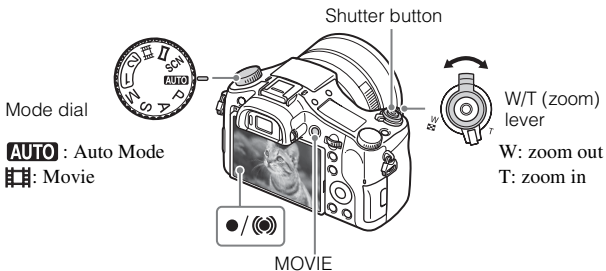
Setting the clock



GB

- 1** Set the ON/OFF (Power) switch to ON.
Date & Time setting is displayed when you turn on the camera for the first time.
 - It may take time for the power to turn on and allow operation.
- 2** Check that [Enter] is selected on the screen, then press ● on the control wheel.
- 3** Select a desired geographic location by following the on-screen instructions, then press ●.
- 4** Set [Daylight Savings], [Date/Time] and [Date Format], then press ●.
 - When setting [Date/Time], midnight is 12:00 AM, and noon is 12:00 PM.
- 5** Check that [Enter] is selected, then press ●.

Shooting still images/movies



Shooting still images

- 1 Press the shutter button halfway down to focus.
When the image is in focus, a beep sounds and the ● or (●) indicator lights.
- 2 Press the shutter button fully down to shoot an image.

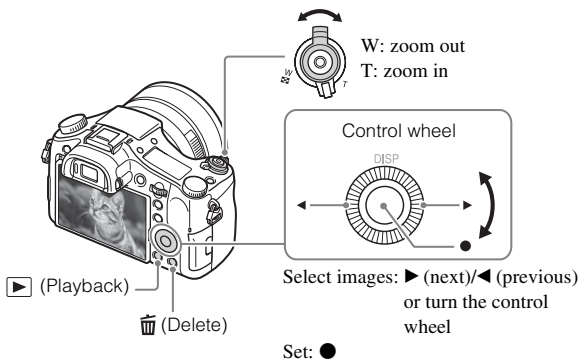
Shooting movies

- 1 Press the MOVIE (Movie) button to start recording.
 - Use the W/T (zoom) lever to change the zoom scale.
- 2 Press the MOVIE button again to stop recording.

Notes

- Do not pull up the flash manually. This may cause a malfunction.
- When using the zoom function while shooting a movie, the sound of the camera operating will be recorded. The sound of the MOVIE button operating may also be recorded when movie recording is finished.
- Continuous movie shooting is possible for approximately 29 minutes at one time with the camera's default settings and when the ambient temperature is approximately 25°C (77°F). When movie recording is finished, you can restart recording by pressing the MOVIE button again. Recording may stop to protect the camera depending on the ambient temperature.

Viewing images



GB

1 Press the (Playback) button.

■ Selecting next/previous image

Select an image by pressing ► (next)/◄ (previous) on the control wheel or by turning the control wheel. Press ● in the center of the control wheel to view movies.

■ Deleting an image

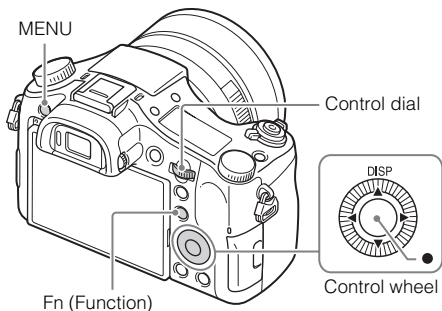
- 1 Press the (Delete) button.
- 2 Select [Delete] with ▲ on the control wheel, then press ●.

■ Returning to shooting images

Press the shutter button halfway down.

Introduction of other functions

Other functions can be operated using the control wheel, MENU button, etc.



■ Control wheel

DISP (Display Contents): Allows you to change the screen display.

● (Eye AF): Focuses on a person's eyes when you press the button. Shoot images by pressing the shutter button while ● is being pressed.

■ Fn (Function) button

Allows you to register 12 functions and recall those functions when shooting.








- ① Press the Fn (Function) button.
- ② Select the desired function by pressing ▲/▼/◀/▶ on the control wheel.
- ③ Select the setting value by turning the control wheel.








■ Control dial

You can instantly change the appropriate setting for each shooting mode just by turning the control dial.




Menu Items

(Camera Settings)


 Image Size	Selects the size of still images.
 Aspect Ratio	Selects the aspect ratio for still images.
 Quality	Sets the image quality for still images.
Panorama: Size	Selects the size of panoramic images.
Panorama: Direction	Sets the shooting direction for panoramic images.
 File Format	Selects the movie file format.
 Record Setting	Selects the size of the recorded movie frame.
Drive Mode	Sets the drive mode, such as for continuous shooting.
Flash Mode	Sets the flash settings.
Flash Comp.	Adjusts the intensity of flash output.
Red Eye Reduction	Reduces the red-eye phenomenon when using flash.
Focus Area	Selects the area of focus.
 AF Illuminator	Sets the AF illuminator, which provides light for a dark scene to aid focusing.
ISO	Adjusts the luminous sensitivity.
ND Filter	Sets the function that reduces the amount of light. You can set to a slower shutter speed, reduce the aperture value, etc.
Metering Mode	Selects the metering mode that sets which part of the subject to measure to determine the exposure.
White Balance	Adjusts color tones of an image.
DRO/Auto HDR	Compensates automatically for brightness and contrast.
Creative Style	Selects the desired image processing.
Picture Effect	Selects the desired effect filter to achieve a more impressive and artistic expression.
Focus Magnifier	Enlarges the image before shooting so that you can check the focus in detail.
 Long Exposure NR	Sets noise reduction processing for shots with a shutter speed of 1/3 second or longer.

 High ISO NR	Sets noise reduction processing for high-sensitivity shooting.
Lock-on AF	Sets the function to track subject and continue focusing.
Smile/Face Detect.	Selects to detect faces and adjust various settings automatically. Sets to automatically release the shutter when a smile is detected.
 Soft Skin Effect	Sets the Soft Skin Effect and the effect level.
 Auto Obj. Framing	Analyzes the scene when capturing faces, close-ups, or subjects tracked by Lock-on AF function, and automatically trims and saves another copy of the image with a more impressive composition.
Auto Mode	You can shoot selecting either Intelligent Auto or Superior Auto.
Scene Selection	Selects pre-set settings to match various scene conditions.
Movie	Selects the exposure mode to suit your subject or effect.
 SteadyShot	Sets SteadyShot for shooting still images. Reduces blur from camera shake when shooting while holding the camera.
 SteadyShot	Sets SteadyShot for shooting movies.
 Color Space	Changes the range of reproducible colors.
 Auto Slow Shut.	Sets the function that automatically adjusts the shutter speed following the brightness of the environment.
Audio Recording	Sets whether to record audio when shooting a movie.
Audio Rec Level	Adjusts the audio recording level during movie recording.
Audio Out Timing	Sets the timing of audio output during the movie recording.
Wind Noise Reduct.	Reduces wind noise during movie recording.
Memory	Registers the desired modes or camera settings.

(Custom Settings)

Zebra	Displays stripes to adjust brightness.
 MF Assist	Displays an enlarged image when focusing manually.
Focus Magnif. Time	Sets the length of time the image will be shown in an enlarged form.
Grid Line	Sets a grid line display to enable alignment to a structural outline.
Audio Level Display	Sets whether or not to display the audio level on the screen.
Auto Review	Sets auto review to display the captured image after shooting.
DISP Button	Sets the screen display modes that can be selected by pressing DISP on the control wheel.
Peaking Level	Enhances the outline of in-focus ranges with a specific color when focusing manually.
Peaking Color	Sets the color used for the peaking function.
Exposure Set. Guide	Sets the guide displayed when exposure settings are changed in the shooting screen.
Live View Display	Sets whether or not to reflect settings such as exposure compensation in screen display.
 Pre-AF	Sets whether or not to perform auto focus before the shutter button is half pressed.
Zoom Setting	Sets whether to use the Clear Image Zoom and Digital Zoom when zooming.
FINDER/MONITOR	Sets the method for switching between the viewfinder and screen.
 AEL w/ shutter	Sets whether to perform AEL when the shutter button is half pressed.
Exp.comp.set	Sets whether to reflect exposure compensation value to flash compensation.
Bracket order	Sets order of shooting for exposure bracket and white balance bracket.
Face Registration	Registers or changes the person to be given priority in the focus.


GB

 Write Date	Sets whether to record a shooting date on the still image.
Function Menu Set.	Customizes the functions displayed when the Fn (Function) button is pressed.
Custom Key Settings	Assigns a desired function to the button and dial.
Zoom Func. on Ring	Sets the zooming function of the manual ring. When you select [Step], you can move the zoom position to a fixed step of the focal length.
MOVIE Button	Sets whether to always activate the MOVIE button.
Dial/Wheel Lock	Sets whether to disable the control dial and the control wheel temporarily by using the Fn button when shooting. You can disable/enable the control dial and the control wheel by pressing and holding down the Fn button.

(Wireless)

Send to Smartphone	Transfers images to display on a smartphone.
Send to Computer	Backs up images by transferring them to a computer connected to a network.
View on TV	You can view images on a network-enabled TV.
Ctrl w/ Smartphone	Shoots still images and movies by controlling the camera remotely by a smartphone.
Airplane Mode	You can set this device to not perform wireless communications.
WPS Push	You can register the access point to the camera easily by pushing the WPS button.
Access Point Set.	You can register your access point manually.
Edit Device Name	You can change the device name under Wi-Fi Direct, etc.
Disp MAC Address	Displays the MAC address of the camera.
SSID/PW Reset	Resets the SSID and password of smartphone connection.
Reset Network Set.	Resets all network settings.

(Playback)


Delete	Deletes an image.
View Mode	Sets the way in which images are grouped for playback.
Image Index	Displays multiple images at the same time.
Display Rotation	Sets the playback direction of the recording image.
Slide Show	Shows a slide show.
Rotate	Rotates the image.
 Enlarge Image	Enlarges the playback images.
4K Still Image PB	Outputs still images in 4K resolution to an HDMI-connected TV that supports 4K.
Protect	Protects the images.
Specify Printing	Adds a print order mark to a still image.

GB

(Setup)

Monitor Brightness	Sets the screen brightness.
Viewfinder Bright.	When using an electronic viewfinder, sets the brightness of the electronic viewfinder.
Finder Color Temp.	Sets the color temperature of the viewfinder.
Volume Settings	Sets the volume for movie playback.
Audio signals	Sets the operating sound of the camera.
Upload Settings	Sets the upload function of the camera when using an Eye-Fi card.
Tile Menu	Sets whether to display the tile menu every time you press the MENU button.
Mode Dial Guide	Turns the mode dial guide (the explanation of each shooting mode) on or off.
Delete confirm.	Sets which Delete or Cancel is preselected in the Delete confirmation screen.
Display Quality	Sets the display quality.
Pwr Save Start Time	Sets the length of time until the camera turns off automatically.

GB
27

PAL/NTSC Selector (only for 1080 50i compatible models)	By changing the TV format of the device, shooting in a different movie format is possible.
Demo Mode	Sets demonstration playback of a movie to on or off.
HDMI Resolution	Sets the resolution when the camera is connected to an HDMI TV.
CTRL FOR HDMI	Operates the camera from a TV that supports "BRAVIA" Sync.
HDMI Info. Display	Selects whether or not to display information to the TV while connected to an HDMI compatible TV.
USB Connection	Sets the USB connection method.
USB LUN Setting	Enhances compatibility by limiting the functions of the USB connection.
 Language	Selects the language.
Date/Time Setup	Sets date and time, and daylight savings.
Area Setting	Sets the location of use.
Format	Formats the memory card.
File Number	Sets the method used to assign file numbers to still images and movies.
Select REC Folder	Changes the selected folder for storing images.
New Folder	Creates a new folder for storing still images and movies (MP4).
Folder Name	Sets the folder format for still images.
Recover Image DB	Recovers the image database file and enables recording and playback.
Display Media Info.	Displays the remaining recording time of movies and the recordable number of still images on the memory card.
Version	Displays the camera software version.
Setting Reset	Restores settings to their defaults.

Features of “PlayMemories Home”

The software “PlayMemories Home” allows you to import still images and movies to your computer and use them. “PlayMemories Home” is required for importing AVCHD movies to your computer.



Importing images from
your camera

Playing back imported
images



GB

For Windows, the following functions are also
available.



Viewing images
on Calendar



Creating
movie
discs



Uploading
images to
network services

Sharing images on
“PlayMemories Online”



Installing “PlayMemories Home”

You can install “PlayMemories Home” from the following URL:
www.sony.net/pm/

Notes

- An Internet connection is required to install “PlayMemories Home”.
- An Internet connection is required to use “PlayMemories Online” or other network services. “PlayMemories Online” or other network services may not be available in some countries or regions.
- Refer to the following URL for Mac software:
<http://www.sony.co.jp/imsoft/Mac/>
- If the software “PMB (Picture Motion Browser),” supplied with models released before 2011, has already been installed on your computer, “PlayMemories Home” will overwrite it and will be installed. Use “PlayMemories Home,” the successor software of “PMB.”

GB
29

■ Installing “PlayMemories Home” on a computer

1 Using the Internet browser on your computer, go to the following URL, and then click [Install] → [Run].

www.sony.net/pm/

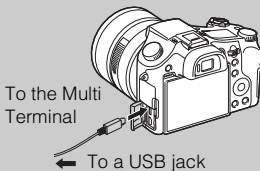
2 Follow the instructions on the screen to complete the installation.

- For details on “PlayMemories Home”, refer to the following PlayMemories Home support page (English only):
<http://www.sony.co.jp/pmh-se/>






Adding available functions to “PlayMemories Home”

When you connect the camera to your computer, functions may be added to “PlayMemories Home.” We recommend that you connect the camera to your computer even if “PlayMemories Home” is already installed on your computer.



Notes

- Do not disconnect the micro USB cable (supplied) from the camera while the operating screen or the accessing screen is displayed. Doing so may damage the data.
- To disconnect the camera from the computer, click  on the tasktray, then click  (disconnect icon). For Windows Vista, click  on the tasktray.

Features of “Image Data Converter”

Below are examples of the functions available when you use “Image Data Converter”.

- You can edit RAW images using multiple correction functions, such as tone curve or sharpness.
- You can adjust images using white balance, brightness and Creative Style, etc.
- You can save displayed and edited still images to your computer.
There are two ways to save RAW images: save and leave as RAW data or save in a general-purpose file format.
- You can display and compare the RAW images/JPEG images that are shot with this camera.
- You can rank images in five levels.
- You can set the color label.

GB

■ Installing “Image Data Converter”

- 1 Download the software from the following URL and install it on your computer.

Windows: <http://www.sony.co.jp/imsoft/Win/>

Mac: <http://www.sony.co.jp/imsoft/Mac/>

■ Viewing “Image Data Converter Guide”

For details on how to use “Image Data Converter,” refer to the “Image Data Converter Guide.”

- 1 For Windows:
Click [Start] → [All Programs] → [Image Data Converter] → [Help] → [Image Data Converter Ver.4].

For Mac:

Start Finder → [Applications] → [Image Data Converter] → [Image Data Converter Ver.4] → In the menu bar, choose “Help” → “Image Data Converter Guide.”

- For Windows 8, start “Image Data Converter Ver.4” → In the menu bar, choose “Help” → “Image Data Converter Guide.”
- For details on “Image Data Converter,” you can also refer to the camera’s “Help Guide” (page 2) or the following “Image Data Converter” support page (English only):
<http://www.sony.co.jp/ids-se/>

GB
31

Number of still images and recordable time of movies

The number of still images and recordable time may vary depending on the shooting conditions and the memory card.

Still images

[Image Size]: L: 20M

When [Aspect Ratio] is set to [3:2]*

Quality \ Capacity	2 GB
Standard	295 images
Fine	170 images
Extra fine	125 images
RAW & JPEG	58 images
RAW	88 images

* When the [Aspect Ratio] is set to other than [3:2], you can record more pictures than shown above. (Except when [Quality] is set to [RAW].)

Movies

The table below shows the approximate maximum recording times. These are the total times for all movie files. Continuous shooting is possible for approximately 29 minutes (a product specification limit). The maximum continuous recording time of an MP4 (12M) format movie is about 15 minutes (limited by the 2 GB file size restriction).

(h (hour), m (minute))

Record Setting \ Capacity	2 GB
60i 24M(FX)/50i 24M(FX)	10 m
60i 17M(FH)/50i 17M(FH)	10 m
60p 28M(PS)/50p 28M(PS)	9 m
24p 24M(FX)/25p 24M(FX)	10 m
24p 17M(FH)/25p 17M(FH)	10 m
1440×1080 12M	15 m
VGA 3M	1 h 10 m

- The recordable time of movies varies because the camera is equipped with VBR (Variable Bit-Rate), which automatically adjusts image quality depending on the shooting scene. When you record a fast-moving subject, the image is clearer but the recordable time is shorter because more memory is required for recording. The recordable time also varies depending on the shooting conditions, the subject or the image quality/size settings.

Notes on using the camera

GB

Functions built into this camera

- This manual describes 1080 60i-compatible devices and 1080 50i-compatible devices.
To check whether your camera is a 1080 60i-compatible device or 1080 50i-compatible device, check for the following marks on the bottom of the camera.
1080 60i-compatible device: 60i
1080 50i-compatible device: 50i
- This camera is compatible with 1080 60p or 50p-format movies. Unlike standard recording modes up to now, which record in an interlacing method, this camera records using a progressive method. This increases the resolution, and provides a smoother, more realistic image.

On use and care

Avoid rough handling, disassembling, modifying, physical shock, or impact such as hammering, dropping, or stepping on the product. Be particularly careful of the lens.

Notes on recording/playback

- Before you start recording, make a trial recording to make sure that the camera is working correctly.
- This camera is designed to be dust and moisture-resistant, but is not waterproof or splash-proof.
- Do not aim the camera at the sun or other bright light. It may cause the malfunction of the camera.
- If moisture condensation occurs, remove it before using the camera.
- Do not shake or strike the camera. It may cause a malfunction and you may not be able to record images. Furthermore, the recording media may become unusable or image data may be damaged.

Do not use/store the camera in the following places

- In an extremely hot, cold or humid place
In places such as in a car parked in the sun, the camera body may become deformed and this may cause a malfunction.
- Storing under direct sunlight or near a heater
The camera body may become discolored or deformed, and this may cause a malfunction.
- In a location subject to rocking vibration

- Near a location that generates strong radio waves, emits radiation or is strongly magnetic place. Otherwise, the camera may not properly record or play back images.
- In sandy or dusty places
Be careful not to let sand or dust get into the camera. This may cause the camera to malfunction, and in some cases this malfunction cannot be repaired.

Carl Zeiss lens

The camera is equipped with a Carl Zeiss lens which is capable of reproducing sharp images with excellent contrast. The lens for the camera has been produced under a quality assurance system certified by Carl Zeiss in accordance with the quality standards of Carl Zeiss in Germany.

Notes on the screen, electronic viewfinder and lens

- The screen and electronic viewfinder are manufactured using extremely high-precision technology, and over 99.99% of the pixels are operational for effective use. However, some tiny black and/or bright dots (white, red, blue or green) may appear on the screen and electronic viewfinder. These dots are a normal result of the manufacturing process, and do not affect the recording.
- Take care that your fingers or other objects are not caught in the lens when it is operating.

Notes on shooting with the viewfinder

This camera is equipped with an Organic Electro-Luminescence viewfinder with high resolution and high contrast. This viewfinder achieves a wide viewing angle and a long eye relief. This camera is designed to provide an easily viewable viewfinder by appropriately balancing various elements.

- The image may be slightly distorted near the corners of the viewfinder. This is not a malfunction. When you want to check every detail of the entire composition, you can also use the LCD screen.
- If you pan the camera while looking into the viewfinder or move your eyes around, the image in the viewfinder may be distorted or the color of the image may change. This is a characteristic of the lens or display device and is not a malfunction. When you shoot an image, we recommend that you look at the center area of the viewfinder.

Notes on the flash

- Do not carry the camera by the flash unit, or use excessive strength on it.
- If water, dust or sand get into the open flash unit, it may cause a malfunction.
- Take care that your finger is not in the way when pushing the flash down.

On camera's temperature

Your camera and battery may get hot due to continuous use, but it is not a malfunction.

On the overheat protection

Depending on the camera and battery temperature, you may be unable to record movies or the power may turn off automatically to protect the camera.

A message will be displayed on the screen before the power turns off or you can no longer record movies. In this case, leave the power off and wait until the camera and battery temperature goes down. If you turn on the power without letting the camera and battery cool enough, the power may turn off again or you may be unable to record movies.

On charging the battery

If you charge a battery that has not been used for a long time, you may be unable to charge it to the proper capacity.

This is due to the battery characteristics, and is not a malfunction. Charge the battery again.

Warning on copyright

Television programs, films, videotapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provisions of the copyright laws.

No guarantee in the case of damaged content or recording failures

Sony cannot provide a guarantee in the case of failure to record or loss or damage of recorded content due to a malfunction of the camera or recording media, etc.

Cleaning the camera surface

Clean the camera surface with a soft cloth slightly moistened with water, then wipe the surface with a dry cloth. To prevent damage to the finish or casing:

– Do not expose the camera to chemical products such as thinner, benzine, alcohol, disposable cloths, insect repellent, sunscreen or insecticide.

Maintaining the screen

- Hand cream or moisturizer left on the screen may dissolve its coating. If you get any on the screen, wipe it off immediately.
- Wiping forcefully with tissue paper or other materials can damage the coating.
- If fingerprints or debris are stuck to the screen, we recommend that you gently remove any debris and then wipe the screen clean with a soft cloth.

Notes on wireless LAN

We assume no responsibility whatsoever for any damage caused by unauthorized access to, or unauthorized use of, destinations loaded on the camera, resulting from loss or theft.

Notes on disposal/transfer of the camera

To protect personal data, perform the following when disposing of or transferring the camera.

- Reset all camera settings by performing [Setting Reset] (page 28).
- Delete all registered people's faces from [Face Registration] (page 25).

Specifications

Camera

[System]

Image device: 13.2 mm × 8.8 mm

(1.0 type) Exmor R CMOS sensor

Total pixel number of camera:

Approx. 20.9 Megapixels

Effective pixel number of camera:

Approx. 20.2 Megapixels

Lens: Carl Zeiss Vario-Sonnar T* 8.3× zoom lens

f = 8.8 mm – 73.3 mm (24 mm – 200 mm (35 mm film equivalent))

F2.8

While shooting movies (16:9):

26 mm – 212 mm^{*1}

While shooting movies (4:3):

31 mm – 259 mm^{*1}

^{*1} When [SteadyShot] is set to [Standard]

SteadyShot: Optical

Exposure control: Automatic exposure,

Aperture priority, Shutter priority,

Manual exposure, Scene Selection

White balance: Automatic, Daylight,

Shade, Cloudy, Incandescent,

Fluorescent (Warm White/

Cool White/Day White/Daylight),

Flash, Color temperature/Color

filter, Custom

File format:

Still images: JPEG (DCF, Exif,

MPF Baseline) compliant, RAW

(Sony ARW 2.3 Format), DPOF

compatible

Movies (AVCHD format):

AVCHD format Ver. 2.0

compatible

Video: MPEG-4 AVC/H.264

Audio: Dolby Digital 2ch,
equipped with Dolby Digital Stereo
Creator

• Manufactured under license from
Dolby Laboratories.

Movies (MP4 format):

Video: MPEG-4 AVC/H.264

Audio: MPEG-4 AAC-LC 2ch

Recording media: “Memory Stick PRO
Duo” media, “Memory Stick
Micro” media, SD cards, microSD
memory cards

Flash: Flash range (ISO sensitivity
(Recommended Exposure Index)
set to Auto):

Approx. 1.0 m to 10.2 m

(3.28 ft. to 33.46 ft.)

[Input and Output connectors]

HDMI connector: HDMI micro jack
Multi Terminal*:

USB communication

USB communication: Hi-Speed USB
(USB 2.0)

Microphone jack: ∅ 3.5 mm Stereo
mini jack

Headphones jack: ∅ 3.5 mm Stereo
mini jack

* Supports Micro USB compatible
device.

[Viewfinder]

Type: Electronic viewfinder

Total number of dots:

1 440 000 dots

Frame coverage: 100%

Magnification: 0.70 × (35 mm-format
equivalent) with 50 mm lens at
infinity, -1 m^{-1} (diopter)

Eye point: Approx. 23 mm from the eyepiece, 21.5 mm from the eyepiece frame at -1 m^{-1} (diopter)
Diopter adjustment:
 -4.0 m^{-1} to $+3.0 \text{ m}^{-1}$ (diopter)

[Screen]

LCD screen:
7.5 cm (3.0 type) TFT drive
Total number of dots:
1 228 800 dots

[Power, general]

Power: Rechargeable battery pack
NP-FW50, 7.2 V
AC Adaptor AC-UB10/UB10B/
UB10C/UB10D, 5 V
Power consumption:
Approx. 2.1 W (during shooting with the LCD screen)
Approx. 2.7 W (during shooting with the viewfinder)
Operating temperature: $0 \text{ }^{\circ}\text{C}$ to $40 \text{ }^{\circ}\text{C}$
($32 \text{ }^{\circ}\text{F}$ to $104 \text{ }^{\circ}\text{F}$)
Storage temperature: $-20 \text{ }^{\circ}\text{C}$ to $+60 \text{ }^{\circ}\text{C}$
($-4 \text{ }^{\circ}\text{F}$ to $+140 \text{ }^{\circ}\text{F}$)
Dimensions (CIPA compliant):
 $129.0 \text{ mm} \times 88.1 \text{ mm} \times 102.2 \text{ mm}$
($5 \frac{1}{8} \text{ inches} \times 3 \frac{1}{2} \text{ inches} \times 4 \frac{1}{8} \text{ inches}$) (W/H/D)
Mass (CIPA compliant) (Approx.):
813 g (1 lb 12.7 oz) (including NP-FW50 battery pack, "Memory Stick PRO Duo" media)
Microphone: Stereo
Speaker: Monaural
Exif Print: Compatible
PRINT Image Matching III:
Compatible

[Wireless LAN]

Supported standard: IEEE 802.11 b/g/n
Frequency: 2.4GHz
Supported security protocols: WEP/
WPA-PSK/WPA2-PSK
Configuration method: WPS (Wi-Fi Protected Setup) / manual
Access method: Infrastructure Mode
NFC: NFC Forum Type 3 Tag compliant

AC Adaptor AC-UB10/UB10B/ UB10C/UB10D

Power requirements: AC 100 V to 240 V, 50 Hz/60 Hz, 70 mA
Output voltage: DC 5 V, 0.5 A
Operating temperature: $0 \text{ }^{\circ}\text{C}$ to $40 \text{ }^{\circ}\text{C}$
($32 \text{ }^{\circ}\text{F}$ to $104 \text{ }^{\circ}\text{F}$)
Storage temperature: $-20 \text{ }^{\circ}\text{C}$ to $+60 \text{ }^{\circ}\text{C}$
($-4 \text{ }^{\circ}\text{F}$ to $+140 \text{ }^{\circ}\text{F}$)
Dimensions (Approx.):
 $50 \text{ mm} \times 22 \text{ mm} \times 54 \text{ mm}$
(2 inches \times 7/8 inches \times 2 1/4 inches) (W/H/D)

Rechargeable Battery Pack NP-FW50

Battery type: Lithium-ion battery
Maximum voltage: DC 8.4 V
Nominal voltage: DC 7.2 V
Maximum charge voltage: DC 8.4 V
Maximum charge current: 1.02 A
Capacity: Typical 7.7 Wh (1 080 mAh)
Minimum 7.3 Wh (1 020 mAh)
Maximum dimensions (Approx.):
 $31.8 \text{ mm} \times 18.5 \text{ mm} \times 45 \text{ mm}$
(1 5/16 inches \times 3/4 inches \times 1 13/16 inches) (W/H/D)

Design and specifications are subject to change without notice.

Trademarks

- The following marks are trademarks of Sony Corporation.
Cyber-shot, “Cyber-shot,” “Memory Stick XC-HG Duo,” “Memory Stick PRO Duo,” “Memory Stick PRO-HG Duo,” “Memory Stick Duo,” “Memory Stick Micro,” “PlayMemories Home,” “PlayMemories Home” logo, “PlayMemories Online,” “PlayMemories Online” logo, “PlayMemories Mobile,” “PlayMemories Mobile” logo
- “AVCHD Progressive” and “AVCHD Progressive” logotype are trademarks of Panasonic Corporation and Sony Corporation.
- Dolby and the double-D symbol are trademarks of Dolby Laboratories.
- The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.
- Windows is a registered trademark of Microsoft Corporation in the United States and/or other countries.
- Mac is a registered trademark of Apple Inc.
- iOS is a registered trademark or trademark of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.
- iPhone and iPad are trademarks of Apple Inc., registered in the U.S. and other countries.
- SDXC logo is a trademark of SD-3C, LLC.
- Android, Google Play are trademarks of Google Inc.

- Wi-Fi, the Wi-Fi logo, Wi-Fi PROTECTED SET-UP are registered trademarks of the Wi-Fi Alliance.
- The N Mark is a trademark or registered trademark of NFC Forum, Inc. in the United States and in other countries.
- DLNA and DLNA CERTIFIED are trademarks of Digital Living Network Alliance.
- Facebook and the “f” logo are trademarks or registered trademarks of Facebook, Inc.
- YouTube and the YouTube logo are trademarks or registered trademarks of Google Inc.
- Eye-Fi is a trademark of Eye-Fi, Inc.
- In addition, system and product names used in this manual are, in general, trademarks or registered trademarks of their respective developers or manufacturers. However, the TM or ® marks are not used in all cases in this manual.

Additional information on this product and answers to frequently asked questions can be found at our Customer Support Website.

<http://www.sony.net/>

關於相機的詳細資訊（“說明指南”）

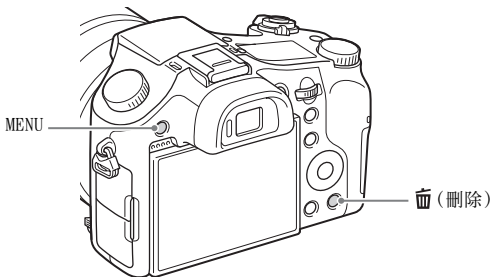


“說明指南”是線上使用說明書。關於相機各種功能的深入使用說明，請參考此書。

- ① 進入 Sony 服務網頁。
<http://www.sony.net/SonyInfo/Support/>
- ② 選擇您的國家或地區。
- ③ 搜尋服務網頁內您相機的型號名稱。
 - 查看您相機底部的型號名稱。


檢視指南

本相機配備有內建的使用指南。



相機指南

相機會顯示 MENU 項目與設定值的解釋。

- ① 按一下 MENU 按鈕或 Fn（功能）按鈕。
- ② 選擇您要的項目，然後按 （刪除）按鈕。

警告

為減少發生火災或電擊的危險，請勿讓本機暴露於雨中或受潮。

重要的安全指示

— 請保存這些指示危險

為了降低火災或電擊的危險，請小心遵守這些指示 CT

注意

電池組

如果電池組處理不當，電池組可能會爆炸，造成火災，甚至化學灼傷。請遵循以下注意事項。

- 切勿拆解。
- 切勿擠壓，撞擊電池組或對電池組用力過度，如敲擊，跌落或踩踏在電池組上。
- 切勿短路或讓金屬物品接觸到電池端子。
- 切勿暴露在超過 60 °C 的高溫下，例如直射陽光下，或停在太陽下的汽車內。
- 切勿焚化或丟棄在火中。
- 切勿處理損壞或洩漏的鋰離子電池。
- 務必使用 Sony 原廠的充電器或可對電池組充電的裝置來為電池組充電。
- 電池組應放在幼兒不易觸及的地方。
- 使電池組保持乾燥。
- 請僅使用與 Sony 建議的相同或相等的電池類型進行更換。
- 請依照說明書中的說明正確丟棄舊電池組。

電源供應器 / 電源適配器

使用電源供應器 / 電源適配器時，請使用附近牆上的電源插座。如果在使用設備時發生任何故障，請立即將電源供應器 / 電源適配器從牆上的電源插座拔掉。

注意

通知

如果靜電或電磁導致資料傳送中斷（失敗），請重新啟動應用程式或斷開連接，並重新連接通信電纜（USB 等）。

本產品已經過測試並確定符合 EMC 規定中所提出的使用連接電纜不得超過 3 公尺的限制。

特定頻率的電磁場可能會影響此機的畫面和聲音。

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

僅適用於台灣



廢電池請回收

附屬電纜上附有鐵芯時的注意事項：USB 電纜或 A/V 連接電纜或電源適配器之 DC 輸出線上的一个鐵芯係抑制電磁波干擾用，請勿任意拆卸。

僅適用於台灣

生產國別：中國

製造廠商：SONY CORPORATION

進口商：台灣索尼股份有限公司

地址：台北市長春路 145 號 5 樓

諮詢專線：4499111

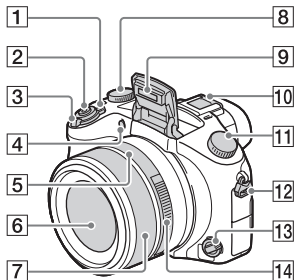
檢查附件


括號中的數字代表的是件數。

- 相機 (1)
- 充電電池 NP-FW50 (1)
- 微型 USB 電纜 (1)
- 電源適配器 AC-UB10/UB10B/UB10C/UB10D (1)
- 電源線 (在美國與加拿大非附件) (1)
- 肩帶 (1)
- 鏡頭蓋 (1)
- 遮光罩 (1)
- 接腳蓋 (1) (附在相機上)
- 目鏡護罩 (1) (附在相機上)
- 使用說明書 (本說明書) (1)

CT

認識各部件

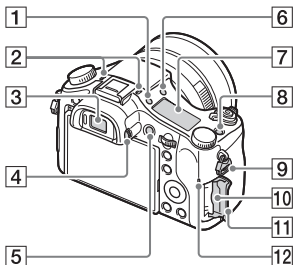


- 1 ON/OFF (電源) 開關
- 2 快門按鈕
- 3 用來拍攝: W/T (變焦) 桿
用來觀看:  (索引) 桿 /
播放變焦桿
- 4 自拍定時器指示燈 /AF 照明器
- 5 光圈指標
- 6 鏡頭
- 7 手動對焦環
 - 在自動對焦模式中, 您可以使用手動對焦環進行縮放。在手動對焦模式或直接手動對焦模式中, 您可以使用手動對焦環調整對焦。

- 8 曝光補償轉盤
- 9 閃光燈
- 10 多介面接座 *

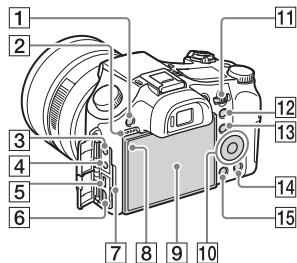
- 11 模式轉盤
AUTO (自動模式) /
P (程式自動) /
A (光圈優先) /
S (快門速度優先) /
M (手動曝光) /
1/2 (記憶回復) /
 (動態影像) /
 (全景攝影) /
SCN (場景選擇)

- 12 肩帶掛勾
- 13 對焦模式轉盤
- 14 光圈環

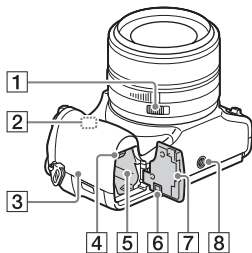


- 1  (顯示面板照明) 按鈕
- 2 麥克風
- 3 觀景窗
- 4 屈光度調整轉盤
- 5 MOVIE (動態影像) 按鈕
- 6  (閃光燈彈起) 按鈕
- 7 顯示面板
- 8 C (自訂) 按鈕
- 9 肩帶掛勾
- 10 記憶卡插槽

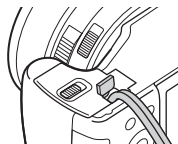
- 11 記憶卡蓋
12 存取指示燈



- 1 MENU 按鈕
2 揚聲器
3 (麥克風) 插孔
• 連接外接麥克風時，相機會從內部麥克風切換到外接麥克風。如果外接麥克風是屬於插入式電源的供電類型，麥克風的電源由相機供應。
4 (耳機) 插孔
5 Multi 端子
• 支援微型 USB 相容裝置。
6 HDMI 微型插孔
7 充電指示燈
8 光感應器
9 LCD 螢幕
10 控制滾輪
11 控制轉盤
12 用來拍攝：AEL (自動曝光鎖定) 按鈕
用來觀看：⊕ (播放變焦) 按鈕
13 用來拍攝：Fn (功能) 按鈕
用來觀看：➡ (傳送至智慧型手機) 按鈕
14 (刪除 / 相機指南) 按鈕
15 (播放) 按鈕



- 1 光圈按鍵開關
• 拍攝動態影像時，將光圈按鍵開關設定為 OFF。如果您在拍攝動態影像時，將光圈按鍵開關設定為 ON 變更光圈值，會記錄光圈環的聲音。
2 Wi-Fi 感應器 (內建)
3 N (N 標記)
• 當您將相機與配備 NFC 功能的智慧型手機連接時，請按一下標記。
• NFC (Near Field Communication) 是國際標準的短距離無線傳輸技術。
4 電池退出桿
5 電池插入槽
6 連接板蓋
使用 AC-PW20 電源適配器 (另售) 時，請使用連接板蓋。將連接板插入電池盒中，然後將電線穿過連接板蓋，如下所示。



- 關上蓋子時，確定電線沒有被夾住。

CT

7 電池蓋

8 三腳架安裝孔

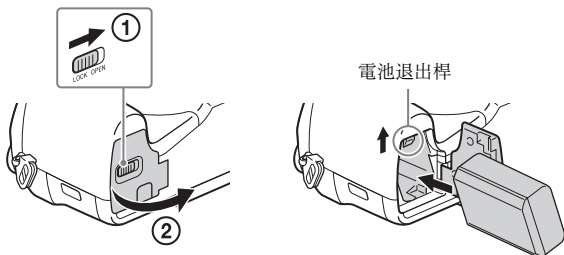
- 請使用螺絲長度在 5.5 公釐以下的三腳架。否則無法將相機牢靠地固定住，而且可能會對相機造成損壞。

* 如需多介面接座相容配件的詳情，請造訪 Sony 網站，或詢問您的 Sony 經銷商或當地授權的 Sony 服務設施。您也可以使用與配件接腳相容的配件。不保證其他製造商配件的操作。

 Multi
Interface Shoe

Accessory Shoe

插入電池



CT

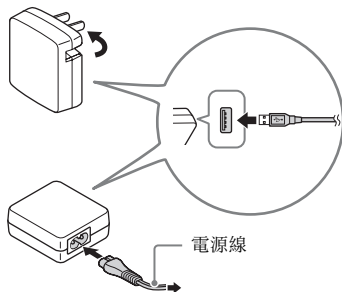
1 打開蓋子。

2 插入電池。

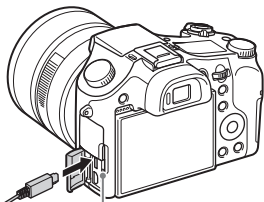
- 如圖所示，在按住電池退出桿的同時將電池插入。確認電池退出桿在插入後有鎖定。
- 電池插入不正確時關上電池蓋可能會損壞相機。

為電池充電

美加地區的用戶



美加以外的國家 / 地區的用戶



充電指示燈
點亮：充電
關閉：充電完成
閃爍：

因為相機不在適當的溫度範圍內而發生充電錯誤或暫停充電。

1 用微型 USB 電纜（附件）將相機連接到電源適配器（附件）。

2 將電源適配器連接到牆上的電源插座。

充電指示燈點亮橘色的燈，充電開始。

- 為電池充電時關閉相機。
- 即使電力沒有完全放光，也可以為電池充電。
- 充電指示燈閃爍且充電未完成時，取出電池之後再插回去。

附註

- 電源適配器連接到牆上的電源插座時，如果相機上的充電指示燈閃爍，表示因為溫度超出建議範圍外而暫停充電。溫度回到適當的範圍內時，會恢復充電。建議您在 10 °C 至 30 °C 的環境溫度下對電池充電。
- 電池的端子部分如果髒了，可能無法有效地充電。遇到這種情況時，請用軟布或棉花棒輕輕地將所有髒東西擦掉，以清潔電池的端子部分。
- 將電源適配器（附件）連接到最近的牆上電源插座。如果使用電源適配器時發生故障，請立即將插頭從插座拔掉以中斷電源。
- 充電完成時，將電源適配器從牆上的電源插座拔掉。
- 務必只使用原廠的 Sony 電池、微型 USB 電纜（附件）以及電源適配器（附件）。
- 如果相機以隨附的電源適配器連接到牆上的電源插座時，在拍攝 / 播放時不會供應電源。如需在拍攝 / 播放時供應相機電源，請使用 AC-PW20（另售）電源適配器。

■ 充電時間（完全充電）

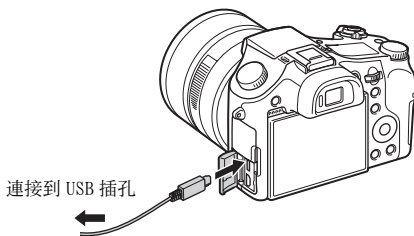
使用電源適配器的充電時間大約是 310 分鐘（附件）。

附註

- 上述充電時間適用於在 25 °C 的溫度為放光電的電池充電。充電可能因為使用情況或環境而需要長一點的時間。

■ 連接到電腦上充電

用微型 USB 電纜將相機連接到電腦，便可以為電池充電。



附註

- 經由電腦充電時，請注意下列幾點：
 - 如果相機是連接在沒有連接電源的到膝上型電腦，電腦的電池電量會降低。請不要長時間充電。
 - 在相機與電腦之間建立 USB 連接時，不要開 / 關或重新啟動電腦，或者是將電腦從休眠模式中喚醒。可能會造成相機故障。開 / 關電腦或重新啟動電腦，或者喚醒休眠模式中的電腦之前，要中斷相機與電腦的連接。
 - 對於自行組裝的電腦或修改過的電腦，不保證能夠充電。

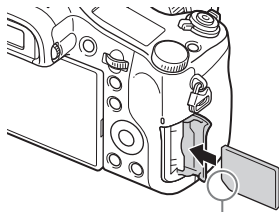
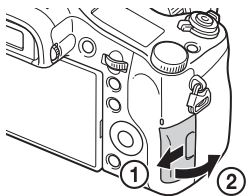
■ 電池使用時間以及可以記錄與播放的影像數目

		電池使用時間	影像數目
拍攝（靜態影像）	LCD 螢幕	大約 210 分鐘	大約 420 張影像
	觀景窗	大約 170 分鐘	大約 340 張影像
標準動態影像拍攝	LCD 螢幕	大約 70 分鐘	—
	觀景窗	大約 70 分鐘	—
連續動態影像拍攝	LCD 螢幕	大約 145 分鐘	—
	觀景窗	大約 145 分鐘	—
檢視（靜態影像）		大約 315 分鐘	大約 6300 張影像

附註

- 上述影像數目適用於電池充滿電的情況。視使用情況而定，影像的數目可能會減少。
- 可以記錄的影像數目是在下列情況下拍攝的：
 - 使用 Sony “Memory Stick PRO Duo” (Mark2) (另售)
 - 在周邊溫度為 25 °C 時使用電池。
 - [顯示品質] 是設定為 [標準]
- “拍攝（靜態影像）”的數目以 CIPA 標準為根據，在下列情況下拍攝：(CIPA: Camera & Imaging Products Association)
 - DISP 設定為 [顯示所有資訊]。
 - 每 30 秒鐘拍一張。
 - 變焦在 W 和 T 端交替轉換。
 - 每拍攝兩次閃光燈閃光一次。
 - 每拍攝十次打開和關閉電源一次。
- 動態影像拍攝的分鐘數取決於 CIPA 標準，並在下列情況下拍攝：
 - [錄影設定]: 60i 17M (FH) / 50i 17M (FH)
 - 標準動態影像拍攝：電池使用時間取決於重複啟動 / 停止拍攝、縮放和開 / 關等動作。
 - 連續動態影像拍攝：電池使用時間取決於連續拍攝至時間限制（29 分鐘）後再按下 MOVIE 按鈕的拍攝時間之總和。其他功能（例如變焦功能）無法操作。

插入記憶卡（另售）



確認缺角那頭朝向正確的方向。

1 打開蓋子。

2 插入記憶卡（另售）。

• 缺角那頭朝向圖示方向，將記憶卡插入到卡入定位為止。

3 關上蓋子。

CT

■ 可以使用的記憶卡

	記憶卡	適用於靜態影像	適用於動態影像
A	Memory Stick XC-HG Duo	✓	✓
	Memory Stick PRO Duo	✓	✓ (僅限 Mark2)
	Memory Stick PRO-HG Duo	✓	✓
B	Memory Stick Micro (M2)	✓	✓ (僅限 Mark2)
C	SD 記憶卡	✓	✓ (等級4或者更快)
	SDHC 記憶卡	✓	✓ (等級4或者更快)
	SDXC 記憶卡	✓	✓ (等級4或者更快)
D	microSD 記憶卡	✓	✓ (等級4或者更快)
	microSDHC 記憶卡	✓	✓ (等級4或者更快)
	microSDXC 記憶卡	✓	✓ (等級4或者更快)

- 在本說明書中，表中的產品統稱如下：

A: “Memory Stick PRO Duo”

B: “Memory Stick Micro”

C: SD 卡

D: microSD 記憶卡

附註

- 以本相機使用 “Memory Stick Micro” 或 microSD 記憶卡時，務必要使用適當的轉接卡。

■ 若要取出記憶卡 / 電池

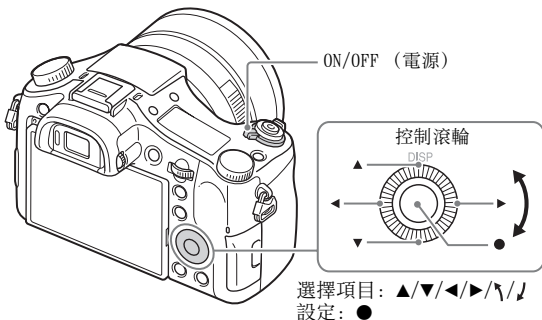
記憶卡：將記憶卡往裡壓一下以退出記憶卡。

電池：推動電池退出桿。小心不要讓電池掉落地上。

附註

- 存取指示燈（第 6 頁）點亮時切勿取出記憶卡 / 電池。這樣可能會對記憶卡中的資料造成損壞。

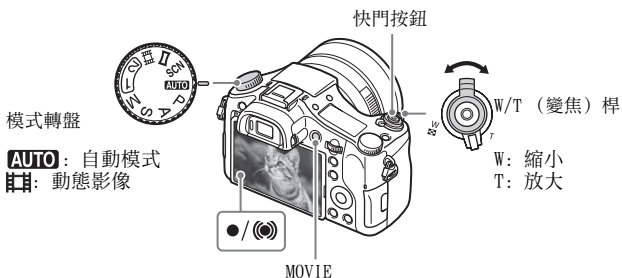
設定時鐘



CT

- 1 設定 ON/OFF (電源) 為 ON。
日期與時間設定會在您首次開機時顯示出來。
 - 可能需要一點時間才能開啟電源並進行操作。
- 2 確認已經選取螢幕上的 [進入]，然後按控制滾輪上的 ●。
- 3 按照螢幕上的指示選取一個您要的地理位置，然後按 ●。
- 4 設定 [日光節約時間]、[日期 / 時間] 和 [日期格式]，然後按 ●。
 - 設定 [日期 / 時間] 時，午夜會顯示 12:00 AM，而正午則是 12:00 PM。
- 5 確認已經選取 [進入]，然後按 ●。

拍攝靜態影像 / 動態影像



拍攝靜態影像

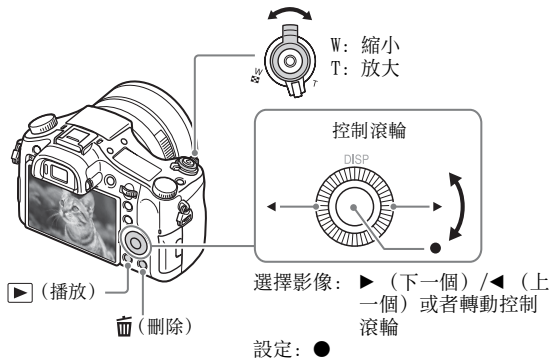
- 1 將快門按鈕按下一半以便對焦。
影像合焦時，會發出一個嗶音，而且 ● 或 (●) 指示燈會點亮。
- 2 將快門按鈕完全按下去以拍攝影像。

拍攝動態影像

- 1 按下 **MOVIE (動態影像) 按鈕** 開始記錄。
 - 用 W/T (變焦) 桿變更變焦比率。
- 2 再度按下 **MOVIE 按鈕** 停止記錄。

附註

- 不要以手動方式拉起閃光燈。這樣可能會造成故障。
- 在拍攝動態影像期間使用變焦功能時，相機的操作聲音會被錄下來。動態影像記錄完成時，**MOVIE 按鈕** 的運作聲音也可能會被記錄下來。
- 當周邊溫度為 25 °C 左右時，以相機的預設設定拍攝，一次可以連續拍攝大約 29 分鐘。動態影像記錄完成時，可以再按一下 **MOVIE 按鈕** 以重新開始記錄。視周遭溫度而定，記錄可能會停止以保護相機。



1 按 ▶ (播放) 按鈕。

■ 選擇下一個 / 上一個影像

按控制滾輪上的 ▶ (下一個) / ◀ (上一個) 或者轉動控制滾輪，以選擇一個影像。按控制滾輪中央的 ● 以檢視動態影像。

■ 刪除影像

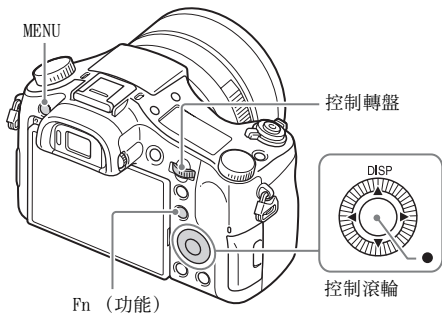
- ① 按 ⏻ (刪除) 按鈕。
- ② 用控制滾輪上的 ▲ 選擇 [刪除]，然後按 ●。

■ 恢復拍攝影像

將快門按鈕按下一半。

其他功能簡介

其他功能可以用控制滾輪、MENU 按鈕等等操作。



■ 控制滾輪

DISP (顯示內容)：讓您變更螢幕顯示。

● (眼控 AF)：當您按下按鈕時，會對焦於被攝人物的眼睛。透過正在按 ● 的同時按下快門按鈕拍攝影像。

■ Fn (功能) 按鈕

讓您登記 12 種功能，並在拍攝時調用這些功能。

- ① 按 Fn (功能) 按鈕。
- ② 在控制滾輪上按 ▲/▼/◀/▶，選擇要使用的功能。
- ③ 轉動控制滾輪選取設定值。

■ 控制轉盤

只要轉動控制轉盤，您就可以為每個拍攝模式立即變更適當的設定。

■ 功能表項目

📷 (拍攝設定)


 影像尺寸	選擇靜態影像的大小。
 長寬比	選擇靜態影像的長寬比。
 影像品質	設定靜態影像的畫質。
全景：影像尺寸	選擇全景影像的大小。
全景：方向	設定全景影像的拍攝方向。
 檔案格式	選擇動態影像檔案格式。
 錄製設定	選擇記錄動態影像框的尺寸。
過片模式	設定過片模式，例如連續拍攝。
閃光燈模式	設定閃光燈設定值。
閃光補償	調整閃光燈輸出的強度。
紅眼減弱	減少使用閃光燈時的紅眼現象。
對焦區域	選擇對焦區域。
 AF 輔助照明	設定 AF 輔助照明，為黑暗場景提供照明以輔助對焦。
ISO	調整感光度。
ND 篩選器	設定此功能即可減少亮度。您可以設定為較慢的快門速度和減少光圈值等。
測光模式	選擇測光模式，以設定要測量被攝體的哪個部分來決定曝光值。
白平衡	調整影像的色調。
DRO/ 自動 HDR	自動補償亮度與對比度。
風格設定	選擇要使用的影像處理。
相片效果	選擇要使用的效果濾鏡，獲得更印象深刻和精彩的表現。
對焦放大鏡	在拍攝之前放大影像，讓您仔細檢查對焦。
 消除長曝雜訊	為快門速度為 1/3 秒鐘或者更長的拍攝設定雜訊消除處理。
 高 ISO 雜訊消除	為高感光度的拍攝設定雜訊消除處理。
鎖定 AF	設定功能以追蹤被攝體並持續對焦。

CT

CT
19

微笑 / 面孔偵測	選此選項以便偵測面孔，並自動調整各項設定。設定在偵測到微笑時自動釋放快門。
 柔膚效果	設定柔膚效果以及效果的等級。
 自動取景	捕捉面孔影像、近拍或透過自動 AF 功能追蹤被攝體時分析場景，並以更令人印象深刻的構圖，自動修剪並儲存另一個影像的副本。
自動模式	您可以選擇智慧式自動或高級自動進行拍攝。
場景選擇	選擇預設的設定，以便與各種場景條件配合。
動態影像	選擇適合拍攝物體或效果的曝光模式。
 SteadyShot	設定 SteadyShot 以拍攝靜態影像。減少手持相機拍攝時因相機晃動而造成的模糊。
 SteadyShot	設定 SteadyShot 以拍攝動態影像。
 色彩空間	變更可再生色彩的範圍。
 自動慢速快門	設定根據環境亮度，自動調整快門速度的功能。
音訊錄製	設定拍攝動態影像時是否記錄聲音。
錄音音量	調整記錄動態影像時的音訊錄製等級。
音訊輸出時刻	記錄動態影像時，設定音訊輸出的時間。
減少風噪音	記錄動態影像時減少風噪音。
記憶	登記要使用的模式或相機設定。

(自訂設定)

斑馬圖案	顯示調整亮度的標線。
 MF 輔助	手動對焦時顯示放大的影像。
對焦放大時間	設定以放大方式顯示影像的時間長度。
格線	設定格線顯示，以便與結構輪廓對齊。
音頻等級顯示	設定是否在螢幕上顯示音訊等級。
自動檢視	設定自動檢視，在拍攝之後顯示捕捉到的影像。
DISP 按鈕	設定按下控制滾輪上的 DISP 時，可以選擇的螢幕顯示模式。
峰值等級	當手動對焦時，以特定的色彩強調合焦範圍的外框。

峰值顏色	設定用於峰值功能的色彩。
曝光設定指南	當拍攝螢幕中的曝光設定變更時，設定顯示指南。
Live View 顯示	設定是否將設定（例如曝光補償等）顯示在螢幕顯示中。
 預先 AF	設定在快門按鈕按下一半前，是否執行自動對焦。
變焦設定	設定當進行變焦時是否使用清晰影像縮放和數位變焦。
FINDER/MONITOR	設定在觀景窗和螢幕之間切換的方法。
 含快門的 AEL	設定在快門按鈕按下一半時，是否執行自動曝光鎖定（AEL）。
曝光補償設定	設定是否將曝光補償值反映在閃光燈補償。
階段順序	設定拍攝曝光包圍和白平衡包圍的指令。
面孔登錄	登記或變更要優先對焦的人。
 寫入日期	設定是否在靜態影像上記錄拍攝日期。
功能選單設定	自訂按下 Fn（功能）按鈕時顯示的功能。
自訂鍵設定	將您要用的功能指定給按鈕和轉盤。
控制環的變焦功能	設定手動對焦環的縮放功能。當您選取 [級數]，可以以固定的焦距間距移動變焦位置。
MOVIE 按鈕	設定是否一律啟動 MOVIE 按鈕。
轉盤 / 滾輪鎖	當拍攝時，設定是否使用 Fn 按鈕讓控制轉盤和控制滾輪暫時失去功用。您可以按住 Fn 按鈕，停用 / 啟用控制轉盤和控制滾輪。

CT

（無線）

傳送至智慧型手機	轉換影像以便顯示在智慧型手機上。
傳送至電腦	轉換影像至連接網路的電腦以備份。
在 TV 上觀看	您可以在網路電視上檢視影像。
使用智慧型手機控制	透過智慧型手機，遙控相機以拍攝靜態影像和動態影像。
飛航模式	您可以設定此裝置不要執行無線通訊。

CT
21

WPS 按鍵	您可以按一下 Wi-Fi 保護設定 (WPS) 按鈕，輕鬆地登記相機的存取點。
存取點手動設定	您可以手動登記您的存取點。
編輯裝置名稱	您可以在 Wi-Fi Direct 等之下變更裝置名稱。
顯示 MAC 地址	顯示相機的網路卡實體 (MAC) 位址。
SSID/ 密碼重設	重新設定智慧型手機連接的服務設定識別碼 (SSID) 和密碼。
重設網路設定	重新設定所有的網路設定。

▶ (播放)

刪除	刪除一個影像。
觀看模式	針對播放，設定影像分類的方法。
影像索引	同時顯示多個影像。
顯示旋轉	設定記錄影像的播放方向。
循環播放	顯示循環播放。
轉動	旋轉影像。
⊕ 放大	放大播放的影像。
4K 靜態影像播放	將解析度 4K 的靜態影像輸出到支援 4K 的 HDMI-連接電視。
保護	保護影像。
指定列印	為一個靜態影像添加列印預定標記。

⚙ (設定)

螢幕亮度	設定螢幕亮度。
觀景窗亮度	當使用電子觀景窗時，設定電子觀景窗的亮度。
觀景窗色溫	設定觀景窗的色溫。
音量設定	設定播放動態影像時的音量。
音頻訊號	設定相機的操作聲音。
上傳的設定	設定使用 Eye-Fi 卡時相機的上傳功能。
非重疊功能表	設定當按下 MENU 按鈕時，是否每次都顯示非重疊功能表。

模式轉盤指南	開啟或關閉模式轉盤指南（解釋各種拍攝模式）。
刪除確認	設定在刪除確認畫面中預選刪除與取消。
顯示品質	設定顯示品質。
省電開始時間	設定相機自動關機前的等待時間。
PAL/NTSC 選擇器 (只限與 1080 50i 相容的模式)	透過變更裝置上的電視格式，就可以使用不同的動態影像格式進行拍攝。
示範模式	設定開啟或關閉動態影像的展示播放。
HDMI 解析度	設定相機連接到 HDMI 電視機時的解析度。
HDMI 控制	從支援“BRAVIA” Sync 的電視機操作相機。
HDMI 資訊顯示	選擇是否在連接至 HDMI 相容電視時，將資訊顯示在電視上。
USB 連線	設定 USB 連接方式。
USB LUN 設定	限制 USB 連接的功能以增加相容性。
 語言	選擇語言。
日期 / 時間設定	設定日期與時間，以及日光節約時間。
區域設定	設定使用的地方。
格式化	格式化記憶卡。
檔案編號	設定用來指定檔案編號給靜態影像與動態影像的方法。
選擇 REC 資料夾	變更選擇用來儲存影像的資料夾。
新資料夾	建立儲存靜態影像和動態影像的新資料夾 (MP4)。
資料夾名稱	設定靜態影像資料夾的格式。
還原影像資料庫	還原影像資料庫檔案，以便能夠記錄與播放。
顯示媒體資訊	顯示記憶卡上動態影像的剩餘記錄時間與可以記錄的靜態影像數目。
版本	顯示相機的軟體版本。
出廠重設	將設定恢復為預設值。

“PlayMemories Home” 的功能

“PlayMemories Home” 軟體可讓您將靜態影像和動態影像匯入電腦並加以使用。必須有 “PlayMemories Home” 才能將 AVCHD 動態影像匯入電腦。



從您的相機匯入影像。



播放匯入的影像。



若使用 Windows，也可使用下列功能。



在月曆上檢視
影像



製作動態
影像光碟



將影像上傳到網
路服務

在 “PlayMemories
Online” 上分享影像



🔦 安裝 “PlayMemories Home”

您可從下列 URL 安裝 “PlayMemories Home”：

www.sony.net/pm/

附註

- 安裝 “PlayMemories Home” 需要連線至網路。
- 若要使用 “PlayMemories Online” 或其他網路服務，必須連線至網路。
“PlayMemories Online” 或其他網路服務在某些國家地區可能無法使用。
- Mac 軟體使用者請連至以下 URL：
<http://www.sony.co.jp/imsoft/Mac/>
- 如果您的電腦已經有安裝適用於 2011 年以前釋外型號的 “PMB (Picture Motion Browser)”，“PlayMemories Home” 會將其覆蓋並安裝。請使用 “PlayMemories Home”，PMB 的繼任軟體。

■ 在電腦裡安裝 “PlayMemories Home”

- 1 請使用您電腦裡的網頁瀏覽器，連至以下 URL，並點選 [安裝] → [執行]。

www.sony.net/pm/

- 2 按照畫面上的指示完成安裝。

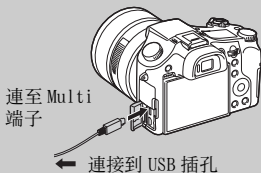
- 如需 “PlayMemories Home” 的詳情，請參閱下列 PlayMemories Home 技術支援頁面（僅英文）：

<http://www.sony.co.jp/pmh-se/>




CT

💡 在 “PlayMemories Home” 新增 可用功能。

如果您將相機連接至電腦，功能會被新增到 “PlayMemories Home”。即使 “PlayMemories Home” 已經安裝在您的電腦裡，還是建議您將相機連接至電腦。



附註

- 當顯示作業畫面或存取畫面時，請勿拔除相機的微型 USB 電纜（附件）。這樣做可能會使資料損壞。
- 若要將相機從電腦拔除，請點選工作列的 ，再點選 （拔除圖示）。若是 Windows Vista 作業系統，請按工作列的 .

“Image Data Converter” 的功能

底下是使用 “Image Data Converter” 時的可用功能範例。

- 您可以出色調曲線或清晰度之類的各種校正功能編輯 RAW 影像。
- 您可以使用白平衡、亮度以及風格設定等調整影像。
- 您可以將顯示並編輯過的靜態影像儲存到您的電腦。

儲存 RAW 影像的方法有兩種：儲存並保留為 RAW 資料，或者以通用型檔案格式儲存。

- 您可以顯示並比較以本相機拍攝的 RAW 影像 / JPEG 影像。
- 您可以以五種等級將影像分級。
- 您可以設定色彩標籤。

■ 安裝 “Image Data Converter”

1 從下列 URL 下載軟體，並將其安裝在您的電腦上。

Windows: <http://www.sony.co.jp/imsoft/Win/>

Mac: <http://www.sony.co.jp/imsoft/Mac/>

■ 檢視 “Image Data Converter 指南”

若需使用 “Image Data Converter” 的詳情，請參閱 “Image Data Converter 指南”。

1 Windows 系統：

點選 [開始] → [所有程式] → [Image Data Converter] → [說明] → [Image Data Converter Ver.4]。

Mac 系統：

開始 Finder → [應用程式] → [Image Data Converter] → [Image Data Converter Ver.4] → 在選單列上選擇 “說明” → “Image Data Converter 指南”。


- 若使用 Windows 8，開啟 “Image Data Converter Ver.4” → 在選單條上選擇 “說明” → “Image Data Converter 指南”。
- 若需 “Image Data Converter” 的更多細節，您也可以參閱相機的 “說明指南”（第 2 頁）或以下的 “Image Data Converter” 支援頁面（僅英文）：


<http://www.sony.co.jp/ids-se/>

靜態影像的數目和可以記錄的動態影像時間



靜態影像的數目和可以記錄的動態影像時間可能會因為拍攝條件和記憶卡而異。

■ 靜態影像

[ 影像尺寸]: L: 20M

當 [ 長寬比] 設定為 [3:2] *

影像品質 \ 容量	2 GB
標準	295 張影像
精細	170 張影像
超精細	125 張影像
RAW 與 JPEG	58 張影像
RAW	88 張影像

* 當 [ 長寬比] 設定為 [3:2] 之外的選項，您可以記錄比上述更多的圖片。（除非 [ 影像品質] 設定為 [RAW]。）

■ 動態影像

下表顯示的是大略的最長記錄時間。這些是所有動態影像檔案的總時間。連續拍攝約可持續 29 分鐘（產品規格限制）。MP4（12M）格式動態影像的最大連續記錄時間約為 15 分鐘（檔案大小限制為 2 GB）。

(h (時), m (分))

錄製設定 \ 容量	2 GB
60i 24M (FX) /50i 24M (FX)	10 m
60i 17M (FH) /50i 17M (FH)	10 m
60p 28M (PS) /50p 28M (PS)	9 m
24p 24M (FX) /25p 24M (FX)	10 m
24p 17M (FH) /25p 17M (FH)	10 m
1440 × 1080 12M	15 m
VGA 3M	1 h 10 m

- 動態影像可以記錄的時間會因相機配有可以根據拍攝場景而自動調整畫質 VBR (Variable Bit-Rate) 而有所不同。記錄快速移動的被攝體時，影像會比較清晰，但是可以記錄的時間會比較短，因為需要更多記憶體來記錄。可以記錄的時間也會因為拍攝條件、被攝體或者畫質 / 尺寸的設定而有所不同。

使用相機的注意事項

本相機內建的功能

- 本說明書描述 1080 60i 相容裝置與 1080 50i 相容裝置。
若要查看您的相機是否是與 1080 60i 或 1080 50i 相容的裝置，請查看相機底部的下列標誌。
1080 60i 相容裝置：60i
1080 50i 相容裝置：50i
- 本相機與 1080 60p 或 50p 格式的動態影像相容。與到目前為止都是以隔行掃描法記錄的標準記錄模式不同的是，本相機是以逐行掃描法記錄。這樣可以增加解析度，提供更順暢、更真實的影像。

關於使用和維護

對於產品要避免粗暴的使用、拆解、修改、實體衝擊，或者敲打、跌落或踐踏之類的撞擊。對於鏡頭要特別小心。

關於記錄 / 播放的注意事項

- 開始拍攝之前，要進行試拍，以確定相機能正確的運作。
- 此相機是防滴防塵設計，但不防水亦不防潑濺。
- 請勿用相機朝向太陽或其它強光。那樣可能會令您的相機故障。
- 如果有濕氣凝結，要在使用相機之前將其清除。
- 請勿搖晃或撞擊本相機。那樣可能會造成故障，您可能無法記錄影像。而且，記錄媒體可能變成無法使用，或者影像資料可能受損。

請勿在下列地方使用 / 存放相機

- 在非常炎熱、寒冷或潮濕的地方
例如，在停在太陽底下的車廂中，相機機身可能變形而造成故障。
- 存放在直射的陽光下或加熱器附近
相機機身可能褪色或變形，而這可能會造成故障。
- 在會受到搖擺振動的地方
- 靠近會產生強烈無線電波、發出輻射或者強烈磁性的地方。否則相機可能無法正確地記錄或播放影像。
- 在多沙或多灰塵的地方
小心不要讓沙子或灰塵進入相機中。否則可能會造成相機故障，有時候這種故障是無法修理的。

Carl Zeiss 鏡頭

本相機配備有 Carl Zeiss 鏡頭，能以優越的對比再生清晰的影像。本相機的鏡頭是根據德國 Carl Zeiss 的品質標準，在經過 Carl Zeiss 認證的品質保證系統底下生產的。

關於螢幕、電子觀景窗以及鏡頭的注意事項

- 螢幕和電子觀景窗是利用極高精確度的技術製造，所以 99.99% 以上的畫素都可以有效的使用。然而，螢幕和電子觀景窗上可能會出現一些細小的黑點和 / 或亮點（白色、紅色、藍色或綠色）。這些點是生產過程中的正常結果，不會影響記錄。
- 當鏡頭正在伸縮時，請注意不要使您的手指或其他東西被夾到。

關於使用觀景窗拍攝的注意事項

此相機裝有高解析度與高對比度的有機電激發光觀景窗。此觀景窗達成了寬廣的視角以及很長的適眼距。此相機透過適當地平衡了多種元素，設計出可輕鬆觀看的觀景窗。

- 在觀景窗的角落附近，影像可能會有輕微的扭曲。這並不是故障。若您想要檢查整個構圖的每個細節，您也可以使用 LCD 螢幕。
- 若您在使用觀景窗時搖晃鏡頭或是視線偏移，觀景窗裡的影像可能會扭曲，或是顏色改變。這是鏡頭或顯示裝置的特性，並非故障。當您拍攝影像時，建議從觀景窗的中央觀看。

關於閃光燈的注意事項

- 請不要以抓住閃光燈的方式拿相機，或者是對閃光燈施加太大的力量。
- 如果水、灰塵或沙子進入開啟的閃光燈，可能會造成故障。
- 將閃光燈壓下時，請注意不要壓到您的手指。

關於相機的溫度

您的相機和電池可能因為持續使用而變熱，但是這並不是故障。

關於過熱保護

您可能無法記錄動態影像，或者電源可能會自動關閉以保護相機，這點要視相機和電池溫度而定。

螢幕上會出現一個訊息，然後電源會關閉，或者您無法再記錄動態影像。遇到這種情況時，將電源關閉，等到相機與電池溫度下降為止。如果不讓相機與電池溫度降得夠低就開啟電源，電源可能會再度關閉或者可能會無法記錄動態影像。

關於為電池充電

如果為很久沒用的電池充電，可能無法將其充到適當的容量。這是因為電池特性的緣故，並不是故障。請再為電池充電。

版權警告

電視節目、影片、錄影帶及其它資料可能具有版權。未經許可錄製這些資料將會觸犯版權法規定。

不保證內容毀損或錄製失敗的問題不會發生。

對於因相機或記錄媒體等的故障而造成的記錄失敗或記錄內容遺失或損毀，Sony 不能補償。

清潔相機表面

用沾了一點水的軟布清潔相機表面，然後以乾布擦拭表面。若要防止傷害表面塗層或外殼：

- 請不要讓相機接觸化學產品如稀釋劑、揮發油、酒精、用過即丟的清潔布、驅蟲劑、遮光劑或殺蟲劑。

螢幕保養

- 殘留在螢幕上的護手乳液或護手霜可能會溶解其塗層。若那些物質沾上螢幕，請立即擦除。
- 使用衛生紙或其他材料用力擦拭可能會損害塗層。
- 若指印和碎屑沾上螢幕，建議先輕輕地處理掉碎屑後，再使用柔軟的布料將螢幕擦拭乾淨。

關於無線 LAN 的注意事項

對於因遺失或遭竊導致未授權的連接、使用或相機內地點之讀取，我們不負任何責任。

關於相機轉賣 / 轉讓的注意事項

為保護個人資料，在轉賣或轉讓相機前請先執行以下操作。

- 執行 [出廠重設] (第 23 頁) 以重設所有相機設定。
- 將 [面孔登錄] (第 21 頁) 上登記了臉孔全部刪除。

規格

相機

[系統]

影像裝置: 13.2 公釐 × 8.8 公釐
(1.0 型) Exmor R CMOS 感應器

相機的總像素數:

約 20.9 百萬像素

相機的有效像素數:

約 20.2 百萬像素

鏡頭: Carl Zeiss Vario-Sonnar T*

8.3 × 變焦鏡頭

f = 8.8 公釐 - 73.3 公釐 (24 公釐 - 200 公釐 (等同於 35 公釐底片機))


F2.8

拍攝動態影像 (16:9) 時:

26 公釐 - 212 公釐 *¹

拍攝動態影像 (4:3) 時:

31 公釐 - 259 公釐 *¹

*¹ 當 [ SteadyShot] 設定為 [標準]

SteadyShot: 光學

曝光控制: 自動曝光、光圈優先、快門優先、手動曝光、場景選擇

白平衡: 自動、日光、陰影、陰天、白熾燈、螢光燈 (暖白 / 冷白 / 白天 / 日光)、閃光、色溫 / 濾色鏡、自訂

檔案格式:

靜態影像: JPEG (DCF, Exif, MPF Baseline) 標準, RAW (Sony ARW 2.3 Format), DPOF 相容

動態影像 (AVCHD 格式): AVCHD 格式 Ver.2.0 相容

視訊: MPEG-4 AVC/H.264

音訊: Dolby Digital 2 聲道,

配備 Dolby Digital Stereo Creator

• 由 Dolby Laboratories 授權製造。

動態影像 (MP4 格式):

視訊: MPEG-4 AVC/H.264

音訊: MPEG-4 AAC-LC 2 聲道

記錄媒體: “Memory Stick PRO Duo”、“Memory Stick Micro”、SD 卡、microSD 記憶卡

閃光燈: 閃光範圍 (ISO 感光度 (建議曝光指數) 設定為自動):

約 1.0 公尺到 10.2 公尺

[輸入和輸出接頭]

HDMI 接頭: HDMI 微型插孔

Multi 端子 *: USB 通訊

USB 通訊: Hi-Speed USB (USB 2.0)

麥克風接孔: \varnothing 3.5 公釐立體聲迷你接孔

耳機接孔: \varnothing 3.5 公釐立體聲迷你接孔

* 支援微型 USB 相容裝置。

CT

[觀景窗]

類型：電子觀景窗

總點數：1 440 000 點

畫面覆蓋率：100%

放大率：0.70 ×（等同於 35 公釐 - 格式相機）50 公釐鏡頭，無限遠對焦，-1 公尺⁻¹（屈光度）

眼點：約離目鏡 23 公釐，離目鏡框 21.5 公釐於 -1 公尺⁻¹（屈光度）

屈光度調整：

-4.0 公尺⁻¹ 到 +3.0 公尺⁻¹
（屈光度）

[螢幕]

LCD 螢幕：

7.5 公分（3.0 型）TFT 驅動

總點數：1 228 800 點

[電源，一般]

電源：充電電池 NP-FW50, 7.2 V

電源適配器 AC-UB10/UB10B/
UB10C/UB10D, 5 V

電池消耗量：

約 2.1 W（使用 LCD 螢幕拍攝時）

約 2.7 W（使用觀景窗拍攝時）

操作溫度：0 °C 至 40 °C

存放溫度：-20 °C 至 +60 °C

尺寸（符合 CIPA 標準）：

129.0 公釐 × 88.1 公釐 ×

102.2 公釐（長 / 高 / 寬）

質量（符合 CIPA 標準）（約）：

813 g（包括 NP-FW50 電池，
“Memory Stick PRO Duo”）

麥克風：立體聲

揚聲器：單聲

Exif Print：相容

PRINT Image Matching III：相容

[無線 LAN]

支援標準：IEEE 802.11 b/g/n

頻率：2.4GHz

支援安全協定：WEP/WPA-PSK/WPA2-
PSK

組態方式：WPS（Wi-Fi Protected
Setup）/ 手動

連接方式：基礎建設模式

NFC：NFC Forum Type 3 Tag 標準

電源適配器 AC-UB10/UB10B/ UB10C/UB10D

電源要求：AC 100 V 至 240 V，
50 Hz/60 Hz, 70 mA

輸出電壓：DC 5 V, 0.5 A

操作溫度：0 °C 至 40 °C

存放溫度：-20 °C 至 +60 °C

尺寸（約）：

50 公釐 × 22 公釐 × 54 公釐
（寬 / 高 / 長）

充電電池 NP-FW50

使用的電池：鋰離子電池

最大電壓：DC 8.4 V

額定電壓：DC 7.2 V

最大充電電壓：DC 8.4 V

最大充電電流：1.02 A

容量：典型 7.7 Wh（1 080 mAh）

最小 7.3 Wh（1 020 mAh）

最大尺寸（約）：

31.8 公釐 × 18.5 公釐 × 45 公釐
（寬 / 高 / 長）

設計及規格如有變更，恕不另行通知。

商標

- 下列標記是Sony Corporation的商標。

Cyber-shot、“Cyber-shot”、“Memory Stick XC-HG Duo”、“Memory Stick PRO Duo”、“Memory Stick PRO-HG Duo”、“Memory Stick Duo”、“Memory Stick Micro”、“PlayMemories Home”、“PlayMemories Home”標誌、“PlayMemories Online”、“PlayMemories Online”標誌、“PlayMemories Mobile”、“PlayMemories Mobile”標誌

- “AVCHD Progressive”與“AVCHD Progressive”標誌是Panasonic Corporation與Sony Corporation的商標。
- Dolby和雙D字符號是Dolby Laboratories的商標。
- HDMI和HDMI High-Definition Multimedia Interface, 以及HDMI商標是HDMI Licensing LLC在美國和其他國家的註冊商標。
- Windows是Microsoft Corporation在美國和/或其他國家的註冊商標。
- Mac是Apple Inc.的註冊商標。
- iOS是Cisco Systems, Inc.和/或其分公司在美國和一些其他國家的註冊商標。
- iPhone和iPad是Apple Inc.在美國和其他國家的註冊商標。
- SDXC標誌是SD-3C, LLC的商標。
- Android、Google Play是Google Inc.的註冊商標。
- Wi-Fi、Wi-Fi標誌、Wi-Fi PROTECTED SET-UP是Wi-Fi Alliance的註冊商標。
- N標記是NFC Forum, Inc.在美國和其他國家的註冊商標。
- DLNA和DLNA CERTIFIED是Digital Living Network Alliance的註冊商標。

- Facebook和“f”標誌是Facebook, Inc.的商標或註冊商標。
- YouTube和YouTube標誌是Google Inc.的商標或註冊商標。
- Eye-Fi是Eye-Fi, Inc.的商標。
- 此外, 在本說明書中所使用的系統和產品名稱通常是他們各自的開發商或製造商的商標或註冊商標。但是在本說明書中並未在所有場合使用™或®標誌。

CT

在我們的客戶支援網站可以查到本產品新增的資訊和常見問題的答案。

<http://www.sony.net/>



<http://www.sony.net/SonyInfo/Support/>

