

SONY®

4-170-840-12(1)

Digital Still Camera



LITHIUM ION **N**
TYPE

DSC-TX5 Instruction Manual

Cyber-shot

GB

English

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 upon your Sony dealer regarding this product.

Model No. DSC-TX5

Serial No. _____

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.

| Battery charger

Even if the CHARGE lamp is not lit, the battery charger is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet (wall socket). If some trouble occurs while using the battery charger, immediately shut off the power by disconnecting the plug from the wall outlet (wall socket).

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.rbc.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.

This Class B digital apparatus complies with Canadian ICES-003.

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.

Regulatory Information

Declaration of Conformity

Trade Name: SONY
Model No.: DSC-TX5
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 Part15 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.

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 Europe

| Notice for the customers in the countries applying EU Directives

The manufacturer of this product is Sony Corporation, 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan. The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

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

| Attention

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

| 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.

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.

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.

Notice for customers in the United Kingdom

A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, a fuse of the same rating as the supplied one and approved by ASTA or BSI to BS 1362, (i.e., marked with an  or  mark) must be used.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

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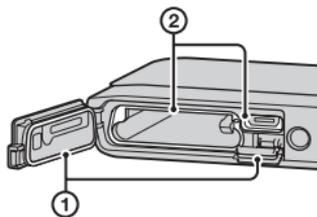
About water-proof, dust-proof, and shock-proof performance of the camera

This camera is equipped to be water-proof, dust-proof and shock-proof. Damage caused from misuse, abuse or failure to properly maintain the camera is not covered by the limited warranty.

- This camera is water-proof/dust-proof equivalent to IEC60529 IP58. The camera is operable up to a water depth of 3 m for 60 minutes.
 - Do not directly subject the camera to flowing water such as tap water.
 - Do not use in hot springs.
 - Use the camera in the recommended operating water temperature range of -10°C to $+40^{\circ}\text{C}$ (14°F to 104°F).
 - Conforming to MIL-STD 810F Method 516.5-Shock standards, this product has passed testing when dropped from a height of 1.5 m above a 5-cm thick plywood board*.
- * Depending on use conditions and circumstances, no guarantee is made regarding damage to, malfunction of, or the water-proof performance of this camera.
- As for dust-proof/shock-proof performance, there is no guarantee that the camera will not become scratched or dented.
 - Sometimes water-proof performance is lost if the camera is subjected to a strong shock such as from being dropped. We recommend the camera be inspected at an authorized repair shop for a fee.
 - Accessories supplied do not meet water-proof, dust-proof, and shock-proof specifications.

Notes before using the camera under/near water

- Make sure that no foreign matter such as sand, hair, or dirt gets inside the battery/memory card cover or multi-connector cover. Even a small amount of foreign matter may lead to water entering the camera.
- Confirm that the sealing gasket and its mating surfaces have not become scratched. Even a small scratch may lead to water entering the camera. If the sealing gasket or its mating surfaces become scratched, take the camera to an authorized repair shop to have the sealing gasket replaced for a fee.
- If dirt or sand gets on the sealing gasket or its mating surfaces, wipe the area clean with a soft cloth that will not leave behind any fibers. Do not use a sharp-pointed implement to prevent the sealing gasket and its mating surfaces from becoming scratched.



- ① Sealing gasket
- ② Surface contacting the sealing gasket

- Do not open/close the battery/memory card cover or multi-connector cover with wet or sandy hands or near water. There is a risk this will lead to sand or water getting inside. Before opening the cover, perform the procedure described in “Cleaning after using the camera under/near water”.
- Open the cover with the camera completely dry.
- Always confirm that the battery/memory card cover and multi-connector cover have been securely locked.

Notes on using the camera under/near water

- Do not subject the camera to shock such as from jumping into water.
- Do not open and close the battery/memory card cover or multi-connector cover while under/near water.
- Use a separately available housing (Marine Pack) if going more than 3 meters under water.
- This camera sinks in water. Place your hand through the wrist strap to prevent the camera from sinking.
- Faint, white, circular spots may appear in under-water flash photos due to reflections off of floating objects. This is not a malfunction.
- Select  (Underwater) in Scene Selection to shoot underwater with less distortion.
- If water drops or other foreign matter is present on the lens, you will be unable to record clear images.

Cleaning after using the camera under/near water

- Always clean the camera with water after use within 60 minutes, and do not open the battery/memory card cover before cleaning is finished. Sand or water may get inside places where it cannot be seen. If not rinsed, water-proof performance will be degraded.
- Allow the camera to sit in pure water poured into a cleaning bowl for more than 5 minutes. Then, gently shake the camera, press each button, slide the zoom (W/T) lever or the lens cover inside the water, to clean away any salt, sand or other matter lodged around the buttons or the lens cover.
- After rinsing, wipe away water drops with a soft cloth. Allow the camera to dry completely in a shady location with good ventilation. Do not blow dry with a hair dryer as there is a risk of deformation and/or degraded water-proof performance.
- This camera is constructed to drain water. Water will drain from openings around the ON/OFF (Power) button, zoom (W/T) lever, and other controls. After removing from water, place the camera on a dry cloth for a while to allow water to drain.
- Bubbles may appear when the camera is placed under water. This is not a malfunction.



- The camera body may become discolored if it comes in contact with sunscreen or suntan oil. If the camera does come in contact with sunscreen or suntan oil, quickly wipe it clean.
- Do not allow the camera to sit with salt water inside or on the surface. This may lead to corrosion or discoloration, and degradation of water-proof performance.
- To maintain the water-proof performance, we recommend that once a year you take the camera to your dealer, or to an authorized repair shop, to have the sealing gasket of the battery/memory card cover, or of the multi-connector cover replaced for a fee.

Refer to “Cyber-shot Handbook” (PDF) on supplied CD-ROM

For details on advanced operations, please read “Cyber-shot Handbook” (PDF) on the CD-ROM (supplied) using a computer.

Refer to “Cyber-shot Handbook” for in-depth instructions on shooting or viewing images and connecting the camera to your computer, printer or TV (page 24).



Checking the accessories supplied

- Battery charger BC-CSN/BC-CSNB (1)
- Power cord (mains lead) (not supplied in the USA and Canada) (1)
- Rechargeable battery pack NP-BN1 (1)
- Paint pen (1)
- USB, A/V cable for multi-use terminal (1)
- Wrist strap (1)
- CD-ROM (1)
 - Cyber-shot application software
 - “Cyber-shot Handbook”
- Instruction Manual (this manual) (1)
- Notes on the water-proofing (1)

Notes

- Accessories supplied do not meet water-proof, dust-proof, and shock-proof specifications.
- The wrist strap is already attached to the camera at the factory. Place your hand through the loop to prevent the camera from sinking or sustaining damage from being dropped.

Notes on using the camera

Changing the language setting

The screen language can be changed if necessary.

To change the language setting, touch **MENU**, then select  (Settings) →  (Main Settings) → [Language Setting].

Internal memory and memory card back up

Do not turn off the camera, remove the battery pack, or remove the memory card while the access lamp is lit. Otherwise, the internal memory data or the memory card may be damaged. Be sure to make a backup copy to protect your data.

On database files

When you insert a memory card without a database file into the camera and turn on the power, part of the memory card capacity is used to automatically create a database file. It may take some time until you can perform the next operation.

Notes on recording/playback

- To ensure stable operations of the memory card, we recommend that you use this camera to format any memory card being used with this camera for the first time. Note that formatting will erase all data recorded on the memory card. This data cannot be restored. Be sure to back-up any important data to a PC or other storage location.
- Before you start recording, make a trial recording to make sure that the camera is working correctly.
- Do not aim the camera at the sun or other bright light. It may cause the malfunction of the camera.
- Do not use the camera near a location that generates strong radio waves or emits radiation. Otherwise, the camera may not properly record or play back images.
- 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.
- Clean the flash surface before use. The heat of flash emission may cause dirt on the flash surface to become discolored or to stick to the flash surface, resulting in insufficient light emission.

Notes on the LCD screen

- The LCD screen is manufactured using extremely high-precision technology so 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 LCD screen. These dots are a normal result of the manufacturing process, and do not affect the recording.
- Do not press against the LCD screen. The screen may be discolored and that may cause a malfunction.

Please use Sony genuine accessories

If you use accessories manufactured by companies other than Sony, this could cause a camera trouble.

- Using other manufacturers' camera cases with magnets could cause a power supply trouble.

On camera's temperature

Your camera and battery may get warm 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 LCD screen before the power turns off or you can no longer record movies.

On image data compatibility

- The camera conforms with DCF (Design rule for Camera File system) universal standard established by JEITA (Japan Electronics and Information Technology Industries Association).
- Sony does not guarantee that the camera will play back images recorded or edited with other equipment, or that other equipment will play back images recorded with the camera.

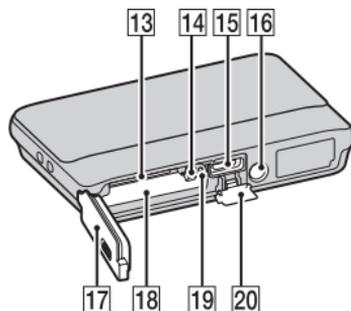
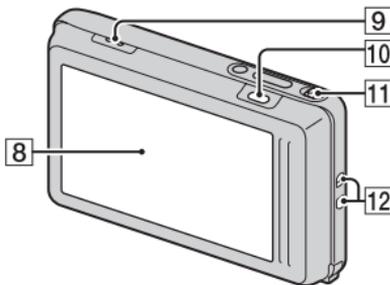
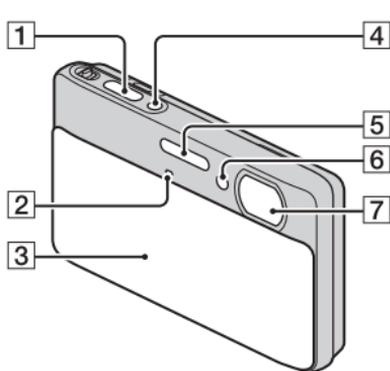
Warning on copyright

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 compensation for damaged content or recording failure

Sony cannot compensate for failure to record or loss or damage of recorded content due to a malfunction of the camera or recording media, etc.

Identifying parts

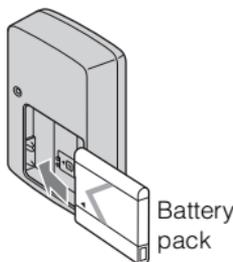


- 1 Shutter button
- 2 Microphone
- 3 Lens cover
- 4 ON/OFF (Power) button
- 5 Flash
- 6 Self-timer lamp/Smile Shutter lamp/AF illuminator
- 7 Lens
- 8 LCD screen/Touch panel
- 9 Speaker
- 10 ▶ (Playback) button
- 11 Zoom (W/T) lever
- 12 Hook for wrist strap
- 13 Memory card slot
- 14 Battery eject lever
- 15 Multi-connector
- 16 Tripod receptacle
 - 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.
- 17 Battery/Memory card cover
- 18 Battery insertion slot
- 19 Access lamp
- 20 Multi-connector cover

Charging the battery pack

1 Insert the battery pack into the battery charger.

- You can charge the battery even when it is partially charged.



2 Connect the battery charger to the wall outlet (wall socket).

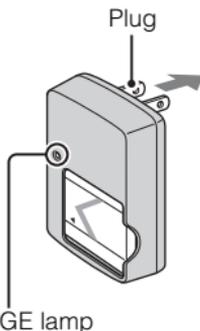
If you continue charging the battery pack for about one more hour after the CHARGE lamp turns off, the charge will last slightly longer (full charge).

CHARGE lamp

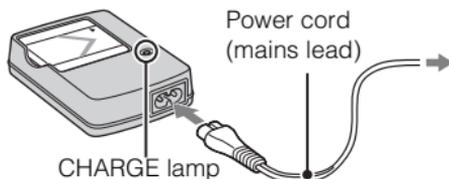
Lit: Charging

Off: Charging finished
(normal charge)

For customers in the USA and Canada



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



3 When charging is finished, disconnect the battery charger.

■ Charging time

Full charge time	Normal charge time
Approx. 245 min.	Approx. 185 min.

Notes

- The table above shows the time required to charge a fully depleted battery pack at a temperature of 25°C (77°F). Charging may take longer depending on conditions of use and circumstances.
- Connect the battery charger to the nearest wall outlet (wall socket).
- When charging is finished, disconnect the power cord (mains lead) from the wall outlet (wall socket), and remove the battery pack from the battery charger.
- Be sure to use the battery pack or the battery charger of the genuine Sony brand.

Battery life and number of still images you can record/view

	Battery life (min.)	No. of Images
Recording	Approx. 125	Approx. 250
Viewing	Approx. 250	Approx. 5000

Note

- The number of still images that can be recorded is based on the CIPA standard, and is for shooting under the following conditions.
(CIPA: Camera & Imaging Products Association)
 - [LCD Brightness] is set to [Normal].
 - Shooting once every 30 seconds.
 - The zoom is switched alternately between the W and T ends.
 - The flash strobos once every two times.
 - The power turns on and off once every ten times.
 - A fully charged battery pack (supplied) is used at an ambient temperature of 25°C (77°F).
 - Using Sony “Memory Stick PRO Duo” media (sold separately).

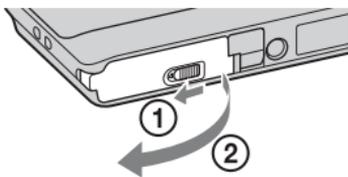


Using the camera abroad

You can use the camera and the battery charger (supplied) in any country or region where the power supply is within 100 V to 240 V AC, 50/60 Hz. Do not use an electronic transformer (travel converter). This may cause a malfunction.

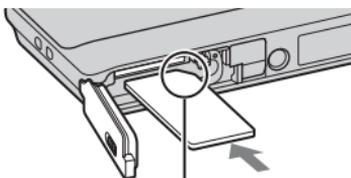
Inserting the battery pack/a memory card (sold separately)

1 Open the cover.



2 Insert a memory card (sold separately).

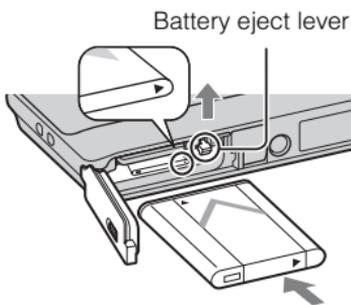
With the notched corner facing as illustrated, insert the memory card until it clicks into place.



Note the notched corner facing the correct direction.

3 Insert the battery pack.

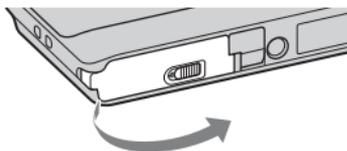
Align the battery pack with the guide inside the battery insertion slot. Then, pressing the battery eject lever with the edge of the battery pack in the direction of the arrow, insert the battery pack until the battery eject lever locks into place.



4 Close the cover.

Securely close the battery cover until you hear the slide lock on the cover catch in place and so that the yellow mark under the slide lock can no longer be seen.

- If foreign matter such as sand gets inside the cover, the sealing gasket may be scratched and it may cause a malfunction (page 8).



Memory card that you can use

The following memory cards are compatible with this camera: “Memory Stick PRO Duo” media, “Memory Stick PRO-HG Duo” media, “Memory Stick Duo” media, SD memory cards and SDHC memory cards. MultiMediaCard is not compatible.

In this manual, the term “Memory Stick Duo” media is used to refer to “Memory Stick PRO Duo” media, “Memory Stick PRO-HG Duo” media and “Memory Stick Duo” media.

When recording movies, it is recommended that you use the following memory cards:

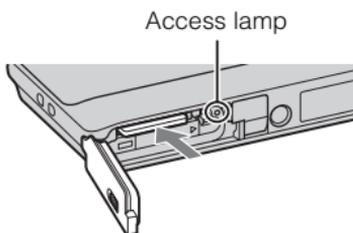
- MEMORY STICK PRO DUO (Mark2) (“Memory Stick PRO Duo” (Mark2) media)
- MEMORY STICK PRO-HG DUO (“Memory Stick PRO-HG Duo” media)
- SD memory card or SDHC memory card (Class 4 or faster)

Note

- This camera should be operated at between -10°C and $+40^{\circ}\text{C}$, but according to the type of memory card, the operating temperature may vary. For details, see the operating instructions supplied with the memory card.

For details on the number of images/time that can be recorded, see page 27.

To remove the memory card



Make sure that the access lamp is not lit, then push the memory card in once.

Note

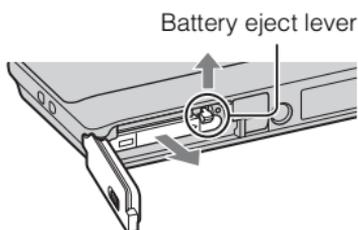
- Never remove the memory card/the battery pack when the access lamp is lit. This may cause damage to data or the memory card.

When there is no memory card inserted

Images are stored in the camera's internal memory (approximately 45 MB).

To copy images from the internal memory to a memory card, insert a memory card in the camera, then touch **MENU** →  (Settings) →  (Memory Card Tool) → [Copy].

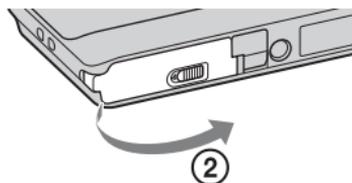
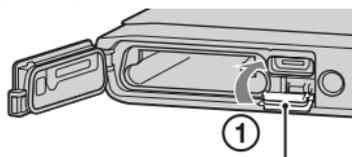
■ To remove the battery pack



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

■ Notes on the multi-connector cover

To open the multi-connector cover, first open the battery/memory card cover. Then, pull the notch on the left side of the multi-connector cover out with the fingernail. Close the multi-connector cover firmly, then the battery/memory card cover.



■ Checking the remaining battery charge

A remaining charge indicator appears on the LCD screen.



Notes

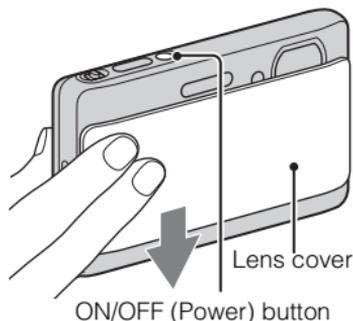
- It takes about one minute until the correct remaining charge indicator appears.
- The remaining charge indicator may not be correct under certain circumstances.
- When [Power Save] is set to [Standard] or [Stamina], if you do not operate the camera for a certain period of time while the power is on, the LCD screen becomes dark, then the camera turns off automatically (Auto power-off function).
- To keep clean battery pack terminal and prevent short-circuiting, place the battery pack in a plastic bag, etc. when carrying and storing to isolate it from other metal objects, etc.

Setting the clock

1 Lower the lens cover.

The camera is turned on.

- You can also turn on the camera by pressing the ON/OFF (Power) button.
- It may take time for the power to turn on and allow operation.



2 Select the desired date display format, then touch [OK].

3 Select Daylight Savings [On]/[Off], then touch [OK].

4 Select the item to be set, then set the value with ▲/▼ and touch [OK].

- Midnight is indicated as 12:00 AM, and noon as 12:00 PM.

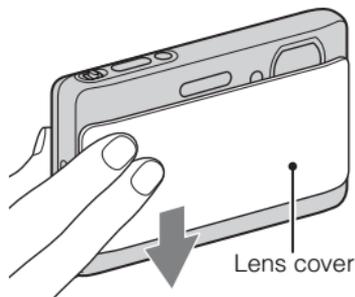
5 Select your desired area with ◀/▶, then touch [OK] → [OK].

■ Setting the date and time again

Touch **MENU** →  (Settings) →  (Clock Settings).

Shooting still images

- 1 Lower the lens cover, then confirm that **i** (REC Mode) is set to **i** (Intelligent Auto Adjustment).



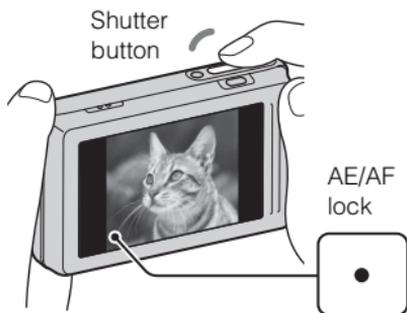
- 2 Hold the camera steady as illustrated.

- Slide the zoom (W/T) lever to the T side to zoom.
Slide to the W side to return.

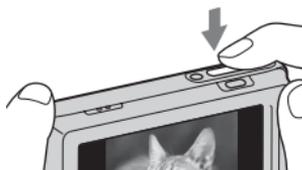


- 3 Press the shutter button halfway down to focus.

When the image is in focus, a beep sounds and the ● indicator lights.

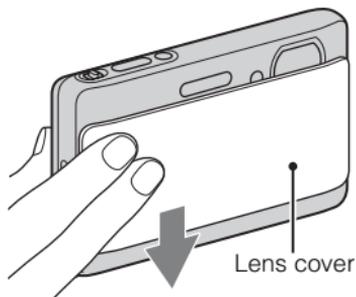


- 4 Press the shutter button fully down.

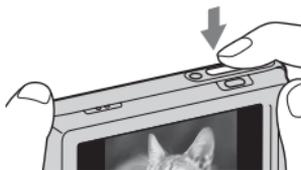


Shooting movies

- 1 Lower the lens cover, then touch  (REC Mode) →  (Movie Mode).



- 2 Press the shutter button fully down to start recording.

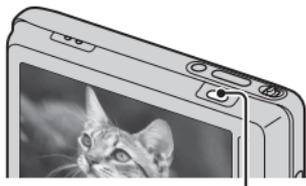


- 3 Press the shutter button fully down again to stop recording.
-

Viewing images

1 Press the (Playback) button.

- When you play back images on a memory card that have been recorded on other cameras, an Image Database registration screen appears.



 (Playback) button

■ Selecting next/previous image

Touch  (Next)/ (Previous) on the screen.

- To view movies, touch  (Playback) on the LCD screen.



■ Deleting an image

Touch  (Delete) → [This Image].

■ Returning to shooting images

Touch  on the LCD screen.

- You can also return to shooting mode by pressing the shutter button halfway down.

■ Turning off the camera

Close the lens cover.

- You can also turn off the camera by pressing the ON/OFF (Power) button.

Learning more about the camera

("Cyber-shot Handbook")

"Cyber-shot Handbook", which explains how to use the camera in detail, is included on the CD-ROM (supplied). Refer to it for in-depth instructions on the many functions of the camera.

■ For Windows users

- 1 Turn on your computer, and insert the CD-ROM (supplied) into the CD-ROM drive.
 - 2 Click [Cyber-shot Handbook].
 - 3 Start "Cyber-shot Handbook" from the shortcut on the desktop.
-

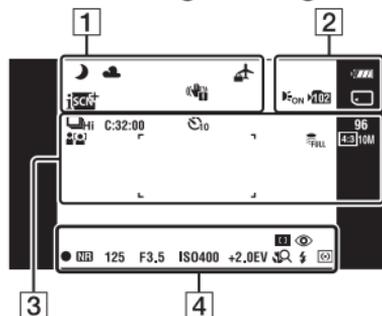
■ For Macintosh users

- 1 Turn on your computer, and insert the CD-ROM (supplied) into the CD-ROM drive.
 - 2 Select the [Handbook] folder and copy "Handbook.pdf" stored in the [GB] folder to your computer.
 - 3 After copying is complete, double-click "Handbook.pdf".
-

List of icons displayed on the screen

The displayed icon positions may differ according to the shooting mode.

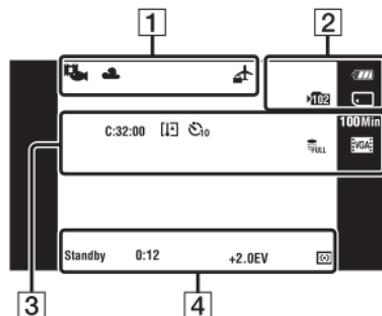
When shooting still images



2

Display	Indication
	Battery remaining
	Low battery warning
	AF illuminator
	Recording folder
	Recording/Playback Media (Memory card, internal memory)
	Zoom scaling

When shooting movies



3

Display	Indication
	Burst mode
C:32:00	Self-diagnosis display
	Temperature increase warning
	Self-timer
96	Number of recordable images
100 Min	Recordable time
	Face Detection
	Database file full/ Database file error warning
4:3 10M	Image size
	AF range finder frame
+	Spot metering cross-hairs

1

Display	Indication
	Scene Recognition icon
	White balance
	Destination
	Scene Recognition
	Vibration warning
	Movie shooting scene

Display	Indication
	Focus
	Red-eye reduction
	AE/AF lock
	NR slow shutter
125	Shutter speed
F3.5	Aperture value
ISO400	ISO number
+2.0EV	Exposure Value
	Close focus
	Flash mode
	Flash charging
	Metering mode
Standby	Recording a movie/ Standby a movie
0:12	Recording time (m:s)

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/Panoramic images

(Units: Images)

Capacity Size	Internal memory	Memory card formatted with this camera				
	Approx. 45 MB	2 GB	4 GB	8 GB	16 GB	32 GB
10M	9	402	808	1637	3334	6588
5M	14	582	1168	2366	4819	9524
VGA	284	11760	23600	47810	97350	192380
16:9(7M)	9	400	803	1626	3311	6543
16:9(2M)	47	1961	3934	7968	16220	32060
Panorama Wide (horizontal)	12	516	1035	2097	4270	8438
Panorama Standard (horizontal)	15	625	1255	2543	5178	10230
Panorama Wide (vertical)	10	423	849	1719	3502	6920
Panorama Standard (vertical)	10	442	887	1797	3660	7232

Notes

- When the number of remaining shootable images is greater than 99,999, the “>99999” indicator appears.
- When an image shot with other cameras is played back on this camera, the image may not appear in the actual image size.

■ 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.

(Units: hour : minute : second)

Capacity Size	Internal memory	Memory card formatted with this camera				
	Approx. 45 MB	2 GB	4 GB	8 GB	16 GB	32 GB
1280×720(Fine)	—	0:27:50	0:56:00	1:53:40	3:51:40	7:37:50
1280×720(Standard)	—	0:40:30	1:21:50	2:45:50	5:37:50	11:07:50
VGA	0:01:40	1:21:20	2:43:40	5:31:50	11:15:50	22:15:50

Note

- The continuous shooting time differs according to the shooting conditions (temperature, etc.). The value above applies when [LCD Brightness] is set to [Normal].

Precautions

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.
- 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 strong magnetic place

On carrying

Do not sit down in a chair or other place with the camera in the back pocket of your trousers or skirt, as this may cause malfunction or damage the camera.

On cleaning

Cleaning the LCD screen

Wipe the screen surface with an LCD cleaning kit (sold separately) to remove fingerprints, dust, etc.

Cleaning the lens

Wipe the lens with a soft cloth to remove fingerprints, dust, 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, benzene, alcohol, disposable cloths, insect repellent, sunscreen or insecticide.
- Do not touch the camera with any of the above on your hand.
- Do not leave the camera in contact with rubber or vinyl for a long time.

On operating temperatures

Your camera is designed for use under the temperatures between -10°C and $+40^{\circ}\text{C}$ (14°F and 104°F). Shooting in extremely cold or hot places that exceed this range is not recommended.

On the internal rechargeable backup battery

This camera has an internal rechargeable battery for maintaining the date and time and other settings regardless of whether the power is on or off.

This rechargeable battery is continually charged as long as you are using the camera. However, if you use the camera for only short periods, it discharges gradually, and if you do not use the camera at all for about one month it becomes completely discharged. In this case, be sure to charge this rechargeable battery before using the camera.

However, even if this rechargeable battery is not charged, you can still use the camera, but the date and time will not be indicated.

Charging method of the internal rechargeable backup battery

Insert charged battery pack in the camera, and then leave the camera for 24 hours or more with the power off.

Specifications

Camera

[System]

Image device: 7.59 mm (1/2.4 type)

Exmor R CMOS sensor

Total pixel number of camera:

Approx. 10.6 Megapixels

Effective pixel number of camera:

Approx. 10.2 Megapixels

Lens: Carl Zeiss Vario-Tessar 4× zoom lens

f = 4.43 mm – 17.7 mm (25 mm – 100 mm (35 mm film equivalent))

F3.5 (W) – F4.6 (T)

When shooting movies (16:9):

28 mm – 112 mm

When shooting movies (4:3):

34 mm – 136 mm

Exposure control: Automatic exposure, Scene Selection (12 modes)

White balance: Automatic, Daylight, Cloudy, Fluorescent 1/2/3,

Incandescent, Flash, One push

Underwater White Balance: Auto,

Underwater 1/2, One push

File format:

Still images: JPEG (DCF Ver. 2.0, Exif Ver. 2.21, MPF Baseline)

compliant, DPOF compatible

Movies: MPEG-4 Visual

Recording media: Internal Memory (approx. 45 MB), “Memory Stick Duo” media, SD memory cards, SDHC memory cards (Class 4, 6, 10)

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

Approx. 0.08 m to 2.9 m (3 1/4

inches to 9 ft 6 1/4 inches) (W)/

approx. 0.5 m to 2.4 m (1 ft 7 3/4

inches to 7 ft 10 1/2 inches) (T)

[Input and Output connectors]

Multi-connector: Type3 (AV-out (SD/HD Component)/USB/DC-in):

Video output

Audio output (Stereo)

USB communication

USB communication: Hi-Speed USB (USB 2.0 compliant)

[LCD screen]

LCD panel: Wide (16:9), 7.5 cm (3.0 type) TFT drive

Total number of dots: 230 400 (960 × 240) dots

[Power, general]

Power: Rechargeable battery pack

NP-BN1, 3.6 V

AC-LS5 AC Adaptor (sold separately), 4.2 V

Power consumption (during shooting):
1.0 W

Operating temperature: -10°C to
 $+40^{\circ}\text{C}$ (14°F to 104°F)

Storage temperature: -20°C to $+60^{\circ}\text{C}$
(-4°F to $+140^{\circ}\text{F}$)

Dimensions: $94.0 \times 56.9 \times 17.7$ mm
($3\ 3/4 \times 2\ 1/4 \times 23/32$ inches)
(W/H/D, excluding protrusions)

Mass (including NP-BN1 battery pack
and a memory card):
Approx. 144 g (5.1 oz)

Microphone: Monaural

Speaker: Monaural

Exif Print: Compatible

PRINT Image Matching III:
Compatible

PictBridge: Compatible

Water-proof/dust-proof performance:
Equivalent to IEC60529 IP58 (The
camera is operable up to a water
depth of 3 m for 60 minutes.)

Shock-proof performance: Conforming
to MIL-STD 810F Method 516.5-
Shock standards, this product has
passed testing when dropped from
a height of 1.5 m above a 5-cm
thick plywood board.

BC-CSN/BC-CSNB battery charger

Power requirements: AC 100 V to
240 V, 50/60 Hz, 2 W

Output voltage: DC 4.2 V, 0.25 A

Operating temperature: 0°C to 40°C
(32°F to 104°F)

Storage temperature: -20°C to $+60^{\circ}\text{C}$
(-4°F to $+140^{\circ}\text{F}$)

Dimensions: Approx. $55 \times 24 \times 83$ mm
($2\ 1/4 \times 31/32 \times 3\ 3/8$ inches)
(W/H/D)

Mass: Approx. 55 g (1.9 oz)

Rechargeable battery pack NP-BN1

Used battery: Lithium-ion battery

Maximum voltage: DC 4.2 V

Nominal voltage: DC 3.6 V

Maximum charge voltage: DC 4.2 V

Maximum charge current: 0.9 A

Capacity:

typical: 2.3 Wh (630 mAh)

minimum: 2.2 Wh (600 mAh)

Design and specifications are subject to
change without notice.

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