

SONY®

4-196-231-11(1)

Digital Still Camera



AVCHD

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

DSC-TX9

Instruction Manual

Cyber-shot

GB

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. DSC-TX9

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).

The power cord (mains lead), if supplied, is designed specifically for use with this camera only, and should not be used with other electrical equipment.

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-TX9
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.

Note: DSC-TX9 is to be used with the Multi-output Stand Model UC-TG.

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.

Table of contents

Getting started

Refer to “Cyber-shot Handbook” (PDF) on supplied CD-ROM.....	8
Checking the accessories supplied.....	8
Notes on using the camera.....	8
Identifying parts	12
Battery charging and the number of images/time that can be recorded	13
Inserting the battery pack/a memory card (sold separately)...	16
Setting the date and time/display color	19

Shooting/viewing images

Shooting still images	21
Shooting movies.....	22
Viewing images.....	23

“Cyber-shot Handbook” (PDF)

Learning more about the camera (“Cyber-shot Handbook”).....	24
---	----

Others

List of icons displayed on the screen	25
Number of still images and recordable time of movies	27
Precautions	29
Specifications.....	31

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 Cable (1)
- AV Cable (1)
- Multi-output stand (1)
- Wrist strap (1)
- CD-ROM (1)
 - Cyber-shot application software
 - “Cyber-shot Handbook”
- Instruction Manual (this manual) (1)

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.

Functions built into this camera

- This manual describes each of the functions of TransferJet-compatible/incompatible devices, 1080 60i-compatible devices and 1080 50i-compatible devices.

To check if your camera supports the TransferJet function, and whether it is a 1080 60i-compatible device or 1080 50i-compatible device, check for the following marks on the bottom of the camera.

TransferJet-compatible device:  (TransferJet)

1080 60i-compatible device: 60i

1080 50i-compatible device: 50i

- Do not watch 3D images shot with this camera for extended periods of time on 3D-compatible monitors.
- When you view 3D images shot with this camera on a 3D-compatible monitors, you may experience discomfort in the form of eye strain, fatigue, or nausea. To prevent these symptoms, we recommend that you take regular breaks. However, you need to determine for yourself the length and frequency of breaks you require, as they vary according to the individual. If you experience any type of discomfort, stop viewing the 3D images until you feel better, and consult a physician as necessary. Also refer to the operating instructions supplied with the device or software you have connected or are using with this camera. Note that a child's eyesight is still at the development stage (particularly children below the age of 6). Consult a pediatrician or ophthalmologist before letting your child view 3D images, and make sure he/she observes the above precautions when viewing such images.

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 backup any important data to a PC or other storage location.
- If you repeatedly record/delete images, fragmentation of data may occur on the memory card. Movies may not be able to be saved or recorded. In such a case, save your images to a PC or other storage location, then [Format].
- Before you start recording, make a trial recording to make sure that the camera is working correctly.
- The camera is neither dust-proof, nor splash-proof, nor water-proof. Read "Precautions" (page 29) before operating the camera.

- Avoid exposing the camera to water. If water enters inside the camera, a malfunction may occur. In some cases, the camera cannot be repaired.
- 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.
- Using the camera in sandy or dusty locations may cause malfunctions.
- 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.
- If water droplets or other liquids splash on the LCD screen and make it wet, immediately wipe off the screen with a soft cloth. Leaving liquids on the LCD screen surface can harm the quality and cause a malfunction.
- 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.

Importing AVCHD movies into a computer

When importing movies recorded in AVCHD format into a computer, for Windows use the “PMB” software on the CD-ROM (supplied) or for Macintosh use the “iMovie” software bundled with Macintosh computers.

Notes when playing movies on other devices

- This camera uses MPEG-4 AVC/H.264 High Profile for AVCHD format recording.

Movies recorded in AVCHD format with this camera cannot be played by the following devices.

- Other devices compatible with AVCHD format that does not support High Profile
- Devices incompatible with the AVCHD format

This camera also uses MPEG-4 AVC/H.264 Main Profile for MP4 format recording.

For this reason, movies recorded in MP4 format with this camera cannot be played on devices other than those that support MPEG-4 AVC/H.264.

Discs recorded with HD (high definition) image quality

This camera captures high definition footage in the AVCHD format. DVD media containing AVCHD footage should not be used with DVD based players or recorders, as the DVD player/recorder may fail to eject the media and may erase its contents without warning. DVD media containing AVCHD footage may be played on a compatible Blu-ray Disc™ player/recorder or other compatible device.

Warning on copyright

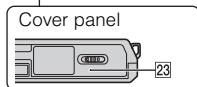
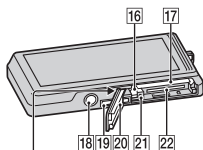
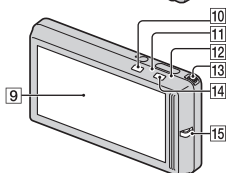
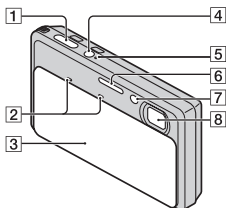
Television programs, films, videotapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provisions of the copyright laws.

No compensation for damaged content or recording failure

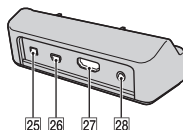
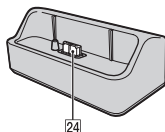
Sony cannot compensate for failure to record or loss or damage of recorded content due to a malfunction of the camera or recording media, etc.

Identifying parts

Camera



Multi-output stand

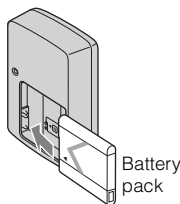


- 1 Shutter button
- 2 Microphone
- 3 Lens cover
- 4 ON/OFF (Power) button
- 5 Power lamp
- 6 Flash
- 7 Self-timer lamp/Smile Shutter lamp/AF illuminator
- 8 Lens
- 9 LCD screen/Touch panel
- 10 (Playback) button
- 11 (Still) mode lamp
- 12 (Movie) mode lamp
- 13 Zoom (W/T) lever
- 14 (Still)/(Movie) mode button
- 15 Hook for wrist strap
- 16 Battery eject lever
- 17 Battery insertion slot
- 18 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.
- 19 Multi-connector
- 20 Battery/Memory card cover
- 21 Access lamp
- 22 Memory card slot
- 23 (TransferJet™) mark
- 24 Camera connector terminal
- 25 DC IN jack
- 26 USB jack
- 27 HDMI jack
- 28 A/V OUT (STEREO) jack

Battery charging and the number of images/time that can be recorded

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).

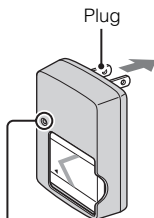
If you continue charging the battery pack for about one more hour after the CHARGE lamp turns off, the charge will last slightly longer (full charge).

CHARGE lamp

Lit: Charging

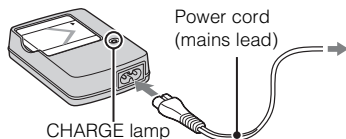
Off: Charging finished
(normal charge)

For customers in the USA and Canada



CHARGE lamp

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) and the battery charger 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 images you can record/view

	Battery life (min.)	No. of Images
Shooting still images	Approx. 115	Approx. 230
Viewing still images	Approx. 180	Approx. 3600
Shooting movies	Approx. 60	—

Notes

- The number of images that can be recorded is an approximate number when shooting with a fully charged battery pack. The number may be less depending on the circumstances.
- The number of images that can be recorded is when shooting under the following conditions:
 - Using Sony “Memory Stick PRO Duo” media (sold separately).
 - When a fully charged battery pack (supplied) is used at an ambient temperature of 25°C (77°F).

- 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 strobes once every two times.
 - The power turns on and off once every ten times.
- The battery life for movies is when shooting under the following conditions:
 - Recording mode: AVCHD HQ
 - When continuous shooting ends because of set limits (page 28), press the shutter button down again and continue shooting. Shooting functions such as the zoom do not operate.

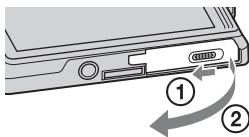


Using the camera abroad

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. An electronic transformer (travel converter) is unnecessary. Do not use an electronic transformer, as this may cause a malfunction.

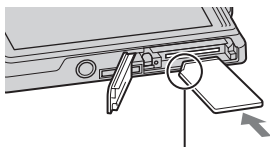
Inserting the battery pack/a memory card (sold separately)

1 Open the cover.



2 Insert a memory card (sold separately).

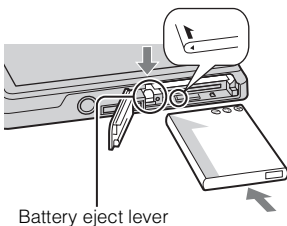
With the notched corner facing as illustrated, insert the memory card until it clicks into place.



Note the notched corner facing the correct direction.

3 Insert the battery pack.

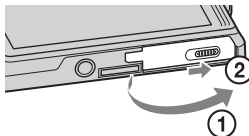
Align the battery pack with the guide arrow inside the battery insertion slot. Then, insert the battery pack until the battery eject lever locks into place.



Battery eject lever

4 Close the cover.

- Closing the cover with the battery inserted incorrectly may damage the camera.



■ 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 card, SDHC memory card and SDXC memory card. However, all memory cards are not guaranteed to work with this camera. MultiMediaCard cannot be used.

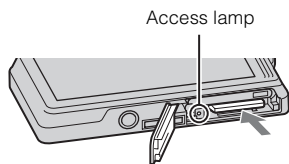
- In this manual, the term “Memory Stick Duo” media is used to refer to “Memory Stick PRO Duo” media, “Memory Stick PRO-HG Duo” media and “Memory Stick Duo” media, and the term “SD card” is used to refer to SD memory card, SDHC memory card and SDXC memory card.
- When recording movies, it is recommended 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, SDHC memory card or SDXC memory card (Class 4 or faster)

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

Note

- Images recorded on an SDXC memory card cannot be transferred or played back on computers or AV devices that are not exFAT-compatible, even when the camera is connected to the computer or AV device using a USB cable. Before connecting, make sure that the device is exFAT-compatible. If connected to a device that is not exFAT-compatible, a format drive request may appear. Do not format the drive, or all data will be lost. (exFAT is the file system used by SDXC memory cards.)

■ To remove the memory card



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

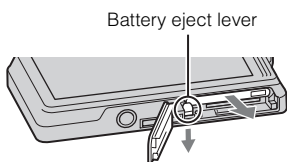
Note

- 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 32 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.

■ Checking the remaining battery charge

A remaining charge indicator appears on the LCD screen.



Notes

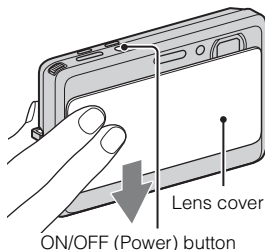
- It takes about one minute until the correct remaining charge indicator appears.
- The remaining charge indicator may not be correct under certain circumstances.
- When [Power Save] is set to [Standard] or [Stamina], if you do not operate the camera for a certain period of time while the power is on, 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 date and time/display color

1 Lower the lens cover.

The camera is turned on. The power lamp lights up only when the camera starts up.

- 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].

6 Select a desired display color, then touch [OK].

■ Superimposing the date on the images

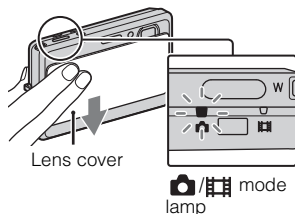
The camera does not have a feature for superimposing dates on images. By using “PMB” in the CD-ROM (supplied), you can print or save images with the date. For details, see the “PMB Help”.

■ Setting the date and time again

The date and time setup screen appears automatically only when the power is turned on the first time. To reset the date and time, display the date and time setup screen by touching **MENU** →  (Settings) →  (Clock Settings) → [Date & Time Setting].

Shooting still images

- 1 Lower the lens cover, then confirm that the  (Still) of the /  mode lamp is on.



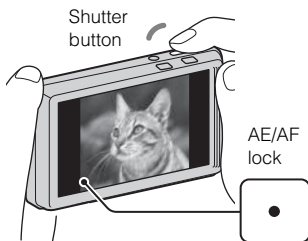
- 2 Hold the camera steady as illustrated.

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

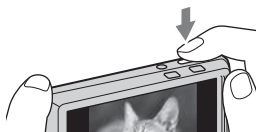


- 3 Press the shutter button halfway down to focus.

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

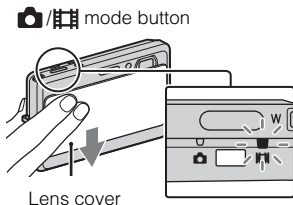


- 4 Press the shutter button fully down.

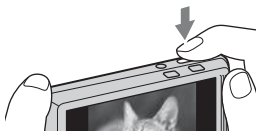


Shooting movies

- 1 Lower the lens cover, then press the / mode button to set the shooting mode to  (Movie).



- 2 Press the shutter button to start recording.



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

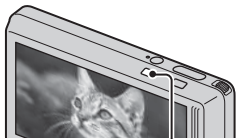
■ Changing the Movie Format

Touch **MENU** →  (Settings) →  (Shooting Settings), then select [Movie format].

Viewing images

1 Press the (Playback) button.

- When you play back images on a memory card that were recorded on other cameras, the database file registration screen appears.



 (Playback) button

■ Selecting next/previous image

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

- To play back movies, touch  (Playback) in the center of the LCD screen.
- To zoom in, touch the image being played back.



■ 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 [Handbook].
 - 3 Click [Install].
 - 4 Start "Cyber-shot Handbook" from the shortcut on the desktop.
-

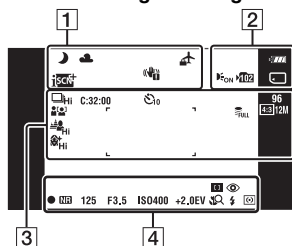
■ For Macintosh users

- 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

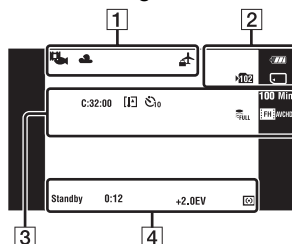


Display	Indication
	Anti Blink

2

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

When shooting movies



3

Display	Indication
	Burst settings
	Self-diagnosis display
	Temperature increase warning
	Self-timer
	Number of recordable images
	Recordable time
	Face Detection
	Defocus Effect
	Soft Skin Effect

1

Display	Indication
	Scene Recognition icon
	White balance
	Destination
	Scene Recognition
	Overlay icon for Superior Auto Adjustment
	Vibration warning
	Movie shooting scene

Display	Indication
 FULL	Database file full/ Database file error warning
 12M	Image size/Panorama image size/Quality
	AF range finder frame
	Spot metering cross- hairs

4

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
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

(Units: Images)

Capacity Size	Internal memory	Memory card formatted with this camera				
	Approx. 32 MB	2 GB	4 GB	8 GB	16 GB	32 GB
12M	6	344	690	1397	2846	5625
8M	8	482	967	1959	3990	7884
5M	10	582	1168	2366	4819	9524
VGA	207	11760	23600	47810	97350	192380
16:9(9M)	6	382	766	1552	3160	6246
16:9(2M)	32	1838	3688	7470	15210	30060

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 at one time. The maximum size of an MP4-format movie file is up to approximately 2GB.

(Units: hour : minute : second)

Capacity Quality/Size	Internal memory	Memory card formatted with this camera				
	Approx. 32 MB	2 GB	4 GB	8 GB	16 GB	32 GB
AVC HD 17M FH	—	0:14:00	0:28:30	0:58:10	1:58:50	3:55:20
AVC HD 9M HQ	—	0:28:00	0:57:00	1:56:20	3:57:50	7:50:40
MP4 12M	—	0:20:40	0:41:40	1:24:40	2:52:30	5:41:00
MP4 6M	—	0:40:40	1:21:50	2:45:50	5:37:50	11:07:50
MP4 3M	0:01:10	1:15:10	2:31:10	5:06:20	10:23:50	20:33:00

Note

- The recordable time of movies may vary depending on the shooting conditions (temperature, etc.).

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
- 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.

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 0°C and 40°C (32°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.

Eye-Fi card

As of March 2010, Eye-Fi cards are sold in the U.S.A., Canada, Japan and some countries in the European Union.

- For more information on the Eye-Fi card, contact the manufacturer or seller of Eye-Fi card directly.
- Eye-Fi cards are permitted only in the countries and regions in which they were purchased. You may be held liable due to local restrictions.

Specifications

Camera

[System]

Image device: 7.81 mm (1/2.3 type)

Exmor R CMOS sensor

Total pixel number of camera:

Approx. 12.8 Megapixels

Effective pixel number of camera:

Approx. 12.2 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):

27 mm – 108 mm

When shooting movies (4:3):

33 mm – 132 mm

Exposure control: Automatic exposure, Scene Selection (16 modes)

White balance: Auto, Daylight,

Cloudy, Fluorescent 1/2/3,

Incandescent, Flash, One push

Underwater White Balance: Auto,

Underwater 1/2, One push

Signal format:

For 1080 50i: PAL color, CCIR standards HDTV 1080/50i specification

For 1080 60i: NTSC color, EIA standards HDTV 1080/60i specification

File format:

Still images: JPEG (DCF Ver. 2.0, Exif Ver. 2.3, MPF Baseline)

compliant, DPOF compatible

3D still images: MPO (MPF

Extended (Disparity Image)) compliant

Movies (AVCHD format):

AVCHD Ver. 1.0 compliant

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: Internal Memory (approx. 32 MB), “Memory Stick Duo” media, SD card

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

Approx. 0.08 m to 3.8 m (3 1/4 inches to 12 ft 5 5/8 inches) (W)/ approx. 0.5 m to 3.1 m (1 ft 7 3/4 inches to 10 ft 2 1/8 inches) (T)

[Input and Output connectors]

Multi-connector: Type2c (AV-out (SD/HD Component)/HDMI/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), 8.8 cm
(3.5 type) TFT drive

Total number of dots: 921 600 (1 920 ×
480) 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: 0°C to 40°C
(32°F to 104°F)

Storage temperature: -20°C to +60°C
(-4°F to +140°F)

Dimensions: 97.8 × 59.5 × 17.5 mm
(3 7/8 × 2 3/8 × 23/32 inches) (W/
H/D, excluding protrusions)

Mass (including NP-BN1 battery pack
and “Memory Stick Duo” media):
Approx. 149 g (5.3 oz)

Microphone: Stereo

Speaker: Monaural

Exif Print: Compatible

PRINT Image Matching III:
Compatible

**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°C
(-4°F to +140°F)

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

Mass: Approx. 55 g (1.9 oz)

Multi-output stand

[Input and output jacks]

A/V OUT (STEREO) jack (Stereo):

Mini jack

⚡ (USB) jack: Mini-B jack

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

HDMI jack

DC IN jack

Camera connector

**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.

Trademarks

- The following marks are trademarks of Sony Corporation.

Cyber-shot, “Cyber-shot,”

“Memory Stick,”  “Memory Stick PRO,” **MEMORY STICK PRO**, “Memory Stick Duo,”

MEMORY STICK DUO, “Memory Stick PRO Duo,”

MEMORY STICK PRO DUO, “Memory Stick PRO-HG Duo,”

MEMORY STICK PRO-HG DUO, “Memory Stick Micro,” “MagicGate,”

MAGIC GATE, “BRAVIA,” “PhotoTV HD,” “DVDirect,”

TransferJet, TransferJet logos

- “Blu-ray Disc” and the logo are trademarks.
- “AVCHD” and “AVCHD” logotype are trademarks of Panasonic Corporation and Sony Corporation.
- Dolby and the double-D symbol are trademarks of Dolby Laboratories.
- HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
- Microsoft, Windows, DirectX and Windows Vista are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Macintosh, Mac OS and “iMovie” are trademarks or registered trademarks of Apple Inc.
- Intel and Pentium are trademarks or registered trademarks of Intel Corporation.
- SDXC and SDHC logos are trademarks of SD-3C, LLC.
- MultiMediaCard is a trademark of the MultiMediaCard Association.

- “PlayStation” is a registered trademark of Sony Computer Entertainment Inc.
- Adobe and Reader are either trademarks or registered trademarks of Adobe Systems Incorporated in the United States and/or other countries.
- The OBEX word mark and logo are registered trademarks and are owned by Infrared Data Association (IrDA®).
- 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 ™ 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/>

Printed on 70% or more recycled paper using VOC (Volatile Organic Compound)-free vegetable oil based ink.

Printed in Japan



4196231110