SONY

Digital Still Camera







DSC-T110/T110D Instruction Manual

Cyber-shot

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 your Sony dealer regarding this product.

Model No.	DSC-T110/T110D
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.
- \bullet Do not short circuit and do not allow metal objects to come into contact with the battery $_{\text{GB}}$ 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.rbrc.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-T110, DSC-T110D 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 p or p 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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Refer to "Cyber-shot Handbook" (PDF) on supplied CD-ROM

For details on advanced operations, please read "Cybershot 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 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) -



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.

To check if your camera supports the TransferJet function, check for the following mark on the bottom of the camera.

TransferJet-compatible device: **▼** (TransferJet)

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.
- 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 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 LCD screen before the power turns off or you can no longer record movies. In such a case, wait until the camera and battery completely cool down, with the power turned off. If you turn the power on before they completely cool down, the power may turn off again or you may be unable to record movies.

On battery charging

In rare cases, a battery that has not been used for a long time may not be charged optimally. This is due to characteristics of the battery and not a malfunction. Charge the battery again.

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.

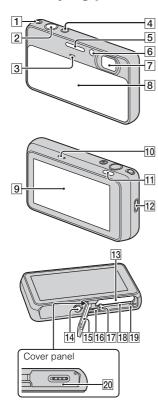
Warning on copyright

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 Zoom (W/T) lever
- 2 Shutter button
- 3 Microphone
- 4 ON/OFF (Power) button/ Power lamp
- 5 Flash
- 6 Self-timer lamp/Smile Shutter lamp/AF illuminator
- 7 Lens
- 8 Lens cover
- 9 LCD screen/Touch panel
- 10 Speaker
- 11 (Playback) button
- 12 Hook for wrist strap
- 13 Battery insertion slot
- 14 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.
- 15 Battery/Memory card cover
- 16 Multi-connector (Type3a)
- 17 Battery eject lever
- 18 Memory card slot
- 19 Access lamp
- 20 **▼** (TransferJetTM) mark

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

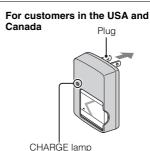
- 1 Insert the battery pack into the battery charger.
 - You can charge the battery even when it is partially charged.



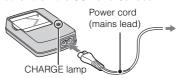
2 Connect the battery charger to the wall outlet (wall socket).

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 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. 250	Approx. 5000
Shooting movies	Approx. 90	_

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" (Mark2) 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: 720 FINE
 - 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.



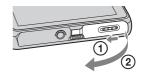
Using the camera abroad

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 Hz/ 60 Hz.

An electronic voltage transformer is unnecessary and its use may cause a malfunction.

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

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.



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 Dup (Mark2) ("Memory Stick PRO Duo" (Mark2) media)
 - MEMORY STICK PRO-HG DUD ("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

Access lamp

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 23 MB). To copy images from the internal memory to a memory card, insert a memory card in the camera, then touch $\boxed{\texttt{MENU}} \rightarrow \boxed{\clubsuit}$ (Settings) $\rightarrow \boxed{\clubsuit}$ (Memory Card Tool) \rightarrow [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

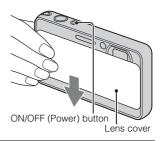
- It takes about one minute until the correct remaining charge indicator appears.
- The remaining charge indicator may not be correct under certain circumstances.
- When [Power Save] is set to [Standard] or [Stamina], if you do not operate the camera for a certain period of time while the power is on, 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 Follow the instructions on the screen to select a desired display color and display resolution mode.
- 7 When the introductory message for the In-Camera Guide appears, touch [OK].

Superimposing the date on the images

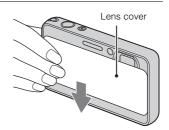
The camera does not have a feature for superimposing dates on images. By using "PMB" in the CD-ROM (supplied), you can print or save images with the date. For details, see the "PMB Help".

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 $\boxed{\text{MENU}} \rightarrow \boxed{\bullet}$ (Settings) $\rightarrow \bullet$ (Clock Settings) \rightarrow [Date & Time Setting].

Shooting still images

1 Lower the lens cover.



- 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 in (REC Mode) → III (Movie Mode).



- 2 Press the shutter button to start recording.
 - You can zoom by sliding the zoom (W/T) lever.
- 3 Press the shutter button again to stop recording.

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.



Selecting next/previous image

Touch \blacktriangleright (Next)/ \blacktriangleright (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 前 (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

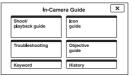
Close the lens cover.

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

In-Camera Guide

This camera contains an internal function guide. This allows you to search the camera's functions according to your needs.





- 1 Touch ? (In-Camera Guide).
- 2 Select a search method.

Shoot/playback guide: Search for various operation functions in shooting/viewing mode.

Icon guide: Search the function and meaning of displayed icons. **Troubleshooting:** Search common problems and their solution. **Objective guide:** Search functions according to your needs.

Keyword: Search functions by key words.

History: Display the last 10 items displayed in the In-Camera Guide.

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".

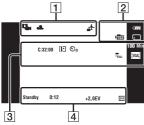
List of icons displayed on the screen

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





When shooting movies



1

Display	Indication
)	Scene Recognition icon
4	White balance
ORO STD	DRO
☆	Destination
iscn	Scene Recognition
((4 177	Vibration warning
	Movie shooting scene (DSC-T110 only)
•	Anti Blink

2

Display	Indication
Ę 7 77	Battery remaining
	Low battery warning
E ON	AF illuminator
▶10 2	Recording folder
$\overline{\bullet}$	Recording/Playback Media (Memory card, internal memory)
ি	Eye-Fi Mode display
x1.3 s Q PQ	Zoom scaling

3

Display	Indication		
	Burst settings		
C:32:00	Self-diagnosis display		
[li	Temperature increase warning		
७ ₀	Self-timer		
96	Number of recordable images		
100 Min	Recordable time		
₽ [•]	Face Detection		
FULL	Database file full/ Database file error warning		
4:3 16M	Image size/ Panorama image size		
r ,	AF range finder frame		

ひと

Display	Indication
+	Spot metering cross- hairs

4

Display	Indication
[]	Focus
③	Red-eye reduction
•	AE/AF lock
NR	NR slow shutter
125	Shutter speed
F3.5	Aperture value
ISO400	ISO number
+2.0EV	Exposure Value
1 0	Close focus
4	Flash mode
4 •	Flash charging
0	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	Internal memory	Memory card formatted with this camera				
Size	Approx. 23 MB	2 GB	4 GB	8 GB	16 GB	32 GB
16M	3	265	530	1050	2100	4250
10M	5	395	790	1600	3200	6400
5M	7	570	1100	2300	4650	9300
VGA	145	11500	23000	46500	94000	188000
16:9(12M)	4	325	650	1300	2600	5200
16:9(2M)	23	1800	3600	7300	14500	29000

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 or up to approximately 2 GB of data at one time.

(h (hour), m (minute), s (second))

Capacity	Internal memory	Memory card formatted with this camera					
Size	Approx. 23 MB	2 GB 4 GB 8 GB 16 GB 32 GB					
1280×720	-	0 h 25 m	0 h 55 m	1 h 50 m	3 h 40 m	7 h 25 m	
(Fine)		(0 h 20 m)	(0 h 40 m)	(1 h 20 m)	(2 h 45 m)	(5 h 30 m)	
1280×720	-	0 h 40 m	1 h 20 m	2 h 40 m	5 h 25 m	10 h 50 m	
(Standard)		(0 h 25 m)	(0 h 55 m)	(1 h 50 m)	(3 h 40 m)	(7 h 25 m)	
VGA	0 m 52 s	1 h 20 m	2 h 40 m	5 h 25 m	10 h 50 m	21 h 45 m	
	(0 m 39 s)	(1 h 0 m)	(2 h 0 m)	(4 h 0 m)	(8 h 5 m)	(16 h 20 m)	

The number in () is the minimum recordable time.

Note

- Your camera uses the VBR (Variable Bit Rate) format to automatically adjust image quality to suit the recording scene. This technology causes fluctuations in the recording time of the media.
- Movies containing fast-moving images are recorded at a higher bit-rate requiring larger memory capacity, which reduces the overall recording time.
 Recordable time may vary depending on the recording conditions, subject, and image size.

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
- Under direct sunlight or near a heater

 The camera body may become discolored or deformed, and this may
 - The camera body may become discolored or deformed, and this may cause a malfunction.
- · In a location subject to rocking vibration

deformed and this may cause a malfunction.

- · 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, benzine, 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.

Eve-Fi card

As of December 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.

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.

Specifications

Camera

[System]

Image device: 7.75 mm (1/2.3 type) color CCD, Primary color filter

Total pixel number of camera: Approx. 16.4 Megapixels

Effective pixel number of camera:

Approx. 16.1 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)

While shooting movies (16:9): 27 mm – 108 mm

While shooting movies (4:3): 33 mm – 132 mm

Steady Shot: Optical Exposure control:

DSC-T110: Automatic exposure, Scene Selection (13 modes) DSC-T110D: Automatic exposure,

Scene Selection (12 modes) White balance: Auto, Daylight,

Cloudy, Fluorescent 1/2/3, Incandescent, Flash, One push

Underwater White Balance (DSC-T110 only): Auto, Underwater 1/2, One push

Recording interval for Burst mode: Approx. 1.0 second

File format:

Still images: JPEG (DCF Ver. 2.0, Exif Ver. 2.3, MPF Baseline) compliant, DPOF compatible Movies: MPEG-4 Visual

Recording media: Internal Memory (approx. 23 MB), "Memory Stick Duo" media. SD card Flash: Flash range (ISO sensitivity (Recommended exposure Index) set to Auto):

Approx. 0.08 m to 2.8 m (3 1/4 inches to 9 ft 2 1/4 inches) (W)/approx. 0.5 m to 2.3 m (1 ft 7 3/4 inches to 7 ft 6 5/8 inches) (T)

[Input and Output connectors]

Multi-connector: Type3a (AV-out (SD/ HD Component)/USB/DC-in):

Video output

Audio output (Stereo)

USB communication

USB communication: Hi-Speed USB (USB 2.0)

[LCD screen]

LCD panel: Wide (16:9), 7.5 cm (3 type) TFT drive

Total number of dots: 230 400 (960 \times 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: 0°C to 40°C (32°F to 104°F)

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

Dimensions (CIPA compliant):

DSC-T110: 93.0 mm × 55.6 mm × 16.8 mm (3 3/4 inches × 2 1/4 inches × 11/16 inches)
DSC-T110D: 93.0 mm × 55.6 mm × 17.1 mm (3 3/4 inches × 2 1/4 inches × 11/16 inches)
(W/H/D)

Mass (CIPA compliant) (including NP-BN1 battery pack and "Memory Stick Duo" media): DSC-T110: Approx. 121 g (4.3 oz) DSC-T110D: Approx. 124 g (4.4 oz)

Microphone: Monaural 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 Hz/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 $(-4^{\circ}F \text{ to } +140^{\circ}F)$

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

Mass: Approx. 55 g (1.9 oz)

(W/H/D)

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)

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