# SONY

# Digital Still Camera

Instruction Manual





# English

# Learning more about the camera ("Cyber-shot User Guide")



"Cyber-shot User Guide" is an on-line manual. Refer to it for in-depth instructions on the many functions of the camera.

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



# Checking the supplied items

The number in parentheses indicates the number of pieces.

- Camera (1)
- LR6 (size AA) alkaline batteries (4)
- Dedicated USB cable (1) (Sony Corporation 1-837-783-)
- Shoulder strap (1)
- Lens cap (1)/Lens cap strap (1)
- Instruction Manual (this manual) (1)

#### 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-H200 Serial No.

# WARNING

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

# 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-H200

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

This product has been manufactured by or on behalf of Sony Corporation, 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan. Inquiries related to product compliance based on European Union legislation shall be addressed to the authorized representative, Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters, please refer to the addresses provided in the separate service or guarantee documents.

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

#### 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

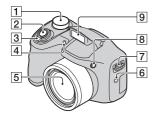
potentially negative consequences for the environment and human health which could otherwise be caused by inappropriate waste handling of the battery. The recycling of the materials will help to conserve natural resources.

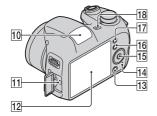
In case of products that for safety, performance or data integrity reasons require a permanent connection with an incorporated battery, this battery should be replaced by qualified service staff only.

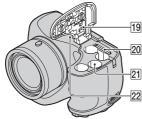
To ensure that the battery will be treated properly, hand over the product at end-of-life to the applicable collection point for the recycling of electrical and electronic equipment. For all other batteries, please view the section on how to remove the battery from the product safely. Hand the battery 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.

# **Identifying parts**





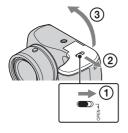


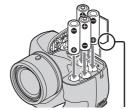
1 Mode dial: SCN(Scene
Selection)/i (Intelligent
Auto)/p (Program Auto)/
M (Manual Exposure Shooting)/
(Sweep Panorama)/
(Movie Mode)

Sbutter button

- [3] For shooting: W/T (Zoom) lever For viewing: Q (Playback zoom) lever/ (Index) lever
- 4 Self-timer lamp/Smile Shutter lamp/AF illuminator
- 5 Lens
- 6 Speaker
- 7 Hook for shoulder strap
- 8 (flash pop-up) button
  - When you do not want to fire the flash, push the flash unit down by hand to retract it.
- 9 Flash
- 10 Microphone
- 11 USB / A/V OUT jack
- 12 LCD screen
- 13 **?**/節 (In-Camera Guide/Delete) button
- 14 Access lamp
- 15 Control button
  MENU on: ▲/▼/◀/▶
  MENU off: DISP/ॐ/⊚ /‡
- 16 MENU button
- [17] (Playback) button
- 18 ON/OFF (Power) button/ ON/OFF (Power) lamp
- 19 Battery/memory card cover
- 20 Memory card slot
- 21 Battery insertion slot
- 22 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.

# Inserting the batteries/a memory card (sold separately)





Ensure the notched corner faces correctly.

- 1 Open the cover.
- 2 Insert the memory card (sold separately).
  - With the notched corner facing as illustrated, insert the memory card until it clicks into place.
- 3 Match +/- and insert the batteries.
- 4 Close the cover.

# Memory cards that you can use

	Memory Card	For still images	For movies
	Memory Stick PRO Duo	<b>V</b>	✓ (Mark2 only)
Α	Memory Stick PRO-HG Duo	<b>V</b>	<b>V</b>
	Memory Stick Duo	<b>V</b>	_
В	Memory Stick Micro (M2)	<b>V</b>	✓ (Mark2 only)
С	SD memory card	<b>V</b>	✓ (Class 4 or faster)
Ŭ	SDHC memory card	<b>V</b>	✓ (Class 4 or faster)
D	microSD memory card	<b>V</b>	✓ (Class 4 or faster)
	microSDHC memory card	<b>V</b>	✓ (Class 4 or faster)

In this manual, the products in the table are collectively referred to as followings:

A: "Memory Stick Duo" media

B: "Memory Stick Micro" media

C: SD card

D: microSD memory card

#### Notes

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

# I To remove the memory card/batteries

Memory card: Push the memory card in once.

Batteries: Be sure not to drop the batteries.

#### Notes

 Never open the battery/memory card cover or remove the batteries/memory card when the access lamp (page 6) is lit. This may cause damage to data in the memory card/internal memory.

# Batteries you can and cannot use with your camera

In the table below, ✓ indicates the battery can be used, while — indicates the one cannot be used.

Battery type	Supplied	Supported	Rechargeable
LR6 (size AA) alkaline batteries	<b>~</b>	<b>~</b>	_
HR15/51: HR6 (size AA) Nickel-Metal Hydride batteries	_	<b>V</b>	<b>Y</b>
Lithium batteries*	_	_	_
Manganese batteries*			_
Ni-Cd batteries*	_	_	_

<sup>\*</sup> Operating performance cannot be ensured if voltage drops or other problems are caused by the nature of the battery.

#### Notes

- The performance of your camera differs depending on the manufacturer and the
  type of battery you use. Also, battery-performance may decline dramatically under
  low temperatures. Especially, at temperatures below 5 °C (41 °F), your camera
  may get turned off unexpectedly as you turn it on or switch the playback mode to
  the shooting mode.
  - For more details on batteries, see "Batteries" in "Cyber-shot User Guide".
- Please note that we cannot guarantee full performance of your camera when using the batteries not indicated as "supported" in the above table.

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

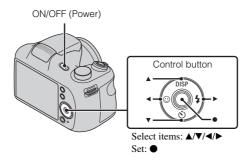
	Battery life	Number of images
Shooting (still images)	Approx. 175 min.	Approx. 350 images
Actual shooting (movies)	Approx. 85 min.	_
Continuous shooting (movies)	Approx. 150 min.	_
Viewing (still images)	Approx. 400 min.	Approx. 8000 images

#### Notes

- The number of images that can be recorded is an approximate number when shooting with new batteries. 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).
  - New batteries are 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)
  - 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 based on the CIPA standard, and is for shooting under the following conditions:
  - Recording mode:  $1280 \times 720$  (Fine)
  - -"Actual shooting (movies)": Indicates the approximate shooting time as a guideline when you repeatedly perform shooting, zooming, standby for shooting, and turning on and off the camera.

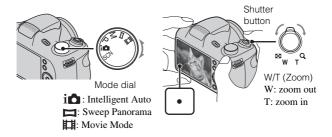
- "Continuous shooting (movies)": When continuous shooting ends because of set limits (29 minutes), press the shutter button again to continue shooting. Shooting functions such as the zoom do not operate.
- The values shown for alkaline battery are based on commercial norms, and do not apply to all alkaline batteries in all conditions. The values may vary, depending on the battery manufacturer/type, environmental conditions, product setting, etc.

# Setting the clock



- 1 Press the ON/OFF (Power) button.
  - Date & Time setting is displayed when you press the ON/OFF (Power) button for the first time.
  - It may take time for the power to turn on and allow operation.
- 2 Select a desired language.
- 3 Select a desired geographic location by following the on-screen instructions, then press ●.
- 4 Set [Date & Time Format], [Summer Time] and [Date & Time], then press [OK].
  - Midnight is indicated as 12:00 AM, and noon as 12:00 PM.
- 5 Operate following the instructions on the screen.

# Shooting still images/movies



#### Shooting still images

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

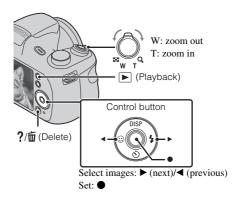
### **Shooting movies**

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

#### Notes

- The operating sound of the lens may be recorded when the zoom function operates while shooting a movie.
- The panoramic shooting range may be reduced, depending on the subject or the way it is shot. Therefore even when [360°] is set for panoramic shooting, the recorded image may be less than 360 degrees.

# Viewing images



# 1 Press the ▶ (Playback) button.

When images on a memory card recorded with other cameras are played back on this camera, the registration screen for the data file appears.

# Selecting next/previous image

Select an image with ▶ (next)/◄ (previous) on the control button. Press ● in the center of the control button to view movies.

# ■ Deleting an image

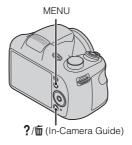
- ① Press ?/m (Delete) button.
- ② Select [This Image] with  $\blacktriangle$  on the control button, then press  $\blacksquare$ .

# ■ Returning to shooting images

Press the shutter button halfway down.

# **In-Camera Guide**

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

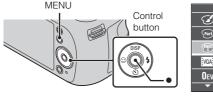


- 1 Press the MENU button.
- 2 Select an item whose description you want to view, then press the ?/ $\dot{\bar{u}}$  (In-Camera Guide) button.

The operation guide for the selected function is displayed.

# Introduction of other functions

Other functions used when shooting or playing back can be operated using the control button or MENU button on the camera. This camera is equipped with a Function Guide that allows you to easily select from the functions. While displaying the guide, try the other functions.





#### **■ Control button**

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

- 🖒 (Self-Timer): Allows you to use the self-timer.
- (Smile Shutter): Allows you to use the Smile Shutter mode.
- (Flash): Allows you to select a flash mode for still images.
- (Tracking focus): Allows you to continue to focus on a subject even if the subject moves.

## **■ Menu Items**

#### **Shooting**

Movie shooting scene	Select movie recording mode.
Panorama Select recording mode when shooting panoramic i Shooting Scene	
Scene Selection Select pre-set settings to match various scene conditi	
Picture Effect	Shoot still images with an original texture according to the desired effect.
Easy Mode	Shoot still images using minimal functions.
Color hue	Set the color hue when [Toy camera] is selected in Picture Effect.

Extracted Color  Select the color to extract when [Partial Color] is selected in Picture Effect.  Soft Skin Effect  Set the Soft Skin Effect and the effect level.  Select the image size for still images, panoramic images or movie files.  Select the image size for still images, panoramic images or movie files.  Exposure Compensation  ISO  Adjust the exposure manually.  White Balance  Adjust color tones of an image.  Focus  Select the focus method.  Metering Mode  Select the metering mode that sets which part of the subject to measure to determine the exposure.  Cont. Shooting Settings  Bracket Setting  Select the bracket shooting mode.  Sene Recognition  Set to automatically detect shooting conditions in Intelligent Auto mode.  Smile Detection Sensitivity  Face Detection  Select to detect faces and adjust various settings automatically.  DRO  Set DRO function to correct the brightness and contrast and improve the image quality.  Anti Blink  Search the camera's functions according to your needs.			
Still Image Size/ Panorama Image Size/Movie Size  Exposure Compensation  ISO  Adjust the exposure manually.  White Balance  Adjust color tones of an image.  Focus  Select the focus method.  Metering Mode  Select the metering mode that sets which part of the subject to measure to determine the exposure.  Cont. Shooting Settings  Bracket Setting  Select the bracket shooting mode.  Set to automatically detect shooting conditions in Intelligent Auto mode.  Sethect to detect faces and adjust various settings automatically.  DRO  Set to automatically shoot two images and select image in which the eyes are not blinking.	Extracted Color		
Panorama Image Size/Movie Size  Exposure Compensation  ISO Adjust the exposure manually.  White Balance Adjust color tones of an image.  Focus Select the focus method.  Metering Mode Select the metering mode that sets which part of the subject to measure to determine the exposure.  Cont. Shooting Settings  Bracket Setting Select the bracket shooting mode.  Sene Recognition Sensitivity Set to automatically detect shooting conditions in Intelligent Auto mode.  Set the Smile Shutter function sensitivity for detecting smiles.  Select to detect faces and adjust various settings automatically.  DRO Set DRO function to correct the brightness and contrast and improve the image quality.  Anti Blink Set to automatically shoot two images and select image in which the eyes are not blinking.	Soft Skin Effect	Set the Soft Skin Effect and the effect level.	
Compensation  ISO Adjust the luminous sensitivity.  White Balance Adjust color tones of an image.  Focus Select the focus method.  Metering Mode Select the metering mode that sets which part of the subject to measure to determine the exposure.  Cont. Shooting Settings Select single-image mode or burst mode.  Sene Recognition Set to automatically detect shooting conditions in Intelligent Auto mode.  Smile Detection Sensitivity Select to detect faces and adjust various settings automatically.  Pace Detection Select to detect faces and adjust various settings automatically.  Anti Blink Set to automatically shoot two images and select image in which the eyes are not blinking.	Panorama Image		
White Balance Adjust color tones of an image.  Focus Select the focus method.  Metering Mode Select the metering mode that sets which part of the subject to measure to determine the exposure.  Cont. Shooting Settings Select single-image mode or burst mode.  Bracket Setting Select the bracket shooting mode.  Scene Recognition Intelligent Auto mode.  Smile Detection Sensitivity Select to detect faces and adjust various settings automatically.  Face Detection Set DRO function to correct the brightness and contrast and improve the image quality.  Anti Blink Set to automatically shoot two images and select image in which the eyes are not blinking.		Adjust the exposure manually.	
Focus Select the focus method.  Metering Mode Select the metering mode that sets which part of the subject to measure to determine the exposure.  Cont. Shooting Settings Select single-image mode or burst mode.  Settings Select the bracket shooting mode.  Scene Recognition Sensitivity Set to automatically detect shooting conditions in Intelligent Auto mode.  Set the Smile Shutter function sensitivity for detecting smiles.  Face Detection Select to detect faces and adjust various settings automatically.  DRO Set DRO function to correct the brightness and contrast and improve the image quality.  Anti Blink Set to automatically shoot two images and select image in which the eyes are not blinking.	ISO	Adjust the luminous sensitivity.	
Metering Mode  Select the metering mode that sets which part of the subject to measure to determine the exposure.  Cont. Shooting Settings  Bracket Setting  Select the bracket shooting mode.  Scene Recognition  Set to automatically detect shooting conditions in Intelligent Auto mode.  Smile Detection Sensitivity  Select to detect faces and adjust various settings automatically.  DRO  Set DRO function to correct the brightness and contrast and improve the image quality.  Set to automatically shoot two images and select image in which the eyes are not blinking.	White Balance	Adjust color tones of an image.	
Select single-image mode or burst mode.  Select the bracket shooting mode.  Seene Recognition  Set to automatically detect shooting conditions in Intelligent Auto mode.  Set the Smile Shutter function sensitivity for detecting smiles.  Select to detect faces and adjust various settings automatically.  DRO  Set DRO function to correct the brightness and contrast and improve the image quality.  Set to automatically shoot two images and select image in which the eyes are not blinking.	Focus	Select the focus method.	
Settings  Bracket Setting  Select the bracket shooting mode.  Scene Recognition  Set to automatically detect shooting conditions in Intelligent Auto mode.  Smile Detection Sensitivity  Set the Smile Shutter function sensitivity for detecting smiles.  Face Detection  Select to detect faces and adjust various settings automatically.  DRO  Set DRO function to correct the brightness and contrast and improve the image quality.  Anti Blink  Set to automatically shoot two images and select image in which the eyes are not blinking.	Metering Mode		
Scene Recognition  Set to automatically detect shooting conditions in Intelligent Auto mode.  Smile Detection Sensitivity  Set the Smile Shutter function sensitivity for detecting smiles.  Face Detection  Select to detect faces and adjust various settings automatically.  DRO  Set DRO function to correct the brightness and contrast and improve the image quality.  Anti Blink  Set to automatically shoot two images and select image in which the eyes are not blinking.		Select single-image mode or burst mode.	
Scene Recognition  Intelligent Auto mode.  Smile Detection Sensitivity Select to detect faces and adjust various settings automatically.  DRO Set DRO function to correct the brightness and contrast and improve the image quality.  Set to automatically shoot two images and select image in which the eyes are not blinking.	Bracket Setting	Select the bracket shooting mode.	
Sensitivity smiles.  Face Detection Select to detect faces and adjust various settings automatically.  DRO Set DRO function to correct the brightness and contrast and improve the image quality.  Anti Blink Set to automatically shoot two images and select image in which the eyes are not blinking.	Scene Recognition		
DRO Set DRO function to correct the brightness and contrast and improve the image quality.  Anti Blink Set to automatically shoot two images and select image in which the eyes are not blinking.		, ,	
and improve the image quality.  Anti Blink  Set to automatically shoot two images and select image in which the eyes are not blinking.	Face Detection	J J	
in which the eyes are not blinking.	DRO	S	
In-Camera Guide Search the camera's functions according to your needs.	Anti Blink		
	In-Camera Guide	Search the camera's functions according to your needs.	

#### Viewing

Beauty Effect	Retouch a face on a still image.
Retouch	Retouch an image using various effects.
Delete	Delete an image.
Slideshow	Select a method of continuous playback.
View Mode	Select the display format for images.
Protect	Protect the images.
Print (DPOF)	Add a print order mark to a still image.
Rotate	Rotate a still image to the left or right.
In-Camera Guide	Search the camera's functions according to your needs.

# Setting items

If you press the MENU button while shooting or during playback, (Settings) is provided as a final selection. You can change the default settings on the (Settings) screen.

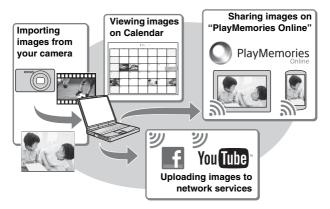
Shooting Settings	AF Illuminator/Grid Line/Disp. Resolution/Digital Zoom/Red Eye Reduction/Blink Alert/Write Date
ช <b>T</b> Main Settings	Beep/Panel Brightness/Language Setting/Display color/ Initialize/Function Guide/Video Out/USB Connect Setting/LUN Setting/Download Music/Empty Music/ Eye-Fi* <sup>1</sup> /Power Save
Memory Card	Format/Create REC.Folder/Change REC.Folder/Delete REC.Folder/Copy/File Number
Clock Settings	Area Setting/Date & Time Setting

<sup>\*1 [</sup>Eye-Fi] is displayed only when a compatible memory card is inserted to the camera.

<sup>\*2</sup> If a memory card is not inserted, (Internal Memory Tool) will be displayed and only [Format] can be selected.

# Features of "PlayMemories Home"

The software "PlayMemories Home" allows you to import still images and movies to your computer and use them.



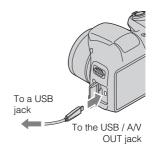
**©** Downloading "PlayMemories Home" (for Windows only) You can download "PlayMemories Home" from the following URL: www.sony.net/pm

#### Notes

- An Internet connection is required to install "PlayMemories Home".
- An Internet connection is required to use "PlayMemories Online" or other network services. "PlayMemories Online" or other network services may not be available in some countries or regions.
- "PlayMemories Home" is not compatible with Macs. Use the applications that are installed on your Mac. For details, visit the following URL: http://www.sony.co.jp/imsoft/Mac/

# **Installing "PlayMemories Home" on a computer**

- 1 Using the Internet browser on your computer, go to the following URL, then click [Install] → [Run].
  www.sony.net/pm
- 2 Follow the instructions on the screen to complete the installation.
  - When the message to connect the camera to a computer is displayed, connect the camera and computer using the dedicated USB cable (supplied).



# **■ Viewing "PlayMemories Home Help Guide"**

For details on how to use "PlayMemories Home", refer to the "PlayMemories Home Help Guide".

- 1 Double-click the [PlayMemories Home Help Guide] icon on the desktop.
  - To access the "PlayMemories Home Help Guide" from the start menu:
     Click [Start] → [All Programs] → [PlayMemories Home] →
     [PlayMemories Home Help Guide].
  - For Windows 8, select the [PlayMemories Home] icon on the Start screen, then launch "PlayMemories Home" and select [PlayMemories Home Help Guide] from the [Help] menu.
  - For details on "PlayMemories Home", you can also see the "Cyber-shot User Guide" (page 2) or the following PlayMemories Home support page (English only):
    - http://www.sony.co.jp/pmh-se/

# 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
Size	Approx. 55 MB	2 GB
20M	5	265
VGA	350	11500
16:9(15M)	7	330

#### 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 (limited by product specifications). For [1280 × 720 (Fine)] size movies, continuous shooting is possible for approximately 20 minutes (limited by 2 GB file size).

(h (hour), m (minute))

Capacity	Internal memory	Memory card
Size	Approx. 55 MB	2 GB
1280 × 720 (Fine)	_	25 m (20 m)
1280 × 720 (Standard)	_	35 m (30 m)
VGA	2 m (1 m)	1 h 5 m (1 h 5 m)

The number in ( ) is the minimum recordable time.

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

# Notes on using the camera

#### On use and care

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

#### Notes on recording/playback

- Before you start recording, make a trial recording to make sure that the camera is working correctly.
- · The camera is neither dust-proof, nor splash-proof, nor water-proof.
- 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.
- · If moisture condensation occurs, remove it before using the camera.
- Do not shake or strike the camera. It may cause a malfunction and you may not be
  able to record images. Furthermore, the recording media may become unusable or
  image data may be damaged.

### Do not use/store the camera in the following places

- In an extremely hot, cold or humid place
   In places such as in a car parked in the sun, the camera body may become deformed and this may cause a malfunction.
- Storing under direct sunlight or near a heater
   The camera body may become discolored or deformed, and this may cause a malfunction.
- · In a location subject to rocking vibration
- Near a location that generates strong radio waves, emits radiation or is strongly
  magnetic place. Otherwise, the camera may not properly record or play back
  images.
- In sandy or dusty places
   Be careful not to let sand or dust get into the camera. This may cause the camera to malfunction, and in some cases this malfunction cannot be repaired.

#### On the battery

- Avoid rough handling, disassembling, modifying, physical shock, or impact such as hammering, dropping or stepping on the battery.
- · Do not use a deformed or damaged battery.
- Do not mix a used battery together with a new battery or different types of batteries.
- Remove the batteries from the camera when you do not operate the camera for long periods, or when the batteries are dead.

#### Notes on the screen and lens

The 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 screen. These dots are a normal result of the manufacturing process, and do not affect the recording.

#### On camera's temperature

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

# 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.

### Cleaning the camera surface

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

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

### Maintaining the LCD monitor

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

# **Specifications**

#### Camera

# [System]

Image device: 7.76 mm (1/2.3 type) CCD, Primary color filter

Total pixel:

Approx. 20.4 Megapixels Effective pixel:

Approx. 20.1 Megapixels

Lens: 26× zoom lens

f = 4.0 mm - 104.0 mm (22.3 mm)

- 580 mm (35 mm film equivalent))

F3.1 (W) - F5.9 (T)

While shooting movies (16:9):

28 mm - 748 mm

While shooting movies (4:3):

22.3 mm – 580 mm

SteadyShot: Optical

Exposure control: Automatic exposure, Manual Exposure, Scene Selection

White balance: Automatic, Daylight, Cloudy, Fluorescent 1/2/3, Incandescent, Flash, One Push

Burst shooting (when shooting with the largest pixel number):

Approx. 0.8 images/second (up to 100 images)

File format:

Still images: JPEG (DCF, Exif, MPF Baseline) compliant, DPOF compatible

Movies: MPEG-4 AVC/H.264

Recording media: Internal Memory (Approx. 55 MB), "Memory Stick Duo" media, "Memory Stick Micro" media, SD cards, microSD memory cards Flash: Flash range (ISO sensitivity (Recommended Exposure Index) set to Auto):

> Approx. 0.4 m to 6.8 m (1 ft. 1/3 inches to 22 ft. 3 3/4 inches) (W) Approx. 1.5 m to 3.6 m (5 ft. to 11 ft. 9 3/4 inches) (T)

#### [Input and Output connectors]

USB / A/V OUT jack:

Video output Audio output

USB communication

USB communication: Hi-Speed USB (USB 2.0)

#### [Screen]

LCD screen:

7.5 cm (3.0 type) TFT drive Total number of dots:

460 800 dots

#### [Power, general]

Power: LR6 (size AA) alkaline batteries (4), 6 V

HR15/51: HR6 (size AA) Nickel-Metal Hydride batteries (4) (sold separately), 4.8 V

Power consumption (during shooting): Approx. 1.6 W

Operating temperature:

0°C to 40°C (32°F to 104°F)

Storage temperature:

 $-20^{\circ}$ C to  $+60^{\circ}$ C ( $-4^{\circ}$ F to  $+140^{\circ}$ F)

Dimensions (CIPA compliant):

122.9 mm × 83.2 mm × 87.2 mm (4 7/8 inches × 3 3/8 inches × 3 1/2 inches)

(W/H/D)

Mass (CIPA compliant) (including four batteries and "Memory Stick Duo" media):

Approx. 530 g (1 lb 2.7 oz)

Microphone: Monaural Speaker: Monaural Exif Print: Compatible PRINT Image Matching III: Compatible

Design and specifications are subject to change without notice.

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