## SONY

## **Digital Still Camera**

## User's Guide/ **Troubleshooting**

#### Operating Instructions

Before operating the unit, please read this manual and "Read This First" (separate volume) thoroughly, and retain it for future reference.

#### Owner's Record

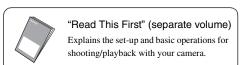
The model and serial numbers are located on the bottom. Record the serial number in the space provided below. Refer to these numbers whenever you call upon your Sony dealer regarding this product.

Model No. DSC-M2

Serial No.



InfoLITHIUM I







Using the menu



Using the Setup screen



Using your computer



Printing still images



Connecting your camera to your TV



Troubleshooting



Others



Index

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 100% recycled paper using VOC (Volatile Organic Compound)-free vegetable oil based ink.

#### WARNING

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

## 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

#### For Customers in the U.S.A.





This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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

Sony Customer Information Services 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-M2

Responsible Party: Sony Electronics Inc. Address: 16450 W. Bernardo Dr, San Diego, CA 92127U.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-M2 is to be used with the Cyber-shot Station Model UC-MB and AC Adaptor Model AC-LS5.

#### 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

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 camera.

#### 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.

#### 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.

## Notes on using your camera

## "Memory Stick Duo" is not supplied with this camera.

For shooting images with this camera, you need to purchase a "Memory Stick Duo".

## Types of "Memory Stick" that can be used (not supplied)

The IC recording medium used by this camera is a "Memory Stick Duo". There are two types of "Memory Stick".

"Memory Stick Duo": you can use a "Memory Stick Duo" with your camera.



"Memory Stick": you cannot use a "Memory Stick" with your camera.



#### Other memory cards cannot be used.

 For details on "Memory Stick Duo", see page 97.

# When using a "Memory Stick Duo" with "Memory Stick" compatible equipment

You can use the "Memory Stick Duo" by inserting it into the Memory Stick Duo Adaptor (not supplied).



Memory Stick Duo Adaptor

## Notes on the "InfoLITHIUM" battery pack

• Charge the supplied NP-FT1 battery pack before using the camera for the first time. (→ step 1 in "Read This First")

- The battery pack can be charged even if it is not completely discharged. Also, even if the battery pack is not fully charged, you can use the partially charged capacity of the battery pack as is.
- If you do not intend to use the battery pack for a long time, use up the existing charge and remove it from your camera, then store it in a cool, dry place. This is to maintain the battery pack functions (page 99).
- For details on the usable battery pack, see page 99.

#### Carl Zeiss lens

This camera is equipped with a Carl Zeiss lens which is capable of reproducing sharp images with excellent contrast.

The lens for this camera has been produced under a quality assurance system certified by Carl Zeiss in accordance with the quality standards of Carl Zeiss in Germany.

## No compensation for contents of the recording

 The contents of the recording cannot be compensated for if recording or playback is not possible due to a malfunction of your camera or recording media, etc.

#### Back up recommendation

 To avoid the potential risk of data loss, always copy (back up) data to other medium.

#### Notes on recording/playback

- This camera is neither dust-proof, nor splashproof, nor water-proof. Read "Precautions" (page 100) before operating the camera.
- Before you record one-time events, make a trial recording to make sure that the camera is working correctly.
- Be careful not to get the camera wet. Water entering the inside of the camera may cause malfunctions which in some cases may not be repairable.
- Do not aim the camera at the sun or other bright light. It may cause the malfunction of your camera

- Do not use the camera near a location that generates strong radio waves or emits radiation.
   The camera may not be able to record or play back properly.
- Using the camera in sandy or dusty locations may cause malfunctions.
- If moisture condensation occurs, remove it before using the camera (page 100).
- Do not shake or strike the camera. In addition to malfunctions and an inability to record images, this may render the recording medium unusable, or cause image data breakdown, damage or loss.
- 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 and lens

 The LCD screen is manufactured using extremely high-precision technology so over 99.99% of the pixels are operational for effective use. However, there may be some tiny black points and/or bright points (white, red, blue or green in color) that constantly appear on the LCD screen. These points are normal in the manufacturing process and do not affect the recording in any way.



- Exposing the LCD screen or the lens to direct sunlight for long periods may cause malfunctions. Be careful when placing the camera near a window or outdoors.
- Do not press against the LCD screen. The screen may be discolored and that may cause a malfunction.
- Images may trail across on the LCD screen in a cold location. This is not a malfunction.
- Be careful not to bump the lens, and be careful not to apply force to it.

#### Lens cover

The lens cover of this camera opens and closes automatically when the camera is turned on and off. Be careful not to pinch your finger when the lens cover opens and closes. Also, do not attempt to forcibly open the lens cover, as this may cause malfunction.

#### On image data compatibility

- This camera conforms with DCF (Design rule for Camera File system) universal standard established by JEITA (Japan Electronics and Information Technology Industries Association).
- Playback of images recorded with your camera on other equipment and playback of images recorded or edited with other equipment on your camera are not guaranteed.

#### 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.

#### The pictures used in this manual

The photographs used as examples of pictures in this manual are reproduced images, and are not actual images shot using this camera.

#### How to handle the camera

• When opening the LCD panel, rotate the panel to the left as illustrated.



 The LCD panel rotates 90 degrees and 180 degrees to each side as illustrated. You can adjust the angle of the LCD screen to suit your situation. Adjust the LCD screen with the LCD panel open at 90 degrees.



 When carrying the camera, close the LCD panel as illustrated.



• When opening the LCD panel, make sure not to touch the lens portion with your fingers.



• Do not hold the LCD panel with your hand.



## For full use of the digital still camera

#### Prepare the camera and shoot images easily



#### "Read This First" (separate volume)

- 1 Prepare the battery pack
- 2 Turn the camera on/set the clock
- 3 Insert a "Memory Stick Duo" (not supplied)
- 4 Select the image size for use
- 5 Shoot images easily (Auto adjustment mode) Enjoy images and movies (Hybrid shooting/5SEC Recording)
- 6 View/delete images

#### Get more familiar with your camera

This manual



- Shoot with your favorite settings (Program auto shooting)
   → page 35
- Enjoy various shooting/playback using the menu → page 32
- Enjoy your images using Slide Show and Album
   → page 28, 30
- Change the default settings → page 50

#### Connect your camera to a PC or a printer

This manual



- Copy your images to a computer and enjoy editing them in various ways → page 60
- Print images by connecting your camera directly to a printer (PictBridge compliant printers only) → page 75

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## **Basic techniques for better images**



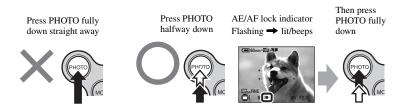
#### Quality

This section describes the basics so you can enjoy your camera. It tells you how to use various camera functions such as the buttons/switches (page 27), the menus (page 32), and so on.

#### Focus

#### Focusing on a subject successfully

When you press PHOTO halfway down, the camera adjusts the focus automatically (Auto Focus). Remember to press PHOTO only halfway down.



To shoot a still image difficult to focus on → [Focus] (page 38)

If the image looks blurred even after focusing, it may be because of camera shake.  $\rightarrow$  See "Hints for preventing blur" (as follows).

#### Hints for preventing blur

Hold the camera steadily. Also, you can stabilize the camera by leaning against a tree or a building beside you. Using a tripod, and using the flash in dark places are also recommended.



#### **Exposure** Adjusting the light intensity

You can create various images by adjusting the exposure and the ISO sensitivity. Exposure is the amount of light that the camera will receive when you release the shutter.

Shutter speed = Length of time the camera receives
light

Aperture = Size of the opening allowing light to pass through

ISO = Recording sensitivity



### Overexposure

= too much light Whitish image The exposure is automatically set to the proper value in the auto adjustment mode. However, you can adjust it manually using the functions below.



#### Correct exposure

#### EV:

Allows you to adjust the exposure that has been determined by the camera.

→ page 37



#### Underexposure = too little light Darker image

#### Metering Mode:

Allows you to change the part of the subject to be measured to determine the exposure. 

step 5 in "Read This First"

#### Adjusting the ISO sensitivity

ISO is unit of measurement (sensitivity), estimating how much light an image pickup device (equivalent to photo films) receives. Even when the exposure is the same, images differ depending on the ISO sensitivity.

To adjust the ISO sensitivity  $\rightarrow$  page 40



#### High ISO sensitivity

Records a bright image even when shooting in a dark location. However, the image tends to become noisy.



#### Low ISO sensitivity

Records a smoother image.

However, the image may become darker.

### Color

#### On the effects of lighting

The apparent color of the subject is affected by the lighting conditions.

#### Example: The color of an image affected by light sources

Weather/lighting	Daylight	Cloudy	Fluorescent	Incandescent
			=	
Characteristics of light	White (standard)	Bluish	Blue-tinged	Reddish

The color tones are adjusted automatically in the auto adjustment mode. However, you can adjust color tones manually with [White Bal] (page 40).

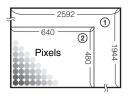
#### Quality

#### On "image quality" and "image size"

A digital image is made up of a collection of small dots called pixels.

If it contains a large number of pixels, the picture becomes large, it takes up more memory, and the image is displayed in fine detail. "Image size" is shown by the number of pixels. Although you cannot see the differences on the screen of the camera, the fine detail and data processing time differ when the image is printed or displayed on a computer screen.

#### Description of the pixels and the image size



- ① Image size: 5M 2592 pixels × 1944 pixels = 5,038,848 pixels
- ② Image size: VGA 640 pixels × 480 pixels = 307,200 pixels

#### Selecting the image size for use (→ step 4 in "Read This First")



The default settings are marked with  $\varnothing$ .

	Image size		Usage guidelines
৶	5M (2592×1944)	Larger	For printing in A4 size or high density images in A5
	3:2* (2592×1728)	<b>A</b>	size
	3M (2048×1536)		
	1M (1280×960)	1	For printing in postcard size
	VGA (640×480)	▼	For recording a large number of images
		Smaller	For attaching images to e-mail or creating web pages

<sup>\*</sup> Images are recorded in the same 3:2 aspect ratio as photograph printing paper or postcards, etc.

	Movie size	Usage guidelines
<	640(30fps) (640×480)	For recording a clear and smooth movie.
	320(30fps) (320×240)	
	320(15fps) (320×240)	For recording more movies.

<sup>• &</sup>quot;fps" indicates the number of frames per second (Frame Per Second). The actual number of image recordable may differ depending on the shooting situations and the subject.

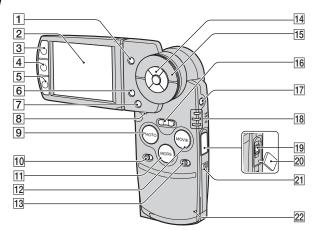
#### Selecting the image quality (compression ratio) in combination (page 41)

You can select the compression ratio when digital images are saved. When you select a high compression ratio, the image lacks the fineness of detail, but has a smaller file size.

## **Identifying parts**

See the pages in parentheses for details of operation.

#### Camera



- 1  $\blacksquare$  (Index) button (75,  $\rightarrow$  step 6 in "Read This First")
- 2 LCD screen (23)
- [3] For shooting: PHOTO button (→ step 5 in "Read This First")
  For viewing: □ button (28)
- [4] [ (Display/LCD backlight on/off) button (23)
- [5] For shooting: MOVIE button (→ step 5 in "Read This First")
  For viewing: button (30)
- [6] ∰ / ∭ (Image Size/Delete) button (→ step 4 and 6 in "Read This First")
- 7 MENU button (32)
- 8 RESET button (83)
- 9 PHOTO button (27, → step 5 in "Read This First")
- 10 HYBRID switch (→ step 5 in "Read This First")
- 11 MODE button (27)
- 12 MOVIE button (27, → step 5 in "Read This First")

- [13] 5SEC switch (→ step 5 in "Read This First")
- 14 Control button

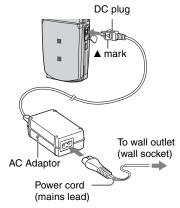
"Read This First")

- 15 Shuttle (27, → step 6 in "Read This First")
- [16] For shooting: Zoom (W/T) button (→ step 5 in "Read This First")
  For viewing: ⊖/⊕ (Playback zoom)
  button / □ (Index) button (→ step 6 in "Read This First")
- 17 POWER button (→ step 2 in "Read This First")
- [18] \$/CHG lamp (orange) (→ step 1 in "Read This First")

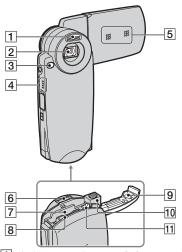
  REC: REC mode lamp (green) (→ step 5 in "Read This First")

PLAY: PLAY mode lamp (green) (→ step 6 in "Read This First")

#### 19 DC IN connector When using the AC-LS5 AC Adaptor (supplied)



- 20 DC IN connector cover
- 21 Hook for wrist strap (→ "Read This First")
- 22 Access lamp (→ step 4 in "Read This First")



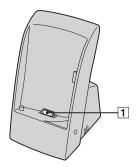
- **1** Flash (→ step 5 in "Read This First")
- 2 Lens
- 3 Self-timer lamp (→ step 5 in "Read This First") / AF illuminator (53)
- 4 Speaker
- 5 Microphone
- 6 Multi connector
- T Battery insertion slot (→ step 1 in "Read This First")
- [8] "Memory Stick Duo" slot (→ step 3 in "Read This First")
- **9** Battery/"Memory Stick Duo" cover (→ step 1 and 3 in "Read This First")
- 10 Tripod receptacle

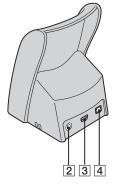
Use a tripod with a screw length of less than 5.5 mm (7/32 inch). You will be unable to firmly secure the camera to a tripod having the screw longer than 5.5 mm (7/32 inch), and may damage the camera.

Battery eject lever (→ step 1 in "Read This First")

#### Cyber-shot Station

This is used when charging the battery pack or connecting the camera to a TV or a computer, etc.

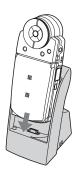




- 1 Camera connector
- 2 A/V OUT (STEREO) jack (81)
- **3 ψ** (USB) jack (63)
- [4] DC IN jack (→ step 1 in "Read This First")

#### How to attach

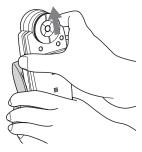
Attach the camera as illustrated.



· Make sure to slide the tray firmly.

#### How to remove

Grasp the camera and the Cyber-shot Station as illustrated and remove the camera.



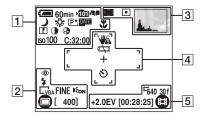
• Be sure to turn off the camera before you attach the camera to the Cyber-shot Station or remove the camera from the Cyber-shot Station.

## **Indicators on the screen**

See the pages in parentheses for details of operation.

#### When in REC mode

#### In shooting standby



#### When pressing PHOTO halfway down



#### When recording movies



Display	Indication
€ 60min	Battery remaining (→ step 1 in "Read This First")
×101	Recording folder (54)
AF	Album (30, 56)
×1.3 Q×1.3	Zoom scaling (51, → step 5 in "Read This First")
[Q] <b>) ₄' ▲</b> <b>&amp; ? •</b> · <b>X</b>	Camera mode (Scene Selection) (35)
	Camera mode (Program) (35)
### #################################	White balance (40)
<b>P</b> <sup>+</sup>	Picture effect (43)
DA <u>TE</u>	Date/Time (52)
T	Macro (→ step 5 in "Read This First")
<b>I</b>	Sharpness (44)
•	Contrast (44)
<b>③</b>	Saturation (44)
IS0100	ISO number (40)
C:32:00	Self-diagnosis display (94)

## 

Display	Indication
<b>③</b>	Red-eye reduction (52)
\$ \$SL <b>\$</b>	Flash mode (→ step 5 in "Read This First")
□ <sub>5M</sub> <u>3:2</u> □ <sub>3M</sub> □ <sub>1M</sub> □ <sub>VGA</sub>	Image size (→ step 4 in "Read This First")
FINE STD	Image quality (41)
DEON	AF illuminator (53)
BRK 🖺	Recording mode (41, → step 5 in "Read This First")
400	Remaining number of recordable images (24)
15 0 00 00 A EC 03 >	Menu/Guide menu (32)
(not displayed on the screen on the previous page)	Pressing MENU switches the menu/guide menu on/ off.

## 

Display	Indication
	AF range finder frame indicator (38)
0.5m	Focus preset distance (38)
•	Metering mode (→ step 5 in "Read This First")
	Histogram (23, 37)

## 

Display	Indication
<b>*</b>	Vibration warning (11)  Indicates vibration may prevent you from shooting clear images due to insufficient lighting. Even if the vibration warning appears, you can still shoot images. However, we recommend using the flash for better lighting or using a tripod or other means to stabilize the camera.
€\(\sigma\)	Low battery warning (26, 94)
+	Spot metering cross hair (→ step 5 in "Read This First")
	AF range finder frame (38)
<b>ల</b>	Self-timer (→ step 5 in "Read This First")

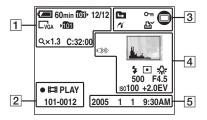
Display	Indication
E640 30f	Movie size (→ step 4 in
⊑320 30f	"Read This First")
<sup>⊑</sup> 320 15f	
+2.0EV	Exposure Value (37)
[00:28:05]	Maximum recordable time (25)
<b>6</b>	Movie recording mode (→ step 5 in "Read This First")

## 

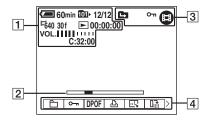
Display	Indication
•	AE/AF lock (→ step 5 in "Read This First")
+2.0EV	Exposure Value (37)
NE	NR slow shutter  • If the shutter speed is slower than or equal to1/6 second (when set to ISO64/100/200) or 1/25 second (when set to ISO400), the NR slow shutter function activates automatically to reduce the picture noise.
2"	Shutter speed
F3.5	Aperture value

Display	Indication
+2.0EV	Exposure Value (37)
	Movie recording
••••	5SEC recording (→ step 5 in "Read This First")
00:00:02	Recording time (25)

#### When playing back still images



#### When playing back movies



• To check the playback display on Album, see page 30.

#### 1

Display	Indication
€ 60min	Battery remaining (→ step 1 in "Read This First")
1011-	Playback folder (45)/ Album playback (30)
<b>≯101</b>	Recording folder (54)
12/12	Image number/Number of images recorded in selected folder
□ 32 □ 3M □ 1M □ VGA □ 30f □ 320 30f □ 320 15f □ 640 2f □ 320 2f □ 320 1f	Image size (→ step 4 in "Read This First")
<b>▶</b> / <b>■</b> / <b>▶</b>	Playback/Stop/Slide Show fast forward (28, 30, → step 6 in "Read This First")
,1/,2/,3 ,1/,2/,3	High Speed Fast forward/ High Speed Rewind
00:00:12	Counter (→ step 6 in "Read This First")
Step 12/16 ▶/Ⅲ	Frame by frame playback (41)
Qx1.3	Zoom scaling (→ step 6 in "Read This First")
VOL.	Volume (→ step 6 in "Read This First")
C:32:00	Self-diagnosis display (94)

Display	Indication
● <b>III</b> PLAY	Hybrid mode playback (→ step 6 in "Read This First")
101-0012	Folder-file number (45)
	Playback bar (→ step 6 in "Read This First")

## 

Display	Indication
	Change folder (45)  • This does not appear when using Album.
о <del></del> -	Protect (46)
<b>(</b> (	PictBridge connecting (76)
	Print order (DPOF) mark (79)
	Recording mode (41, → step 5 in "Read This First")

## 

Display	Indication
	Do not disconnect the USB cable (77)
Park.	Histogram (23, 37)  • ⊗ appears when histogram display is disabled.
<b>\$</b>	Flash
•	Metering mode (→ step 5 in "Read This First")
₩B ⊹ 無 ■ ¥ RWB	White balance (40)
500	Shutter speed
F4.5	Aperture value
IS0100	ISO number (40)
+2.0EV	Exposure Value (37)
D - DOFAELA	Menu/Guide menu (32)

Display	Indication
2005 1 1	Recorded date/time of the
9:30 AM	playback image (52)

## Changing the screen display

Histogram display

(page 37)

Each time you press the | | (Display/LCD backlight on/off) button, the display changes as follows.



- When you set the histogram display to on, image information is displayed during playback.
- The histogram does not appear in the following situations:

#### While shooting

- The menu is displayed.
- Recording movies
- The image size is 3:2.
- Recording in the digital zoom area

#### During playback

- The menu is displayed.
- In index mode
- You are using playback zoom.
- You are rotating still images.
- Playback of Multi Burst images
- Playback of movies
- Playback of Slide Show

- A large difference in the histogram displayed when shooting and during playback may occur when:
  - The flash strobes.
- The shutter speed is slow or high.
- The histogram may not appear for images recorded using other cameras.
- You can extend the battery remaining time by turning off the LCD backlight.
- When you start Slide Show, the indicators will be turned off. During Slide Show, you can turn the indicators on by pressing [\_\_] (Display/ LCD backlight on/off) button.

# Number of still images and recording time of movies

The tables show the approximate number of still images and the length of time for movies that can be recorded on a "Memory Stick Duo" formatted with this camera. The values may vary depending on the shooting conditions.

## The number of still images (The image quality is [Fine] on the upper line and [Standard] on the lower line.) (Units: Images)

Size	32MB	64MB	128MB	256MB	512MB	1GB	2GB
5M	12	25	51	92	188	384	789
	23	48	96	174	354	722	1482
3:2	12	25	51	92	188	384	789
	23	48	96	174	354	722	1482
3M	20	41	82	148	302	617	1265
	36	74	149	264	537	1097	2250
1M	50	101	202	356	725	1481	3038
	93	187	376	649	1319	2694	5524
VGA	196	393	789	1427	2903	5927	12153
	490	984	1974	3569	7259	14819	30383

- The number of images listed is for when [Mode] is set to [Normal].
- The size of a single still image is 1M when [Mode] is set to [Multi Burst].
- When the number of remaining shootable images is greater than 9,999, the ">9999" indicator appears.
- You can resize the images later ([Resize], page 47).

## The number of still images in Hybrid shooting (The image quality is [Fine] on the upper line and [Standard] on the lower line.) (Units: Images)

Size	32MB	64MB	128MB	256MB	512MB	1GB	2GB
5M	9	18	37	67	138	282	578
	14	28	57	103	210	429	880
3:2	9	18	37	67	138	282	578
	14	28	57	103	210	429	880
3M	12	25	51	93	191	389	799
	17	36	72	129	263	538	1104
1M	20	41	83	148	302	617	1265
	25	51	102	183	372	759	1558
VGA	29	59	119	216	439	898	1841
	32	65	131	237	483	987	2025

<sup>•</sup> The number of images listed is for when [Hybrid Rec] is set to [Normal].

(Units: hour: minute: second)

#### The recording time of movies

Size Capacity	32MB	64MB	128MB	256MB	512MB	1GB	2GB
640(30fps)	0:01:29	0:02:59	0:05:59	0:10:49	0:22:01	0:44:57	1:32:10
320(30fps)	0:04:45	0:09:34	0:19:12	0:34:43	1:10:37	2:24:10	4:55:36
320(15fps)	0:16:37	0:33:24	1:07:00	2:01:08	4:06:24	8:23:01	17:11:20

- For image size and image quality, see page 13.
- The maximum recording time is two hours per one recording.
- · Playback of movies not recorded with this camera cannot be guaranteed.
- When images recorded using earlier Sony models are played back on this camera, the display may differ from the actual image size.

# Battery life and number of images that can be recorded/viewed

The tables show the approximate number of images that can be recorded/viewed and the battery life when you shoot images in [Normal] mode with the battery pack (supplied) at full capacity and at an ambient temperature of 25°C (77°F). The numbers of images that can be recorded or viewed take into account changing the "Memory Stick Duo" as necessary.

Note that the actual numbers may be less than those indicated depending on the conditions of use.

- The battery capacity decreases as the number of uses increases and also over time (page 99).
- The number of images that can be recorded/ viewed and the battery life are decreased under the following conditions:
  - The surrounding temperature is low.
  - The flash is used.
  - The camera has been turned on and off many times
  - The zoom is used frequently.
  - [LCD Backlight] is set to [Bright].
  - The battery power is low.

#### When shooting still images

	LCD backlight	No. of Battery lit images (min.)	
Normal	On	Approx. 210	Approx. 105
	Off	Approx. 250	Approx. 125
Hybrid	On	Approx. 130	Approx. 65
	Off	Approx. 160	Approx. 80

- · Shooting in the following situations:
  - − ♠: (P.Quality) is set to [Fine].
  - 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 measurement method is based on the CIPA standard.
  - (CIPA: Camera & Imaging Products Association)
- The number of shooting images/battery life does not change, regardless of image size.

#### When viewing still images

Battery life (min.)
Approx. 100

 The values show when playing back Music at the time of when [Transition] is set to [Normal] in Slide Show.

#### When shooting movies

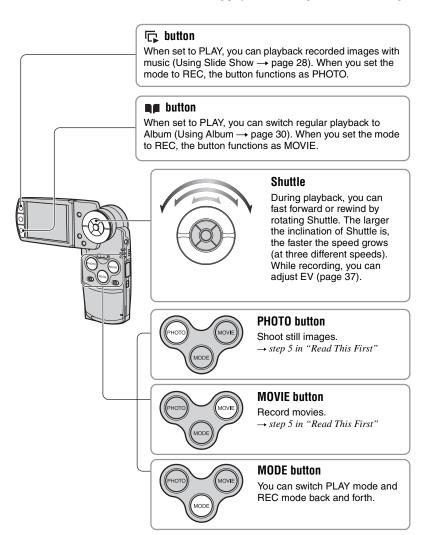
Movie size	Battery life (min.)		
1010010 3120	LCD backlight On	LCD backlight Off	
640(30fps)	Approx. 55	Approx. 65	
320(15fps)	Approx. 65	Approx. 75	

#### When viewing movies

Movie size	Battery life (min.)	
640(30fps)	Approx. 90	
320(15fps)	Approx. 100	

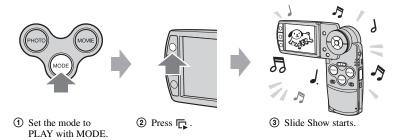
## Using the buttons for recording/playback

You can use the buttons and Shuttle for recording/playback according to the desired setting.



## **Using Slide Show**

You only need to press \tau to view a series of images with music (Slide Show).



During Slide Show, you can display the previous/next image with **◄/▶** on the control button.

- When pressing during regular playback, you can view the saved image on "Memory Stick Duo" and during Album playback, you can view the saved image in Album.
- When you have shot images by Hybrid, you can only playback still images.
- When you have shot the Multi Burst images, you can only playback the first frame of the continuous images.

#### To pause Slide Show

Press lacktriangle at the center of the control button. When you want to restart, select [Continue] with lacktriangle and press lackle.

#### To stop Slide Show

Press either  $\ \ \$  or  $\ \$  . If you have pressed  $\ \ \$  , select [Exit] and press  $\ \ \ \$  .

#### To adjust the setting

You can adjust the desired setting for Slide Show.

- ① Press MENU during Slide Show playback, then display the menu.
- ② Select the desired menu item with ▲/▼ on the control button.



- ③ Select the setting with ◀/►.
- ④ Select [Restart] and press ●.

The available setting items are shown below. The default settings are marked with  $\varnothing$ .

#### **Image**

✓	Folder (This Date)	Playback a series of images saved in a specified folder (or in a specified "This Date" during Album playback) in order.
	All	Playback all images in a "Memory Stick Duo" (in Album for Album playback) in order.

#### Music

Ø	Music1	Select the music for Slide Show playback. A number of		
	Music2	selectable music in [Music1] - [Music4] reflects the stored Music files.		
	Music3			
	Music4			
	Off	Cancel the music for Slide Show playback.		

#### **Transition**

	Quick	You can set the transition for changing images. The effects on the image display will vary depending on your transition			
V	Normal	setting. However, when you set the transition to [Slow], images are displayed like in regular playback. The effects are			
	Slow	only available as you switch the images.			

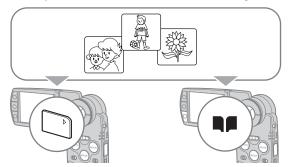
### 🗳 On add/change Music files

You can transfer the desired music from your CDs or MP3 files to the camera to playback during Slide Show. You can transfer the music after connecting the camera and a computer via the USB connection using the supplied software "Music Transfer" with the "Memory Stick Duo" removed. For more details, see page 71.

- You can record up to four pieces of music on the camera (those four preset pieces (Music 1-4) can be changed with the desired pieces).
- · A maximum length of each music file for music playback of the camera is 180 seconds.
- If you cannot playback a Music file due to damage or other malfunctions to the file, execute [Format Music] (page 57) and transfer some music again.

## **Using Album**

When shooting images during A displayed on the screen, those minimized copies of the original images can be saved on Album (page 56). Even if images are deleted from the "Memory Stick Duo," you can still view and store the minimized images in Album.



 When shooting still images, their image-size recorded on Album is [VGA]. You can shoot a maximum of 1,100 still images. Up to the first 5 seconds of movies are saved as minimized movies specified below:

Movie size	Movie size saved on Album		
640(30fps)	640(2fps)		
320(30fps)	320(2fps)		
320(15fps)	320(1fps)		

• You cannot save the pre/post movies of each still image on Album when shooting in Hybird.

#### To playback images in Album

- ① Set the mode to PLAY with MODE.
- 2 Press 1.

Images in Album will be organized by the shooting date. Each unit of this group is called "This Date" to be displayed on the index screen.



- A: Recording year
- **B**: Recording month
- Recording day
- **D**: The images recorded on "This Date"
- ③ Select "This Date" with ▲/▼/◄/► or with Shuttle, then press ●. All images, including those in "This Date," appear in the index screen.



- A: Recording year/month
- **B**: Recording day

④ Select the image you want to play back with ▲/▼/◄/► or with Shuttle, then press ●. The selected image appear.



• To return to the index screen in "This Date", press [10] (Index).

#### To delete images from Album

#### To delete images in single-image mode

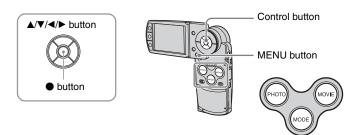
- ① Display the image you want to delete, then press ##/ | (Delete).
- ② Select [Delete] with △, then press ●.

#### To delete images in index mode

- ① Follow step ③ of "To playback images in Album" (page 30), then press  $\frac{44}{10}$  / 🗓 (Delete). (You cannot delete "This Date" in step ② of "To playback images in Album").
- ② Select [Select] with ◀/▶, press ●.
- ③ Select the images you want to delete with ▲/▼/◄/► or with Shuttle, press to mark mm (Delete).
- 4) Press / m (Delete).
- ⑤ Select [OK] with ▶, then press ●.
- To delete all the images in "This Date", select [All in this date] in step ② then press ●. Select [OK] with ▶, then press ●.

#### ϔ On recorded image data in Album

- When Album becomes full, your old image data gets deleted automatically. Protect the image data you need (page 46).
- When the capacity of Album becomes full by saving protected images, pb blinks. Although you can
  record images on a "Memory Stick Duo", you cannot record the images on Album. If you remove the
  protection of unwanted images, you can record the image data on Album.
- To create a backup for your image data in Album, perform the procedure explained in [Copy] (page 55).
- You cannot transfer your image data in Album directly to a computer. Perform the procedure explained in [Copy] (page 55). Copy the desired image data on a "Memory Stick Duo," then transfer them to a computer.
- · Data on a "Memory Stick Duo" or a computer cannot be copied to Album.
- Even if you protect the images recorded on a "Memory Stick Duo," those minimized images in Album are not protected. Also, even if the minimized images are protected in Album, those original images in "Memory Stick Duo" are not protected (page 46).
- · If you trim or resize images in regular playback, those in Album are not affected.
- You cannot operate the following functions on the images saved on Album:
- Marking print order (DPOF)
- Print
- Resize
- Trimming



## 1 Turn on the power and set the mode with MODE.

Different items are available depending on the (Camera) menu settings.

### 2 Press MENU to display the menu.

## 3 Select the desired menu item with ◄/▶ on the control button.

- In REC mode, [PHOTO/MOVIE] is indicated. You cannot set an item with [PHOTO/MOVIE] indicator in gray
- In PLAY mode, press after setting an item.



### 4 Select the setting with ▲/▼.

The setting you select is zoomed and is set.

### **5** Press MENU to turn off the menu.

- If there is an item that is not displayed, an ▲/V/√/▶ mark appears on the edges of the location where
  menu items usually appear. To display an item that is not displayed, select the mark with the control
  button.
- · You cannot select items that are grayed out.

(✓ : available)

### **Menu items**

The available menu items vary depending on the mode setting.

Menu for shooting (page 35) PHOTO PHOTO/MOVIE MOVIE Auto Program Scene (Camera) V ✓ (EV) (Focus) WB (White Bal) ISO (P.Quality) Mode (REC Mode)1) BRK (Bracket Step)2) **V**3) **V**<sup>3)</sup> (Interval)2) **V**3) PFX (P.Effect) **V** 

**V** 

③ (Saturation)● (Contrast)☑ (Sharpness)☑ (Setup)

<sup>1)</sup> During Hybrid shooting, [Mode](REC Mode) is set to [Normal].

<sup>2)</sup> During Hybrid shooting, you cannot select it.

<sup>3)</sup> You cannot use these depending on the mode in Scene Selection (page 36).

Menu for viewing (page 45)	Regular playback	Album playback	
(Folder)	<b>V</b>	_	
o¬¬ (Protect)	<b>V</b>	<b>V</b>	
DPOF	<b>V</b>	_	
凸 (Print)	<b>V</b>	_	
⊡ (Resize)	<b>V</b>	_	
[]::: (Rotate)	<b>V</b>	<b>V</b>	
Setup)	<b>V</b>	_	
Trimming <sup>4)</sup>	<b>V</b>	_	

<sup>&</sup>lt;sup>4)</sup> Available only during playback zoom.

## **Shooting menu**

The default settings are marked with  $\varnothing$ . When the mode has been set to PLAY, switch it to REC with MODE.

↑ (Camera) PHOTO MOVIE

The following modes are predetermined to match the scene conditions.

#### Scene Selection → Twilight\* [Q]Magnifying glass The subject appears on Shoots night scenes at a the LCD screen distance without losing the magnified by up to 3.5x. dark atmosphere of the surroundings. ■ Twilight portrait\* ▲ Landscape Shoots portraits in dark Shoots landscapes, etc., by places. focusing on a distant subject. Snow **7**Beach Shoots whitish scenes Shoots seasides or brightly. lakesides, with the blue of the water clearly recorded. ✓ High-speed shutter Fireworks\* Shoots moving subjects Fireworks are recorded in outdoors or in other bright all their splendor. places. ♦ Candle\* Shoot candlelit scenes, without spoiling the atmosphere. Program The necessary adjustments are made automatically like still image auto shooting, but you can also change the focus and other adjustments as desired. In addition, you can also set the desired shooting functions using menus. < Auto You can shoot images in Auto adjustment mode. $\rightarrow$ step 5 in

"Read This First"

<sup>\*</sup> The shutter speed becomes slower, so using a tripod is recommended.

On the $[Q]$ Magnifying $[$	alass
-----------------------------	-------

Distance to the subject	Magnification scale		
1 cm (13/32 inch)	3.5×		
2 cm (13/16 inch)	2.2×		
5 cm (2 inches)	1.1×		
10 cm (4 inches)	0.5×		
20 cm (7 7/8 inches)	0.3×		

- The focal distance to a subject is approx. 1 cm to 20 cm (13/32 inch to 7 7/8 inches).
- The optical zoom is locked to the W side and cannot be used.
- When you press the Zoom button, the image is enlarged using the digital zoom. When using the digital zoom, set [Digital Zoom] in the  $\blacksquare$  (Setup) screen to [On] beforehand.



Qx1.1

#### On the Scene Selection

For shooting an image appropriately according to the scene condition, a combination of functions is determined by the camera.

(**✓**: you can select the desired setting)

	Macro	Flash*	AF range finder	Focus preset	White Balance	Flash level	Speed Burst*/ Multi Burst*/ Bracket*
[0]		\$ / 🏵	<b>V</b>		>	>	
)		<b>(</b>	<b>V</b>	8	>		_
٦	>	<b>\$</b> SL	<b>V</b>	>	>	>	_
		\$ / ③	<b>V</b>	8	>	>	<b>V</b>
<b>6</b>	>	\$ / ③	<b>V</b>	>	>	>	<b>V</b>
<u>*-</u>	>	\$ / ③	<b>V</b>	>	>	>	<b>V</b>
( <b>X</b> )	<b>V</b>	\$ / 🏵	<b>V</b>	<b>V</b>	<b>&gt;</b>	<b>V</b>	<b>V</b>
		<b>(</b>	_	8	*	_	_
<b>₽</b>	_	<b>③</b>	Center AF	0.5m/1.0m/ 3.0m/7.0m	*	_	_

<sup>\*</sup>When shooting a movie, you cannot use the functions.

#### ⊭ (EV) PHOTO MOVIE



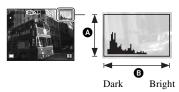
Toward +

Manually adjusts the exposure.

	↑+2.0EV	Toward +: Brightens an image.
$ \checkmark $	0EV	The exposure is determined automatically by the camera.
	<b>↓</b> –2.0EV	Toward -: Darkens an image.

- For details on the exposure → page 12
- The compensation value can be set in 1/3EV increments.
- You can also adjust EV with Shuttle without using the Setup menu.
- If a subject is being shot in extremely bright or dark conditions, or the flash is used, the exposure adjustment may not be effective.

#### ϔ Adjusting EV (Exposure Value) by displaying a histogram



A histogram is a graph showing the brightness of an image. Press | | (Display/LCD backlight on/ off) repeatedly to display the histogram inside the screen. The graph display indicates a bright image when skewed to the right side, and a dark image when skewed to the left side. When shooting still images, adjust EV while checking the exposure with the histogram.

- A Number of pixels
- Brightness
- The histogram also appears in the following cases, but you cannot adjust the exposure.
  - When (Camera) is set to [Auto]
  - When playing back a single image

### (Focus) PHOTO MOVIE

You can change the focus method. Use the menu when it is difficult to get the proper focus in auto focus mode.

	∞ (unlimited distance) 7.0m 3.0m 1.0m 0.5m	Focuses on the subject using a previously set distance to the subject. (Focus preset)  • When shooting a subject through a net or through window glass, it is difficult to get the proper focus in auto focus mode. In these cases, use of [Focus] is convenient.
	Spot AF (■)	Focuses automatically on an extremely small subject or a narrow area.  • This is useful when focusing on an extremely small subject or a narrow area. Use together with the AF lock function lets you shoot in the desired image composition. Take care to hold the camera steady so that the subject does not deviate from the range finder frame.  AF range finder frame indicator  AF range finder frame
	Center AF ( 👣 )	Focuses automatically on a subject in the center of the finder frame.  • Using this with the AF lock function lets you shoot in the desired image composition.  AF range finder frame indicator  AF range finder frame
<b>∜</b>	Multi AF (Multipoint AF) (Still image (19) (Movie (19)	Focuses automatically on a subject in all ranges of the finder frame.  • This mode is useful when the subject is not in the center of the frame.  AF range finder frame indicator  AF range finder frame

- · AF stands for Auto Focus.
- Distance setting information in [Focus] is approximate. If you point the lens up or down, the error increases.
- When you are shooting movies, [Multi AF] is recommended as the AF works even with a certain amount of vibration.
- When you use Digital Zoom or AF Illuminator, priority AF movement is given to subjects in or near the center of the frame. In this case the , or indicator flashes and the AF range finder frame is not displayed.
- Some options are not available depending on the Scene mode (page 36).

#### " If the subject is out of focus

When shooting with the subject at the edge of the frame (or the screen), or when using [Center AF] or [Spot AF], the camera may not focus on a subject at the edge of the frame. In such cases, do as follows.

① Recompose the shot so that the subject is centered in the AF range finder, and press PHOTO halfway down to focus on the subject (AF lock).



AF range finder frame

AE/AF lock indicator

As long as you do not press PHOTO fully down, you can retry the procedure as many times as you want.

When the AE/AF lock indicator stops flashing and remains on, return to the fully composed shot, and press PHOTO fully down.



### WB (White Bal) PHOTO MOVIE

Adjusts the color tones according to the lighting condition in a situation, for example, when the colors of an image look strange.

	<b>≱</b> WB (Flash)	Adjusts for the flash conditions. • You cannot use this item when shooting movies.
	्र- (Incandescent)	Adjusts for places where the lighting conditions change quickly such as at a party hall, or under bright lighting such as at photography studios.
	⊯ (Fluorescent)	Adjusts for fluorescent lighting.
	(Cloudy)	Adjusts for a cloudy sky.
	(Daylight)	Adjusts for outdoors, shooting night scenes, neon signs, fireworks, or sunrise, or conditions before and after sundown.
$ \checkmark $	Auto	Adjusts the White Balance automatically.

- For details on the white balance → page 13
- Under fluorescent lights that flicker, the white balance function may not work correctly even though you select [[...]] (Fluorescent).
- Except in [\$WB] (Flash) modes, [WB] is set to [Auto] when the flash strobes.
- · Some options are not available depending on the Scene mode (page 36).



Selects a luminous sensitivity with units of ISO. The larger the number, the higher the sensitivity.

	400	Select a large number when shooting in dark locations or
	200	shooting a subject moving at high speed, or select a small number to obtain high image quality.
	100	
	64	
Ø	Auto	

- For details on the ISO sensitivity → page 12
- Note that the image tends to become noisier as the ISO sensitivity number increases.
- [ISO] is set to [Auto] in the Scene mode.

### €:- (P.Quality) PHOTO MOVIE

Selects the still image quality.

$ \checkmark $	Fine (FINE)	Records with high quality (low compression).
	Standard (STD)	Records with standard quality (high compression).

• For details on the image quality  $\rightarrow$  page 13

### Mode (REC Mode) PHOTO MOVIE

Selects whether the camera performs continuous shooting or not when you press PHOTO.

	Multi Burst ()	Records 16 frames in succession as a still image file when you press PHOTO.  • This is convenient for checking your form in sports, for example.  • You can select the Multi Burst shutter interval in [Interval] mode (page 43).
	Exp Brktg (BRK)	Records a series of three images with the exposure values automatically shifted.  • You can select the image with the appropriate exposure after recording when you are unable to shoot good pictures depending on the brightness of the subject.
	Speed Burst (\$\bigsize\)	Records maximum four images in succession when you press and hold down PHOTO.  • When "Recording" disappears, you can shoot the next image.
✓	Normal	Does not shoot continuously.

#### On the [Multi Burst]

- You can successively play back images shot in the Multi Burst mode using the following procedures:
  - To pause/resume: Press on the control button.
  - To play back frame-by-frame: Press ◀/▶ in pause mode. Press to resume playback in series.
- · You cannot use the following functions in the Multi Burst mode:
  - Flash
  - Hybrid shooting
  - Inserting the date and time
  - Dividing a series of images shot in the Multi Burst mode
  - Deleting a frame in a series of images shot in the Multi Burst mode
  - Setting the frame interval to a mode other than [1/30] when 
    (Camera) is set to [Auto]
- When playing back a series of images shot in the Multi Burst mode using a computer or a camera not equipped with the Multi Burst function, the image is displayed as a single image with 16 frames.
- The image size of images shot in the Multi Burst mode is 1M.
- You may not be able to shoot images in the Multi Burst mode depending on the Scene mode (page 36).

#### On the [Exp Brktg]

- The flash is set to ③ (No flash).
- The focus and white balance are adjusted for the first image, and these settings are also used for the other images.
- When the exposure is manually adjusted (page 37), the exposure is shifted based on the adjusted brightness.
- The recording interval is approximately 0.36 second.
- If the subject is too bright or too dark, you may be unable to shoot properly with the selected bracket adjustment value.
- · You cannot shoot continuous shots in Hybrid.
- You may not be able to shoot images in the Exposure Bracket mode depending on the Scene mode (page 36).

#### On the [Speed Burst]

- The flash is set to (No flash).
- When recording with the self timer, a series of a maximum of four images is recorded.
- When the battery level is low, or "Memory Stick Duo" is full, the Speed Burst stops.
- · You cannot shoot continuous shots in Hybrid.
- You may not be able to shoot images in the Speed Burst mode depending on the Scene mode (page 36).

### **BRK (Bracket Step)**

PHOTO

MOVIE

Records a series of three images with the exposure values automatically shifted.

	±1.0EV	Shifts the exposure value by plus or minus 1.0EV.
✓	±0.7EV	Shifts the exposure value by plus or minus 0.7EV.
	±0.3EV	Shifts the exposure value by plus or minus 0.3EV.

• BRK (Bracket Step) is not displayed in some Scene modes.

#### (Interval)

PHOTO

MOVIE

Selects the frame interval in the [Multi Burst] mode (page 41).

	1/7.5	• This setting cannot be made when [Mode] (REC Mode) in the menu is set to other than [Multi Burst] (page 41).
	1/15	menu is set to other than [Multi Burst] (page 41).
$ \checkmark $	1/30	

• Interval) is not displayed in some Scene modes.

### \$± (Flash Level)

PHOTO



Adjusts the amount of flash light.

	+ (\$+)	Toward +: Makes the flash level higher.
<b>⊘</b>	Normal (\$)	
	- ( <b>\$</b> -)	Toward -: Makes the flash level lower.

- To change flash mode → step 5 in "Read This First".
- You may not be able to set the Flash Level depending on the Scene mode (page 36).

#### PFX (P.Effect)

PHOTO



Allows you to shoot an image with special effects.

	B & W ( <b>p</b> +)	Records the image in monochrome (black and white).
	Sepia (₱+)	Records the image in sepia (like an old photograph).
<b>⊘</b>	Off	No effect.

• This setting is not maintained when the power is turned off.

### (Saturation)

PHOTO MOVIE

Adjusts the saturation of the image.

	+ (3)	Toward +: Brightens the color.
<b>⊘</b>	Normal	
	- ( <b>③</b> )	Toward -: Darkens the color.

### (Contrast)

PHOTO

MOVIE

Adjusts the contrast of the image.

	+(①)	Toward +: Enhances the contrast.
$ \checkmark $	Normal	
	-(①)	Toward -: Reduces the contrast.

### (Sharpness)

PHOTO MOVIE

Adjusts the sharpness of the image.

	+ ([[])	Toward +: Sharpens the image.
<b>⊘</b>	Normal	
	- ( <u> </u>	Toward -: Softens the image.

### 🖶 (Setup)

See page 50.

### Viewing menu

The default settings are marked with &.

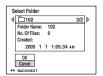
When the mode has been set to REC, switch it to PLAY with MODE.

#### (Folder)

Selects the folder containing the image you want to play back when using the camera with "Memory Stick Duo".

	OK	See the following procedure.
V	Cancel	Cancels the selection.

① Select the desired folder with **◄/▶** on the control button.



② Select [OK] with ▲, then press ●.

#### ϔ On the folder

The camera stores images in a specified folder of a "Memory Stick Duo" (page 54). You can change the folder or create a new one.

- To create a new folder → [Create REC.Folder] (page 54)
- To change the folder for recording images  $\rightarrow$  [Change REC.Folder] (page 55)
- When multiple folders are created in the "Memory Stick Duo" and the first or last image in the folder is displayed, the following indicators appear.
  - : Moves to the previous folder.
  - : Moves to the next folder.
  - : Moves to either the previous and next folders.

### ு (Protect)

Protects images against accidental erasure. You can prevent deleteing images automatically in Album by protecting the images.

✓	Protect (O-m)	See the following procedure.
	Exit	Exits the Protection function.

### To protect images in single-image mode

- 1 Display the image you want to protect.
- 2 Press MENU to display the menu.
- ③ Select [○¬¬] (Protect) with ◀/▶ on the control button, then press ●. The image is protected and the ○¬¬ indicator appears on the image.



(4) To protect other images, select the desired image with **◄/▶**, then press **●**.

### To protect images in index mode

- ① Press [ (Index) to display the index screen.
- 2 Press MENU to display the menu.
- ③ Select [•¬¬] (Protect) with ◀/▶ on the control button, then press ●.
- ④ Select [Select] with ◀/▶, then press ●.
- ⑤ Select the image you want to protect with ▲/▼/◄/▶, then press ●. A green ⊶ indicator appears on the selected image.



- 6 Repeat step 5 to protect other images.
- Press MENU.
- Select [OK] with ▶, then press ●.
   The ○¬¬ indicator turns white. The selected images are protected.
- To protect all images in the folder, select [All In This Folder] in step ④, and press ●. Select [On] with ▶, then press ●.
- To protect the images in Album in the index mode, follow step ③ of "To playback images in Album"(page 30), then press MENU to display [o¬¬]. Press ♠, then follow the above procedure from step ④. To protect all images in "This Date", display [o¬¬], then press ♠. Select [All in this date] with ▶, then press ♠. Select [On] with ▶, then press ♠.

#### To cancel the protection

In single-image mode

Press ● in step ③ or ④ of "To protect images in single-image mode."

#### In index mode

- ① Select the image for which you want to remove protection in step ⑤ of "To protect images in index mode."
- ② Press to turn the ⊶ indicator gray.
- 3 Repeat the operation above for all images to be unprotected.
- ④ Press MENU, select [OK] with ▶, and then press ●.

#### To cancel protection of all images in the folder

Select [All In This Folder] in step ④ of "To protect images in index mode," and press ●. Select [Off] with ▶, then press ●.

- Note that formatting the "Memory Stick Duo" or Album erases all data stored on the recording media, even if images are protected, and these images cannot be recovered.
- · It may take some time to protect an image.

#### **DPOF**

Adds a (Print order) mark to images you want to print (page 79).

#### 凸 (Print)

See page 75.

### 

You can change the image size of a recorded image (Resize), and save it as a new file. The original image is retained even after resizing.

	5M	The setting size is just a guideline.
	3M	→ step 4 in "Read This First"
	1M	
	VGA	
$ \checkmark $	Cancel	Cancels resizing.

- ① Display the image you want to resize.
- 2 Press MENU to display the menu.
- ③ Select [□ ] (Resize) with **◄/▶** on the control button, then press **●**.
- ④ Select the desired size with ▲/▼, then press ●.
  The resized image is recorded in the recording folder as the newest file.

- For details on [Image Size] → step 4 in "Read This First"
- · You cannot resize movies, Multi Burst images or the images saved on Album.
- When you change from a small size to a large size, the image quality deteriorates.
- You cannot resize to an image size of 3:2.
- When you resize a 3:2 image, the upper and lower black portions will be displayed on the image.

#### П.⊒. (Rotate)



Rotates a still image.

	47	Rotates an image. See the following procedure.
	OK	Determines the rotation. See the following procedure.
✓	Cancel	Cancels rotation.

- ① Display the image to be rotated.
- 2 Press MENU to display the menu.
- ③ Select [13] (Rotate) with ◄/▶ on the control button, then press ●.
- 4 Select  $[ \checkmark ]$  with  $\blacktriangle$ , then rotate the image with  $\blacktriangleleft / \blacktriangleright$ .
- Select [OK] with ▲/▼, then press ●.
- You cannot rotate protected images, movies, or Multi Burst images.
- Even if you rotate the images shot in Hybrid they will be displayed in the original position on the screen.
- You may not be able to rotate images shot with other camera.
- When viewing images on a computer, the image rotation information may not be reflected depending on the software.

### 📇 (Setup)

See page 50.

### Trimming

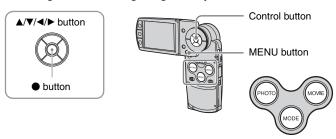
Records an enlarged image (→ step 6 in "Read This First") as a new file.

	Trimming	See the following procedure.
$ \checkmark $	Return	Cancels trimming.

- 1 Press MENU during playback zoom to display the menu.
- ② Select [Trimming] with ▶ on the control button, then press ●.
- ③ Select the image size with ▲/▼, then press ●.
  The image is recorded, and the original image is displayed again.
- The trimmed image is recorded as the newest file in the selected recording folder, and the original image is retained.
- The quality of trimmed images may deteriorate.
- You cannot trim to an image size of 3:2.
- · You cannot trim the images saved on Album.

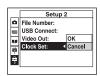


You can change the default settings using the Setup screen.



- 1 Turn on the power and set the mode with MODE.
- 2 Press MENU to display the menu.
- 3 Press ▶ on the control button to select \( \begin{aligned} \begin{aligned} \text{Setup} \end{aligned} \).
- 4 Press ▲/▼/◄/▶ on the control button to select the item you want to set.

The frame of the selected item turns yellow.



**5** Press • to enter the setting.



To turn off the **\( \subseteq \)** (Setup) screen, press MENU.

To return to the menu from the  $\blacksquare$  (Setup) screen, press  $\blacktriangleleft$  on the control button repeatedly.

### To cancel the $\blacksquare$ (Setup) setting

Select [Cancel] if it appears, then press ● on the control button. If it does not appear, select the previous setting again.

• This setting is maintained even when the power is turned off.



The default settings are marked with .

#### **Hybrid Rec**

During Hybrid shooting, you can select whether to record either a pre movie or pre/post movies in Hybrid.

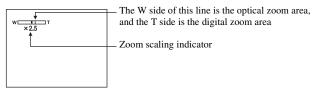
<	Normal	Records a five-second-movie before a still image shooting and a three-second-movie after the shooting.
	Pre Rec	Records a five-second movie before shooting a still image.

### **Digital Zoom**

Selects the digital zoom mode. When set to [On], the camera adjusts the zoom scaling up to a maximum 3x. The Optical zoom starts to operate automatically when an image needs further enlargement.

	On (Qx)	Enlarges all image sizes up to a maximum of 6x, but the image quality deteriorates.
Ø	Off (x)	Does not use the digital zoom.

• When you press the zoom button, the zoom scaling indicator appears as follows.



- The maximum zoom scale of digital zoom includes the scale of the optical zoom.
- The AF range finder frame does not appear when using the digital zoom. The ■, □ or indicator flashes, and AF operates with priority on subjects located near the center of the frame.
- The zoom may stop momentarily on the boundary between the optical zoom and the digital zoom.

#### Date/Time

Selects how to superimpose the date or time onto the image. Select this before shooting.

• The date and time do not appear during shooting, instead, the indicator appears. The date and time appear in red on the lower-right corner of the screen during playback only.

	Day&Time	Superimposes the date, hour, and minute.
	Date	Superimposes the year, month and day.  • The date is inserted in the order you select. (→ step 2 in "Read This First")
8	Off	Does not superimpose the date and time.

- · You cannot insert the date and time into movies or images in the Multi Burst mode.
- The date and time superimposed cannot be removed later.

#### **Red Eye Reduction**





Reduces the red-eye phenomenon when using the flash. Select this before shooting.

	On ( <b>③</b> )	Reduces the red-eye phenomenon.  • The flash pre-strobes twice or more before shooting.
<b>⊘</b>	Off	Does not use Red Eye Reduction.

- Because it takes about a second until the shutter clicks, hold the camera firmly to prevent the effects of vibration. Also, do not let the subject move.
- Red-eye reduction may not produce the desired effects depending on individual differences, the distance
  to the subject, if the subject does not see the pre-strobe, or other conditions.

#### **AF Illuminator**

The AF illuminator supplies fill light to focus more easily on a subject in dark surroundings. The AF illuminator emits red light allowing the camera to focus easily when PHOTO is pressed halfway, until the focus is locked. The  $\mathbb{N}_{SON}$  indicator appears at this time.

Ø	Auto	Uses the AF illuminator.
	Off	Does not use AF illuminator.

- If the AF illuminator light does not reach the subject sufficiently or the subject has no contrast, focus will not be achieved. (A distance of up to approximately 1.8 m (5 feet 10 7/8 inches) (W)/2.1 m (6 feet 10 11/16 inches) (T) is recommended.)
- Focus is achieved as long as the AF illuminator light reaches the subject, even if the light is slightly off the
  center of the subject.
- When Focus preset is set (page 38), AF Illuminator does not work.
- The AF range finder frame does not appear. The 
   indicator flashes, and AF operates with priority on subjects located near the center of the frame.
- The AF illuminator does not operate when  $\mathcal{J}$  (Twilight mode),  $\stackrel{\blacksquare}{}$  (Landscape mode),  $\stackrel{\bigstar}{}$  (High-speed shutter mode) or  $\stackrel{\clubsuit}{}$  (Fireworks mode) is selected in the Scene mode.
- The AF illuminator emits very bright light. Although there are no problems with safety, do not look directly into the AF illuminator emitter at close range.

#### **Auto Review**

Displays the recorded image on the screen for approximately two seconds immediately after shooting a still image. (When [Hybrid Rec] is set to [Normal], the recorded image cannot be displayed.)

	On	Use the Auto Review.
$ \checkmark $	Off	Does not use Auto Review.

### **™** Memory Stick Tool

This item appears only when a "Memory Stick Duo" is inserted in the camera. The default settings are marked with  $\varnothing$ .

#### **Format**

Formats the "Memory Stick Duo". A commercially available "Memory Stick Duo" is already formatted, and can be used immediately.

 Note that formatting irrevocably erases all data on a "Memory Stick Duo," including even protected images.

	OK	See the following procedure.
⋄	Cancel	Cancels the formatting.

- ① Select [OK] with ▲ on the control button, then press ●. The message "All data in Memory Stick will be erased Ready?" appears.
- ② Select [OK] with ▲, then press ●. The format is complete.

#### Create REC.Folder

Creates a folder in a "Memory Stick Duo" for recording images.

OK	See the following procedure.
Cancel	Cancels folder creation.

① Select [OK] with ▲ on the control button, then press ●. The folder creation screen appears.



② Select [OK] with ▲, then press ●.

A new folder is created with a number incremented one higher than the largest number, and the folder becomes the current recording folder.

- · For details on the folder, see page 45.
- When not creating a new folder, the "101" folder is selected as the recording folder.
- You can create folders designated up to "999".
- Images are recorded in the newly created folder until a different folder is created or selected.
- · You cannot delete a folder with the camera. To delete a folder, use your computer, etc.
- Up to 4,000 images can be stored in one folder. When the folder capacity is exceeded, a new folder is automatically created.
- For more information, see "Image file storage destinations and file names" (page 67).

#### Change REC.Folder

Changes the folder currently used for recording images.

	OK	See the following procedure.
<b>⊘</b>	Cancel	Cancels changing the recording folder.

Select [OK] with ▲ on the control button, then press ●.
 The folder selection screen appears.



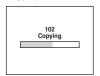
- ② Select the desired folder with **◄/▶**, and [OK] with **▲**, then press **●**.
- You cannot select the "100" folder as a recording folder.
- · You cannot move recorded images to a different folder.

#### Copy

Copies all images in Album to a "Memory Stick Duo". When using the battery pack, this menu is not displayed. When you want to copy images, use the AC Adaptor (supplied).

	OK	See the following procedure.
$ \checkmark $	Cancel	Cancels the copying.

- ① Insert a "Memory Stick Duo" having 64 MB or larger capacity.
- ② Select [OK] with ▲ on the control button, then press ●. The message "All data in album will be copied Ready?" appears.
- ③ Select [OK] with ▲, then press ●. Copying starts.



- · You cannot copy individual images.
- You cannot select a folder copied on a "Memory Stick Duo".
- You can copy the images saved on Album to the "Memory Stick Duo" without deleting the images saved on Album.
- After shooting images, you cannot copy the images in the recording folder/playback folder to Album.
- When playing back images in Album, the order of images displayed on the screen may be different from that of images copied on the "Memory Stick Duo".



The default settings are marked with 

✓.

### Write in Album

When shooting images, you can choose to save the minimized copies of the original images.

<	On	When shooting images, save the minimized copies of the original images in Album.
	Off	Does not save the minimized copies of the original images in Album.

• For more details in Album, see "Using Album" (page 30).

#### **Format**

#### Formats Album.

· Note that formatting irrevocably erases all data in Album, including even protected images.

	ОК	See the following procedure.
$ \checkmark $	Cancel	Cancels the formatting.

- ① Select [OK] with ▲ on the control button, then press ●. The message "All data in album will be erased Ready?" appears.
- ② Select [OK] with ▲, then press ●. The format is complete.



The default settings are marked with .

#### Beep

Selects the sound produced when you operate the camera.

	Shutter	Turns on the shutter sound when you press PHOTO.
<	On	Turns on the beep/shutter sound when you press the control button/press PHOTO.
	Off	Turns off the beep/shutter sound.

### **Format Music**

If you cannot playback Music with Slide Show, the Music file may be damaged. In this case, format the write-in-area for Music files first. Remove the "Memory Stick Duo," then connect the camera to your computer through the USB connection. Then transfer the desired music using the supplied application, "Music Transfer" again.

 Once you format the write-in-area of Music files, all data in the area will be erased, and you cannot get it back.

	OK	See the following procedure.
8	Cancel	Cancels the formatting.

- ① Select [OK] with ▲ on the control button, then press ●.

  The message "All data will be erased Ready?" appears.
- ② Select [OK] with ▲, then press ●. The format is complete.

#### LCD Backlight

Selects the brightness of the LCD backlight when using the camera with battery pack.

	Bright	Brightens.
<b>⊘</b>	Normal	

· Selecting [Bright] exhausts the battery pack charge faster.

### Language

Selects the language to be used to display the menu items, warnings, and messages.



The default settings are marked with 

✓.

### **File Number**

Selects the method used to assign file numbers to images.

<	Series	Assigns numbers to files in sequence even if the recording folder or the "Memory Stick Duo" is changed. (When the replaced "Memory Stick Duo" contains a file with a number higher than the last assigned number, a number one higher than the largest number is assigned.)
	Reset	Starts from 0001 each time the folder is changed. (When the recording folder contains a file, a number one higher than the largest number is assigned.)

### **USB** Connect

Selects the USB mode to be used when connecting the camera to a computer or a PictBridge compliant printer using the USB cable.

	PictBridge	Connects the camera to a PictBridge compliant printer (page 75).
	PTP	When [PTP] (Picture Transfer Protocol) is set and the camera is connected to a computer, the images in the recording folder on the camera are copied to the computer. (Compatible with Windows XP and Mac OS X.)
	Mass Storage	Establishes a Mass Storage connection between the camera and a computer or other USB device (page 63).  • When a "Memory Stick Duo" is in the camera, you can see the images from the "Memory Stick Duo" on the computer. When there is no "Memory Stick Duo" inserted in your camera, the write-in-area of Music files appears.
<b>∜</b>	Auto	Connects the camera to a computer or a PictBridge auto compliant printer (pages 63 and 76).  • If the camera and a PictBridge compliant printer cannot be connected when set to [Auto], change the setting to [PictBridge].  • If the camera and a computer or other USB device cannot be connected when set to [Auto], change the setting to [Mass Storage].

### Video Out

Sets the video signal output according to the TV color system of the connected video equipment. Different countries and regions use different TV color systems. If you want to view images on a TV screen, check page 82 for the TV color system of the country or region where the camera is used.

NTSC	Sets the video output signal to NTSC mode (e.g., for the USA, Japan).
PAL	Sets the video output signal to PAL mode (e.g., for Europe).

### **Clock Set**

Sets the date and time.

	OK	Select [OK] with $\triangle$ on the control button, and press $\blacksquare$ . Then, perform the procedure explained in "Set the clock" ( $\rightarrow$ <i>step 2 in "Read This First"</i> ).
$ \checkmark $	Cancel	Cancels setting the clock.

### **Enjoying your Windows computer**

For details on using a Macintosh computer, refer to "Using your Macintosh computer" (page 72).



### Copying images to your computer (page 62)

### Preparation



Viewing images on your computer

Installing the USB driver.

 Installation of the USB driver is not needed when using Windows XP.

### Enjoying images using "PicturePackage" (page 70)



Viewing images saved on your computer

Installing "PicturePackage" (page 70).



Storing images on a CD-R



Creating a Slideshow



Adding/Changing the Music files in Slide Show using "Music Transfer"



Printing images

### Recommended computer environment

The following environment is recommended for a computer connected to the camera.

### Recommended environment for copying images

- OS (pre-installed): Microsoft Windows 98, Windows 98SE, Windows 2000 Professional, Windows Millennium Edition, Windows XP Home Edition, or Windows XP Professional
  - Operation is not assured in an environment based on an upgrade of the operating systems described above or in a multi-boot environment.

CPU: MMX Pentium 200 MHz or faster

USB connector: Provided as standard

**Display:**  $800 \times 600$  dots or more, High Color (16-bit color, 65,000 colors) or more

### Recommended environment for using "PicturePackage"

- "Movie Player" (the playback application for movies) can only be installed on Widows XP/ 2000.
- Software: Macromedia Flash Player 6.0 or later, Windows Media Player 7.0 or later, DirectX 9.0b or later
- **Sound card:** 16-bit stereo sound card with speakers
- **Memory:** 64 MB or more (128 MB or more is recommended.)

**Hard Disk:** Disk space required for installation—approximately 500 MB

**Display:** Video card (Direct Draw driver compliant) with 4 MB of VRAM

- For automatic creation of a Slideshow (page 70), a Pentium III 500 MHz or faster CPU is required.
- This software is compatible with DirectX technology. "DirectX" must be installed for use.

 A separate software application for operating the recording device is required in order to write to CD-Rs.

### Note on playback of movie files (MPEG-4)

To playback movie files (MPEG-4) recorded by the camera, you need to install the software compatible with MPEG-4 or "PicturePackage" on your computer. (When using Windows XP/2000, you can use "PicturePackage" to playback movie files (MPEG-4)).

### Notes on connecting your camera to a computer

- Operations are not guaranteed for all the recommended computer environments mentioned above.
- If you connect two or more USB devices to a single computer at the same time, some devices, including your camera, may not operate, depending on the types of USB devices you are using.
- Operations are not guaranteed when using a USB hub.
- Connecting your camera using a USB interface that is compatible with Hi-Speed USB (USB 2.0 compliant) allows advanced transfer (high speed transfer) as this camera is compatible with Hi-Speed USB (USB 2.0 compliant).
- There are three modes for a USB connection when connecting a computer, [Auto] (default setting), [Mass Storage] and [PTP] modes. This section describes the [Auto] and [Mass Storage] as examples. For details on [PTP], see page 58.
- When your computer resumes from a suspend or sleep mode, communication between your camera and your computer may not recover at the same time.

### **Copying images to your computer**

This section describes the process using a Windows computer as an example. You can copy images from the camera to your computer as follows.

### For a computer with a "Memory Stick" slot

Remove the "Memory Stick Duo" from the camera and insert it in the Memory Stick Duo Adaptor. Insert the Memory Stick Duo Adaptor in the computer and copy the images.

### For a computer without a "Memory Stick" slot

Follow Stages 1 through 4 on pages 62 to 66 to copy images.

### Stage 1: Installing the USB Driver

#### 98 98SE 2000 Me

- A driver is software that enables equipment connected to the computer to operate properly.
- When using Windows XP, start from Stage 2.
- When "PicturePackage" is already installed, start from Stage 2.

### NOTE: Do not connect the camera to the computer at this time.

### 1 Shut down all application software in use.

 In Windows 2000, log on as Administrator (authorized Administrators).

# 2 Insert the CD-ROM into the computer, then click [USB Driver] when the install menu screen appears.

The "InstallShield Wizard" screen appears.

 If the install menu screen does not appear, double-click (My Computer) → (PICTUREPACKAGE).

### 3 Click [Next].



The USB driver installation starts. When the installation is finished, the screen informs you of completion.

### 4 Click the radio button next to [Yes, I want to restart my computer now] to select it, then click [Finish].

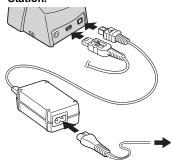


Your computer restarts. Now, you can establish a USB connection.

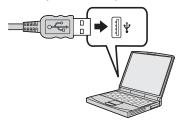
Remove the CD-ROM when the installation is completed.

### Stage 2: Connecting the camera with a computer

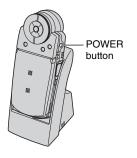
- 1 Insert a "Memory Stick Duo" with the recorded images in the camera.
  - You cannot copy the images in Album directly to a computer. Copy (page 55) the images in Album to "Memory Stick Duo" first, then follow step 1.
- 2 Connect the Cyber-shot Station (supplied) with the AC Adaptor (supplied), then plug the adaptor into the wall outlet (wall socket). Connect the USB cable to ∜ (USB) jack of the Cyber-shot Station.



 If you copy image files using the battery pack, you may not be able to transfer data for running out of battery power. 3 Connect the USB cable to the USB jack of a computer.

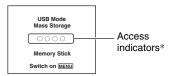


4 Attach the camera on the Cybershot Station (page 17), then turn it on.



• With Windows XP, the AutoPlay wizard appears on the desktop.

"USB Mode Mass Storage" appears on the screen of the camera.



When a USB connection is established for the first time, your computer automatically runs a program to recognize the camera. Wait for a while.

- \* During communication, the access indicators turn red. Do not operate the computer until the indicators turn white.
- If "USB Mode Mass Storage" does not appear, set [USB Connect] to [Mass Storage] (page 58).
- Do not remove the camera from the Cyber-shot Station while using the USB connection. Your image files may get damaged. When disconnecting the USB connection, see "To delete the USB connection" on page 67.

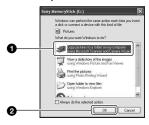
### Stage 3-A: Copying images to a computer

ХP

- For Windows 98/98SE/2000/Me, follow the procedure explained in "Stage 3-B: Copying images to a Computer" on page 65.
- For Windows XP, when the wizard screen does not appear automatically, follow the procedure explained in "Stage 3-B: Copying images to a Computer" on page 65.

This section describes an example of copying images to a "My Documents" folder.

1 After making a USB connection in Stage 2, click [Copy pictures to a folder on my computer using Microsoft Scanner and Camera Wizard] → [OK] as the wizard screen appears automatically on the desktop.



The "Scanner and Camera Wizard" screen appears.

### 2 Click [Next].

The images saved on the "Memory Stick Duo" of the camera appear.

3 Click the check box of unwanted images to remove the checkmark so they are not copied, then click [Next].



The "Picture Name and Destination" screen appears.

### 4 Select a name and destination for the images, then click [Next].



Image copying starts. When the copying is completed, the "Other Options" screen appears.

- This section describes an example of copying images to the "My Documents" folder.
- 5 Click the radio button next to [Nothing. I'm finished working with these pictures] to select it, then click [Next].



The "Completing the Scanner and Camera Wizard" screen appears.

### 6 Click [Finish].

The wizard screen closes.

 To continue copying other images, disconnect the USB cable from the Cybershot Station. Then follow the procedure explained in "Stage 2: Connecting the camera with a computer" on page 63.

### Stage 3-B: Copying images to a Computer

98 98SE 2000 Me

 For Windows XP, follow the procedure explained in "Stage 3-A: Copying images to a computer" on page 64.

This section describes an example of copying images to the "My Documents" folder.

### 1 Double-click [My Computer] → [Removable Disk] → [DCIM].



When you have not created a new folder, only [101MSDCF] will be displayed.

- When coping movies, double-click on [MP ROOT].
- If the "Removable Disk" icon is not displayed, see page 89.

2 Double-click the folder where the image files you want to copy are stored.

Then, right-click an image file to display the menu and click [Copy].



3 Double-click the [My Documents] folder. Then, right-click on the "My Documents" window to display the menu and click [Paste].



The image files are copied to the "My Documents" folder

When an image with the same file name exists in the copy destination folder, the overwrite confirmation message appears. When you overwrite an existing image with a new one, the original file data is deleted. To copy an image file to the computer without overwriting, change the file name to a different name and then copy the image file. However, note that if you change the file name (page 69), you may not be able to play back that image with your camera.

### Stage 4: Viewing images on your computer

This section describes the procedure for viewing copied images in the "My Documents" folder.

1 Click [Start] → [My Documents].



The contents of the "My Documents" folder are displayed.

 If you are not using Windows XP, double-click [My Documents] on the desktop.

### 2 Double-click the desired image file.



The image is displayed.

 To playback movie files (MPEG-4) recorded by the camera, you need to install the software compatible with MPEG-4 or "PicturePackage" on your computer. (When using Windows XP/2000, you can use "PicturePackage" to playback movie files (MPEG-4)).

### To delete the USB connection

Perform the procedures listed below beforehand when:

- · Disconnecting the USB cable
- Removing a "Memory Stick Duo"
- · Turning off the camera

### ■ For Windows 2000/Me/XP

① Double-click 🕏 on the tasktray.



- ② Click  $\stackrel{\leftarrow}{\Leftrightarrow}$  (Sony DSC)  $\rightarrow$  [Stop].
- ③ Confirm the device on the confirmation window, then click [OK].
- 4 Click [OK].
  The device is disconnected.
  - Step 4 is unnecessary for Windows XP.

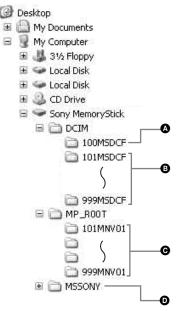
### ■ For Windows 98/98SE

Confirm that the access indicators (page 64) are white. If the access indicators have turned white, the device is disconnected from a computer.

### Image file storage destinations and file names

The image files recorded with your camera are grouped as folders on the "Memory Stick Duo".

### **Example: viewing folders on Windows XP**



- Polder containing image data recorded using a camera not equipped with the folder creating function
- Folder containing image data which was recorded using your camera, movie data which was recorded in Hybrid, or movie and image data which was recorded using

- another camera equipped with the folder creating function. When not creating any folders, there is only the "101MSDCF" folder.
- Folder containing movie data that were recorded using your camera (except for movie data recorded in Hybrid). When not creating any folder, there is only the "101MNV01" folder.
- Folder containing movie data, etc., which were recorded using the camera not equipped with the folder creating function
- You cannot record any images to "100MSDCF" or "MSSONY" folders. The images in the "100MSDCF" folder are available only for viewing.
- Image files are named as follows. □□□□
   stands for any number within the range from
   0001 to 9999.
- Still image files: DSC0□□□□.JPG
- Movie files recorded in simultaneously in Hybrid mode: DSC0□□□□.MP4
- Movie files: M4V0□□□□.MP4
- Index image files that are recorded when you record movies: M4V0□□□□.THM
- The numerical portions of the following files are the same.
  - A still image file recorded in Hybrid mode and its corresponding movie files
  - A movie file and its corresponding index image file
- For more information about folders, see pages 45, 54.

## Viewing image files stored on a computer with your camera

This section describes the process using a Windows computer as an example. When an image file copied to a computer no longer remains on a "Memory Stick Duo", you can view that image again on the camera by copying the image file on the computer to a "Memory Stick Duo".

- Step 1 is not necessary if the file name set with your camera has not been changed.
- You may be unable to play back some images depending on the image size.
- When an image file has been processed by a computer or when the image file was recorded using a model other than that of your camera, playback on your camera is not guaranteed.
- When there is no folder, first create a folder with your camera (page 54) and then copy the image file.
- 1 Right-click the image file, then click [Rename]. Change the file name to "DSC0□□□□".

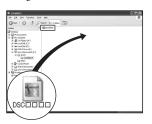
Enter a number from 0001 to 9999 for  $\square \square \square \square$ .



- If the overwrite confirmation message appears, enter a different number.
- An extension may be displayed depending on the computer settings. The extension for still images is JPG, and the extension for movies is MP4. Do not change the extension.

### 2 Copy the image file to the "Memory Stick Duo" folder in the following order.

- ①Right-click the image file, then click [Copy].
- ②Double-click [Removable Disk] or [Sony MemoryStick] in [My Computer].
- ③ Right-click the [□□□MSDCF] (for still image) in the [DCIM] folder or [□□□MNV01] (for movie) folder in the [MP\_ROOT] folder and click [Paste].
  - $\square\square\square$  stands for any number within the range from 100 to 999.



### **Using the supplied software**

This section describes the process using a Windows computer as an example.

### Overview of the supplied software

The supplied CD-ROM contains one software application: "PicturePackage".

#### PicturePackage



#### What you can do:

- A Save the images on CD-R
- **B** Automatic Slideshow Producer
- Viewing video and pictures on PC
- Transfer Slideshow music ("Music Transfer")
- **♦** Viewing Movie clips on PC ("Movie Player"\*)
- \* "Movie Player" is only compatible with Windows XP/2000

How to start up the functions: Click one of **②-⑤**, then click the button at the lower right of the screen.

### Installing the software

You can install the "PicturePackage" software using the following procedure.

- If you have not yet installed the USB driver (page 62), do not connect the camera to the computer before you install the "PicturePackage" software (except for Windows XP).
- In Windows 2000/XP, log on as Administrator.
- When "PicturePackage" is installed, the USB driver is installed automatically.

### 1 Turn on your computer, and insert the CD-ROM (supplied) into the CD-ROM drive.

The installation menu screen appears.

 If it does not appear, double-click (My Computer) (PICTUREPACKAGE).

### 2 Click [PicturePackage].

The "Choose Setup Language" screen appears.

### 3 Select the desired language, then click [Next] twice.

This section describes the English screen.

The "License Agreement" screen appears.

Read the agreement carefully. If you accept the terms of the agreement, click the radio button next to [I accept the terms of the license agreement] and then click [Next].

# 4 Follow the instructions on the screen to complete the installation.

- "DirectX" will be installed if you have not yet installed it.
- When the restarting confirmation message appears, restart the computer following the instructions on the screen.

5 Remove the CD-ROM as the shortcut icons of "PicturePackage Menu" and "PicturePackage destination Folder" are displayed after the installation.

### To start up the software

Double-click the "PicturePackage Menu" icon on the desktop.

### For information on the use of the software

Click [?] at the upper-right corner of each screen to show the on-line help.

### Adding/Changing Music using "Music Transfer"

You can change the Music files that are preset at the factory with the desired Music file. Also, you can delete or add these files. The music you can transfer with "Music Transfer" is listed below:

- MP3 files stored on the hard drive of your computer
- Music on CDs
- · Preset-music saved on this camera
- Make a USB connection between the camera and a computer with a "Memory Stick Duo" removed from the camera.
  - When you have a "Memory Stick Duo" in the camera, "Music Transfer" cannot recognize the camera to add/change the Music files.
- 2 Start "Music Transfer".

### 3 Follow the instructions on the screen to add/change Music files.

- When you want to use the preset Music again, we recommended that you excute [Format Music] (page 57) first.
- For details on using "Music Transfer," see the on-line help in "Music Transfer".

Technical support for "PicturePackage" is provided by the Pixela User Support Center. For more information, refer to the leaflet in the supplied CD-ROM package.

### **Using your Macintosh computer**

You can copy images to your Macintosh computer and change your desired music in Slide Show using "Music Transfer".

### Recommended computer environment

### Recommended environment for copying images

**OS (pre-installed):** Mac OS 9.1, 9.2, or Mac OS X (v10.0 or later)

USB connector: Provided as standard

 We recommend that you have QuickTime 6 or later pre-installed on your computer.

#### Recommended environment for using "Music Transfer"

**OS (pre-installed):** Mac OS X (v10.3 or later)

**CPU:** iMac, eMac, iBook, PowerBook, Power Mac G3/G4/G5 series, Mac mini

**Memory:** 64 MB or more (128 MB or more is recommended.)

**Hard Disk:** Disk space required for installation—approximately 250 MB

### Notes on connecting your camera to a computer

- Operations are not guaranteed for all the recommended computer environments mentioned above.
- If you connect two or more USB devices to a single computer at the same time, some devices, including your camera, may not operate depending on the types of USB devices you are using.
- Operations are not guaranteed when using a USB hub.
- Connecting your camera using a USB interface that is compatible with Hi-Speed USB (USB 2.0 compliant) allows advanced transfer (high speed transfer) as this camera is compatible with Hi-Speed USB (USB 2.0 compliant).

- There are three modes for a USB connection when connecting a computer, [Auto] (default setting), [Mass Storage] and [PTP] modes. This section describes the [Auto] and [Mass Storage] as examples. For details on [PTP], see page 58.
- When your computer resumes from the suspend or sleep mode, communication between your camera and your computer may not recover at the same time.

### Copying and viewing images on a computer

### 1 Connect the camera with a Macintosh computer.

Perform the same procedure as described in "Stage 2: Connecting the camera with a computer" on page 63.

### 2 Copy image files to the Macintosh computer.

- ① Double-click the newly recognized icon → [DCIM] (for still image) or [MP\_ROOT] (for movie) → the folder where the images you want to copy are stored.
- ②Drag and drop the image files to the hard disk icon.
  - The image files are copied to the hard disk.
- For details on the storage location of the images and file names, see page 67.

### 3 View images on the computer.

Double-click the hard disk icon → the desired image file in the folder containing the copied files to open that image file.

 To view movies, MPEG-4 compliant application software is required.

### To delete the USB connection

Perform the procedures listed below beforehand when:

- · Disconnecting the USB cable
- · Removing a "Memory Stick Duo"
- · Turning off the camera

# Drag and drop the drive icon or the icon of the "Memory Stick Duo" to the "Trash" icon.

The camera is disconnected from the computer.

 If using Mac OS X v10.0, disconnect the USB cable etc., after you have turned your computer off

# Adding/Changing music using "Music Transfer"

You can change the Music files that are preset at the factory with the desired Music file. Also, you can add these files.

The music you can transfer with "Music Transfer" is listed below:

- MP3 files stored on the hard drive of your computer
- · Music on CDs
- · Preset-music saved on this camera

### To install "Music Transfer"

- Shut down all other application software before you install "Music Transfer".
- For installation, you need to log on as administer.
- ① Turn on your Macitosh, and insert the CD-ROM (supplied) into the CD-ROM drive.
- 2 Double-click ( (PICTUREPACKAGE).
- 3 Double-click the [MusicTransfer.pkg] file in the [MAC] folder.
- 4 The installation of the software starts.

### To add/change Music files

See "Adding/Changing Music using 'Music Transfer" in page 71.

- When you want to use the preset Music again, we recommend that you excute [Format Music] (page 57) first.
- For details on using "Music Transfer," see the on-line help in "Music Transfer".

Technical support for "Music Transfer" is provided by the Pixela User Support Center. For more information, refer to the leaflet in the supplied CD-ROM package.

# **How to print still images**

### Printing directly using a PictBridge compliant printer (page 75)



You can print images by connecting the camera directly to a PictBridge compliant printer.

### Printing directly using a "Memory Stick" compliant printer



You can print images with a "Memory Stick" compliant printer. For details, see the operating instructions supplied with the printer.

### Printing using a computer



You can copy images to a computer using the supplied "PicturePackage" software and print the images.

# Printing at a shop (page 79)



You can take a "Memory Stick Duo" containing images shot with your camera to a photo printing service shop. You can make a Print order) mark on images that you want to print out in advance.

# Printing images directly using a PictBridge compliant printer

Even if you do not have a computer, you can print shot images using your camera by connecting the camera directly to a PictBridge compliant printer.

# 🌈 PictBridge

 "PictBridge" is based on the CIPA standard. (CIPA: Camera & Imaging Products Association)

# In single-image mode

You can print a single image on a printing sheet.



### In index mode

You can print several images at a reduced size on a printing sheet. You can print a set of either the same images (①) or different images (②).





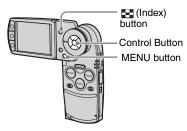




- An index print function may not be provided depending on the printer.
- The quantity of images that can be printed as an index image differ depending on the printer.
- You cannot print movies or the images saved on Album.
- If the \( \int \) indicator flashes on the screen of the camera for about five seconds (error notification), check the connected printer.

# Stage 1: Preparing the camera

Prepare the camera to connect it to the printer with the USB cable. When connecting the camera to a printer that is recognized when [USB Connect] is set to [Auto], Stage 1 is unnecessary.



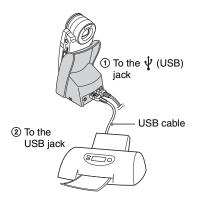
- It is recommended to use a fully charged battery pack or the AC Adaptor (supplied) to prevent the power from turning off partway through printing.
- 1 Press MENU to display the menu.
- 2 Press ➤ on the control button to select \( \exists \) (Setup).
- 3 Select [♣] (Setup 2) with ▼, then select [USB Connect] with △/▼/▶.
- 4 Select [PictBridge] with ►/▲, then press ●.



The USB mode is set.

# Stage 2: Connecting the camera to the printer

1 Attach the camera on the Cybershot Station, then connect between the USB jack of the Cyber-shot Station and that of the printer using the supplied USB cable.



# 2 Turn on your camera and the printer.

After the connection is made, the *(* indicator appears.



The camera is set to PLAY mode, then an image and the print menu appear on the screen.

# Stage 3: Printing

Regardless of REC/PLAY mode is set to, the print menu appears when you complete Stage 2.

1 Select the desired printing method with ▲/▼ on the control button, then press ●.

### [All In This Folder]

Prints all the images in the folder.

# [DPOF image]

Prints all the images with a (Print order) mark (page 79) regardless of the displayed image.

### [Select]

Selects images and prints all the selected images.

- ① Select the image you want to print with ◀/▶ or with Shuttle, then press ●.

  The ✔ mark appears on the selected image.
  - To select other images, repeat this procedure.
- ② Select [Print] with **▼**, then press **●**.

# [This image]

Prints a displayed image.

• If you select [This image] and set [Index] to [On] in step 2, you can print a set of the same images as an index image.

# 2 Select print settings with ▲/▼/◄/▶.



## [Index]

Select [On] to print as an index image.

### [Size]

Select the size of the printing sheet.

### [Date]

Select [Day&Time] or [Date] to insert the date and time on images.

 When you choose [Date], the date will be inserted in the order you select (→ step 2 in "Read This First"). This function may not be provided depending on the printer.

# [Quantity]

### When [Index] is set to [Off]:

Select the number of sheets of an image that you want to print. The image will be printed as a single image.

# When [Index] is set to [On]:

Select the number of sets of images that you want to print as an index image. If you selected [This image] in step 1, select the number of the same image you want to print side by side on a sheet as an index image.

 The designated number of images may not all fit onto a single sheet depending on the quantity of images.

# 3 Select [OK] with ▼/▶, then press ●.

The image is printed.

Do not disconnect the USB cable while the
 (Do not disconnect the USB cable) indicator appears on the screen.



# To print other images

After step 3, select [Select] and the desired image with  $\triangle/\nabla$ , then perform from step 1.

# To print images on the index screen

Perform "Stage 1: Preparing the camera" (page 75) and "Stage 2: Connecting the camera to the printer" (page 76), then proceed with the following.

When you connect the camera to a printer, the print menu appears. Select [Cancel] to turn off the print menu, then proceed as follows.

① Press III (Index).

The index screen appears.

- To switch the nine-image screen to the sixteen-image screen, press (Index) once.
- 2 Press MENU to display the menu.
- ③ Select [♣] (Print) with ▶, then press ●.
- 4 Select the desired printing method with ◄/▶, then press ●.



# [Select]

Selects images and prints all the selected images.

Select the image you want to print with ▲/
▼/◄/► or with Shuttle, then press ● to
display the ✓ mark. (Repeat this
procedure to select other images.) Then,
press MENU.

# [DPOF image]

Prints all the images with a (Print order) mark regardless of the displayed image.

# [All In This Folder]

Prints all the images in the folder.

**⑤** Perform steps 2 and 3 of "Stage 3: Printing" (page 76).

# **Printing at a shop**

You can take a "Memory Stick Duo" containing images shot with your camera to a photo printing service shop. As long as the shop supports photo printing services conforming to the DPOF, you can make a (Print order) mark on images in advance so that you do not need to reselect them when you print them out at the shop.

### What is DPOF?

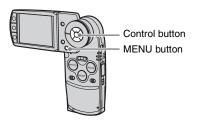
DPOF (Digital Print Order Format) is a function allowing you to make a (Print order) mark on images of "Memory Stick Duo" that you want to print out later.

- You can also print the images with the Print order) mark using a printer that conforms to the DPOF (Digital Print Order Format) standard or using a PictBridge compliant printer.
- · You cannot mark movies.
- When you mark images shot in the [Multi Burst] mode, all the images are printed on one sheet divided into 16 panels.
- · You cannot mark the images saved on Album.

# When taking a "Memory Stick Duo" to a shop

- Consult your photo printing service shop as to what types of "Memory Stick Duo" they handle.
- If a "Memory Stick Duo" is not handled by your photo printing service shop, copy the images you want to print out to other medium such as a CD-R and take it to the shop.
- Be sure to take the Memory Stick Duo Adaptor with it.
- Before you take image data to a shop, always copy (back up) your data to a disk.
- · You cannot set the number of prints.

# Marking in single-image mode



- 1 Display the image you want to mark.
- **2** Press MENU to display the menu.
- 3 Select DPOF with **◄/▶**, then press

A (Print order) mark is marked on the image.



4 To mark other images, display the desired image with ◄/▶ or with Shuttle, then press ●.

# To remove the mark in single-image mode

Press ● in step 3 or 4.

# Marking in index mode

- 1 Display the index screen (→ step 6 in "Read This First").
- 2 Press MENU to display the menu.
- 3 Select DPOF with **◄/▶**, then press
- 4 Select [Select] with **◄/▶**, then press **●**.
  - You cannot add a mark in [All In This Folder].
- 5 Select the image you want to mark with ▲/▼/◄/▶ or with Shuttle, then press ●.

A green mark appears on the selected image.



- 6 Repeat step 5 to mark other images.
- 7 Press MENU.
- 8 Select [OK] with ▶, then press ●.

  The 
  mark turns white.

To cancel, select [Cancel] in step 4 or select [Exit] in step 8, then press ●.

### To remove the mark in index mode

Select the images from which you want to remove the mark in step 5, then press •.

# To remove all the marks in the folder

Select [All In This Folder] in step 4, then press ●. Select [Off], then press ●.



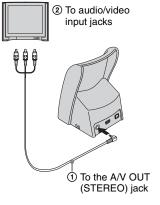
Connecting your camera to your TV

# Viewing images on a TV screen

You can view images on a TV screen by connecting the camera to a TV.

Turn off both your camera and the TV before connecting the camera and the TV.

1 Connect the supplied A/V connecting cable to the A/V OUT (STEREO) jack of the Cyber-shot Station and the video/audio input jacks of the TV.



If your TV has a mono input jack, connect the yellow plug of A/V connecting cable to the video input jack, then connect either the white plug or the red audio plug to the audio input jack. If connected to the white plug, you will hear sound from the left audio output, and if connected to the red plug, you will hear sound from the right audio output.

- When the USB cable is connected to the Cyber-shot Station, disconnect the USB cable from the Cyber-shot Station.
- 2 Attach the camera on the Cybershot Station (page 17).

- 3 Turn on the TV and set the TV/ video input switch to "VIDEO".
  - For details, see the operational instructions supplied with TV.
- 4 Set the mode to PLAY with MODE.



The recorded images will appear on the screen.

Select the desired image with **◄/▶** on the control button.

- When you attach the camera on the Cybershot Station while connecting to the A/V connecting cable, nothing will appear on the LCD screen of the camera.
- When using your camera abroad, it may be necessary to switch the video signal output to match that of your TV system (page 59).

### On TV color systems

If you want to view images on a TV screen, you need a TV with a video input jack and the USB cable (supplied). The color system of the TV must match that of your digital still camera. Check the following lists for the TV color system of the country or region where the camera is used.

# NTSC system

Bahama Islands, Bolivia, Canada, Central America, Chile, Colombia, Ecuador, Jamaica, Japan, Korea, Mexico, Peru, Surinam, Taiwan, the Philippines, the U.S.A., Venezuela, etc.

## PAL system

Australia, Austria, Belgium, China, Czech Republic, Denmark, Finland, Germany, Holland, Hong Kong, Hungary, Italy, Kuwait, Malaysia, New Zealand, Norway, Poland, Portugal, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Thailand, United Kingdom, etc.

# PAL-M system

Brazil

# PAL-N system

Argentina, Paraguay, Uruguay

# **SECAM** system

Bulgaria, France, Guiana, Iran, Iraq, Monaco, Russia, Ukraine, etc.



# Troubleshooting

# **Troubleshooting**

If you experience trouble with your camera or accessory, try the following solutions.

1 Check the items on pages 84 to 93.

If a code such as "C/E: $\square\square$ : $\square$ " appears on the screen, see page 94.

- Remove the battery pack, and insert the battery pack again after about one minute, and turn on the power.
- Should your camera still not work properly, press the RESET button using a fine-tipped object, then turn on the power again (All the settings including date and time are cleared).



**4** Consult your Sony dealer or local authorized Sony service facility.

Please understand that you give your consent that the image data in Album or the Music files may be checked when you send your camera to be repaired.

# **Battery pack and power**

### You cannot charge the battery pack.

• The camera is turned on. Turn the camera off (→ step 2 in "Read This First").

### The battery pack cannot be installed.

• Install the battery pack correctly (→ step 1 in "Read This First").

### The \$/CHG lamp flashes when charging a battery pack.

- Install the battery pack correctly (→ step 1 in "Read This First").
- The battery pack is discharged. Re-insert the AC Adaptor and then charge the battery pack.
- The battery pack has malfunctioned. Consult your Sony dealer or local authorized Sony service facility.

### The 4/CHG lamp does not light up when charging a battery pack.

- The AC Adaptor is disconnected. Properly connect the AC Adaptor (page 16, → step 1 in "Read This First").
- Install the battery pack correctly (→ step 1 in "Read This First").
- The battery pack is completely charged.
- The battery pack is discharged. Re-insert the AC Adaptor and then charge the battery pack.
- The AC Adaptor has malfunctioned. Consult your Sony dealer or local authorized Sony service facility.
- Properly attach the camera to the Cyber-shot Station (page 17).

# The battery remaining indicator is incorrect, or sufficient battery remaining indicator is displayed but the power runs out too quickly.

- This phenomenon occurs when you use the camera in an extremely hot or cold location (page 99).
- The displayed time remaining differs from the current one. Fully discharge and then charge
  the battery pack to correct the display.
- The battery pack is discharged. Install the charged battery pack (→ step 1 in "Read This First").
- The battery pack is dead (page 99). Replace it with new one.

### The battery pack runs down too quickly.

- Charge it sufficiently (→ step 1 in "Read This First").
- You are using the camera in an extremely cold location (page 99).
- The battery terminal is dirty. Clean the battery terminal with a cotton swab, etc., and charge the battery pack.
- The battery pack is dead (page 99). Replace it with new one.

#### Cannot turn on the camera.

- Install the battery pack correctly (→ step 1 in "Read This First").
- The AC Adaptor is disconnected. Properly connect the AC Adaptor (page 16, → step 1 in "Read This First").
- The AC Adaptor has malfunctioned. Consult your Sony dealer or local authorized Sony service facility.
- The battery pack is discharged. Install charged battery pack (page 16, → step 1 in "Read This First").
- The battery pack is dead (page 99). Replace it with a new one.
- Properly attach the camera to the Cyber-shot Station (page 17).

### The power turns off suddenly.

- If you do not operate the camera for about three minutes while the power is on, the camera turns off automatically to prevent wearing down the battery pack. Turn on the camera again (→ step 2 in "Read This First") or use the AC Adaptor (page 16).
- The battery pack is discharged. Install charged battery pack (→ step 1 in "Read This First").
- Properly attach the camera on the Cyber-shot Station (page 17).

# Shooting still images/movies

### The LCD screen is not turned on even when the power is on.

• The LCD backlight is turned off with  $|\Box|$  in the dark place. Turn on the LCD backlight with  $|\Box|$  (page 23).

### Your camera cannot record images.

- Check the free capacity of "Memory Stick Duo" (page 24). If it is full, do one of the following:
  - Delete unnecessary images (→ step 6 in "Read This First").
  - Change the "Memory Stick Duo".
- You are using the "Memory Stick Duo" with the write-protect switch, and the switch is set to the LOCK position. Set the switch to the recording position (page 97).
- You cannot record images while charging the flash.
- . The mode is set to PLAY. Set the mode to REC with MODE.

### The subject is not visible on the screen.

• The mode is set to REC. Set the mode to PLAY with MODE.

### Recording takes a long time.

• The NR slow shutter function is activated (page 20). This is not a malfunction.

### The image is out of focus.

- The subject is too close. Record in the close-up (Macro) recording mode. Make sure to position the lens farther away from the subject than the shortest shooting distance, approximately 8 cm (3 1/4 inches) (W)/25 cm (9 7/8 inches) (T), when shooting. Or, select [Q] (Magnifying glass mode) and focus from a distance of approx. 1 cm to 20 cm (13/32 inch to 7 7/8 inches) from the subject (page 36).
- [Q] (Magnifying glass mode), (Twilight mode), (Landscape mode) or (Fireworks mode) is selected in the Scene mode when shooting still images.
- The Focus preset function is selected. Select the auto focus mode (page 38).
- Refer to "If the subject is out of focus" on page 39.

### Optical zoom does not work.

• Select a mode other than [Q] (Magnifying glass mode) when shooting still images.

### Digital zoom does not work.

• Set [Digital Zoom] to [On] (page 51).

#### The flash does not work.

- The flash is set to ③ (No flash) (→ step 5 in "Read This First").
- · You cannot use the flash when:
- [Mode] (REC Mode) is set to [Speed Burst] or [Multi Burst], [Exp Brktg] (page 41).
- → (Twilight mode), & (Candle mode) or 
   \( \subseteq \) (Fireworks mode) is selected in the Scene mode (page 36).
- when recording movies.
- Set the flash to **4** (Forced flash) (→ step 5 in "Read This First") when [Q] (Magnifying glass mode), (Landscape mode), (Snow mode), (Beach mode) or ★ (Highspeed shutter mode) is selected in the Scene mode (page 36).

## Fuzzy specks appear in images shot using the flash.

• Dust in the air reflected the flash light and appeared in the image. This is not a malfunction.

## The close-up (Macro) function does not work.

• [Q] (Magnifying glass mode), → (Twilight mode), ▲ (Landscape mode), ♦ (Candle mode) or ﴿ (Fireworks mode) is selected in the Scene mode (page 36).

### The date and time are recorded incorrectly.

• Set the correct date and time (→ step 2 in "Read This First").

# The F value and shutter speed flash when you press and hold PHOTO halfway down.

• The exposure is incorrect. Correct the exposure (page 37).

### The image is too dark.

- You are shooting a subject with a light source behind the subject. Select the metering mode
   (→ step 5 in "Read This First") or adjust the exposure (page 37).
- The brightness of the screen is too low. Adjust the brightness of the LCD backlight (page 57).
- Turn on the LCD backlight with | (page 23).

### The image is too bright.

- You are shooting a spotlighted subject in a dark location such as on a stage. Adjust the exposure (page 37).
- The brightness of the screen is too bright. Adjust the brightness of the LCD backlight (page 57).

### The image colors are not correct.

• Picture Effect function is activated. Cancel the Picture Effect function (page 43).

### Vertical streaks appear when you are shooting a very bright subject.

• The smear phenomenon is occurring. This phenomenon is not a malfunction.

### Noise appears in the image when you view the screen in a dark place.

 The camera is attempting to increase the visibility of the screen by temporarily brightening the image under conditions of low illumination. There is no effect on the recorded image.

### The eyes of the subject come out red.

- Set [Red Eye Reduction] in the  $\blacksquare$  (Setup) menu to [On] (page 52).
- Shoot the subject at a distance closer than the recommended shooting distance using the flash (→ step 5 in "Read This First").
- · Light the room and shoot the subject.

### Dots appear and remain on the screen.

• This is not a malfunction. These dots are not recorded (page  $5, \rightarrow$  "Read This First").

### Cannot shoot images in succession.

- "Memory Stick Duo" is full. Delete unnecessary images (→ step 6 in "Read This First").
- The battery level is low. Install a charged battery pack.

# Viewing images

Refer to "Computers" (page 89) in conjunction with the following items.

### Your camera cannot play back images.

- The mode is set to REC. Set the mode to PLAY with MODE.
- The folder/file name has been changed on your computer (page 69).
- When an image file has been processed by a computer or when the image file was recorded using a model other than that of your camera, playback on your camera is not guaranteed.
- The camera is in USB mode. Delete the USB connection (page 67, 73).

### The image appears rough right after playback starts.

• The image may appear rough right after playback starts due to image processing. This is not a malfunction

### The image does not appear on the TV screen.

- Check [Video Out] to see if the video output signal of your camera is set to the color system of your TV (page 59).
- Check whether the connection is correct (page 81).
- The Cyber-shot station is connected to the USB cable. Remove the USB cable following the proper procedures (page 67, 73).

### The image does not appear on the LCD screen.

 The A/V connecting cable has been connected to the Cyber-shot station. This is not a malfunction.

# **Deleting/Editing images**

# Your camera cannot delete an image.

- Cancel the protection (page 47).
- You are using the "Memory Stick Duo" with the write-protect switch, and the switch is set to the LOCK position. Set the switch to the recording position (page 97).

# You have deleted an image by mistake.

 Once you have deleted an image, you cannot restore it. We recommend that you protect on images (page 46), or use the "Memory Stick Duo" with the write-protect switch and set the switch to the LOCK position (page 97) to prevent accidental erasure.

### The resizing function does not work.

• You cannot resize movies, Multi Burst images or the images saved on Album.

### You cannot display a DPOF (Print order) mark.

• You cannot display DPOF (Print order) marks on movies or the images saved on Album.

## **Computers**

### You do not know if the OS of your computer is compatible with the camera.

 Check "Recommended computer environment" on page 61 for Windows, and page 72 for Macintosh.

### You cannot install the USB driver.

• In Windows 2000, log on as Administrator (authorized Administrators) (page 62).

### Your computer does not recognize your camera.

- Turn on the camera ( $\rightarrow$  step 2 in "Read This First").
- When the battery level is low, install the charged battery pack (→ step 1 in "Read This First"), or use the AC Adaptor (page 16).
- Use the supplied USB cable (page 63).
- Disconnect the USB cable from both the computer and the Cyber-shot Station, and connect it again firmly. Make sure that "USB mode Mass Storage" is displayed (page 64).
- Properly attach the camera on the Cyber-shot Station (page 17).
- Set [USB Connect] to [Mass Storage] in the 🖶 (Setup) menu (page 58).
- The USB jacks on your computer are connected to other device besides the keyboard, the mouse and the Cyber-shot Station. Disconnect all equipment other than the keyboard, the mouse and the Cyber-shot Station from the USB jacks.
- Connect the Camera/Cyber-shot Station directly to your computer without passing through a USB hub or other device (page 63).
- The USB driver is not installed. Install the USB driver (page 62).
- Your computer does not properly recognize the device because you connected the camera and your computer with the USB cable before you installed the "USB Driver" from the supplied CD-ROM. Delete the erroneously recognized device from your computer, then install the USB driver (see the next item).

# The "Removable disk" icon does not appear on the computer screen when you connect your computer to the camera.

- Follow the procedure below to install the USB driver again. The following procedure is for a Windows computer.
- **1** Right-click [My Computer] to display the menu, then click [Properties].
  - The "System Properties" screen appears.
- 2 Click [Hardware] → [Device Manager].
  - For Windows 98/98SE/Me, click the [Device Manager] tab.
  - The "Device Manager" appears.
- **3** Right-click [ $^{\circ}$ ] Sony DSC], then click [Uninstall]  $\rightarrow$  [OK].
- The device is deleted.
- 4 Install the USB driver (page 62).

### You cannot copy images.

- Connect the camera and your computer correctly using the supplied USB cable (page 63).
- Follow the designated copy procedure for your OS (pages 64, 72).
- When you shoot images with a "Memory Stick Duo" formatted by a computer, you may not be able to copy the images to a computer. Shoot using a "Memory Stick Duo" formatted by your camera (page 54).

### After making a USB connection, "PicturePackage" does not start automatically.

- Start up the "PicturePackage Menu" and check [Settings].
- Make the USB connection after the computer is turned on (page 58).

### The image cannot be played back on a computer.

- If you are using "PicturePackage," click on help at the upper-right corner of each screen.
- To playback movie files (MPEG-4) recorded by the camera, you need to install the software compatible with MPEG-4 or "PicturePackage" on your computer. (When using Windows XP/ 2000, you can use "PicturePackage" to playback movie files (MPEG-4)).
- · Consult the computer or software manufacturer.

# The image and sound are interrupted by noise when you view a movie on a computer.

• You are playing back the movie directly from "Memory Stick Duo". Copy the movie to the hard disk of your computer, then play back the movie from the hard disk (page 62).

# You cannot print an image.

· Check the printer settings.

### Images once copied to a computer cannot be viewed on the camera.

- Copy them to a folder recognized by the camera, such as "101MSDCF" (page 67).
- Operate correctly (page 69).
- The folder/file name has been changed on your computer (page 69).

# "Music Transfer" cannot recognize the camera.

- A "Memory Stick Duo" is inserted in the camera. Remove the "Memory Stick Duo" and make the USB connection again.
- The write-in-area of Music files of the camera is corrupted. Execute [Format Music] (page 57).

# "Memory Stick Duo"

### Cannot insert a "Memory Stick Duo".

• Insert it in the correct direction (→ step 3 in "Read This First").

### Cannot record on a "Memory Stick Duo".

- You are using the "Memory Stick Duo" with the write-protect switch, and the switch is set to the LOCK position. Set the switch to the recording position (page 97).
- The "Memory Stick Duo" is full. Delete unnecessary images (→ step 6 in "Read This First").

### Cannot format a "Memory Stick Duo".

• You are using the "Memory Stick Duo" with the write-protect switch, and the switch is set to the LOCK position. Set the switch to the recording position (page 97).

### You have formatted a "Memory Stick Duo" by mistake.

 All the data on the "Memory Stick Duo" is deleted by formatting. You cannot restore it. We recommend that you set the write-protect switch on the "Memory Stick Duo" to the LOCK position to prevent accidental erasure (page 97).

# "Memory Stick PRO Duo" is not recognized by a computer with a "Memory Stick" slot.

- Check whether the computer and the card reader support "Memory Stick PRO Duo". Users of computers and card readers made by companies other than Sony should contact those manufacturers.
- If "Memory Stick PRO Duo" is not supported, connect the camera to the computer (pages 62 to 63). The computer recognizes the "Memory Stick PRO Duo".

### Album

# The free capacity of Album does not increase even when you copy the data stored in Album to a "Memory Stick Duo".

• The data is not deleted after copying.

# The [Copy] setup item for Memory Stick Tool is not displayed.

The [Copy] setup item for Memory Stick Tool is not displayed while using the battery pack.
 When you want to copy images, use the AC Adaptor.

# Cannot copy the data stored in Album to a "Memory Stick Duo".

• The "Memory Stick Duo" is full. Check the capacity (64 MB or more recommended).

# Cannot copy the data on the "Memory Stick Duo" or the computer to Album.

• Data on a "Memory Stick Duo" or a computer cannot be copied to Album.

### You cannot record images on Album.

- Set [Write in Album] to [On] in the 🖶 (Setup) menu (page 56).
- The capacity of Album becomes full by saving protected images. Remove the protection of unwanted images (page 47).

# PictBridge compliant printer

### A connection cannot be established.

- The camera cannot be connected directly to a printer that is not compliant with the PictBridge standard. Consult the printer manufacturer as to whether the printer is compliant with PictBridge or not.
- Check that the printer is turned on and can be connected to the camera.
- Set [USB Connect] to [PictBridge] in the 🛖 (Setup) menu (page 58).
- Disconnect and connect the USB cable again. If an error message is indicated on the printer, refer to the operating instructions supplied with the printer.

### Cannot print images.

- Check that the camera and the printer are properly connected using the USB cable.
- Turn on the printer. For further information, refer to the operating instructions supplied with the printer.
- If you select [Exit] during printing, images may not print. Disconnect and connect the USB cable again. If you still cannot print your images, disconnect the USB cable, turn the printer off and then on, then connect the USB cable again.
- You cannot print movies or the images saved on Album.
- Images shot using cameras other than this camera or images modified with a computer may not be printed.

### Printing is canceled.

 You disconnected the USB cable before the ₽\$\infty\$ (Do not disconnect USB cable) mark disappears.

### Cannot insert the date or print images in the index mode.

- The printer does not provide these functions. Consult the printer manufacturer as to whether the printer provides these functions or not.
- The date may not be inserted in the index mode depending on the printer. Consult the printer manufacturer.

# "--- -- " is printed on the date-inserted part of the image.

• Images that do not have the recording data cannot be printed with the date inserted. Set [Date] to [Off] and print the image again (page 77).

### Cannot select the print size.

• Consult the printer manufacturer as to whether the printer can provide the desired size.

### Cannot print the image at the size selected.

- Disconnect the USB cable and reconnect it whenever you change the paper size after the printer has been connected to the camera.
- The print setting of the camera differs from that of the printer. Change the setting of either the camera (page 77) or the printer.

### Cannot operate the camera after canceling printing.

 Wait for a while as the printer is carrying out the cancellation. It may take some time depending on the printer.

### Others

#### Your camera does not work.

- Use the type of battery pack you can use with this camera (page 99).
- The battery level is low (The ♥¬ indicator appears). Charge the battery pack (→ step 1 in "Read This First").
- · Make sure that the AC Adaptor is connected securely.
- Properly attach the camera on the Cyber-shot Station (page 17).

### The power is on, but the camera does not work.

The built-in microcomputer is not working properly. Remove the battery pack, and then, after
one minute, insert the battery pack and turn on the camera. If this does not work, press the
RESET button with a fine-tipped object, then turn the power on again (This will clear the date
and time settings, etc.) (page 83).

### Cannot identify an indicator on the screen.

• See page 18.

### The lens gets fogged.

 Moisture condensation has occurred. Turn off the camera and leave it for about an hour before using it (page 100).

### The camera becomes warm when you use it for a long time.

· This is not a malfunction.

### The Clock Set screen appears when you turn on the camera.

• Set the date and time again (→ step 2 in "Read This First").

# **Warning indicators and messages**

# Self-diagnosis display

If a code starting with a letter of the alphabet appears, your camera has a self-diagnosis display. The last two digits (indicated by  $\square\square$ ) will differ depending on the state of the camera.

If you are unable to solve the problem even after trying the following corrective actions a few times, contact your Sony dealer or local authorized Sony service facility.

#### C:32:□□

 There is trouble with your camera's hardware. Turn the power off and on again.

#### C:13:□□

- The camera cannot read or write data on the "Memory Stick Duo". Re-insert the "Memory Stick Duo" several times.
- A format error on Album has occured.
  Or an unformatted "Memory Stick
  Duo" is inserted. Format the "Memory
  Stick Duo" (page 54).
- The inserted "Memory Stick Duo" cannot be used with your camera, or the data is damaged. Insert a new "Memory Stick Duo" (page 97).

#### C:91:□□

 When transfering Music files from your computer an error occured due to USB disconnection or other problem.
 Execute [Format Music] (page 57).
 When you execute [Format Music] all your stored Music files will be erased.
 Tranfer the Music files using the supplied application again.

### E:61:□□

#### E:91:

 A camera malfunction has occurred.
 Press the RESET button (page 83), then turn the power on again.

### Messages

If the following messages appear, follow the instructions.

 $\Box$ 

• The battery level is low. Charge the battery pack (→ step 1 in "Read This First"). Depending on the conditions of use or the type of battery pack, the indicator may flash even though there are still 5 to 10 minutes of remaining battery time left.

### For "InfoLITHIUM" battery only

 This battery pack is not a "InfoLITHIUM" type.

### No Memory Stick

 Insert a "Memory Stick Duo" (→ step 3 in "Read This First").

# System error

• Turn the power off and then on again (→ step 2 in "Read This First").

# **Memory Stick error**

- The inserted "Memory Stick Duo" cannot be used in your camera (page 97)
- The "Memory Stick Duo" is damaged.
- The terminal section of the "Memory Stick Duo" is dirty.
- Insert the "Memory Stick Duo" correctly (→ step 3 in "Read This First").

### Memory Stick type error

· The inserted "Memory Stick Duo" cannot be used in your camera (page 97).

#### Format error

• Format the media again (page 54).

### **Memory Stick locked**

· You are using the "Memory Stick Duo" with the write-protect switch, and the switch is set to the LOCK position. Set the switch to the recording position (page 97).

### No memory space

 Delete unnecessary images or files (→ step 6 in "Read This First").

### Read only memory

· Your camera cannot record or delete images on this "Memory Stick Duo".

#### No file in this folder

- · No images have been recorded in this folder
- You did not operate correctly when copying images from your computer (page 69).

#### Folder error

· A folder with the same first three digit number already exists on the "Memory Stick Duo" (For example: 123MSDCF and 123ABCDE). Select other folders. or create a new folder (page 54).

#### Cannot create more folders

· The folder with a name beginning with "999" exists on the "Memory Stick Duo". You cannot create any folders if this is the case

### Cannot record

· The camera cannot record images in the selected folder. Select a different folder (page 55).

#### File error

· An error occurred while playing back the image.

### File protect

• Release the protection (page 47).

### Image size over

· You are playing back an image of a size that cannot be played back on your camera.

### Invalid operation

· You are playing back a file that was created on equipment other than this camera

### (Vibration warning indicator)

· Camera shake may occur due to insufficient light. Use the flash, mount the camera on a tripod, or otherwise secure the camera in place.

### Turn the power off and on again

· A problem with the lens caused an error.

#### Album error

· An error in Album has occured. Format Album, (In the case of formatting, note that all image data, including the protected images, in Album will be erased.)

### Enable printer to connect

- [USB Connect] is set to [PictBridge], however the camera is connected to a non-PictBridge compliant device.
   Check the device.
- The connection is not established.
   Disconnect and connect the USB cable again. If an error message is indicated on the printer, refer to the operating instructions supplied with the printer.

### Connect to / device

 You tried to print images before the printer connection was established.
 Connect to a PictBridge compliant printer.

### No printable image

- You tried to execute [DPOF image] without placing a DPOF (Print order) mark on the image(s).
- You tried to execute [All In This Folder] while a folder that holds only movies was selected. You cannot print movies.

Printer busy Paper error No paper Ink error Low Ink No Ink

· Check the printer.

#### **Printer error**

- · Check the printer.
- Check if the image you want to print is corrupted.



• The data transmission to the printer may not be completed yet. Do not disconnect the USB cable.

### **Processing**

 The printer is canceling the current print job. You cannot print until it is finished.
 This may take time, depending on the printer.

### Recover data

- The data in Album has been destroyed. Recover the data by selecting [OK]. When you want to start recording immediately, select [Cancel] to start your operation. However, each time you turn on the camera, the same error massage appears until you recover the data.
- When you start recovering the data, the protection of images is canceled. If you want the images to be protected, protect the images again (page 46).
- Even when the power source is cut off during formatting the album, the format will be completed. The error occures and it can be fixed, yet the data can not he recovered



Others

# On the "Memory Stick"

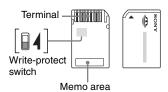
A "Memory Stick" is a compact, portable IC recording medium. The types of "Memory Stick" that can be used with this camera are listed in the table below. However, proper operation cannot be guaranteed for all "Memory Stick" functions.

"Memory Stick" type	Recording/ Playback
Memory Stick (without MagicGate)	1
Memory Stick (with MagicGate)	_
Memory Stick Duo (without MagicGate)	0
Memory Stick Duo (with MagicGate)	O*1*2
MagicGate Memory Stick	=
MagicGate Memory Stick Duo	O*1
Memory Stick PRO	_
Memory Stick PRO Duo	O*1*2

- \*1 "Memory Stick Duo", "MagicGate Memory Stick Duo" and "Memory Stick PRO Duo" are equipped with MagicGate functions. MagicGate is copyright protection technology that uses encryption technology. Data recording/playback that requires MagicGate functions cannot be performed with this camera.
- \*2 Supports high-speed data transfer using a parallel interface.
- A "Memory Stick Duo" formatted with a computer is not guaranteed to operate with this camera
- Data read/write speeds differ depending on the combination of the "Memory Stick Duo" and the equipment used.

# Notes on using a "Memory Stick Duo" (not supplied)

 You cannot record, edit or delete images if you slide the write-protect switch to LOCK with a fine-tipped object.



The position and/or the shape of the writeprotect switch may differ depending on the "Memory Stick Duo" you use.

- Do not remove the "Memory Stick Duo" while reading or writing data.
- Data may be corrupted in the following cases:
  - When the "Memory Stick Duo" is removed or the camera is turned off during a read or write operation
  - When the "Memory Stick Duo" is used in locations subject to static electricity or electrical noise
- · We recommend backing up important data.
- Do not press down hard when you write down on the memo area.
- Do not attach a label on the "Memory Stick Duo" itself nor on a Memory Stick Duo Adaptor.
- When you carry or store the "Memory Stick Duo," put it in the case supplied with it.
- Do not touch the terminal section of the "Memory Stick Duo" with your hand or a metal object.
- Do not strike, bend or drop the "Memory Stick Duo".
- Do not disassemble or modify the "Memory Stick Duo".
- Do not expose the "Memory Stick Duo" to water.
- Do not leave the "Memory Stick Duo" within the reach of small children. They might accidentally swallow it.

- Do not use or store the "Memory Stick Duo" under the following conditions:
  - High temperature locations such as the hot interior of a car parked in direct sunlight
  - Locations exposed to direct sunlight
  - Humid locations or locations with corrosive substances present

## Notes on using the Memory Stick Duo Adaptor (not supplied)

- To use a "Memory Stick Duo" with a "Memory Stick" compliant device, be sure to insert the "Memory Stick Duo" into a Memory Stick Duo Adaptor. If you insert a "Memory Stick Duo" into a "Memory Stick" compliant device without a Memory Stick Duo Adaptor, you might not be able to remove it from the device.
- When inserting a "Memory Stick Duo" into a Memory Stick Duo Adaptor, make sure the "Memory Stick Duo" is inserted facing in the correct direction, then insert it all the way in. Incorrect insertion may result in a malfunction.
- When using a "Memory Stick Duo" inserted into a Memory Stick Duo Adaptor with a "Memory Stick" compliant device, make sure that the "Memory Stick Duo" is inserted facing the correct direction. Note that improper use may damage the equipment.
- Do not insert a Memory Stick Duo Adaptor into a "Memory Stick" compliant device without a "Memory Stick Duo" attached. Doing so may result in malfunction of the unit

# Notes on using "Memory Stick PRO Duo" (not supplied)

 "Memory Stick PRO Duo" with a capacity up to 2 GB have been confirmed to operate properly with this camera.

# On the "InfoLITHIUM" battery pack

This camera requires an "InfoLITHIUM" battery pack (T type).





# What is an "InfoLITHIUM" battery pack?

An "InfoLITHIUM" battery pack is a lithium-ion battery pack that has functions for exchanging information related to operating conditions with your camera. The "InfoLITHIUM" battery pack calculates the power consumption according to the operating conditions of your camera, and displays the remaining battery time in minutes.

### On charging the battery pack

We recommend charging the battery pack in an ambient temperature of between 10°C to 30°C (50°F to 86°F). You may not be able to efficiently charge the battery pack outside of this temperature range.

# Effective use of the battery pack

- Battery performance decreases in low temperature surroundings. So, the time that the battery pack can be used is shorter in cold places. We recommend the following to ensure longer battery pack use:
  - Put the battery pack in a pocket close to your body to warm it up, and insert it in your camera immediately before you start shooting.
- The battery pack will run out quickly if you use the flash or zoom frequently.
- We recommend having spare battery packs handy for two or three times the expected shooting time, and making trial shots before taking the actual shots.
- Do not expose the battery pack to water. The battery pack is not water-resistant.
- Do not leave the battery pack in extremely hot places, such as in a car or under direct sunlight.

# On the remaining battery time indicator

The power may go off although the battery remaining indicator shows there is enough power to operate. Use the battery pack up and charge the battery pack fully again so that the indication on the battery remaining indicator is correct. Note, however, that the correct battery indication sometimes will not be restored if the battery pack is used in high temperatures for a long time, left in a fully charged state or used frequently.

### How to store the battery pack

- If the battery pack is not to be used for a long time, fully charge it and then fully use it up once a year on your camera before storing the battery pack in a dry, cool place. Repeat this charging and using up once a year to maintain the battery pack's function.
- To use up all the battery power, leave your camera performing Slide Show (page 28) until the power runs out.
- To prevent staining the terminal, shortcircuiting, etc., be sure to use a supplied battery case when carrying and storing.

# On battery life

- The battery life is limited. Battery capacity decreases little by little as you use it more and more, and as time passes. If the battery operating time seems shortened considerably, a probable cause is that the battery pack has reached the end of its life. Buy a new battery pack.
- The battery life varies according to how it is stored and the operating conditions and environment in which each battery pack is used.

# **Precautions**

# Do not leave the camera in the following places

- In an extremely hot 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 (not supplied) 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. Do not use the following as they may damage the finish or the casing.

- Chemical products such as thinner, benzine, alcohol, disposable cloths, insect repellent, sunscreen or insecticide, etc.
- Do not touch the camera with 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 moisture condensation

If the camera is brought directly from a cold to a warm location, moisture may condense inside or outside the camera. This moisture condensation may cause a malfunction of the camera.

# Moisture condensation occurs easily when:

- The camera is brought from a cold location such as a ski slope into a warmly heated room.
- The camera is taken from an air-conditioned room or car interior to the hot outdoors, etc.

#### How to prevent moisture condensation

When bringing the camera from a cold place to a warm place, seal the camera in a plastic bag and allow it to adapt to conditions at the new location over about an hour.

#### If moisture condensation occurs

Turn off the camera and wait about an hour for the moisture to evaporate. Note that if you attempt to shoot with moisture remaining inside the lens, you will be unable to record clear images.

# On the internal rechargeable 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 as long as you do not record the date and time.

# Charging method of the internal rechargeable battery

Insert charged battery pack in the camera, or connect the camera to a wall outlet (wall socket) using the AC Adaptor (supplied), and leave the camera for 24 hours or more with the power off.

# Charging method of the "InfoLITHIUM" battery pack

→ step 1 in "Read This First"

# **Specifications**

Camera

[System]

Image device 7.17 mm (1/2.5 type) color

CCD, Primary color filter

Total pixel number of camera

Approx. 5 255 000 pixels

Effective pixel number of camera

Approx. 5 090 000 pixels

Lens Carl Zeiss Vario-Tessar

3× zoom lens

f = 6.33 - 19.0 mm (38 - 114 mm) when converted to a

35 mm still camera)

F3.5 - 4.4

Exposure control Automatic exposure, Scene

Selection (9 modes)

White balance Automatic, Daylight, Cloudy,

Fluorescent, Incandescent,

Flash

File format (DCF compliant)

Still images: Exif Ver. 2.2 JPEG compliant, DPOF

compatible

Movies: MPEG-4 compliant

(Stereo)

Recording media "Memory Stick Duo"

Flash Recommended distance (ISO

set to Auto): approx. 0.1 m to 2.6 m (3 15/16 inches to 8 feet

6 3/8 inches) (W)/

(1 feet 7 11/16 inches to 6 feet

10 11/16 inches) (T)

[Input and Output connectors]

Multi connector

USB communication

Hi-Speed USB (USB 2.0

compliant)

[LCD screen]

LCD panel 6.2 cm (2.5 type) TFT drive

Total number of dots

123 200 (560×220) dots

[Power, general]

Battery pack used

Rechargeable battery pack

NP-FT1

Power requirements 3.6 V

3.0

Power consumption (during shooting)

1.2 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 51.2×123.1×32.4 mm

(2 1/8×4 7/8×1 5/16 inches)

(W/H/D, excluding protrusions)

Mass Approx. 210 g (7.4 oz)

(including NP-FT1 battery pack, "Memory Stick Duo" and

wrist strap, etc.)

Microphone Electret condenser microphone

Speaker Dynamic speaker

Exif Print Compatible
PRINT Image Matching III

Compatible

PictBridge Compatible

Cyber-shot Station UC-MB

[Input and Output connectors]

A/V OUT (STEREO) jack (Stereo)

Minijack

Video: 1 Vp-p, 75  $\Omega$ , unbalanced, sync negative Audio: 327 mV (at a 47 k $\Omega$ 

load)

Output impedance 1 k $\Omega$ 

USB jack mini-B

USB connection High-Speed USB

(USB 2.0 High-Speed

compatible)

DC IN jack

Camera connector

## **AC Adaptor AC-LS5**

Input rating 100 V to 240 V AC,

50/60 Hz, 11 W

Output rating 4.2 V DC\*

\* See the label on the AC Adaptor for other specifications.

Operating temperature

 $0^{\circ}$ C to  $+40^{\circ}$ C ( $+32^{\circ}$ F to  $+104^{\circ}$ F)

Storage temperature

-20°C to +60°C (-4°F to

 $+140^{\circ}F$ )

Dimensions

Approx. 48×29×81 mm (1 15/16×1 3/16×3 1/4 inches) (W/H/D, excluding projecting parts)

Mass Approx. 13

Approx. 130 g (5.0 oz) excluding power cord (mains

lead)

# Rechargeable battery pack NP-FT1

Used battery Lithium-ion battery

Maximum voltage

DC 4.2 V

Nominal voltage DC 3.6 V

Capacity 2.4 Wh (680 mAh)

Design and specifications are subject to change without notice.



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