SONY®

bloggie™

Handbook
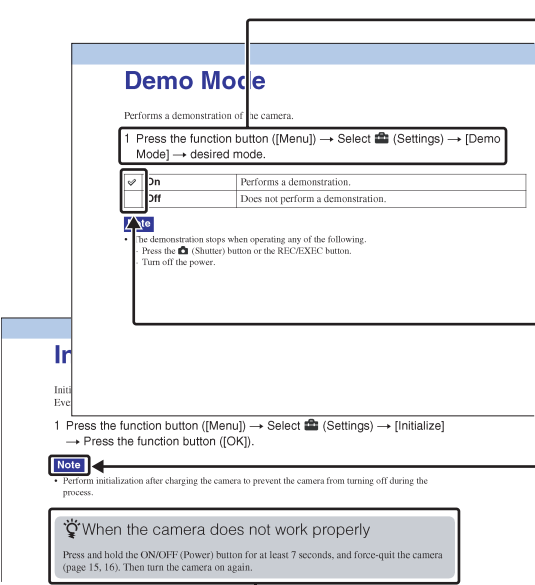## Mobile HD Snap Camera

MHS-TS22

GB

How to use this handbook

Click on a button on the right to jump to the corresponding page.
This is convenient when searching for a function you want to view.

SONY

Table of contents	Search for information by function.
Operation Search	Search for information by operation.
Settings Search	Search for information in a listing of setting items.
Index	Search for information by keyword.

Marks and notations used in this handbook

Demo Mode

Performs a demonstration of the camera.

1 Press the function button ([Menu]) → Select 🎬 (Settings) → [Demo Mode] → desired mode.

On	Performs a demonstration.
Off	Does not perform a demonstration.

Note
• The demonstration stops when operating any of the following.
  - Press the 📷 (Shutter) button or the REC/EXEC button.
  - Turn off the power.

In this handbook, the sequence of operations is shown by arrows (→). Operate the camera in the order indicated. Marks are shown as they appear in the camera's default setting.

The default setting is indicated by ✅ .

Initialize

Initializes
Even

1 Press the function button ([Menu]) → Select 🎬 (Settings) → [Initialize] → Press the function button ([OK]).

Note
• Perform initialization after charging the camera to prevent the camera from turning off during the process.

💡 **When the camera does not work properly**

Press and hold the ON/OFF (Power) button for at least 7 seconds, and force-quit the camera (page 15, 16). Then turn the camera on again.

Indicates cautions and limitations relevant to the correct operation of the camera.

💡 Indicates information that is useful to know.

Notes on using the camera

Internal memory back up

Be sure to make a backup copy to protect your data.

Notes on recording/playback and connection

- Before you start recording, make a trial recording to make sure that the camera is working correctly.
- Do not aim the camera at the sun or other bright light.
- Do not use the camera near a location that generates strong radio waves or emits radiation. Otherwise, the camera may not properly record or play back images.
- If moisture condensation occurs, remove it before using the camera (page 67).
- Do not shake or strike the camera. It may cause a malfunction and you may not be able to record images. Furthermore, the recording media may become unusable or image data may be damaged.
- When connecting your camera to another device with a cable, be sure to insert the connector plug in the correct way. Pushing the plug forcibly into the terminal will damage the terminal and may result in a malfunction of your camera.
- Playback of movies other than those shot, edited or composed on this camera is not guaranteed.

On camera's temperature

The camera may get warm due to continuous use, but it is not a malfunction.

### On the overheat protection

Depending on the camera and battery temperature, you may be unable to record movies or the power may turn off automatically to protect the camera. A message will be displayed on the LCD screen before the power turns off or you can no longer record movies.

Notes on the battery pack

- The battery pack is built into the camera. Charge the camera before using for the first time.
- You can charge the battery pack even if it is not completely discharged. In addition, even if the battery pack is not fully charged, you can use the partially charged capacity of the battery pack as is.
- For details on the usable battery pack, see page 66.

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, some tiny black and/or bright dots (white, red, blue or green) may appear on the LCD screen. These dots are a normal result of the manufacturing process and do not affect the recording.
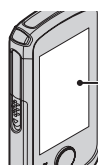
Black, white, red, blue or green dots

- 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.

On image data compatibility

- This camera supports "MP4 format" as movie file format. Therefore, movies recorded by this camera cannot be played on devices that do not support "MP4 format".
- This camera does not support "AVCHD format" and therefore is not compatible with the playback and recording of movies in "AVCHD format" like a Digital HD Video camera recorder.
- Still images recorded by this camera are compressed/recorded in JPEG format. The file extension is ".JPG".
- The camera conforms with DCF (Design rule for Camera File system) universal standard established by JEITA (Japan Electronics and Information Technology Industries Association).
- Sony does not guarantee that the camera will play back images recorded or edited with other equipment, or that other equipment will play back images recorded with the camera.

Warning on copyright

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

3GB

No compensation for damaged content or recording failure

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

The images used in this handbook

- The images used as examples in this handbook are reproduced images, and are not actual images shot using the camera.
- Design and specifications are subject to change without notice.

Notes on playing back movies on other devices

The camera is compatible with MPEG-4 AVC/ H.264 Main Profile. Therefore, you cannot play back images on the camera with the devices which are not compatible with the MPEG-4 AVC/H.264.

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

This camera is equipped to be water-proof, dust-proof and shock-proof. Damage caused from misuse, abuse or failure to properly maintain the camera is not covered by the limited warranty. This camera is water-proof/dust-proof equivalent to IEC60529 IP58. The camera is operable up to a water depth of 5 m for 60 minutes.

- Do not subject the camera to pressurized water, such as from a tap.
- Do not use in hot springs.
- Use the camera in the recommended operating water temperature range of 0°C to 40°C (32°F to 104°F).
- Conforming to MIL-STD 810F Method 516.5-Shock standards, this product has passed testing when dropped from a height of 1.5 m above a 5-cm thick plywood board*.
- * Depending on use conditions and circumstances, no guarantee is made regarding damage to, malfunction of, or the water-proof performance of this camera.
- As for dust-proof/shock-proof performance, there is no guarantee that the camera will not become scratched or dented.
- Sometimes water-proof performance is lost if the camera is subjected to a strong shock such as from being dropped. We recommend the camera be inspected at an authorized repair shop for a fee.
- Accessories supplied do not meet water-proof, dust-proof, and shock-proof specifications.
- Read "Precautions" (page 67) before operating the camera.
- If you attach the camera to a tripod with a screw

over 5.5 mm in length, a hole may result in the camera body, and cause water to enter the camera.
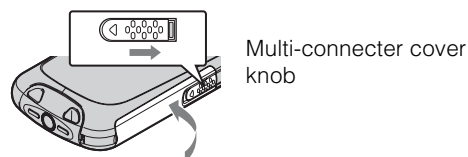
Notes before using the camera under/ near water

- Make sure that no foreign matter such as sand, hair, or dirt gets inside the multi-connector cover. Even a small amount of foreign matter may lead to water entering the camera.

①Sealing gasket
②Surface contacting the sealing gasket
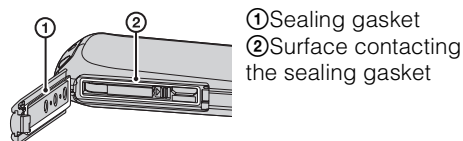
- Confirm that the sealing gasket and its mating surfaces have not become scratched. Even a small scratch may lead to water entering the camera. If the sealing gasket or its mating surfaces become scratched, take the camera to an authorized repair shop to have the sealing gasket replaced for a fee.
- If dirt or sand gets on the sealing gasket or its mating surfaces, wipe the area clean with a soft cloth that will not leave behind any fibers. Be careful not to damage the sealing gasket or mating surfaces when cables are connected.
- Do not open/close the multi-connector cover with wet or sandy hands or near water. There is a risk this will lead to sand or water getting inside. Before opening the cover, perform the procedure described in "Cleaning after using the camera under/near water".
- Open the multi-connector cover with the camera completely dry.

Closing the covers

Multi-connecter cover knob

- Fully close the cover until the yellow mark under the slide lock can no longer be seen.

Notes on using the camera under/near water

- Do not subject the camera to shock such as from jumping into water.
- Do not open and close the multi-connector cover while under/near water.
- This camera sinks in water. Place your hand through the wrist strap to prevent the camera from sinking.

4^{GB}

- Faint, white, circular spots may appear in underwater flash photos due to reflections off of floating objects. This is not a malfunction.
- Set [Underwater Mode] if you are concerned about the color.
- If water drops or other foreign matter is present on the lens, you will be unable to record clear images.

Cleaning after using the camera under/near water

- Always clean the camera with water after use within 60 minutes, and do not open the multi-connector cover before cleaning is finished. Sand or water may get inside places where it cannot be seen. If not rinsed, water-proof performance will be degraded.

- Place the camera in fresh water for about 5 minutes. Then, gently shake the camera underwater while pressing each button repeatedly to clean away any lodged salt, sand or other matter.
- After rinsing, wipe away water drops with a soft cloth. Allow the camera to dry completely in a shady location with good ventilation. Do not blow dry with a hair dryer as there is a risk of deformation and/or degraded waterproof performance.
- This camera is constructed to drain water. Water will drain from openings around the ON/OFF (Power) button, zoom lever, and other controls. After removing from water, place the camera on a dry cloth for a while to allow water to drain.
- Bubbles may appear when the camera is placed under water. This is not a malfunction.
- The camera body may become discolored if it comes in contact with sunscreen or suntan oil. If the camera does come in contact with sunscreen or suntan oil, quickly wipe it clean.
- Do not allow the camera to sit with salt water inside or on the surface. This may lead to corrosion or discoloration, and degradation of water-proof performance.
- Remove any remaining water or other foreign matter inside the multi-connector cover with a soft, dry cloth.
- Do not directly subject the camera to flowing water such as tap water.
- To maintain the water-proof performance, we recommend that once a year you take the camera to your dealer, or to an authorized repair shop, to have the sealing gasket of the multi-connector

cover replaced for a fee.

Message on the LCD screen when using [Underwater Mode]

The following message is displayed every time* you set [Underwater Mode] to [On].
  "When using the camera underwater/near water, firmly close the cover, specified by the arrow, after having inspected it for foreign matter/damage, then press [OK]"
- This message does not indicate the malfunction.
- Rather, it is to remind you of the things to be checked before using the camera to keep the waterproof performance.
- Operate the camera after erasing the message by touching the area around the displayed message.
- * It is displayed only when you set [Underwater Mode] to [On].

Life with "Bloggie"

Capture your life

For more active scenes

Use "Bloggie Sport" to capture not only everyday scenes, but also scenes of outdoor activities, on snowy mountains, etc.
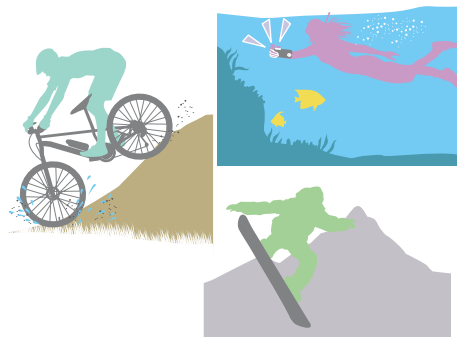
At a party

Record still images at maximum 5M (2592 × 1944) and movies at maximum 1920 × 1080 30p full high-definition (page 42, 44). Also, you can record still images during movie recording (page 31).

During a walk

Take compact "Bloggie" with you anywhere, anytime. Take it out, and record casually.
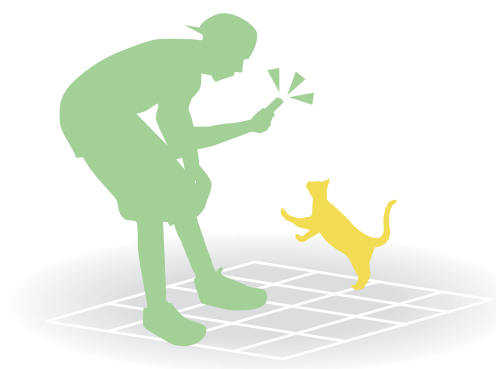
Share your life

Import and upload captured moments

You can upload images easily and intuitively using the available software (page 26, 40). You can also choose the images and the sharing site to upload in advance (Share it Later) (page 46).

Connect to TV

Connect your "Bloggie" to a TV with an HDMI cable (sold separately), and enjoy images on the big screen (page 57).

Table of contents

Table of contents

Operation
Search

Settings
Search

Index

Notes on using the camera

Getting started

Shooting

Viewing

Computer

Settings

TV

Troubleshooting

Others

Table of
contents

Operation
Search

Settings
Search

Index

Index

Operation Search

Table of
contents

Operation
Search

Settings
Search

Index

Settings Search

Setting items

In the table below, ✓ indicates settings that can be changed, while – indicates settings that cannot be changed.
Click an item to jump to the corresponding page.

Items	Shooting mode/Playback mode
Image Size	✓
Self-Timer	✓
Underwater Mode	✓
Flicker Reduction	✓
Beep	✓
Language Setting	✓
Demo Mode	✓
Initialize	✓
HDMI Output	✓
LUN Settings(USB)	✓
Format	✓
Date & Time Setting	✓
Calibration	✓

How to set items

1 Press the ON/OFF (Power) button.
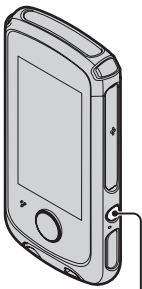
ON/OFF (Power) button

12^{GB}

2 Tap [MENU] to display the menu screen.
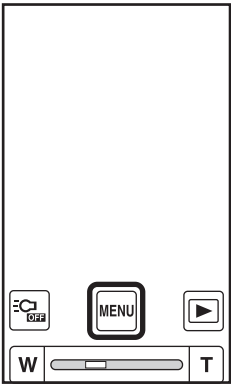
3 Tap the desired item.
Tap ▲/▼ to scroll the display.

Menu
Beep
Language Setting
Demo Mode
Initialize
HDMI Output
LUN Settings(USB)
Format
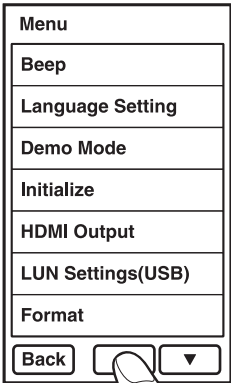
Back   ▼

4 Tap the desired settings.

5 Tap [Back].

13GB

Identifying parts

A Lens
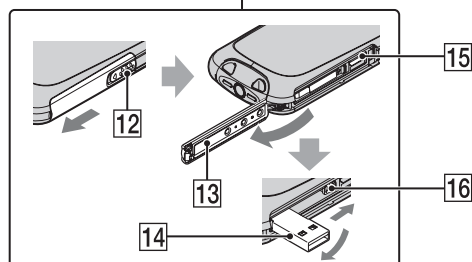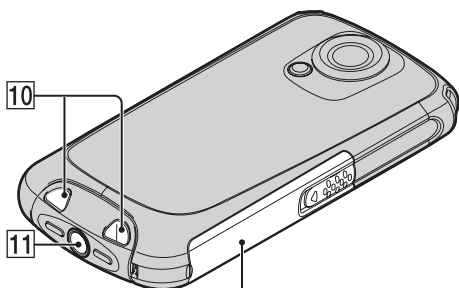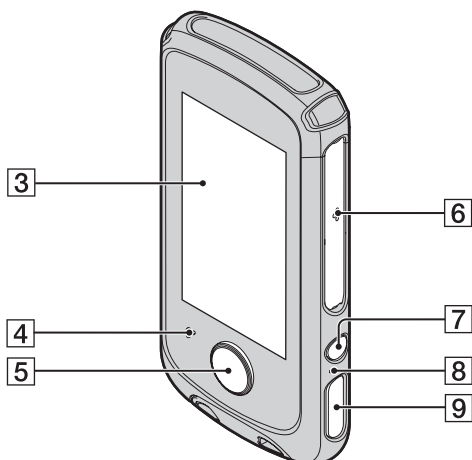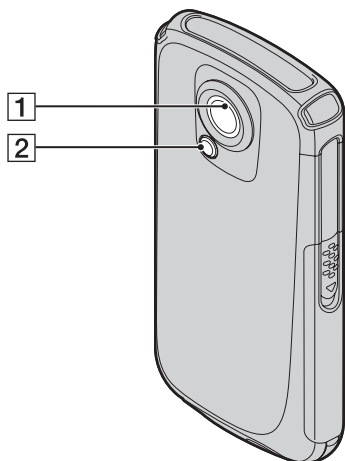
B Video Light

C LCD screen

D Speaker

E Movie button

F Microphone

G ON/OFF (Power) button
   • Press and hold the ON/OFF (Power) button for at least 7 seconds to force-quit the camera.

H Charge lamp

I ☐ (Shutter) button

J Strap hole

K Tripod receptacle
   • Do not hold the camera when attaching the tripod.

L Multi-connector cover knob

M Multi-connector cover

N Built-in USB arm

O HDMI OUT jack (57)

P USB jack knob

14GB

List of icons displayed on the screen

Icons are displayed on the screen to indicate the camera status.

When in standby for shooting
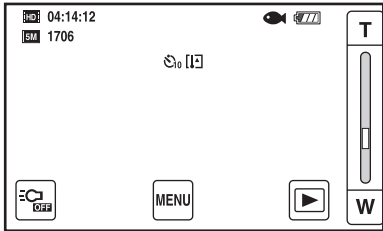
When shooting movies

When playing back
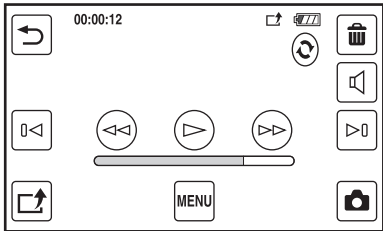
Buttons

Display	Indication
MENU	Menu
T / W	Zoom scaling
▶	Viewing mode
🔦 🔦	Light
◀◀ ▷ ▶▶	Playback bar
�	Back
🗑	Delete
📤	Share it Later
🔊	Adjusting volume
🔉— 🔊+	Volume
✕	Returning to the previous screen
📷	Shooting mode

Icons

Display	Indication
🔋	Battery remaining
🔋	Low battery warning
🐟	Underwater Mode
5M 3M 0.4M	Photo Size (aspect ratio/ resolution)
FULL HD SPORTS / HD / LITE	Movie Size (resolution vertical shooting/frame rate)
⏱10	Self-Timer
1706	Number of recordable still images
● (green)	AE/AF lock
04:14:12	Recordable time
00:12	Recording time (m:s)
JAN-1-2012 9:30 AM	Recorded date/time of the playback image
● (red)	During movie recording

15GB

Display	Indication
⊏⁴	Share it Later
[⁐]	Overheating warning
00:00:12	Counter

Notes

- Indicators and their positions are approximate and differ from what you actually see.
- The screen display shifts both horizontally and vertically depending on the camera aspect.
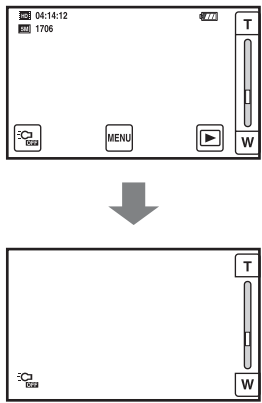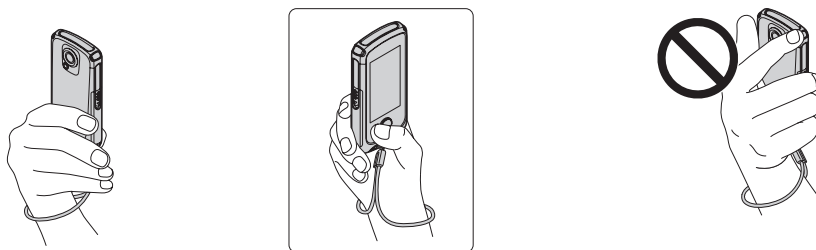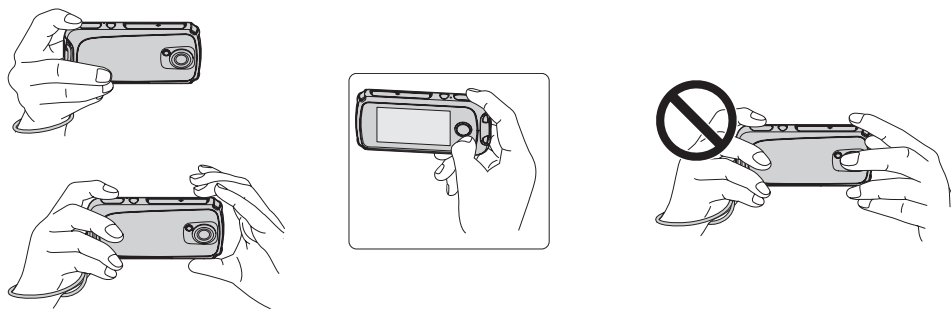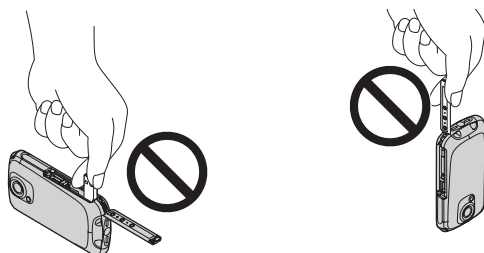- The screen display disappears automatically after about 5 seconds.

How to hold the camera

Be careful not to block the lens or microphone with your finger when shooting.

Do not hold the Built-in USB arm or multi-connector cover.

Attach the strap and place your hand through its loop to prevent the camera from sinking or damage by being dropped.

Strap hole
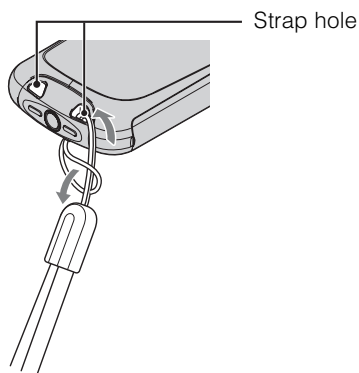
☼Holding the camera vertically when you shoot movies

Portrait images are recorded. Black bands appear on the left and right of the screen during playback on TV or computer. This is useful when shooting portrait objects.
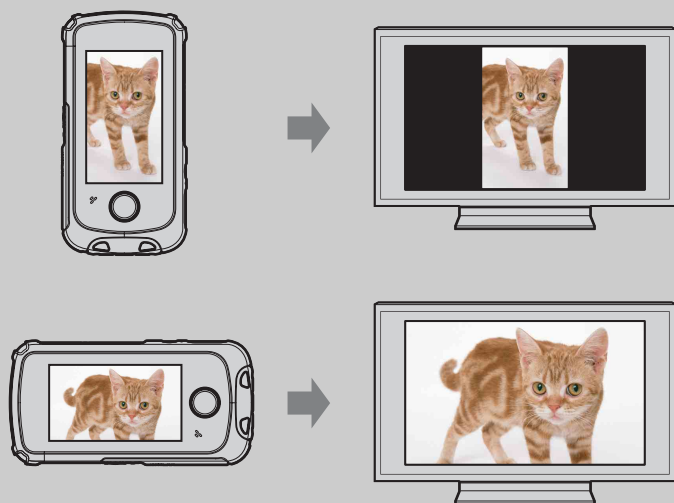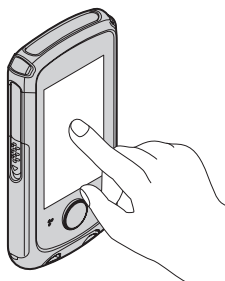
How to use the touch panel

You can operate the camera or set the settings by tapping buttons on the LCD screen of the camera.

Note

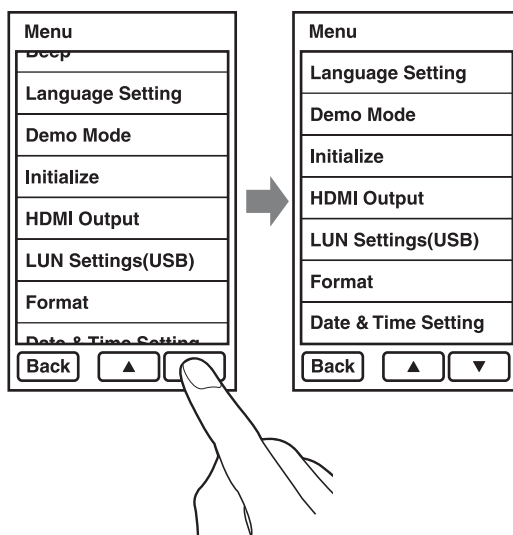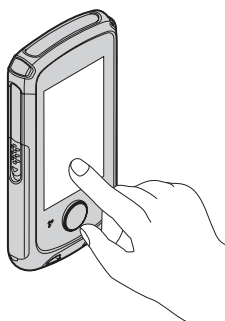• Do not operate with a sharp-pointed object, such as pen or finger nail.

Select the items

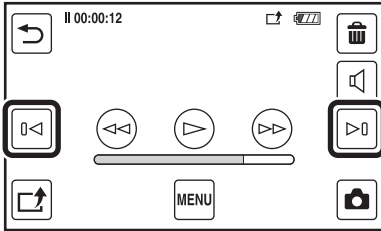Tap the buttons or items on the screen with your finger.

Menu
Beep
Language Setting
Demo Mode
Initialize
HDMI Output
LUN Settings(USB)
Format
Back   ▲   ▼
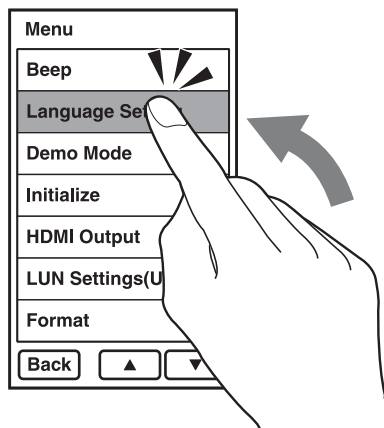
Scroll the screen

Tap ▲/▼ on the LCD screen.

Menu		Menu
Beep		Language Setting
Language Setting		Demo Mode
Demo Mode		Initialize
Initialize		HDMI Output
HDMI Output		LUN Settings(USB)
LUN Settings(USB)		Format
Format		Date & Time Setting
Date & Time Setting		
Back ▲ ▼		Back ▲ ▼

19^{GB}

Display the next screen

Tap ◁◁ / ▷▷ on the LCD screen.

```
┌──────────────────────────────────┐
│  ⎌    ‖ 00:00:12        ⤴ 🔋      🗑  │
│                                 🔊 │
│  ◁◁    ◁◁    ▷    ▷▷    ▷▷       │
│      ────────────────            │
│  ⤴          MENU           📷     │
└──────────────────────────────────┘
```

Table of
contents

Operation
Search

Settings
Search

Index

Checking the accessories supplied

- USB connection support cable (1)
  (Sony Corporation 4-277-105-)
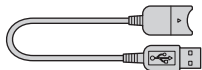
 Use this if Built-in USB arm of the camera cannot be connected to the computer (page 22).
- Wrist strap (1)
- Instruction Manual (1)
- Important Notice (1)
- Notes on the water-proofing (1)
- Bloggie Handbook (this manual)
 This is included in the internal memory of this camera.

Charging the camera

The camera's battery is continuously charged whenever the camera is connected to a running computer.

1 Press the ON/OFF (Power) button to turn off the camera.

ON/OFF (Power) button
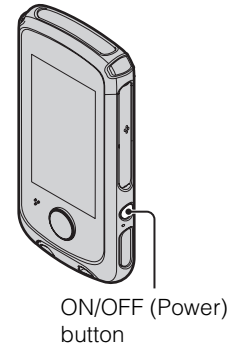
2 Slide the multi-connector cover knob in the direction of the arrow as illustrated and open the multi-connector cover.

USB jack knob
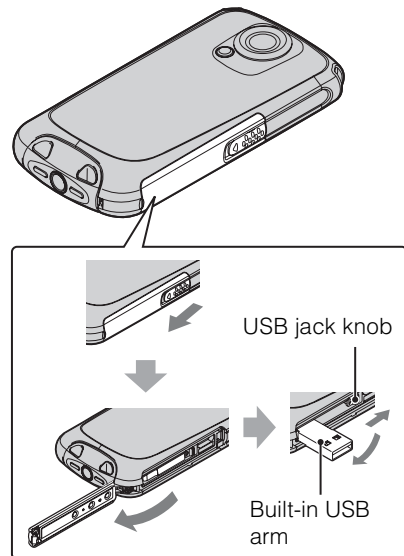
Built-in USB arm

3 Slide the USB jack knob.

The Built-in USB arm comes out as shown in the illustration.

4 Connect the camera to the computer that is turned on.

The charge lamp lights up in orange, and charging starts.

When the charge lamp turns off, charging is finished.

- The charge lamp may turn off when the temperature is outside of the recommended operating temperature (10°C to 30°C (50°F to 86°F)).
- The charge icon is displayed on the LCD screen when charging is started. However, the icon disappears after a while.
- If the battery level is low (low battery), the charge icon may not be displayed on the LCD screen. In this case, check if the charge lamp is lighting up.
- If the charging lamp does not light correctly, reconnect the camera to the computer.

Charge lamp

22GB
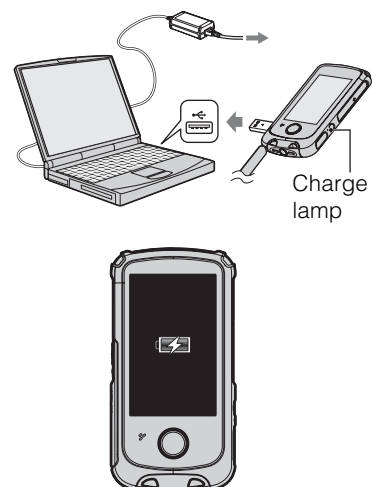
5 When charging is finished, disconnect the USB connection between the camera and computer (page 23).

Notes

- While the camera is connected to a computer, you cannot operate the camera. Be sure to disconnect the camera before operation.
- Do not apply force to the camera, when you connect the camera to a computer. This may cause damage to the camera or the computer.
- When you connect the camera to a notebook computer that is not connected to an AC power source, the battery of the notebook computer may be depleted rapidly. Do not leave the camera connected to the computer for a long time.
- Charging the battery or the connection with customized or hand-built computers is not guaranteed. Depending on the type of the USB device used, charging may not function properly.
- If you do not intend to use the camera for an extended period, charge the camera once every 6 to 12 months to maintain battery performance.

Disconnecting the USB connection

Windows 7

1 Click ⌃ on the task tray.

2 Click the disconnect icon in Customize.

3 Click the device to remove.
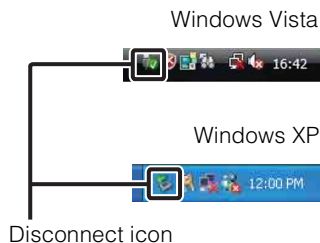
Disconnect icon

Windows Vista/Windows XP

Perform the procedures from step 1 to 3 below before:
- Disconnecting the USB connection support cable.
- Turning off the camera.

1 Double-click the disconnect icon on the tasktray.

2 Click ⇌ (USB Mass Storage Device) → [Stop].

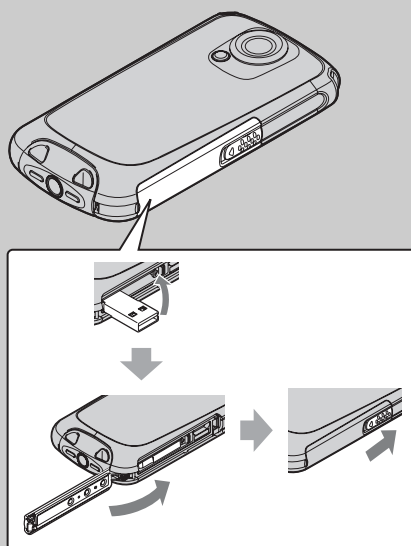3 Confirm the device on the confirmation window, then click [OK].

Windows Vista

Windows XP

Disconnect icon

Note

- Drag and drop the drive icon to the "Trash" icon beforehand when you use a Mac computer, and the camera is disconnected from the computer.

23^{GB}

💡 To retract the Built-in USB arm

Push Built-in USB arm back in the
direction of the arrow until it clicks.
• To tightly close the multi-connector cover,
close the multi-connector cover and slide
the multi-connector cover knob to lock.

Table of
contents

Operation
Search

Settings
Search

Index

24GB

Table of
contents

Operation
Search

Settings
Search

Index

☀How long does it take to charge the camera?

Charging time

Full charge time	
Computer	Approx. 210 min.
AC-UD20* (sold separately)	Approx. 120 min.

- Time required to charge a fully depleted battery at a temperature of 25°C (77°F). Charging may take longer under certain circumstances or conditions.
- You can rapid-charge the camera with a USB charger AC-UD20 (sold separately). To use, connect the USB charger to the USB jack of the supplied USB connection support cable, or directly to the Built-in USB arm of the camera.
- * AC-UD20 (sold separately) may not be available in some countries or regions.

☀How long can I record or play back images?

Standard battery life

Recording time*[1]	
Continuous recording time*[2]	Approx. 110 min.
Typical recording time*[3]	Approx. 50 min.

Playback time
Approx. 150 min.

- *[1] Recording time is the time when you set movie size to [1280×720 30p].
- *[2] Continuous recording time shows the approximate time available of a fully charged battery pack. Continuous recording of movies is possible for approximately 29 minutes. Also, recording stops automatically to prevent the file size from exceeding 2 GB.
- *[3] Typical recording time shows the approximate time available of a fully charged battery pack when you repeatedly execute operations, such as setting to shooting mode, turning on/off the power, or zooming.

☀Checking the remaining battery charge

A remaining charge indicator appears on the upper right of the LCD screen.

High   ▭   ▭   ▭   ▭   ▭   ▭   Low

- The displayed battery remaining indicator may not be correct under certain circumstances.
- If the camera is running on battery power and you do not operate the camera for about 5 minutes, the camera turns off automatically to prevent wearing down the battery (Auto power off function).
- The Language/Clock Setting screen appears when the camera is turned on for the first time (page 27).
- It takes about one minute until the correct battery remaining indicator appears.

For easy set-up of Bloggie Sport, visit the web

1 Turn on the camera, then connect to a computer via USB.

2 Access the website: http://www.sony.net/start/bloggie.

* Double-click [Computer] (in Windows XP, [My Computer]) → [START] → [Start_Bloggie].

3 Install the software and register to a share service by Sony, from the website.

– Software: Install the software on your computer to manage and upload images with a simple, integrated interface.
  Windows version: "PlayMemories Home"
  Mac version: Upload software for Bloggie ("Share-it-Later for Bloggie", "PlayMemories Online Uploader")
– Registration: Try "PlayMemories Online", the share service by Sony.

Note

• Availability of "PlayMemories Online Uploader" depends on your location

26^{GB}

Setting the language and clock

1 Press the ON/OFF (Power) button.

The camera is turned on.
The demonstration movie plays back when you turn on the camera for the first time.
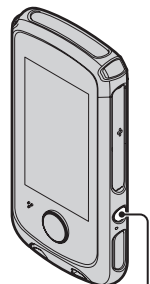
ON/OFF (Power) button

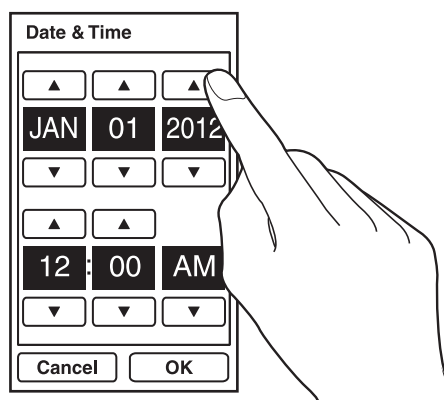2 Select the desired language, then tap [Next].

3 Select the desired date display format, then tap [Next].

Date & Time Format

Y-M-D

M-D-Y

D-M-Y

Back   Next
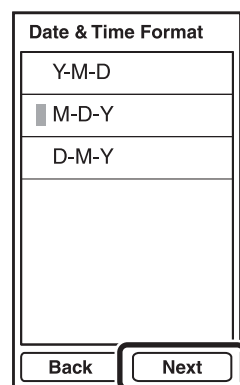
4 Select Daylight Savings [On]/[Off], then tap [Next].

5 Tap ▲/▼ to set each item so that the desired date and time is obtained, then tap [OK].

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

Date & Time

JAN   01   2012

12 : 00   AM

Cancel   OK

Note

• To stop the demonstration, double-tap the LCD screen.

ღTo set the date and time again

Tap [MENU] → [Date & Time Setting] → [Date & Time] (page 56).

27GB

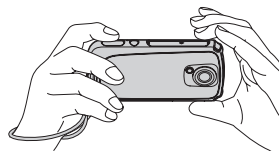# Shooting (Still images)

1 Press the ON/OFF (Power) button.
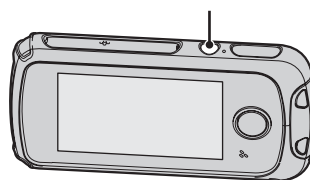
ON/OFF (Power) button

2 Compose the shot.

Be sure not to place fingers on the lens.
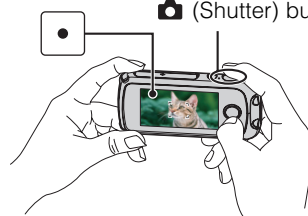Touch and hold T on the T/W (zoom) bar to zoom in,
W to zoom out.
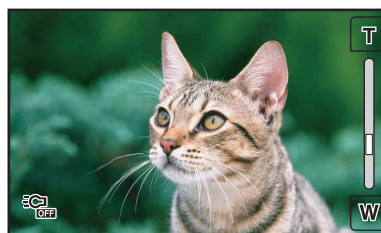
3 Press the ◖ (Shutter) button halfway
down.

When the image is in focus, a beep sounds and the ●
indicator (AE/AF lock) lights on the top of the display.

AE/AF lock indicator

◖ (Shutter) button

4 Press the ◖ (Shutter) button fully down.

28GB

💡 If you shoot a still image of a subject that is difficult to focus on

- The shortest shooting distance is approximately 10 cm (4 inches).
- If the camera cannot focus on a subject automatically, the AE/AF lock indicator changes to slow flashing and the beep does not sound. Recompose the shot.
- Focusing may be difficult in the following situations:
  - It is dark and the subject is distant.
  - The contrast between the subject and the background is poor.
  - The subject is seen through glass.
  - The subject is moving quickly.
  - There is reflective light or shiny surfaces.
  - The subject is flashing.
 - The subject is backlit.

💡 When shooting portrait

- When the camera detects faces, the white frames appear, and the focus and exposure are adjusted to the faces automatically.
- The frames turn green when the faces are in focus by pressing the 📷 (Shutter) button half way down.
- The camera may not detect faces depending on the shooting condition.
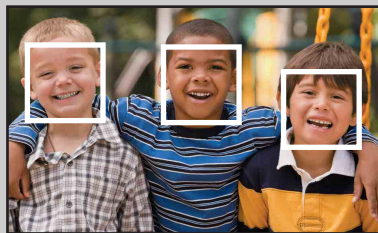
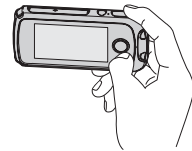# Shooting (Movies)

1 Press the ON/OFF (Power) button.
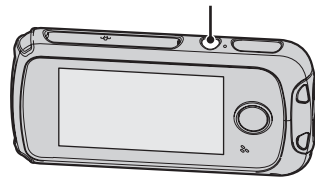
ON/OFF (Power) button

2 Compose the shot.
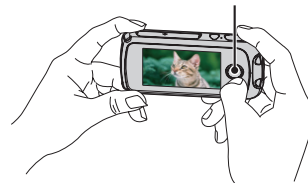
Be sure not to place fingers on the lens.
Touch and hold T on the T/W (zoom) bar to zoom in,
W to zoom out.

3 Press the movie button.

Press the movie button again to finish shooting the
movie.

Movie button

Notes

- Continuous recording is possible for approximately 29 minutes.
- The maximum size of a single movie file is approximately 2 GB. Recording stops before 29 minutes if the file size reaches approximately 2 GB during movie recording.

To shoot still images during movie recording

- Press the ◘ (Shutter) button fully down during movie recording.
- The recorded still image appears small on the LCD screen of the camera.
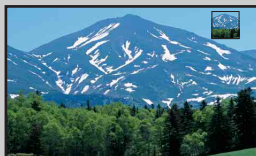
- The still image sizes are as follows, depending on the movie size.

  – 1920 × 1080 30p: (1920 × 1080)

  – 1280 × 720 30p/60p: (1280 × 720)

  – WVGA:480 × 270 30p: (480 × 270)

About the HD (High Definition) recording method of this camera

For MPEG-4 AVC/H.264, the camera supports high definition images with an effective total number of scanning lines of 1080 or 720. The number of recorded image pixel is 1920 × 1080 or 1280 × 720, approximately 30 or 60 frames per second, and the image is recorded in progressive mode.
- MPEG: Moving Picture Experts Group
- AVC: Advanced Video Codec
MPEG-4 AVC/H.264 is a standard of video camera, which uses highly efficient image compression encoding technology to record HD (high definition) images. Compared with the existing image compression encoding technology, MPEG-4 AVC/H.264 is able to compress images even more effectively.

Zoom

You can enlarge the image when shooting. The camera's zoom function can enlarge images up to 4 times.

1 Touch and hold T or W.

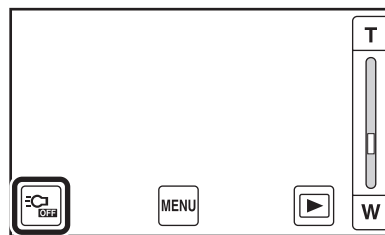Touch and hold T to zoom in, W to zoom out.
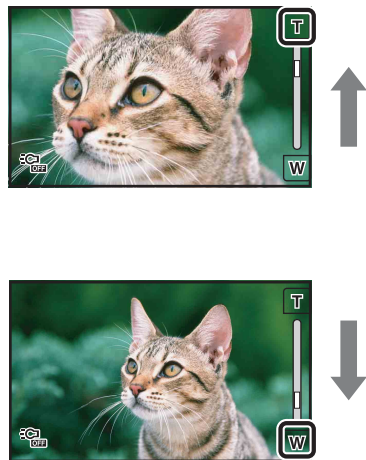
Notes

- Only Digital zoom is available with this camera.
- You may not be able to zoom in or out images smoothly when using zoom function.
- Image quality decreases as the images are digitally processed.

Light

You can shoot with the light of the camera turned on.

1 Press ⎡☐⎤ on the shooting screen.

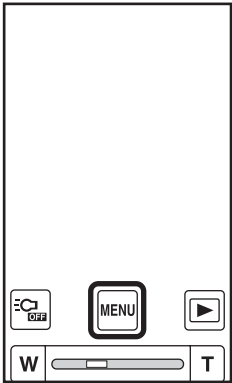To turn off the light, press ⎡☐⎤ again.

Notes

- You can use the light in shooting mode only.
- The camera emits very bright light. Do not aim directly at eyes at close range.
- Battery power wears down faster when the light is turned on.

Self-Timer

1 Tap [MENU] → [Self-Timer].

Tap the LCD screen when the screen display is not shown.
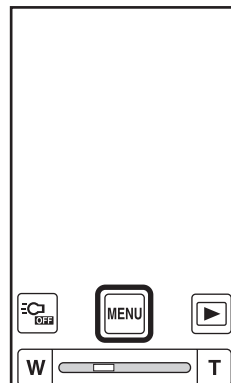
2 Select the desired mode from [Self-Timer].

✓	♡OFF **(Off)**	Does not use the self-timer.
	♡10 **(10sec)**	Sets the 10-seconds delay self-timer. When you press the ◘ (Shutter) button or the movie button, a self-timer icon flashes, and after rapid beep sounds are heard, the camera will shoot.

Underwater Mode

1 Tap [MENU] → [Underwater Mode] → [On🐟].

Tap the LCD screen when the screen display is not shown.

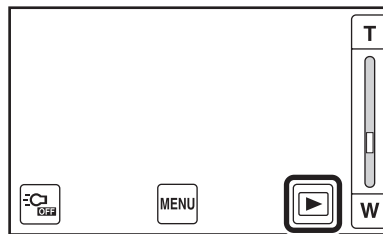2 Check the message on the LCD screen, then tap [OK].

💡To cancel the [Underwater Mode]
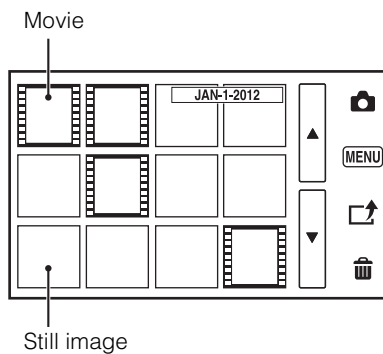
Tap [MENU] → [Underwater Mode] → [Off].

Viewing

1 Tap ▶ (Playback) to switch to playback mode.

The index screen appears.

2 Select an image and tap.

A single movie plays back when an image is selected.

Movie

JAN-1-2012

Still image

ϔ To show the previous/next images

Press ◄/►.
Press ◄/► for the movies while playback is paused.

ϔ Fast forward/Fast rewind the movie

Press ◄◄/►► during playback of the movie.

36^{GB}

⚛ To go back to the shooting screen

Do one of the following:
– Tap 🔾 on the index screen.

JAN-1-2012

– Press the 🔾 (Shutter) button or movie button.
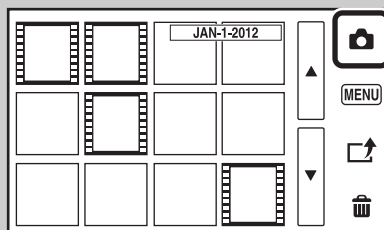
🔾 (Shutter) button

Movie button
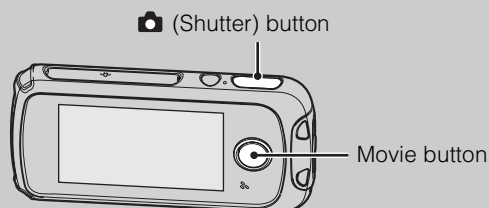
⚛ To go back to the index screen

Tap ⤺.

37GB

Playback zoom

Enlarges the played back still images.

1 Tap ▣ (Playback) to switch to playback mode.

2 Select the still image and tap.

3 Double-tap to enlarge.

4 Adjust the magnification and the part to enlarge.

Each double-tap on the LCD screen enlarges the image up to 8 times its original size.
Press ▲/▼/◄/► to change the part to enlarge.
To cancel playback zoom, tap ✕.
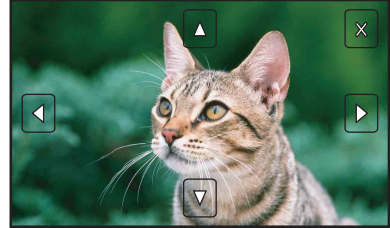
Note

• You cannot operate playback zoom when an HDMI cable (sold separately) is connected.

Volume control

You can adjust the volume for playback movies.

1 Tap ▶ (Playback) to switch to playback mode.

2 Select a movie and tap.

3 Tap ◁ (Volume control).
Tap the LCD screen when the screen display is not shown.

4 Touch and hold ◁+ to increase, ◁− to decrease
the volume.

◁− ▭▭▭▭ ◁+
Lower ◀━━━▶ Louder

Using the software to upload images

See page 26 for installing the software.

1 Choose images, and the sharing site to upload to, with the camera in advance (page 46).

2 Connect the camera to a computer in which the software (downloaded from website) is already installed.

The software starts automatically, and you can upload images chosen on the camera.

– Editing the share list of the camera.

Note

• Set [LUN Settings(USB)] to [Multi].

Notes on computer software
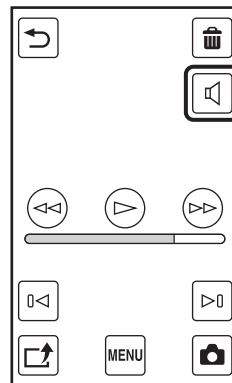
In order to use "PlayMemories Home" to enjoy the benefits of the image uploading service or other services (the "services") provided by these and other websites, you must consent to the following.

• Some websites require registration procedures and/or fees to use their services. In using such services, you must comply with the terms and conditions established by the websites concerned.

• Services may be terminated or changed in accordance with the convenience of the website operators. Sony will not be held responsible for any trouble occurring between the users and third parties or any inconvenience caused to users relating to the utilization of the services inclusive of the termination of or changes to such services.

• To view a website, you will be redirected to it by the Sony server. There may be times when you cannot access the website because of server maintenance or for other reasons.

• If the operation of the Sony server is to be terminated, you will be notified of the termination ahead of time on Sony's website, etc.

• The URLs to which you are redirected by the Sony server and other information may be recorded for the purposes of improving Sony's future products and services. However, no personal data will be recorded on such occasions.

Recommended computer environment

See page 26 for installing the software.

Windows

The following computer environment is recommended when using the "PlayMemories Home", and importing images via a USB connection.

OS (pre-installed)	Microsoft Windows XP*¹ SP3/Windows Vista*² SP2/Windows 7 SP1
Others	**CPU***³**:** Intel Pentium III 800 MHz or faster (For playing/editing High Definition movies: Intel Core Duo 1.66 GHz or faster/Intel Core 2 Duo 1.66 GHz or faster) **Memory:** 512MB or more (For playing/editing the High Definition movies: 1 GB or more) **Hard Disk:** Disk space required for installation: approximately 500 MB **Display:** 1,024 × 768 dots or more

*¹ 64-bit editions and Starter (Edition) are not supported.
*² Starter (Edition) is not supported.
*³ Minimum requirement to play back HD movies.
The above system requirements do not guarantee proper operation.

Mac

The following computer environment is recommended when using the "Share-it-Later for Bloggie" or "PlayMemories Online Uploader".

OS (pre-installed)	**USB Connection:** Mac OS X (v10.5 to v10.7)

Note on playback of movie files (MPEG-4 AVC/H.264)

To play back and edit movie files (MPEG-4 AVC/H.264) recorded by the camera on your computer, you need to install the software compatible with MPEG-4 AVC/H.264 or the "PlayMemories Home" (Windows).
• Even in a PC environment where operations are guaranteed, images may not play back smoothly due to dropped frames, etc. Note that the imported image itself is not affected.
• If you are using a notebook PC, be sure to use the PC with the AC adaptor plugged in. Sometimes normal operations are not possible due to the power savings function of the PC.

Note
• Operations are not guaranteed, even on computers fulfilling the above system requirements. For example, other open or background applications currently running may limit product performance.

Photo Size

The photo size determines the size of the image file that is recorded when you take an image. The larger the photo size, the more detail will be reproduced when the image is printed on large-format paper. The smaller the photo size, the more images can be recorded.

1 Tap [MENU] → [Image Size].

Tap the LCD screen when the screen display is not shown.
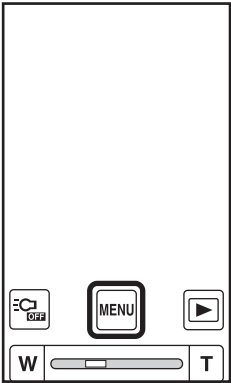
2 Tap the desired size from [Photo Size].

	Photo Size	Usage guidelines	No. of images	Printing
	5M (2592×1944) 4:3	Suitable for prints	Less	Fine
✓	**3M** (2356×1324) 16:9	Suitable for playback on a computer		
	0.4M (854×480) 16:9	Suitable for faster WEB upload	More	Rough

Note

• When you print still images recorded with 16:9 aspect ratio, both edges may be cut off.

When you select **5M** 4:3 (2592 × 1944)

The aspect ratio switches to 4:3 when shooting images.

42^{GB}

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 image 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
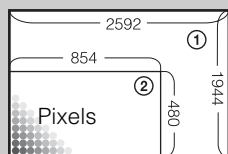
① Image size: 5M
   2,592 pixels × 1,944 pixels = 5,038,848 pixels
② Image size: 0.4M
   854 pixels × 480 pixels = 409,920 pixels
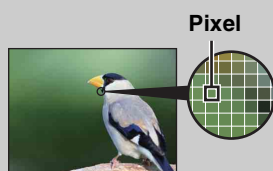
Pixel

Many pixels
(Fine image quality and large file size)

Few pixels
(Rough image quality but small file size)

Movie Size

The larger the movie size, the higher the movie quality.
The movies shot with the camera will be recorded in MPEG-4 AVC/H.264 Main Profile,
approximately 30 or 60 frames per second, Progressive, AAC LC, "MP4 format".

1 Tap [MENU] → [Image Size].

Tap the LCD screen when the screen display is not shown.
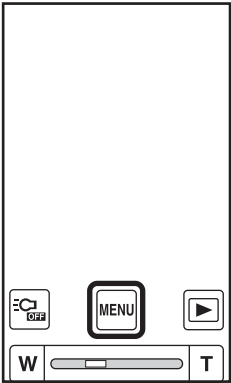
2 Tap the desired size from [Movie Size].

	Movie Size	Usage guidelines
	FULL HD (1920×1080 30p) 1080 30p	Suitable for playback on a full high definition TV
	HD SPORTS (1280×720 60p) 720 60p	Suitable for recording fast-moving objects
✓	**HD** (1280×720 30p) 720 30p	Suitable for playback on a computer
	LITE (480×270 30p) 270 30p	Suitable for faster WEB upload

💡 Progressive playback

The camera supports progressive mode*, which is used in computers, and therefore is suited
for playing back images on computers.

* Progressive and Interlaced modes are types of movie recording method. Progressive mode reads out
all image pixels at once while Interlaced mode separates a frame into odd/even fields and reads out
them alternately.

Delete

Allows you to select unwanted images for deletion.

1 Tap ▶ (Playback) to switch to playback mode.

2 Tap 🗑 (Delete) on the index screen.
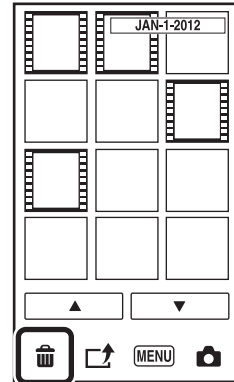
3 Tap the center of the images you want to delete.
   Repeat the above step until there are no more images to be
   deleted.
   Select an image with a ✓ mark again to release the ✓ mark.
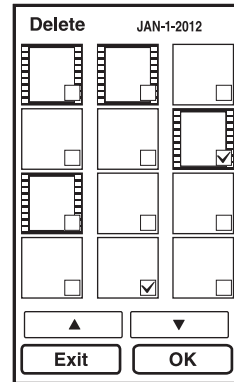
4 Tap [OK] → [OK].

💡To delete images during playback

Tap 🗑 (Delete) → [OK] in single-image mode.

Share it Later

"Share-it-Later" lets you register images in Bloggie for faster and easier uploading at a later time.

Reserve for sharing immediately after taking images.

1 Tap ↱ (Share) on the screen after taking the image.

2 Select the service to share, then tap [OK].

Batch together and share later.

1 Tap ▶ (Playback) to switch to playback mode.

2 Tap ↱ (Share) on the index screen.

3 Scroll with ▲/▼, then tap the image you want to upload.
Repeat the above steps for each image you want to upload.

4 Tap [Next].

5 Select and tap the sharing site to upload to, from the share list. Then tap [OK].
To upload images, see page 40.

Notes
• You cannot create the share list with the camera. Use "PlayMemories Home" to create.
• The maximum number of share lists the camera can display is 14.

ஜ To share images during playback

Tap ↱ (Share it Later) → The sharing site you upload images → [OK] in single-image mode.

ஜ To cancel sharing

Tap ↱ (Share it Later) → Release the ✓ mark on the sharing site → [OK] during playback of the image you want to cancel sharing.

Flicker Reduction

Curbs the flicker generated by fluorescent by using the electro-shutter.

1 Tap [MENU] → [Flicker Reduction] → desired mode
Tap the LCD screen when the screen display is not shown.
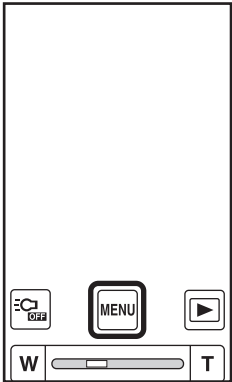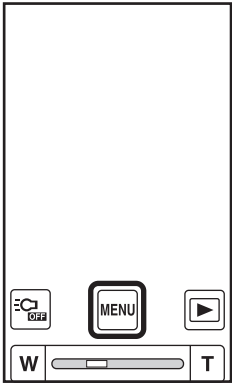
	On	Uses the Flicker Reduction.
✓	Off	Does not use the Flicker Reduction.

Beep

Sets the sound for when you operate the camera.

1 Tap [MENU] → [Beep] → desired mode.

✓	**On**	Turns on the beep sound when you press the ● (Shutter) button or the movie button.
	Off	Turns off the beep sound.

Language Setting

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

1 Tap [MENU] → [Language Setting] → desired
  language.

Table of
contents

Operation
Search

Settings
Search

Index
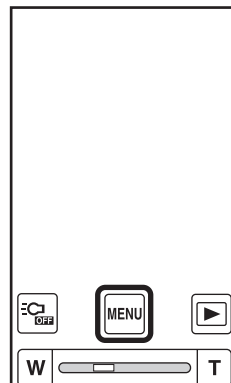
Demo Mode

Performs a demonstration of the camera.

1 Tap [MENU] → [Demo Mode] → desired mode.
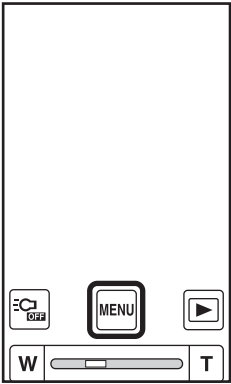
✓	**On**	Performs a demonstration.
	Off	Does not perform a demonstration.

Note

- The demonstration stops when operating any of the following.
  - Touch LCD screen.
  - Press the ◘ (Shutter) button or movie button.
  - Turn off the power.

Calibration

When you tap a button on the touch panel, if a different button responds or does not work as expected, perform the calibration

1 Tap [MENU] → [Calibration].

2 Tap the center of the ✖ mark as it appears on the screen (3 locations).

Notes

- If you cancel the calibration by tapping [Cancel], the calibration is not made.
- If you did not tap in the correct spot, the calibration is not performed.
  Tap the center of the ✖ mark again.

Initialize

Initializes the setting to the default setting.
Even if you execute this function, the images are retained.

1 Tap [MENU] → [Initialize] → [OK].
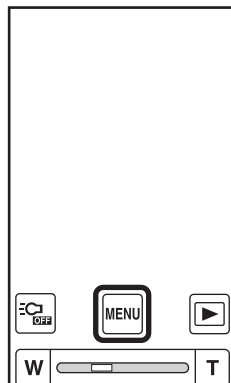
Table of
contents

Operation
Search

Settings
Search

Index

Note
• Perform initialization after charging the camera to prevent the camera from turning off during the process.

When the camera does not work properly

Press and hold the ON/OFF (Power) button for at least 7 seconds, and force-quit the camera (page 14). Then turn the camera on again.

LUN Settings(USB)

Sets the display method for the recording media displayed on a computer screen or other monitor when the camera is connected with a computer or AV component using a USB connection.

1 Tap [MENU] → [LUN Settings(USB)] → desired mode.
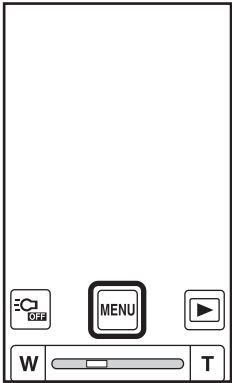
	Multi	Select this setting when you connect the camera to a computer.
	Single	Select this setting in cases where the images are not displayed when the camera is connected to a device other than a computer.

HDMI Output

Selects the type of signal to be output to a TV from the HDMI OUT jack. If images are not displayed on the TV clearly, changing the setting may improve the display.

1 Tap [MENU] → [HDMI Output] → desired mode.
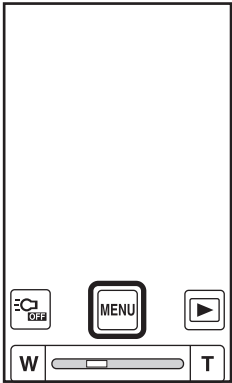
✓	**60Hz**	Outputs with 60Hz.
	50Hz	Outputs with 50Hz.

Format

Formats the internal memory.

1 Tap [MENU] → [Format] → [OK].
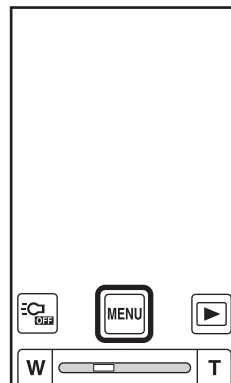
Note

• Note that formatting permanently erases all data.

Date & Time Setting

Sets the date and time again.

1 Tap [MENU] → [Date & Time Setting].

2 Tap the items you want to set.

Date & Time Format	Selects the date and time display format.
Daylight Savings	Pushes forward an hour.
Date & Time	Sets the date and time (page 27).

Viewing images on a TV

Table of
contents

Operation
Search

Settings
Search

Index

Connect the camera to a TV which has an HDMI jack with an HDMI cable (sold separately).
Refer also to the instruction manuals of the TV.

1 Turn off both the camera and the TV.

2 Open the multi-connector cover and connect the camera to the TV with
  the HDMI cable (sold separately).

HDMI jack

① To HDMI jack

HDMI cable
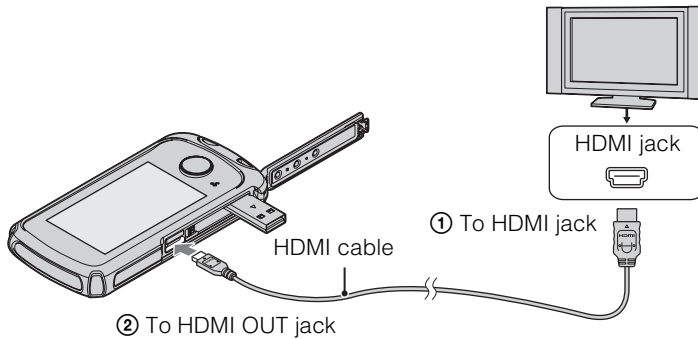
② To HDMI OUT jack

3 Turn on the camera.

4 Turn on the TV and set the input.
  Images shot with the camera appear on the TV.

5 Tap images to play back.

Notes

- Connect the mini-HDMI jack of the HDMI cable (sold separately) to the HDMI OUT jack of the camera.
- Do not connect the output jack of the camera to that of other devices. This may result in malfunction.
- Some devices may not work properly. Image and sound may not be output.
- Use an HDMI cable with the HDMI logo.

On TV color systems

If you want to view images on a TV screen, you need a TV with an HDMI jack and an HDMI cable (sold separately). The color system of the TV must match that of the camera. Check the following lists for the TV color system of the country or region where the camera is used, and set [HDMI Output] (page 54).

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, Croatia, Czech Republic, Denmark, Finland, Germany, Holland, Hong Kong, Hungary, Indonesia, Italy, Kuwait, Malaysia, New Zealand, Norway, Poland, Portugal, Rumania, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Thailand, Turkey, United Kingdom, Viet Nam, etc.

PAL-M system

Brazil

PAL-N system

Argentina, Paraguay, Uruguay

SECAM system

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

Troubleshooting

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

❶ **Check the items on pages 59 to 64.**

❷ **Turn the power off and then on again.**

❸ **Press and hold the ON/OFF (Power) button for at least 7 seconds, and force-quit the camera. Then turn the camera on again (page 14).**

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

Be aware that by sending the camera for repair, you give consent that the contents of the internal memory, music files may be checked.

Additional information on this product and answers to frequently asked questions can be found at our Customer Support Website.
http://www.sony.net/

Battery pack and power

Cannot turn on the camera.

• The battery pack is discharged. Charge the camera.

The power turns off suddenly.

• Depending on the camera and battery temperature, the power may turn off automatically to protect the camera. In this case, a message is displayed on the LCD screen before the power turns off.
• If you do not operate the camera for a certain period of time while the power is on, the camera turns off automatically to prevent wearing down the battery pack. Turn the camera on again.

Battery life is short.

• Charge the battery until the charge lamp disappears.
• You are using the camera in an extremely hot or cold location, or the charging is insufficient. This is not a malfunction.
• If you have not used the camera for a prolonged period, the efficiency of the battery will be improved by repeatedly charging and discharging it.
• When usable battery life becomes half the usual time, even after charging the battery fully, the battery may need to be replaced. Consult your nearest Sony dealer.

Cannot charge the camera.

- Turn off the camera and make the USB connection.
- Disconnect the USB connection support cable, and then reconnect it.
- Use the USB connection support cable (supplied).
- Charge the battery in an ambient temperature of 10°C to 30°C (50°F to 86°F).
- Turn on the computer and connect the camera.
- Release the computer from sleep or hibernation status.
- Connect the camera directly to a computer using the supplied USB connection support cable.
- Connect the camera to a computer with the operating system that is supported by the camera.
- After trying the remedies above, if the problem still persists, press and hold the ON/OFF (Power) button for at least 7 seconds, and force-quit the camera. Then reconnect it to the computer using the supplied USB connection support cable.
- You cannot charge the camera when using a noncompliant USB charger.

The remaining charge indicator is incorrect.

- This phenomenon occurs when you use the camera in an extremely hot or cold location.
- A discrepancy arose between the remaining charge indicator and the actual remaining battery charge. Fully discharge the battery pack once, then charge it to correct the indication.
- The battery pack is dead (page 66). Consult your nearest Sony dealer.

Shooting still images/movies

Cannot record images.

- Check the free capacity of the internal memory. If it is full, delete unnecessary images (page 45).

The date and time are not displayed on the LCD screen.

- While shooting, the date and time are not displayed. They are displayed only during playback.

Cannot insert dates on images.

- The camera does not have a feature for superimposing dates on images.

Dots appear and remain on the screen.

- This is not a malfunction. These dots are not recorded.

Viewing images

Cannot play back images.

- The folder/file name has been changed on your computer.
- Playback on the camera cannot be guaranteed if files contain images processed on a computer, or images shot by another camera.
- The camera is in USB mode. Disconnect the USB connection (page 23).

The image appears rough right after playback starts.

- This may happen due to image processing. This is not a malfunction.

The image does not appear on the TV.

- Set [HDMI Output] to [60Hz] in NTSC region, [50Hz] in PAL region (page 54).
- Check whether the connection is correct (page 57).

The top and bottom edges of images are trimmed slightly on a connected TV.

- The LCD screen of the camera can display recording images across the entire screen (full pixel display). However, this may cause slight trimming of the top, bottom, right, and left edges of images when played back on a TV that is not compatible with full pixel display.

Black bands appear on the left and right of the screen.

- Black bands appear on the left and right of the screen when viewing movies recorded with the camera held in the vertical position on a TV or a computer. This is not a malfunction.

Computers

Your computer does not recognize the camera.

- When the battery level is low, charge the camera.
- Turn on the camera and connect to a computer.
- Use the USB connection support cable (supplied).
- Disconnect the USB connection support cable from both the computer and the camera, and connect it again firmly.
- Disconnect all equipment other than the camera, the keyboard and the mouse from the USB connectors of your computer.
- Connect the camera directly to your computer without passing through a USB hub or other device.
- Set [LUN Settings(USB)] to [Multi] (page 53).

Cannot import images.

- Connect the camera and your computer correctly making a USB connection (page 41).
- When you format the internal memory with a computer, you may not be able to import the images to a computer. Format the internal memory with the camera, and shoot (page 55).

After making a USB connection, "PlayMemories Home" does not start automatically.

- Install the "PlayMemories Home" to a computer, and make the USB connection after both the camera and a computer are turned on.

Cannot play back images on your computer.

- 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 the internal memory. Import the movie to your computer using the "PlayMemories Home" and play it back.

Others

The camera does not work properly.

- Press and hold the ON/OFF (Power) button for at least 7 seconds, and force-quit the camera. Then turn the camera on again.

The lens gets fogged.

- Moisture condensation has occurred. Turn off the camera and wait about an hour for the moisture to evaporate.

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

- This is not a malfunction.

The Language/Clock Setting screen appears when you turn on the camera.

- Set the date and time again (page 27).

The date or time is incorrect.

- Set the date and time again (page 56).

Table of
contents

Operation
Search

Settings
Search

Index

Warning indicators and messages

If the following messages appear, follow the instructions.

- The battery level is low. Charge the battery pack immediately. Depending on the conditions of use, the indicator may flash even though there are still 5 to 10 minutes of remaining battery time left.

System error

- Turn the power off and then on again.

- If you record movies for an extended period, the camera temperature rises. In this case, stop recording movies.

Camera overheating
Allow it to cool

- The camera temperature has risen. The power may turn off automatically, or you may be unable to record movies. Leave the camera in a cool location until the temperature goes down.

Internal memory error

- Turn the power off and then on again.

Error formatting internal memory

- Format the media again (page 55).

No images

- No images that can be played back have been recorded on the internal memory.

Folder error

- A folder with the same first three digit number already exists on the internal memory (for example: 123MSDCF and 123ABCDE). Format the camera (page 55).

Cannot create more folders

- The folder with a name beginning with "999" exists on the internal memory. Format the camera (page 55).

File error

- An error occurred while the image was playing back.
  Playback on the camera cannot be guaranteed if files contain images processed on a computer, or images shot by another camera.

Image size over limit

- You are playing back an image with size that cannot be played back on the camera.

63^{GB}

Maximum number of images already selected

• Up to 100 files can be selected when using [Delete] and [Share].

Operation cannot be executed for movie files

• Playback zoom cannot be performed on movies.

Invalid operation

• This message appears if you perform an invalid operation.

Table of
contents

Operation
Search

Settings
Search

Index

Number of still images and recordable time of movies

The number of still images and recordable time may vary depending on the shooting conditions.

Still images

(Units: Images)

Size	Capacity
5M	1335
3.1M	2945
0.4M	16416

Notes

- When the number of remaining recordable images is greater than 9,999, the ">9999" indicator appears.
- When images recorded using other cameras are played back on this camera, the display may differ from the actual image size.
- When measuring media capacity, 1 GB equals 1 billion bytes, a portion of which is used for data management.

Movies

The table below shows the approximate maximum recording times. These are the total times for all movie files. Continuous shooting is possible for approximately 29 minutes.

(Units: hour : minute : second)

Size	Capacity
1920×1080 30p	0:40:00 (0:22:00)
1280×720 60p	1:20:00 (0:36:00)
1280×720 30p	2:00:00 (0:54:00)
480×270 30p	8:00:00 (4:00:00)

Notes

- Your camera uses the VBR (Variable Bit Rate) format to automatically adjust image quality to suit the recording scene. This technology causes fluctuations in the recording time of the internal memory. Movies containing quickly moving and complex images are recorded at a higher bit rate, and this reduces the overall recording time.
- The maximum size of a single movie file is approximately 2 GB. Recording stops before 29 minutes if the file size reaches approximately 2 GB during movie recording.
- The number in ( ) is the minimum recording time.
- When the possible continuous shooting time ends, the recording stops automatically.

Built-in battery pack

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). The battery pack may not be effectively charged in temperatures outside this range.
• When usable battery life becomes half the usual time, even after charging the battery fully, the battery should be replaced. Consult your nearest Sony dealer.

Effective use of the battery pack

• Battery performance decreases in low temperature surroundings. So in cold places, the operational time of the battery pack is shorter.
• The battery pack will run out quickly if you use the zoom frequently.
• Do not leave the camera in an extremely hot place, such as in a car or under direct sunlight.

How to store the camera

• Even if you do not use the camera for an extended period, fully charge the camera every 6 to 12 months to maintain the camera's function. Also, store the camera in a cool, dry place.

On battery life

• The battery life is limited. Battery capacity decreases over time and through repeated use. If decreased usage time between charges becomes significant, consult your nearest Sony dealer.
• 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 use/store the camera in the following places

- In an extremely hot, cold or humid place
  In places such as in a car parked in the sun, the camera body may become deformed and this may cause a malfunction.
- Under direct sunlight or near a heater
  The camera body may become discolored or deformed, and this may cause a malfunction.
- In a location subject to rocking vibration
- Near strong magnetic fields
- 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 may be irreparable.

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 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 do any of the following as they may damage the finish or the casing.

– Use chemical products such as thinner, benzine, alcohol, disposable cloths, insect repellent, sunscreen or insecticide, etc.
– Touch the camera with any of the above on your hand.
– 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.

If moisture condensation occurs

Turn off the camera and wait about an hour for the moisture to evaporate.

Note on disposal/transfer

- When using the software pre-loaded on the internal memory, personal information such as IDs and mail addresses may be saved on the internal memory of the camera. Before changing ownership of the camera, or before disposal, delete any personal information.
- Even if you delete data on the internal memory or format the camera, you may not delete data from the internal memory completely.
- To prevent the camera from restoring the internal memory data, record any unnecessary data on the internal memory of the camera.

Specifications

Camera

[System]

Image device: 4.5 mm (1/4 type) CMOS sensor
Total pixel number of camera:
 Approx. 5 110 000 pixels
Effective pixel number of camera:
 Approx. 3 110 000 pixels (still image, 16:9),
 Approx. 5 030 000 pixels (still image, 4:3),
 Approx. 3 110 000 pixels ([1920×1080 30p]
 movie)
Lens: F2.8
 f = 4.1 mm (3/16 inches)
 When converted to a 35 mm still camera
 For movies: 47 mm (1 7/8 inches) (16:9)
 For still images: 41 mm (1 5/8 inches) (4:3)
Exposure control: Automatic exposure
File format:
 Still images: JPEG (DCF Ver. 2.0, Exif Ver. 2.3,
 MPF Baseline) compliant
 Movies: MPEG-4 AVC/H.264 (MP4)
 Audio: MPEG AAC
Recording media: Internal Memory (Approx.
 3.9 GB)
• When measuring media capacity, 1 GB equals 1
 billion bytes, a portion of which is used for
 system management and/or application files.
 Available user capacity is as below.
 Approx. 3.7 GB

[Input and Output connectors]

HDMI jack: HDMI mini connector
Built-in USB arm: type A (built-in)
USB communication: Hi-Speed USB (USB 2.0
 compliant)

[LCD screen]

LCD screen: 6.7 cm 2.7 type (16:9) TFT drive
Total number of dots: 230 400 (960 × 240) dots

[Power, general]

Power:
 Built-in rechargeable battery pack
 USB charging
Charging time: Approx. 210 mins. (full charge)
 (when charging from the USB connector of the
 computer)
Power consumption (during shooting): 1.5 W
 (when the movie image size is [1280×720 30p])
Operating temperature: 0°C to 40°C (32°F to
 104°F)
Storage temperature: –20°C to +60°C (–4°F to
 +140°F)
Dimensions (Approx.):
 59.6 mm × 116.5 mm × 21.0 mm (2 3/8 inches ×
 4 5/8 inches × 27/32 inches)
 (W/H/D, excluding protrusions)
Mass:
 Approx. 148 g (5.2 oz)
Microphone: Monaural
Speaker: Monaural

Design and specifications are subject to change
without notice.

Trademarks

- "Bloggie" is a trademark of Sony Corporation.
- "⬛" and "PlayStation" are registered trademarks of Sony Computer Entertainment Inc..
- HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

HƎMI
HIGH-DEFINITION MULTIMEDIA INTERFACE

- Microsoft, Windows, Windows Vista and DirectX are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
- Mac, Mac OS, the Mac OS logo, iMac, iBook, iMovie, PowerBook, Power Mac and eMac are trademarks or registered trademarks of Apple Inc.
- Intel and Pentium are trademarks or registered trademarks of Intel Corporation.

In addition, system and product names used in this manual are, in general, trademarks or registered trademarks of their respective developers or manufacturers. However, the ™ or ® marks are not used in all cases in this manual.

Works with PlayStation®3

"Works with PlayStation 3" indicates that the product provides further enjoyment through your PlayStation 3 by use of specific application software.
The application software for this product to be used on PlayStation 3 is only accessible in the countries where PlayStation Store is available.

Notes on the License

THIS PRODUCT IS LICENSED UNDER THE AVC PATENT PORTFOLIO LICENSE FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER TO (i) ENCODE VIDEO IN COMPLIANCE WITH THE AVC STANDARD ("AVC VIDEO") AND /OR (ii) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE <HTTP://WWW.MPEGLA.COM>

Index

Table of
contents

Operation
Search

Settings
Search

Index