DSC-H300

User Guide

Use this manual if you encounter any problems, or have any questions about the camera.
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Confirming the operation method

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Situations this camera has difficulty handling

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How to use this User Guide

- Selecting a topic to display
- Searching a topic by keyword
- Returning to a previous page
- Printing out a page
- Marks and notations used in this User Guide

Selecting a topic to display
The following illustrations take Internet Explorer 7 as an example.

1. Click a title in the side bar on the left of the browser window. The title’s topic list appears in the right pane.

2. Click a topic title in the list.

Descriptions appear in the right pane.
Changing the font size
Change the font size by changing the setting of your web browser. For how to change the font size setting, refer to the Help of your web browser.

Searching a topic by keyword
Enter the keyword in the search window, then click the [Search] button.

Returning to a previous page
Use the browser's back button to return to a previously viewed page, or use the breadcrumb trail navigation (A) to display the desired page.

Printing out a page
Click the [Print] button to print out the page you are viewing.
Marks and notations used in this User Guide
In this User Guide, the sequence of operations is shown by arrows (→) (A). Operate the camera in the order indicated.

- Icons in the operating procedure sentences appear when the camera is in its default settings.
- The default setting is indicated by ✓.
- ✨ indicates information that is useful to know.
Names of parts

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

2. Shutter button

3. For shooting: W/T (zoom) lever
   For viewing: Q (Playback zoom) lever/ (Index) lever

4. Self-timer lamp/Smile Shutter lamp/AF illuminator

5. Lens

6. Speaker

7. Hook for shoulder strap

8. (flash pop-up) button

9. Flash
10 Microphone
11 USB / A/V OUT terminal
12 LCD screen
13 (Playback) button
14 (Delete) button
15 Control button
   MENU on: ▲ / ▼ / ◄ / ►
   MENU off: DISP/□□
16 MENU button
17 MOVIE (Movie) button
18 ON/OFF (Power) button
19 Battery/Memory card cover
20 Memory card slot
21 Battery insertion slot
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▼ List of shooting mode icons
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<td>Image size/Panorama image size/Movie size</td>
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<td>F4.0</td>
<td>Aperture value</td>
</tr>
<tr>
<td>⏩</td>
<td>Playback</td>
</tr>
<tr>
<td>⏩</td>
<td>Playback bar</td>
</tr>
<tr>
<td>00:00:12</td>
<td>Counter</td>
</tr>
<tr>
<td>📷 📷 📷 📷</td>
<td>Histogram</td>
</tr>
<tr>
<td>📷 📷 📷 📷 📷</td>
<td>Volume</td>
</tr>
</tbody>
</table>
Using the shoulder strap

Attach the shoulder strap and lens cap strap to prevent the camera from damage by being dropped.
Using the internal memory

On image data stored in the internal memory
The camera has approximately 55 MB of internal memory. You can record images on the internal memory when there is no memory card inserted in the camera.

When a memory card is inserted
[Recording]: Images are recorded on the memory card.
[Playback]: Images on the memory card are played back.
[Menu, Settings, etc.]: Various functions can be performed on images on the memory card.

When there is no memory card inserted
[Recording]: Images are recorded using the internal memory.
- You cannot record movies to the internal memory when the movie image size is [1280x720(Fine)] or [1280x720(Standard)].
[Playback]: Images stored in the internal memory are played back.
[Menu, Settings, etc.]: Various functions can be performed on images in the internal memory.

On image data stored in the internal memory
We recommend that you copy (back up) data using one of the following methods.

To copy (back up) data on a hard disk of your computer
Without a memory card inserted in the camera, import the images into a computer. [Details]

To copy (back up) data on a memory card
Prepare a memory card with sufficient free capacity, then copy the images in the internal memory to the memory card. [Details]

Notes
- You cannot transfer image data on a memory card to the internal memory.
- By making a USB connection between the camera and a computer with a USB cable, you can transfer data stored in the internal memory to a computer. However you cannot transfer data on a computer to the internal memory.
Using the control button

Moving the selection frame on the MENU screen, etc.
Moving the selection frame on the MENU screen, etc.

Press the up/down/right/left side of the control button to move the selection frame.

Selecting an image to be played back
Selecting an image to be played back

Press the right or left side of the control button to play back the next/previous image.
Using MENU items (Shooting)

You can select the various shooting functions easily from the MENU button.

1. Press the ON/OFF (Power) button and set the camera to shooting mode.

2. Press the MENU button to display the Menu screen.

3. Select the desired menu item with ▲ / ▼ / ◀ / ◁ on the control button.

4. Press the MENU button to close the Menu screen.
Using MENU items (Viewing)

You can select the various viewing functions easily from the MENU button.
1. Press the (Playback) button to switch to playback mode.
2. Press the MENU button to display the Menu screen.
3. Select the desired menu item with up / down / left / right on the control button.
4. Press on the control button.
Changing camera settings

You can change the settings on the [Settings] screen.

1. Press the MENU button to display the Menu screen.

![Menu screen]

2. Select 📷 (Settings) with ▲ / ▼ on the control button, then press ● to display the setup screen.

![Setup screen]

3. Select the desired category by using ▲ / ▼ / ◀ / ►, then press ● to display the setup screen.

![Category selection]

4. Select the desired setting, then press ● .

Notes
- [Shooting Settings] appears only when settings have been entered from shooting mode.
- [Memory Card Tool] appears only when a memory card is inserted in the camera, while [Internal Memory Tool] appears only when a memory card is not inserted.
Shooting still images

1. Set the mode dial to \(\text{i}\) (Intelligent Auto), then press the ON/OFF (Power) button.

2. Hold the camera steady as illustrated.

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

- The shortest shooting distance is approximately 1 cm (0.03 ft.) (W), 150 cm (4.92 ft.) (T) (from the lens).
- Macro mode may be automatically set for some shooting conditions.

4. Press the shutter button fully down.
- Do not put your fingers on the flash or lens when shooting.
If you shoot a still image of a subject that is difficult to focus on

- When the camera cannot focus on the subject automatically, the AE/AF lock indicator changes to slowly flashing and the beep does not sound. Either recompose the shot or change the focus setting. [Details]

- 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 backlit or there is a flashing light.

Related Topic
Viewing still images
Still Image Size / Panorama Image Size / Movie Size

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Zoom

You can enlarge the image when shooting. The camera’s optical zoom function can enlarge images up to 35×.

1. Turn the W/T (zoom) lever.
   Turn the W/T (zoom) lever to the T side to zoom in, W side to zoom out.

- When the zoom scale exceeds 35×, set [Digital Zoom]. [Details]

Notes
- Zoom is locked to the W side in Sweep Panorama mode.
- The operating sound of the lens may be recorded when the zoom function operates while shooting a movie.
Shooting movies

1. Set the mode dial to ☑️ (Movie Mode), then press the ON/OFF (Power) button.

2. Press the MOVIE (Movie) button to start recording.

3. Press the MOVIE button again to stop recording.

MOVIE (Movie) button
You can start recording a movie by pressing the MOVIE button, regardless of the position of the mode dial.

Notes
- The operating sound of the lens may be recorded when the zoom function operates while shooting a movie.

Related Topic
Zoom
Movie shooting scene
Picture Effect
## List of mode dial functions

Set the mode dial to the desired function.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>📸(Intelligent Auto)</td>
<td>Allows you to shoot still images with the settings adjusted automatically.</td>
</tr>
<tr>
<td>P (Program Auto)</td>
<td>Allows you to shoot with the exposure adjusted automatically (both the shutter speed and the aperture value (F value)). Also you can select various settings using the menu.</td>
</tr>
<tr>
<td>M (Manual Exposure Shooting)</td>
<td>Allows you to shoot after adjusting the exposure manually (both the shutter speed and the aperture (F value)).</td>
</tr>
<tr>
<td>📲 (Sweep Panorama)</td>
<td>Allows you to shoot a panorama image after composing images.</td>
</tr>
<tr>
<td>🎥 (Movie Mode)</td>
<td>Allows you to change the setting for movie recording.</td>
</tr>
<tr>
<td>SCN (Scene Selection)</td>
<td>Allows you to shoot with preset settings according to the scene.</td>
</tr>
</tbody>
</table>

### Related Topic
- Intelligent Auto
- Program Auto
- Scene Selection
- Manual Exposure Shooting
- Shooting panoramic images
- Shooting movies

▲ Back to top


Intelligent Auto

Allows you to shoot still images with the settings adjusted automatically.

1. Set the mode dial to i (Intelligent Auto).
2. Shoot with the shutter button.

Scene Recognition

Scene Recognition operates in Intelligent Auto mode. This function lets the camera automatically recognize the shooting conditions and shoot the image.

In Scene Recognition, the position of an icon displayed on the LCD screen is different depending on the circumstances. It depends on whether the camera recognizes a scene or condition.

If the camera recognizes a scene, icons and guides such as 📸 (Portrait), 🎀 (Infant), 🎁 (Night Portrait), 🍃 (Night Scene), 🎨 (Backlight Portrait), 🏺 (Backlight), 🏞️ (Landscape), 🍃 (Macro), 🕯️ (Spotlight) or 🎆 (Low Light), are displayed on the first line. If the camera recognizes a condition, icons such as 📈 (Tripod) or 🏃 (Move) are displayed on the second line. The camera may recognize both the scene and condition, or just one.

Related Topic

Functions available for each shooting mode
MENU items available for each shooting mode
Program Auto

Allows you to shoot with the exposure adjusted automatically (both the shutter speed and the aperture value). Also you can select various settings using the menu.

1. Set the mode dial to P (Program Auto).
2. Shoot with the shutter button.

Related Topic

Functions available for each shooting mode
MENU items available for each shooting mode
### Picture Effect

Allows you to shoot a still image with original texture, according to the desired effect.

1. Set the mode dial to P (Program Auto) or M (Manual Exposure Shooting).

2. MENU → (Picture Effect) → desired mode
   - If you want to select another Picture Effect mode, select from MENU.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>Does not use the Picture Effect.</td>
</tr>
<tr>
<td>Toy camera</td>
<td>Allows you to shoot images with effects such as tunnel effect, high contrast, or color cast as if they were shot with a toy camera. You can change the color hue using MENU → [Color hue].</td>
</tr>
<tr>
<td>Pop Color</td>
<td>Allows you to shoot a pop art-like colorful image with emphasis on the color tone.</td>
</tr>
<tr>
<td>Partial Color</td>
<td>Allows you to shoot an image that makes a strong impression by leaving a specified color on portions of a monochrome image. You can select the color to extract using MENU → [Extracted Color].</td>
</tr>
<tr>
<td>Soft Focus</td>
<td>Allows you to shoot soft, clear images with an emphasis on brightness.</td>
</tr>
</tbody>
</table>
Use the following procedures to add effects to panoramic images and movies.

When (Sweep Panorama) mode is selected:
- MENU → [Panorama Shooting Scene] → [Picture Effect] → desired mode
- [Toy camera] cannot be used for [Panorama Shooting Scene].

When (Movie Mode) is selected:
- MENU → [Movie shooting scene] → [Picture Effect] → desired mode

Related Topic
- Color hue
- Extracted Color
- Functions available for each shooting mode
- MENU items available for each shooting mode
- Panorama Shooting Scene
- Movie shooting scene
## Scene Selection

Allows you to shoot with preset settings according to the scene.

1. Set the mode dial to **SCN** (Scene Selection).
2. Select the desired mode → on the control button.
   - If you want to select another Scene Selection mode, select from MENU.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>🖼️ (Soft Skin)</td>
<td>Allows you to shoot faces for smoothness.</td>
</tr>
<tr>
<td>🖼️ (Soft Snap)</td>
<td>Allows you to shoot images with a softer atmosphere for portraits and flowers, etc.</td>
</tr>
<tr>
<td>🏞️ (Landscape)</td>
<td>Allows easy shooting of distant scenes by focusing in the distance. Shoots a clear sky, trees and flowers in vivid colors.</td>
</tr>
<tr>
<td>🖼️ (Night Portrait)</td>
<td>Allows you to shoot sharp images of people with a night view in the background, without compromising the atmosphere. Pop up the flash to use this mode.</td>
</tr>
<tr>
<td>Mode</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>🖼 (Night Scene)</td>
<td>Allows you to shoot night scenes at far distance without losing the dark atmosphere of the surroundings.</td>
</tr>
<tr>
<td>📷 (High Sensitivity)</td>
<td>Allows you to shoot images without a flash under low light conditions, reducing blur.</td>
</tr>
<tr>
<td>🍽 (Gourmet)</td>
<td>Allows you to shoot food arrangements in delicious and bright colors.</td>
</tr>
<tr>
<td>🐱 (Pet)</td>
<td>Allows you to shoot images of your pet with the best settings.</td>
</tr>
<tr>
<td>🌊 (Beach)</td>
<td>Allows you to shoot scenes on the beach in bright and vivid colors even under the sunlight.</td>
</tr>
<tr>
<td>🌨 (Snow)</td>
<td>Allows you to record clear images preventing sunken colors in snowy scenes or other places where the whole screen appears white.</td>
</tr>
<tr>
<td>🎆</td>
<td>Allows you to record fireworks in all their splendor.</td>
</tr>
</tbody>
</table>
Notes
• When you shoot images using (Night Portrait), (Night Scene) or (Fireworks) modes, the shutter speed is slower and the images tend to blur. To prevent blurring, the use of a tripod is recommended.

Related Topic
Functions available for each shooting mode
MENU items available for each shooting mode
Shooting panoramic images

Allows you to create a panoramic image from composite images.

1. Set the mode dial to \(\text{\text{Sweep Panorama}}\).
2. Select a shooting direction using \(\uparrow / \downarrow / \leftarrow / \rightarrow\) (up/down/left/right) of the control button.
3. Align the camera with the end of the subject and press the shutter button fully.
4. Pan the camera to the end of the guide \(\text{(A)}\), following the indicator on the screen.

Tips for shooting a panoramic image

Pan the camera in an arc at a constant velocity in the direction indicated on the screen. Subjects at rest are more suited for panoramic shots than moving subjects.
Radius as short as possible.
First press the shutter button halfway so that you can lock the focus and exposure. Then press the shutter button fully down and pan or tilt the camera.

If a section with greatly varied shapes or scenery is concentrated along a screen edge, the image composition may fail. In such a case, adjust the frame composition so that the section is in the center of the image, then shoot again.

**To shoot a 360 degree panoramic image**

This camera is equipped with a panorama shooting function, capable of shooting a nearly 360 degree panoramic image. Shoot a panoramic image by selecting MENU → set [Panorama Image Size] to [360°]. Recorded panoramic images can be scrolled normally when played on the camera.

Select a shooting direction using ◀ / ▶ on the control button. You cannot shoot a panoramic image in a vertical direction with [Panorama Image Size] set to [360°].

The image actually recorded may not cover 360 degrees, depending on the subject or the way it is shot.

**Notes**

- If you cannot pan the camera across the entire subject within the given time, a gray area occurs in the composite image. If this happens, move the camera faster to record a full panoramic image.
- Since several images are stitched together, the stitched part will not be
recorded smoothly.

- When the whole angle of panoramic shooting and the AE/AF locked angle are very different in brightness, color and focus, the shooting will not be successful. If this happens, change the AE/AF locked angle and shoot again.
- You cannot create panoramic images in the following situations:
  - You pan the camera too quickly or too slowly.
  - There is too much camera shake.

**Related Topic**

- Scrolling panoramic images for display
- Still Image Size / Panorama Image Size / Movie Size
- Functions available for each shooting mode
- MENU items available for each shooting mode
- Panorama Shooting Scene
- Picture Effect
Manual Exposure Shooting

You can shoot at your favorite exposure by manually setting the shutter speed and aperture value.

1. Set the mode dial to M (Manual Exposure Shooting).
2. Press ◇ on the control button.
3. Press ▲ / ▼ to select the desired shutter speed, and press ◢ ◤ to select the aperture (F value).
   - Select a shutter speed from 30 seconds to 1/1500 seconds.
   - When zoom is set fully to W, you can select an aperture of F3.0 or F7.7 (when used with the Internal ND (Neutral Density) Filter).
     When zoom is set fully to T, you can select an aperture of F5.9 or F15.3 (when used with the Internal ND (Neutral Density) Filter).
4. Shoot with the shutter button.

**Setting the shutter speed and aperture (F value)**

The difference between the settings and the proper exposure as judged by the camera appears as an Exposure Compensation value on screen.

A: Shutter speed/aperture (F value)
B: Exposure Compensation value

- 0EV is the value judged as the most suitable by the camera.
- When the shutter speed is one second or slower, the shutter speed is indicated by ["], for example, ["1"].
- When you set the shutter speed slower, using a tripod is recommended to prevent the effects of vibration.
- When the shutter speed becomes slower than a certain speed, the NR slow shutter function is activated automatically to reduce image noise, and NR appears on the screen.
- If you select slow shutter speeds, it takes time to process the data.

**Notes**

- If proper exposure is not obtained by your settings, the setting value indicators on the screen will flash when the shutter button is pressed halfway down. You can shoot in this condition, but exposure readjustment is recommended.
• You cannot select the shutter speed and aperture (F value) when the self-timer is set to [Self-portrait One Person] or [Self-portrait Two People].

**Related Topic**

Functions available for each shooting mode  
MENU items available for each shooting mode
Viewing still images

1. Set the camera to playback mode.
2. Select an image with the control button.

Viewing images taken with a different camera
If the camera detects images not registered in the Image Database File on the memory card, a registration screen with the message “Files found which were not recognized Import files” will be displayed. To view unregistered images, register them by selecting [OK].
Playback zoom

Enlarges the image being played back.

1. Set the camera to playback mode.

2. Turn the W/T (zoom) lever to the T side (Q) during still image playback. The image is enlarged to twice the previous size, at the center of the image.

3. Adjust the position using ▲ / ▼ / ◀ / ▶ on the control button. The frame in the lower left of the image shows which part of the total image is being displayed.

4. Change the zoom scale with the W/T (zoom) lever. Turn the W/T (zoom) lever to the T side (Q) to zoom in, W side (▲) to zoom out. Press ● on the control button to cancel playback zoom.
Image Index

Displaying images of the desired folder
Viewing images with the Calendar

Displays multiple images at the same time.

1. Set the camera to playback mode.
2. Turn the W/T (zoom) lever to the W side (Zoom) to display the image index screen. Turn the lever again to display an index screen with more images. Turn the lever yet again to view images with the Calendar while playing back in [Date View].
3. To return to the single-image screen, select an image with the control button, then press .

Displaying images of the desired folder
Select the left side bar with the control button, then select the desired folder with ▲ / ▼.

Viewing images with the Calendar
When [View Mode] is set to [Date View] and the screen display is in index mode, turn the W/T (zoom) lever to the W side (Zoom) to view images in the Calendar.

• To select the month you want to display, select ▲ / ▼ with the control button, then the desired month.
•
• To view images in selected date in index mode, select the date with the control button and press ●.
• To cancel the calendar display and return to the index screen, select ❌ using the control button, then press ●.
### Deleting images

Allows you to select unwanted images for deletion. You can also delete images from the MENU button. [Details]

1. Set the camera to playback mode.

2. (Delete) button → desired mode → • on the control button

3. Press [OK] → •.

<table>
<thead>
<tr>
<th>All in This Folder</th>
<th>Deletes all images in the selected date range or folder at once.</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Images on This Date</td>
<td></td>
</tr>
<tr>
<td>Multiple Images</td>
<td>Allows you to select and delete multiple images.</td>
</tr>
<tr>
<td>1. After step 2, select an image to be deleted, then press •.</td>
<td></td>
</tr>
<tr>
<td>2. To cancel the selection, press • again to cancel the ✔ mark.</td>
<td></td>
</tr>
<tr>
<td>3. MENU → [OK] → •</td>
<td></td>
</tr>
<tr>
<td>This Image</td>
<td>Deletes the currently displayed image.</td>
</tr>
<tr>
<td>Cancel</td>
<td>Cancels the deletion.</td>
</tr>
</tbody>
</table>

💡 **You can switch between index and single-image mode when selecting images**

Turn the W/T (zoom) lever to the T side (⤢) in index mode to return to single-image mode, and turn the lever to the W side (⇄) in single-image mode to return to index mode.

**Notes**

- When the internal memory is used to record images, View Mode is set to Folder View and still images and movies are displayed in the same folder.

**Related Topic**

Delete
Viewing movies

1. Set the camera to playback mode.
2. Select a movie with the control button.
3. Press ●.
   The playback bar appears, and a movie playback starts.

On the movie viewing screen
Select the image you want to display using ◄ / ► on the control button, and press ●.
The Playback bar appears, you can check a playback position of a movie.

<table>
<thead>
<tr>
<th>Control button</th>
<th>Action during playback</th>
</tr>
</thead>
<tbody>
<tr>
<td>●</td>
<td>Play/Pause</td>
</tr>
<tr>
<td>►</td>
<td>Fast forward</td>
</tr>
<tr>
<td>◄</td>
<td>Fast rewind</td>
</tr>
<tr>
<td>▼</td>
<td>Displays the control screen. Adjust the volume with ▲ / ▼ on the control button, then press ●.</td>
</tr>
</tbody>
</table>

Notes
• You may not be able to play back some images shot using other cameras.

Related Topic
View Mode
Scrolling panoramic images for display

You can scroll panoramic images by pressing the center button on the control button while panoramic images are being displayed.

A: Shows the displayed area of the whole panoramic image

<table>
<thead>
<tr>
<th>Control button</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>● on the control button</td>
<td>Starts scrolling playback/pauses scrolling playback</td>
</tr>
<tr>
<td>▲ / ▼ / ◄ / ► on the control button</td>
<td>Scrolls images</td>
</tr>
<tr>
<td>W side of W/T (zoom) lever</td>
<td>Displays the whole image</td>
</tr>
</tbody>
</table>

- Panorama images recorded using another camera may not scroll correctly when played.
Functions available for each shooting mode

Functions available in REC modes
Functions available in Scene Selection
Functions available in Picture Effect

In the table below, a check mark indicates a function that can be changed, while — indicates function that cannot be changed. The icons below [Flash] and [Self-Timer] indicate the available modes.

<table>
<thead>
<tr>
<th>Functions available in REC modes</th>
<th>Flash</th>
<th>Self-Timer</th>
<th>Face Detection</th>
<th>Smile Shutter</th>
<th>Tracking focus</th>
<th>Cont. Shooting Settings / Bracket Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intelligent Auto)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Program Auto)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Manual Exposure Shooting)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Sweep Panorama)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Movie Mode)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* [Bracket Setting] cannot be selected.

Functions available in Scene Selection

<table>
<thead>
<tr>
<th>Functions available in Scene Selection</th>
<th>Flash</th>
<th>Self-Timer</th>
<th>Face Detection</th>
<th>Smile Shutter</th>
<th>Tracking focus</th>
<th>Cont. Shooting Settings / Bracket Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Soft Skin)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Movie Mode)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Function</td>
<td>Flash</td>
<td>Self-Timer</td>
<td>Face Detection</td>
<td>Smile Shutter</td>
<td>Tracking focus</td>
<td>Cont. Shooting Settings / Bracket Setting</td>
</tr>
<tr>
<td>------------------</td>
<td>-------</td>
<td>------------</td>
<td>----------------</td>
<td>---------------</td>
<td>----------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>(Off)</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>(Toy camera)</td>
<td>✔</td>
<td>✔</td>
<td>—</td>
<td>—</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>(Pop Color)</td>
<td>✔</td>
<td>✔</td>
<td>—</td>
<td>—</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>(Partial Color)</td>
<td>✔</td>
<td>✔</td>
<td>—</td>
<td>—</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>(Soft High-key)</td>
<td>✔</td>
<td>✔</td>
<td>—</td>
<td>—</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

* [Bracket Setting] cannot be selected.

**Functions available in Picture Effect**

- [Off] cannot be selected for [Face Detection].

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### MENU items available for each shooting mode

**MENU items available in Scene Selection/Picture Effect mode**

In the table below, a check mark indicates settings that can be changed, while – indicates settings that cannot be changed. A setting may be fixed or restricted depending on the shooting mode. For details, see each topic.

<table>
<thead>
<tr>
<th>Menu items</th>
<th>i</th>
<th>P</th>
<th>M</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panorama Shooting Scene</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Movie shooting scene</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Scene Selection</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Picture Effect</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Easy Mode</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color hue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extracted Color</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soft Skin Effect</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Still Image Size *</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Panorama Image Size</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Movie Size</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Exposure Compensation</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>ISO</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>White Balance</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Focus</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Metering Mode</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Cont. Shooting Settings</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bracket Setting</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Smile Detection Sensitivity</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Face Detection</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DRO</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>(Settings)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
* In [Advanced Flash] mode, the maximum still image size you can select is [5M].

## MENU items available in Scene Selection/Picture Effect mode

The icons below **SCN** or ✗ indicate the available modes.

<table>
<thead>
<tr>
<th>Menu items</th>
<th>SCN</th>
<th>✗ (Still images)</th>
<th>✗ (Panoramic images)</th>
<th>✗ (Movies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panorama Shooting Scene</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>Movie shooting scene</td>
<td>✗</td>
<td>✗</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>Scene Selection</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Picture Effect</td>
<td>✗</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>Easy Mode</td>
<td>-</td>
<td>✗</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Color hue</td>
<td>-</td>
<td>✗</td>
<td>-</td>
<td>✗</td>
</tr>
<tr>
<td>Extracted Color</td>
<td>-</td>
<td>✗</td>
<td>-</td>
<td>✗</td>
</tr>
<tr>
<td>Soft Skin Effect*2</td>
<td>✗</td>
<td>✗</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Still Image Size</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Panorama Image Size</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>Movie Size</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Exposure Compensation</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>ISO</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>White Balance*1</td>
<td>✗</td>
<td>✗</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Focus</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Metering Mode</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cont. Shooting Settings</td>
<td>✗</td>
<td>✓</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Bracket Setting</td>
<td>✗</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Smile Detection Sensitivity</td>
<td>✗</td>
<td>✗</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Face Detection*3</td>
<td>✗</td>
<td>✓</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>DRO</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*1 [Flash] cannot be selected for [White Balance] when Scene Selection is set to SCN.
(High Sensitivity).

*2 [Off] cannot be selected for [Soft Skin Effect] when Scene Selection is set to 📸 (Soft Skin).

*3 [Off] cannot be selected for [Face Detection] when Scene Selection is set to 📸 (Soft Skin) or 🎥 (Soft Snap).
Tracking focus

The camera tracks the subject and adjusts the focus automatically even when the subject is moving.

1. Point the camera at the subject, and press on the control button. The target frame appears.

2. Place the target frame over the subject you want to focus on, and press . Tracking begins.

3. Shoot with the shutter button.

Tracking a face

If you use the tracking focus function while the Face Detection function is activated, you can select a face to be given priority and register that face with the camera.

Notes

- [Tracking focus] is not available in the following situations:
  - When shooting using any zoom other than the optical zoom.
- Tracking focus will automatically be canceled when the subject disappears from the screen or has failed to be tracked.

Related Topic

Face Detection

Functions available for each shooting mode
DISP (Display Setting)

- **Histogram**

1. Press **DISP** (Display Setting) on the control button.
2. Select the desired mode with the control button.
   - This setting is also applied when an image is displayed immediately after shooting it.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑️ (OFF)</td>
<td>Displays only images.</td>
</tr>
<tr>
<td>📈 (Detailed Info)</td>
<td>Displays the information. Exif data for the recorded image and the histogram are also displayed.</td>
</tr>
<tr>
<td>☑️ (ON)</td>
<td>Displays the information.</td>
</tr>
</tbody>
</table>

**Histogram**

A histogram is a graph showing the brightness of an image. The graph display indicates a bright image when skewed to the right side (A), and a dark image when skewed to the left side (B).
1. Press **DISP** (Display Setting) on the control button, then select [Detailed Info].

**Notes**
- The histogram also appears when playing back a single image, but you cannot adjust the exposure.
- The histogram does not appear in the following situations:
  - When recording/playing back movies
  - When viewing vertical orientation images
  - When rotating still images
  - When shooting/viewing panoramic images
- The histogram may not appear for images recorded using other cameras.
Flash

1. Press the flash unit pop-up button to raise the flash.
   - When the flash unit is not raised, the flash mode is set to (Off) automatically. You cannot change the setting.
2. Press (Flash) on the control button.
3. Select the desired mode with the control button.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adv (Advanced Flash)</td>
<td>Flash to a farther distance by increasing the upper limit value of ISO sensitivity.</td>
</tr>
<tr>
<td>AUTO (Auto)</td>
<td>Flash automatically operates in dark locations or when there is a backlight.</td>
</tr>
<tr>
<td>On</td>
<td>Flash always operates.</td>
</tr>
<tr>
<td>SL (Slow Synchro)</td>
<td>Flash always operates. The shutter speed is slow in a dark place to clearly shoot background that is out of flash light.</td>
</tr>
</tbody>
</table>

💡 When “White circular spots” appears in flash photos
These spots are caused by particles (dust, pollen, etc.) floating close to the lens. When they are accentuated by the camera’s flash, they appear as white circular spots.

How can the “White circular spots” be reduced?
- Light the room and shoot the subject without flash.
- If you select ISO (High Sensitivity) mode in Scene Selection, [Flash] is automatically set to [Off].

Notes
- The flash strobes twice. The first flash adjusts the light quantity.
- While charging the flash, is displayed.
- You cannot use the flash during burst shooting.
- Adv (Advanced Flash) can be selected only in [Intelligent Auto] mode. When Adv (Advanced Flash) is selected, the maximum size of [Still Image Size] is [5M]. If [Still Image Size] is set to larger than [5M], [Still Image Size] is set to...
[5M] automatically.

- When shooting with the flash and the zoom is set to W, the shadow of the lens may appear on the screen, depending on the shooting conditions. If this happens, set the zoom to T and shoot with the flash again.
- When not using the flash, keep the flash down.

Related Topic

Functions available for each shooting mode
Self-Timer

- Automatic shooting with Self-portrait timer

1. Press (Self-Timer) on the control button.
2. Select the desired mode with the control button.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off (Off)</td>
<td>Does not use the self-timer.</td>
</tr>
<tr>
<td>10sec</td>
<td>Sets the self-timer to a 10-second delay. When you press the shutter button, the self-timer lamp flashes and a beep sounds until the shutter operates. To cancel, press again.</td>
</tr>
<tr>
<td>2sec</td>
<td>Sets the self-timer to a 2-second delay.</td>
</tr>
<tr>
<td>One Person</td>
<td>Sets the self-timer to Self-portrait timer. When the camera detects the specified number of faces, a beep sounds, and the shutter operates 2 seconds later.</td>
</tr>
<tr>
<td>Two People</td>
<td></td>
</tr>
</tbody>
</table>

- Tips for preventing blur

  If your hands or body move while holding the camera and pressing the shutter button, “Camera shake” occurs. Camera shake occurs frequently under low-light or slow shutter speed conditions, such as those encountered in Night Portrait or Night Scene mode.

  To reduce camera shake, set the self-timer to a 2-second delay and brace your arms against your sides after pressing the shutter button.

- Automatic shooting with Self-portrait timer

  Point the lens at yourself so that the selected number of faces is reflected in the screen. The shutter operates automatically. Do not move your camera after the beep sounds.
Related Topic
Functions available for each shooting mode

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Smile Shutter

When the camera detects a smile, the shutter is released automatically.

1. Press (Smile Shutter) on the control button.
2. Wait for a smile to be detected.
   When a smile is detected and the smile level exceeds the point on the indicator, the camera records images automatically.
3. To stop shooting, press (Smile Shutter) again.

Tips for better capturing of smiles

1. Do not cover the eyes with bangs. Do not obscure the face by hat, mask, sunglasses, etc.
2. Try to orient the face in front of the camera and be as level as possible. Keep the eyes narrowed.
3. Give a clear smile with an open mouth. The smile is easier to detect when the teeth are showing.
   - The shutter operates when any person whose face is being detected smiles.
   - If a smile is not detected, select MENU → [Smile Detection Sensitivity], then set the value to [Slight Smile].
Notes

- Shooting using the Smile Shutter ends automatically when either the memory card or internal memory becomes full.
- Smiles may not be detected correctly depending on the conditions.
- You cannot use the digital zoom function.

Related Topic
Smile Detection Sensitivity
Functions available for each shooting mode
MENU items available for each shooting mode
Movie shooting scene

You can select the movie shooting mode when the camera is set to [Movie Mode].

1. MENU → (Movie shooting scene) → desired mode

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Auto)</td>
<td>Allows you to shoot movies with the settings adjusted automatically. [Details]</td>
</tr>
<tr>
<td>(Picture Effect)</td>
<td>Allows you to shoot movies with an original texture according to the desired effect.</td>
</tr>
</tbody>
</table>

Related Topic

Picture Effect
Panorama Shooting Scene

Allows you to shoot with preset settings according to the scene when the camera is in [Sweep Panorama] mode.

1. MENU → (Panorama Shooting Scene) → desired mode

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>shoots a regular panoramic image.</td>
</tr>
<tr>
<td>(Sweep Panorama)</td>
<td>Allows you to shoot a panoramic image with an original texture according to the desired effect.</td>
</tr>
<tr>
<td>(Picture Effect)</td>
<td></td>
</tr>
</tbody>
</table>

Related Topic

Picture Effect

Copyright 2013 Sony Corporation
Easy Mode

Scene Recognition

Scene Recognition operates in Easy Mode. This function lets the camera automatically recognize the shooting conditions and shoot an image.

For details, see “Scene Recognition”. [Details]

Shooting functions available in Easy Mode (Shooting)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Timer</td>
<td>on the control button → desired mode  Select between [10sec] or [Off] mode.</td>
</tr>
</tbody>
</table>
| Flash | ☀ on the control button → desired mode  
Select between [On] or [Auto] mode. |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Smile Shutter</td>
<td>☺ on the control button</td>
</tr>
</tbody>
</table>
When you select [Toy camera] in Picture Effect, adjust the color hue.

1. MENU → (Color hue) → desired mode

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Normal)</td>
<td>Adds a normal hue and darkens the surroundings.</td>
</tr>
<tr>
<td>(Cool hue)</td>
<td>Adds a cool bluish hue and darkens the surroundings.</td>
</tr>
<tr>
<td>(Warm hue)</td>
<td>Adds a warm reddish hue and darkens the surroundings.</td>
</tr>
<tr>
<td>(Green hue)</td>
<td>Adds a green filter-like hue and darkens the surroundings.</td>
</tr>
<tr>
<td>(Magenta hue)</td>
<td>Adds a magenta filter-like hue and darkens the surroundings.</td>
</tr>
</tbody>
</table>

**Notes**
- It is recommended that you shoot a test image in advance for some subjects.

**Related Topic**
- Picture Effect
- MENU items available for each shooting mode
Extracted Color

When you select [Partial Color] in Picture Effect, select the color to extract.

1. MENU → (Extracted Color) → desired mode

- (Red) Extracts red only.
- (Green) Extracts green only.
- (Blue) Extracts blue only.
- (Yellow) Extracts yellow only.

Notes
- Images may not retain the selected color, depending on the subject.

Related Topic
Picture Effect
MENU items available for each shooting mode
Soft Skin Effect

When the Face Detection function is activated, sets whether to use the Soft Skin Effect, and the effect level.

1. MENU → (Soft Skin Effect) → desired mode

<table>
<thead>
<tr>
<th>Mode</th>
<th>Effect Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off (Off)</td>
<td>Does not use the Soft Skin Effect.</td>
</tr>
<tr>
<td>Lo (Low)</td>
<td>Adds light, moderate or strong Soft Skin Effect.</td>
</tr>
<tr>
<td>Mid (Mid)</td>
<td></td>
</tr>
<tr>
<td>Hi (High)</td>
<td></td>
</tr>
</tbody>
</table>

Notes

- The [Soft Skin Effect] may not be visible depending on the subject.
Still Image Size / Panorama Image Size / Movie Size

Image size when shooting still images

Image size in Easy Mode

Image size when shooting Sweep Panorama

Image size when shooting movies

The image size determines the size of the image file that is recorded when you take an image.

The larger the image size, the more detail will be reproduced when the image is printed on large-format paper. The smaller the image size, the more images can be recorded.

Image size when shooting still images

1. MENU → 10M (Still Image Size) → desired size

<table>
<thead>
<tr>
<th>Still Image Size (Horizontal × Vertical)</th>
<th>Usage guidelines</th>
<th>Number of images</th>
<th>Printing</th>
</tr>
</thead>
<tbody>
<tr>
<td>[3] 20M (5152 × 3864)</td>
<td>For prints up to A3+ size</td>
<td>Less</td>
<td>Fine</td>
</tr>
<tr>
<td>[3] 10M (3648×2736)</td>
<td>For prints up to A3 size</td>
<td>More</td>
<td>Rough</td>
</tr>
<tr>
<td>[3] 5M (2592×1944)</td>
<td>For prints from 10×15 cm up to A4 size</td>
<td>Fine</td>
<td>More</td>
</tr>
<tr>
<td>[3] VGA (640×480)</td>
<td>For e-mail attachments</td>
<td>Less</td>
<td>Fine</td>
</tr>
<tr>
<td>[13] 15M (5152×2896)</td>
<td>For viewing on a high-definition TV and printing up to A3 size</td>
<td>More</td>
<td>Rough</td>
</tr>
<tr>
<td>[13] 2M (1920×1080)</td>
<td>For viewing on a high-definition TV</td>
<td>More</td>
<td>Rough</td>
</tr>
</tbody>
</table>
**Notes**
- When you print still images recorded at a 16:9 aspect ratio or panoramic images, both edges may be cut off.

### Image size in Easy Mode

1. MENU → [Still Image Size] → desired size

<table>
<thead>
<tr>
<th>Large</th>
<th>Shoots images in [20M] size.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>Shoots images in [5M] size.</td>
</tr>
</tbody>
</table>

### Image size when shooting Sweep Panorama

1. MENU → STD (Panorama Image Size) → desired size

<table>
<thead>
<tr>
<th>STD (Standard)</th>
<th>Shoots images using standard size.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Horizontal: 4912 × 1080)</td>
<td></td>
</tr>
<tr>
<td>(Vertical: 3424 × 1920)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WIDE (Wide)</th>
<th>Shoots images using wide size.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Horizontal: 7152 × 1080)</td>
<td></td>
</tr>
<tr>
<td>(Vertical: 4912 × 1920)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>360 (360°)</th>
<th>Shoots 360-degree images.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal: 11520 × 1080</td>
<td></td>
</tr>
</tbody>
</table>

### Image size when shooting movies

The larger the size of the movie image, the higher the image quality. The higher the amount of data used per second (average bit-rate), the smoother the playback image.

Movies shot with this camera are recorded in MPEG-4 format, at approximately 30 frames/sec, in progressive mode, with AAC audio, mp4 format.

1. MENU → VGA (Movie Size) → desired size

<table>
<thead>
<tr>
<th>Movie Size</th>
<th>Average bit-rate</th>
<th>Usage guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1280x720(Fine)</td>
<td>9 Mbps</td>
<td>Shoots highest quality movies for display on High Definition TV.</td>
</tr>
<tr>
<td>1280x720(Standard)</td>
<td>6 Mbps</td>
<td>Shoots standard quality movies for display on High Definition TV.</td>
</tr>
<tr>
<td>VGA</td>
<td>3 Mbps</td>
<td>Shoots an image size suitable for WEB upload.</td>
</tr>
</tbody>
</table>
Notes

- A telephoto image results if [VGA] image size is selected when shooting movies.
Exposure Compensation

You can adjust the exposure manually in 1/3 EV steps in a range of –2.0 EV to +2.0 EV.

1. MENU → Exposure Compensation → desired Exposure Compensation setting

💡 Adjusting the exposure for better looking images

A: Overexposure (too much light)  
B: Correct exposure  
C: Underexposure (too little light)

- When the image shot is overexposed, adjust [Exposure Compensation] to the minus side.  
- When the image shot is underexposed, adjust [Exposure Compensation] to the plus side.

Notes

- If you shoot a subject in extremely bright or dark conditions, or when you use the flash, the exposure adjustment may not be effective.

Related Topic

MENU items available for each shooting mode
ISO

Adjusts the luminous sensitivity when the camera is set to Program Auto. In Movie mode, [ISO] is fixed to [Auto].

1. MENU → ISO AUTO (ISO) → desired mode

<table>
<thead>
<tr>
<th>ISO sensitivity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Auto)</td>
<td>Sets the ISO sensitivity automatically.</td>
</tr>
<tr>
<td>ISO 80/100/200/400/800/1600/3200</td>
<td>You can reduce image blurring in dark locations or with moving subjects by increasing the ISO sensitivity (select a larger number).</td>
</tr>
</tbody>
</table>

**Adjusting ISO Sensitivity (Recommended Exposure Index)**

ISO sensitivity is a speed rating for recording media that incorporates an image sensor that receives light. Even when the exposure is the same, images differ depending on the ISO sensitivity.

**High ISO sensitivity**

Records a bright image even in dark locations while increasing shutter speed to reduce blur.

However, the image tends to be noisy.

**Low ISO sensitivity**

Records a smoother image.

However, when the exposure is insufficient, the image may be darker.
Related Topic
MENU items available for each shooting mode
### White Balance

#### To capture a basic white color in [One Push Set] mode

Adjusts color tones according to the surrounding light conditions. Use this function if the image color appears unnatural.

1. **MENU → WB (White Balance) → desired mode**

<table>
<thead>
<tr>
<th>WB Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(Auto)</strong></td>
<td>Adjusts the white balance automatically so that the colors appear natural.</td>
</tr>
<tr>
<td>☀ (Daylight)</td>
<td>Adjusts for outdoors conditions on a fine day, evening views, night scenes, neon signs, fireworks, etc.</td>
</tr>
<tr>
<td>☁ (Cloudy)</td>
<td>Adjusts for a cloudy sky or a shady location.</td>
</tr>
<tr>
<td>⛄ (Fluorescent White Balance 1)</td>
<td>[Fluorescent White Balance 1]: Adjusts for white fluorescent lighting.</td>
</tr>
<tr>
<td>⛄ (Fluorescent White Balance 2)</td>
<td>[Fluorescent White Balance 2]: Adjusts for natural white fluorescent lighting.</td>
</tr>
<tr>
<td>⛄ (Fluorescent White Balance 3)</td>
<td>[Fluorescent White Balance 3]: Adjusts for daylight fluorescent lighting.</td>
</tr>
<tr>
<td>⚡ (Incandescent)</td>
<td>Adjusts for places under incandescent lamp, or under bright lighting, such as in a photo studio.</td>
</tr>
<tr>
<td>☐ (Flash)</td>
<td>Adjusts for flash conditions.</td>
</tr>
<tr>
<td>☀ (One Push)</td>
<td>Adjusts the white balance depending on the light source. Use this mode when [Auto] and other settings do not provide accurate colors.</td>
</tr>
<tr>
<td>☀ (One Push Set)</td>
<td>Memorizes the basic white color which will be used in [One Push] mode. [Details]</td>
</tr>
</tbody>
</table>

#### Effects of lighting conditions

The apparent color of the subject is affected by the lighting conditions. The color tones are adjusted automatically, but you can adjust color tones manually using the White Balance function.
Daylight (White as Standard)

Cloudy (Bluish)

Fluorescent (Green-tinged)

Incandescent (Reddish)

Notes
- When shooting with a flash in other than [Flash] mode, [White Balance] is set to [Auto].
- When [Flash] is [On] or [Slow Synchro], the white balance can only be adjusted to [Auto], [Flash], [One Push] or [One Push Set].

To capture a basic white color in [One Push Set] mode
1. Frame a white object such as a piece of paper filling the screen under the same lighting conditions as you will shoot the subject.
2. MENU → WB AUTO (White Balance) → [One Push Set] → on the control button
   The screen momentarily turns black, and when the white balance has been adjusted and stored in the memory, the recording screen is displayed again.

Notes
- If the indicator flashes while shooting, the white balance is either not set or cannot be set. Use automatic white balance.
- Do not shake or strike the camera while [One Push Set] is in progress.
- When flash mode is set to [On] or [Slow Synchro], the white balance is adjusted to the condition with the flash emitting.

Related Topic
MENU items available for each shooting mode
## Focus

### Focusing on subjects near the edge of the screen
You can change the focus method. Use the menu when it is difficult to get the proper focus in auto focus mode. AF stands for “Auto Focus,” a function that adjusts the focus automatically. The selected AF range finder frame appears on the screen.

1. MENU → (Focus) → desired mode

<table>
<thead>
<tr>
<th></th>
<th>Focuses on a subject in all ranges of the finder frame automatically. When you press the shutter button halfway down in still image shooting mode, a green frame is displayed around the area that is in focus.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Multi AF" /></td>
<td>When the Face Detection function is active, AF operates with priority on faces.</td>
</tr>
<tr>
<td></td>
<td>Focuses on a subject in the center of the finder frame automatically. Using the AF lock function together, you can compose the image the way you want.</td>
</tr>
<tr>
<td><img src="image" alt="Center AF" /></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Focuses on an extremely small subject or a narrow area automatically. Using the AF lock function together, you can compose the image the way you want.</td>
</tr>
<tr>
<td><img src="image" alt="Spot AF" /></td>
<td>Hold the camera steady so as not to misalign the subject and the AF range finder frame.</td>
</tr>
</tbody>
</table>
Notes

- When you use [Digital Zoom] or [AF Illuminator], the AF range finder frame is disabled and appears in a dotted line. In this case, the camera works to focus on the subjects at the center of the screen.
- If the tracking focus is activated, the camera focuses with priority on the subject to be tracked.

Focusing on subjects near the edge of the screen

If the subject is out of focus, do as follows:

1. Recompose the shot so that the subject is centered in the AF range finder (A), and press the shutter button halfway to focus on the subject (AF lock).
2. When the AE/AF lock indicator (B) stops flashing and remains on, return to the fully composed shot, and press the shutter button fully down.

Related Topic

Tracking focus

MENU items available for each shooting mode
Metering Mode

Selects the metering mode that sets which part of the subject to measure to determine the exposure.

1. MENU → (Metering Mode) → desired mode

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑</td>
<td>(Multi) Divides into multiple regions and measures each region. The camera determines a well-balanced exposure (Multi-pattern metering).</td>
</tr>
<tr>
<td>☑</td>
<td>(Center) Measures the center of the image, and determines the exposure based on the brightness of the subject there (Center-weighted metering).</td>
</tr>
<tr>
<td>☑</td>
<td>(Spot) Align the spot metering cross hairs (A) on the subject to meter one part of the subject (Spot metering). This function is useful when the subject is backlit or when there is strong contrast between the subject and the background.</td>
</tr>
</tbody>
</table>

Related Topic

MENU items available for each shooting mode
**Cont. Shooting Settings**

You can select Single Shooting or Continuous Shooting as the shooting mode.

1. MENU → [Cont. Shooting Settings] → desired mode

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️ (Single Shooting)</td>
<td>The camera shoots a single image.</td>
</tr>
<tr>
<td>(Continuous Shooting)</td>
<td>The camera shoots up to 100 frames and up to approximately 0.8 frames per second when you continue to hold down the shutter button.</td>
</tr>
</tbody>
</table>

**Notes**
- [Flash] is set to [Off].
- When recording with the self-timer, a series of up to 5 images is recorded.
- The recording interval becomes longer, depending on the setting for the image size.
- [Focus], [White Balance], and [Exposure Compensation] are adjusted for the first image, and these settings are also used for the other images.
- When the internal memory or a memory card is full, the burst stops.

**Related Topic**

MENU items available for each shooting mode
Bracket Setting

You can set the type of the bracket shooting. In bracket shooting mode, you can record a series of 3 images with the setting changed. You can select the most suitable image afterwards.

1. MENU → Bracket Setting → desired mode

<table>
<thead>
<tr>
<th>Bracket Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Off)</td>
<td>Does not use the bracket shooting.</td>
</tr>
<tr>
<td>EXP ±0.3</td>
<td>Records a series of 3 images with the exposure shifted in the following order: standard, dark, and bright. The larger the bracket step value, the larger the shift of the exposure value.</td>
</tr>
<tr>
<td>EXP ±0.7</td>
<td></td>
</tr>
<tr>
<td>EXP ±1.0</td>
<td></td>
</tr>
<tr>
<td>(White Balance)</td>
<td>Records a series of 3 images with the white balance shifted in the following order: current color tone, toward blue, and toward red.</td>
</tr>
<tr>
<td></td>
<td>• When you set [White Balance] to other than [Auto], the color tone is shifted based on the selected white balance.</td>
</tr>
</tbody>
</table>

Notes

- You cannot select [White Balance] when the mode dial is set to SCN (Scene Selection).

Related Topics

Functions available for each shooting mode
MENU items available for each shooting mode
Smile Detection Sensitivity

Sets the sensitivity of the Smile Shutter function for detecting smiles.

1. MENU → 😊(Smile Detection Sensitivity) → desired mode

<table>
<thead>
<tr>
<th>🎖️ (Big Smile)</th>
<th>😊 (Normal Smile)</th>
<th>☺️ (Slight Smile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detects a big, normal or slight smile.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes

- Smiles may not be detected correctly depending on the conditions.

Related Topic

Smile Shutter

MENU items available for each shooting mode
Face Detection

When the Face Detection function is used, the camera detects the faces of your subjects and adjusts the focus, flash, exposure, white balance and red-eye reduction settings automatically.

1. MENU → \( \text{\textbullet} \) (Face Detection) → desired mode

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>Cannot use Face Detection.</td>
</tr>
<tr>
<td>Auto</td>
<td>Selects the face the camera is to automatically focus on.</td>
</tr>
</tbody>
</table>

Notes

- [Off] is not available when [Self-Timer] is set to [Self-portrait One Person] or [Self-portrait Two People].
- You can select [Face Detection] only when the focus mode is set to [Multi AF] and the metering mode is set to [Multi].
- The Face Detection function does not operate when you use the digital zoom.
- Up to 8 faces of your subjects can be detected.
- During Smile Shutter shooting, [Face Detection] is automatically set to [Auto] even if it is set to [Off].

Related Topic

Tracking focus

MENU items available for each shooting mode
DRO

The camera analyzes the shooting scene and automatically corrects the brightness and contrast to improve the image quality.
DRO stands for “Dynamic Range Optimizer,” a function that automatically optimizes the difference between light and dark parts of an image.

1. MENU → (DRO) → desired mode

<table>
<thead>
<tr>
<th>DRO (Off)</th>
<th>Does not adjust.</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔ DRO (DRO Standard)</td>
<td>Adjusts the brightness and contrast of the images automatically.</td>
</tr>
<tr>
<td>DRO plus (DRO plus)</td>
<td>Adjusts image brightness and contrast automatically and strongly.</td>
</tr>
</tbody>
</table>

**Notes**
- Depending on shooting conditions, it may not be possible to obtain correction effects.
- Only [ISO AUTO] or values from [ISO 80] to [ISO 800] can be set for the ISO value when [DRO plus] is set.
### MENU items available for each view mode

<table>
<thead>
<tr>
<th>Menu items</th>
<th>Memory card</th>
<th>Internal Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Date View</td>
<td>Folder view</td>
</tr>
<tr>
<td></td>
<td>Folder view (Still)</td>
<td>Folder view (Movie)</td>
</tr>
<tr>
<td>🎪 (Beauty Effect)</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>🗑️ (Delete)</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>🎁 (Slideshow)</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>📽 (View Mode)</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>🛡️ (Protect)</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Print (DPOF)</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>📷 (Rotate)</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>🛠️ (Settings)</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

#### Notes
- Only the items that are available for each mode are displayed on the screen.
### Beauty Effect

Allows you to apply the Beauty Effect to retouch the still image of a person and make it look better, for example, retouching for smoother skin, larger eyes, and whiter teeth.

You can set the effects from level 1 to 5. An image on which the Beauty Effect is used is saved as a new file. The original image is retained as is.

1. Set the camera to playback mode.
2. MENU → Beauty Effect → on the control button
3. Select a face you want to use the Beauty Effect for.
4. Select the desired effect and perform retouching according to the operation method in each mode.

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✱ (Skin Toning)</td>
<td>Retouch the image to change the skin color to the desired effect.</td>
</tr>
<tr>
<td></td>
<td>① Select the desired base skin color using ▲/▼ and press ●.</td>
</tr>
<tr>
<td></td>
<td>② Increase or decrease the color using ▲/▼.</td>
</tr>
<tr>
<td>✱ (Skin Smoothing)</td>
<td>Retouch the image to remove age spots and wrinkles from the skin.</td>
</tr>
<tr>
<td></td>
<td>Increase or decrease the effect using ▲/▼.</td>
</tr>
<tr>
<td>✱ (Shine Removal)</td>
<td>Retouch the image to suppress the oily skin look.</td>
</tr>
<tr>
<td></td>
<td>Increase or decrease the effect using ▲/▼.</td>
</tr>
<tr>
<td>🕰 (Eye Widening)</td>
<td>Retouch the image to enlarge the eyes.</td>
</tr>
<tr>
<td></td>
<td>Increase or decrease the effect using ▲/▼.</td>
</tr>
<tr>
<td>✱+ (Teeth Whitening)</td>
<td>Retouch the image to whiten the teeth.</td>
</tr>
<tr>
<td></td>
<td>You may not be able to whiten teeth for some images.</td>
</tr>
<tr>
<td></td>
<td>Increase or decrease teeth whiteness using ▲/▼.</td>
</tr>
</tbody>
</table>

**Notes**

- You cannot use [Beauty Effect] for the following images:
  - Panoramic images
  - Movies
- You cannot use the Beauty Effect on an extremely small facial image.
- To use the Beauty Effect on two or more faces, select the same image again after the effect has been applied once and then use the effect on another face.
- The Beauty Effect may not work properly for some images.
Delete

Allows you to select unwanted images for deletion. You can also delete image using \( \text{(Delete) button} \) [Details].

1. Set the camera to playback mode.
2. MENU  \( \rightarrow \) \( \text{(Delete) \rightarrow \text{desired mode \rightarrow } \bullet \) on the control button
3. [OK] \( \rightarrow \bullet \)

<table>
<thead>
<tr>
<th>( \text{(All in This Folder) \text{ or (All Images on This Date)} )</th>
<th>Deletes all still images and movies in the selected date range or folder at once.</th>
</tr>
</thead>
</table>
| \( \text{(Multiple Images)} \) | Allows you to select and delete multiple images.  
① After step 2, select an image to be deleted, then press \( \bullet \) .  
To cancel the selection, press \( \bullet \) again to cancel the \( \checkmark \) mark.  
② MENU \( \rightarrow \) [OK] \( \rightarrow \bullet \) |

| \( \text{(This Image)} \) | Deletes the currently displayed image in single-image mode. |

Notes
- When the internal memory is used to record images, View Mode is set to Folder View and still images and movies are displayed in the same folder.

Related Topics
Deleting images
Slideshow

Continuous Playback

Images are automatically played back in succession.

1. Set the camera to playback mode.
2. MENU → (Slideshow) → desired slideshow → on the control button

<table>
<thead>
<tr>
<th>Control button</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>●</td>
<td>Stop</td>
</tr>
<tr>
<td>▲</td>
<td>Sets the display settings.</td>
</tr>
<tr>
<td>▼</td>
<td>Displays the volume control screen.</td>
</tr>
<tr>
<td></td>
<td>• Adjust the volume with ▲ / ▼ on the control button, then press ●.</td>
</tr>
<tr>
<td>◄</td>
<td>Rewinds image.</td>
</tr>
<tr>
<td>►</td>
<td>Forwards image.</td>
</tr>
</tbody>
</table>

Continuous Playback

1. Select the desired image for playing with the control button.
2. MENU → (Slideshow) → [Continuous Playback] → ●

Viewing panoramic images during continuous playback

The whole panoramic image is displayed for 3 seconds. You can scroll a panoramic image by pressing ●.

Slideshow with music
1. **MENU → ‏(Slideshow)‏ → [Slideshow with music] → ‏ on the control button**
   Displays the setting screen.

2. Select a desired setting.

3. [Start] → ‏

4. Press ‏ to end the slideshow.

**Notes**
- [Slideshow with music] is not available for panoramic images.

---

**Playback Selection**
Selects the group of images to be shown.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>![ ]</td>
<td>All</td>
<td>Plays a slideshow of all the images in order.</td>
</tr>
<tr>
<td>![ ]</td>
<td>This Date</td>
<td>Plays a slideshow of images with the currently selected date range when [View Mode] is [Date View].</td>
</tr>
<tr>
<td>![ ]</td>
<td>Folder</td>
<td>Plays a slideshow of images in the currently selected folder in Folder View.</td>
</tr>
</tbody>
</table>

---

**Effects**
Selects the playback speed and mood for slideshows.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>![ ]</td>
<td>Simple</td>
<td>A simple slideshow switching images at a preset interval. The playback interval is adjustable in [Interval] and you can thoroughly enjoy your images.</td>
</tr>
<tr>
<td>![ ]</td>
<td>Nostalgic</td>
<td>A moody slideshow reproducing the atmosphere of a movie scene.</td>
</tr>
<tr>
<td>![ ]</td>
<td>Stylish</td>
<td>A stylish slideshow proceeding at middle tempo.</td>
</tr>
<tr>
<td>![ ]</td>
<td>Active</td>
<td>A high-tempo slideshow suitable for active scene.</td>
</tr>
</tbody>
</table>

---

**Music**
Specifies the music to be played during slideshows. You can select more than one background music track. Press ‏ on the control button to display the volume control screen, then press ‏ / ‏ to adjust the volume.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>![ ]</td>
<td>Music1</td>
<td>The default setting for a [Simple] slideshow.</td>
</tr>
<tr>
<td>![ ]</td>
<td>Music3</td>
<td>The default setting for a [Stylish] slideshow.</td>
</tr>
<tr>
<td>![ ]</td>
<td>Music4</td>
<td>The default setting for a [Active] slideshow.</td>
</tr>
<tr>
<td>![ ]</td>
<td>Muting</td>
<td>Does not use music.</td>
</tr>
</tbody>
</table>

---

**Notes**
The movies are played back without their audio.

**Interval**
Sets the screen switching interval. The setting is fixed to [Auto] when [Simple] is not selected as the [Effects].

<table>
<thead>
<tr>
<th>Interval</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 sec</td>
<td>Sets the display interval of images for a [Simple] slideshow.</td>
</tr>
<tr>
<td>☑️ 3 sec</td>
<td>The interval is set to suit the selected [Effects] item.</td>
</tr>
<tr>
<td>5 sec</td>
<td></td>
</tr>
<tr>
<td>10 sec</td>
<td></td>
</tr>
</tbody>
</table>

**Selecting background music**
You can transfer a desired music file from your CDs or MP3 files to the camera to play back during a slideshow. To transfer music, install the “Music Transfer” software to your computer. [Details]

**Related Topic**
“Music Transfer”
View Mode

Displaying the Calendar

Allows you to select the display format for images.

1. Set the camera to playback mode.

2. MENU → (View Mode) → desired mode → on the control button

<table>
<thead>
<tr>
<th>(Date View)</th>
<th>Displays images by date.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Folder view (Still))</td>
<td>Displays still images.</td>
</tr>
<tr>
<td>(Folder view (Movie))</td>
<td>Displays movies.</td>
</tr>
</tbody>
</table>

Notes

- When the internal memory is used to record images, View Mode is set to Folder View and still images and movies are displayed in the same folder.

Displaying the Calendar

1. MENU → (View Mode) → [Date View] → on the control button

2. Turn the W/T (zoom) lever to the W side repeatedly until the Calendar is displayed.
   Use the control button to select , then select the month you want to display. Select the date and press to view images of the selected date in index mode.
Protect

To cancel protection
Protects recorded images against accidental erasure. The ◄ mark is displayed for registered images.

1. Set the camera to playback mode.
2. MENU → ◄ (Protect) → desired mode → ◄ on the control button

<table>
<thead>
<tr>
<th>◄ (This Image)</th>
<th>Protects the currently displayed image in single-image mode.</th>
</tr>
</thead>
</table>
| ◄ (Multiple Images) | You can select and protect multiple images.  
① After step 2, select an image to be protected, then press ◄.  
② To cancel the selection, press ◄ again to cancel the ◄ mark.  
③ MENU → [OK] → ◄ |

Notes
- When the internal memory is used to record images, View Mode is set to Folder View and still images and movies are displayed in the same folder.

To cancel protection
Select the image for which you want to cancel protection, and unlock it by pressing ◄ on the control button as the same procedure to protect it. The ◄ indicator disappears, and the protection is released.
PRINT (DPOF)

Clearing the DPOF mark

DPOF (Digital Print Order Format) is a function that allows you to specify the images of the memory card that you want to print out later. The DPOF (Print order) mark is displayed for registered images.

1. Set the camera to playback mode.
2. MENU → DPOF → desired mode → on the control button

<table>
<thead>
<tr>
<th>DPOF (This Image)</th>
<th>Orders printing the currently displayed image in single-image mode.</th>
</tr>
</thead>
</table>
| DPOF (Multiple Images) | You can select and order multiple images to be printed.  
1. After step 2, select an image to be printed, then press .  
To cancel the selection, press again to cancel the mark.  
2. MENU → [OK] → . |

Notes

- The DPOF (Print order) mark cannot be added to the following images:
  - Movies
  - Images in the internal memory
- You can add a DPOF (Print order) mark to a maximum 999 images.

Clearing the DPOF mark

Select the image to clear the DPOF registration, then press on the control button in the same procedure as when making a DPOF mark. The DPOF mark disappears and the DPOF registration is cleared.

Related Topic

Printing still images
Rotate

Rotates a still image. Use this to display a horizontal orientation image in vertical orientation.

1. Set the camera to playback mode.
2. MENU → (Rotate) →  on the control button

Notes

- You cannot rotate the following images:
  - Movies
  - Protected still images
- You may not be able to rotate images shot with other cameras.
- When viewing images on a computer, the image rotation information may not be reflected, depending on the software.
**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 the shutter button is pressed halfway, until the focus is locked. The \( \text{ON} \) indicator appears at this time.

1. Set the camera to shooting mode.

2. MENU → 图 (Settings) → 拍 (Shooting Settings) → [AF Illuminator] → desired mode → ●

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto</td>
<td>Sets whether to use the AF illuminator automatically in dark surroundings.</td>
</tr>
<tr>
<td>Off</td>
<td></td>
</tr>
</tbody>
</table>

**Notes**

- Focus is achieved as long as the AF illuminator light reaches the subject, regardless of whether light fails to reach the center of the subject.
- You cannot use the AF illuminator in the following situations:
  - In movie mode
  - In [Sweep Panorama] mode
  - When \( \text{Landscape} \), \( \text{Night Scene} \), \( \text{Pet} \) or \( \text{Fireworks} \) mode is selected in Scene Selection.
  - When [Self-Timer] is set to [Self-portrait One Person] or [Self-portrait Two People].
- When you use the AF illuminator, the normal AF range finder frame is disabled and a new AF range finder frame is displayed by a dotted line. AF operates with priority on subjects located near the center of the frame.
- The AF illuminator emits very bright light. Although there is no health hazard, do not look directly into the AF illuminator emitter at close range.
Grid Line

With reference to the grid lines, you can easily set a subject in a horizontal/vertical position.

1. Set the camera to shooting mode.
2. MENU → (Settings) → (Shooting Settings) → [Grid Line] → desired mode →

<table>
<thead>
<tr>
<th>On</th>
<th>Displays the grid lines. The grid lines are not recorded.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>Does not display the grid lines.</td>
</tr>
</tbody>
</table>

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Disp. Resolution

Adjusts the image quality on the screen for shooting.

1. Set the camera to shooting mode.
2. MENU → (Settings) → (Shooting Settings) → [Disp. Resolution] → desired mode → ●

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Displays the image on the screen in high image quality.</td>
</tr>
<tr>
<td>Standard</td>
<td>Displays the image on the screen in standard image quality.</td>
</tr>
</tbody>
</table>

**Notes**
- The battery power may decrease faster when [Disp. Resolution] is set to [High].
- In Sweep Panorama and Movie Mode, [Disp. Resolution] is set to [High].
Digital Zoom

▼ Total zoom scale when using Smart zoom (including optical zoom 35×)

Selects the digital zoom mode. The camera enlarges the image using optical zoom (up to 35×). When the zoom scale is exceeded, the camera uses either smart or precision digital zoom.

1. Set the camera to shooting mode.
2. MENU → (Settings) → (Shooting Settings) → [Digital Zoom] → desired mode →

- Smart ( )
  Enlarges the image digitally within the range where the image will not be distorted, according to the image size (Smart zoom).

- Precision ( )
  Enlarges all image sizes by the total zoom scale of approximately 70×, including the optical zoom 35×. However, note that the image quality deteriorates when the optical zoom scale is exceeded (Precision digital zoom).

- Off
  Does not use the digital zoom.

Notes

- [Digital Zoom] is not available in the following situations:
  - In [Sweep Panorama] mode
  - When the Smile Shutter function is activated.
  - When [Self-Timer] is set to [Self-portrait One Person] or [Self-portrait Two People].
- The smart zoom is not available when you record movies or the image size is set to [20M] or [16:9(15M)].
- The Face Detection function does not operate in the range of [Digital Zoom].

Total zoom scale when using Smart zoom (including optical zoom 35×)

The supported zoom ratio differs depending on the image size.

<table>
<thead>
<tr>
<th>Size</th>
<th>Total zoom scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>10M</td>
<td>Approx. 49×</td>
</tr>
<tr>
<td>5M</td>
<td>Approx. 69×</td>
</tr>
<tr>
<td>VGA</td>
<td>Approx. 280×</td>
</tr>
<tr>
<td>16:9(2M)</td>
<td>Approx. 93×</td>
</tr>
</tbody>
</table>
Red Eye Reduction

The flash strobes two or more times before shooting to reduce the red-eye phenomenon when using flash.

1. Set the camera to shooting mode.
2. MENU →  (Settings) →  (Shooting Settings) → [Red Eye Reduction] → desired mode →

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto</td>
<td>When the Face Detection function is activated, the flash strobes automatically to reduce the red-eye phenomenon.</td>
</tr>
<tr>
<td>On</td>
<td>The flash always strobes to reduce the red-eye phenomenon.</td>
</tr>
<tr>
<td>Off</td>
<td>Does not use Red Eye Reduction.</td>
</tr>
</tbody>
</table>

What causes the red-eye phenomenon?
Pupils become dilated in dark environments. The flash light is reflected off the blood vessels at the back of the eye (retina) (A), causing the “red-eye” phenomenon.

Other ways to reduce red-eye
- Select (High Sensitivity) mode in Scene Selection. (The flash is set to [Off] automatically.)

Notes
- To avoid blurring of images, hold the camera firmly until the shutter is released. It usually takes a second until the shutter is released, and also be sure not to allow the subject to move during this period.
- Red Eye Reduction may not produce the desired effects. It depends on individual differences and conditions, such as the distance to the subject or if the subject looked away from the pre-strobe.
- If you do not use the Face Detection function, Red Eye Reduction does not work, even when you select [Auto].
- [Red Eye Reduction] is set to [Off] in the following situations:
  - When (Night Scene), (High Sensitivity), (Gourmet), (Pet) or (Fireworks) mode is selected in Scene Selection.
When the Smile Shutter function is activated.
Write Date

Sets whether to record a shooting date on the still image.

1. Set the camera to shooting mode.
2. MENU → 📷 (Settings) → 📷 (Shooting Settings) → [Write Date] → desired mode → ●

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>On (●)</td>
<td>Records a shooting date. When [On] is selected, the 📷 mark will appear on the screen while shooting. However, in some shooting modes that cannot record dates on images, the 📷 mark will disappear.</td>
</tr>
<tr>
<td>Off</td>
<td>Does not record a shooting date.</td>
</tr>
</tbody>
</table>

Notes

- You cannot record dates in the following situations:
  - In movie mode
  - When shooting panoramic images
  - In burst shooting mode
  - In [Easy Mode]
- If you shot images with the date once, you cannot delete the date from the images later.
- The dates are doubly printed, if you set the camera to superimpose the dates when printing.
- The recorded time of the image cannot be superimposed on the image.
Beep

Selects the sound produced when you operate the camera.

1. MENU → 📷 (Settings) → ☑️ (Main Settings) → [Beep] → desired mode →

<table>
<thead>
<tr>
<th>Shutter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑️ On</td>
<td>Turns on the beep/shutter sound when you press the control button/shutter button.</td>
</tr>
<tr>
<td>Off</td>
<td>Turns off the beep/shutter sound.</td>
</tr>
</tbody>
</table>

Shutter Turns on the shutter sound when you press the shutter button.
Monitor Brightness

You can select the screen brightness from level 1 to 5. The screen becomes brighter as the number rises. When you use the camera in bright outside light, select a higher number to see the screen easier.

1. MENU  →  (Settings)  →  (Main Settings)  →  [Monitor Brightness]  →  desired mode  →  ●

Notes
• The brighter the screen, the faster the battery runs out.
• The screen grows dark if you do not operate the camera while the power is on.
Language Setting

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

1. MENU → (Settings) → (Main Settings) → [Language Setting] → desired mode →

▲ Back to top
Initialize

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

1. MENU → (Settings) → (Main Settings) → [Initialize] → [OK] →

Notes
- Be sure not to remove the batteries while initializing.

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**Function Guide**

You can select whether or not the function guide is displayed when you operate the camera.

1. **MENU** → ![Settings] (Settings) → ![Main Settings] (Main Settings) → [Function Guide] → desired mode

<table>
<thead>
<tr>
<th>On</th>
<th>Off</th>
</tr>
</thead>
<tbody>
<tr>
<td>![On]</td>
<td>![Off]</td>
</tr>
</tbody>
</table>

Sets whether to display the function guide.
Video Out

Sets the video signal output according to the TV color system of the connected video equipment. The TV color systems differ depending on the country and region. To view images on a TV screen, check the TV color system of the country or region of use. [Details]

1. MENU → 📺 (Settings) → ⏹️ (Main Settings) → [Video Out] → desired mode

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTSC</td>
<td>Sets the video output signal to NTSC mode (e.g., for the USA, Japan).</td>
</tr>
<tr>
<td>PAL</td>
<td>Sets the video output signal to PAL mode (e.g., for Europe, China).</td>
</tr>
</tbody>
</table>

▲ Back to top
USB Connect Setting

Sets how to make a USB connection when connecting the camera to a computer, etc.

1. MENU → (Settings) → (Main Settings) → [USB Connect Setting] → desired mode

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass Storage</td>
<td>Establishes a Mass Storage connection between the camera and a computer or other USB device.</td>
</tr>
<tr>
<td>PTP/MTP</td>
<td>When you connect the camera to a computer, the AutoPlay Wizard appears, and the still images in the recording folder on the camera are imported to the computer. (with Windows 7, Windows 8, Windows Vista, Windows XP, Mac OS X)</td>
</tr>
</tbody>
</table>

Notes
- When [USB Connect Setting] is set to [PTP/MTP], you cannot export movies to a computer. To export movies to a computer, set [USB Connect Setting] to [Mass Storage].

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### LUN Setting

Sets USB connection mode when connecting the camera to a computer, etc.

1. **MENU →  (Settings) →  (Main Settings) →  [LUN Setting] →  desired mode →  ●**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multi</strong></td>
<td>Images both on the memory card and in the internal memory are displayed. Select this setting when you connect the camera to a computer.</td>
</tr>
<tr>
<td><strong>Single</strong></td>
<td>When the memory card is inserted into the camera, the images on the memory card are displayed; when it is not inserted, the images in the internal memory are displayed. Select this setting in cases where the images of both the memory card and the internal memory are not displayed when the camera is connected to a device other than a computer.</td>
</tr>
</tbody>
</table>
Download Music

You can change background music tracks using “Music Transfer”.

1. MENU →  (Settings) → [Main Settings] → [Download Music] → 
   The message “Connect to PC” is displayed.

2. Make a USB connection between the camera and a computer, then start “Music Transfer”.

3. Follow the instructions on the screen to change music files.
Empty Music

You can delete all the background music files stored in the camera. It can be used in cases such as when the background music files are damaged and cannot be played.

1. MENU → (Settings) → (Main Settings) → [Empty Music] → [OK] →

Related Topic
“Music Transfer”
Eye-Fi

Transferring image data using the Eye-Fi card

Sets whether to use the upload function of an Eye-Fi card (commercially available), when you use the Eye-Fi card with this camera. [Eye-Fi] is displayed only when the Eye-Fi card is inserted in the camera.

1. MENU → (Settings) → (Main Settings) → [Eye-Fi] → desired mode

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>On</td>
<td>Uses the upload function. The Eye-Fi mode display icon on the screen will change depending on the communication mode of the Eye-Fi card.</td>
</tr>
<tr>
<td></td>
<td>- Eye-Fi card is in standby mode. There is no image to be sent.</td>
</tr>
<tr>
<td></td>
<td>- Eye-Fi card is in upload standby mode.</td>
</tr>
<tr>
<td></td>
<td>- Eye-Fi card is in connecting mode.</td>
</tr>
<tr>
<td></td>
<td>- Eye-Fi card is uploading images.</td>
</tr>
<tr>
<td></td>
<td>- An error has occurred.</td>
</tr>
<tr>
<td>Off</td>
<td>Does not use the upload function.</td>
</tr>
</tbody>
</table>

Notes
- Eye-Fi cards are only sold in certain countries/regions.
- For more information on the Eye-Fi card, contact the manufacturer or seller of Eye-Fi cards directly.
- Eye-Fi cards are permitted only in the countries and regions in which they were purchased. You may be held liable due to local restrictions.
- The Eye-Fi card has a wireless LAN function. Do not insert the Eye-Fi card where wireless LAN is prohibited, such as while aboard an airplane. If the Eye-Fi card is inserted, set [Eye-Fi] to [Off]. When the uploading function of the Eye-Fi card is set to [Off], [Off] is displayed on the screen.

Transferring image data using the Eye-Fi card

1. Set the wireless LAN access point settings or the transferring direction settings of the Eye-Fi card.
   For details, refer to the operating instructions supplied with the Eye-Fi card.

2. After the settings are finished, insert the Eye-Fi card into the camera, and shoot the images.
   The recorded images are automatically transferred via wireless LAN to a computer, etc.

Notes
-
• When uploading image data, [Power Save] is not available.
• If the 😞 (error) icon is displayed, eject and re-insert the Eye-Fi card, or turn the power of the camera off and on again. If the 😞 (error) icon is still displayed, the Eye-Fi card may be corrupted. For details, contact Eye-Fi, Inc.
• Wireless LAN communication may be interrupted by other communication devices. If data reception is insufficient, move the camera closer to the access point.
• Some Eye-Fi cards have an “Endless Memory Mode.” This product does not support “Endless Memory Mode.” Make sure that Eye-Fi cards that you insert into this product have “Endless Memory Mode” turned off. For details on setting “Endless Memory Mode”, refer to the operating instructions supplied with the Eye-Fi card.
## Power Save

Sets the length of time until the screen goes dark and the time until the camera turns off. If you do not operate the camera for a certain period of time while the power is on, the screen goes dark and the camera later turns off automatically to prevent wearing down the batteries (Auto power-off function).

1. **MENU** → 📈 (Settings) → 📀 (Main Settings) → [Power Save] → desired mode → ⊕

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max</td>
<td>Saves battery power better than when set to [Standard]. If the camera is not operated for a certain period of time, the power turns off automatically. In shooting mode, the screen automatically goes dark before the power turns off.</td>
</tr>
<tr>
<td>✔️ Standard</td>
<td>If the camera is not operated for a certain period of time, the power turns off automatically. In shooting mode, the screen automatically goes dark before the power turns off. It takes longer before the power turns off than when set to [Max].</td>
</tr>
<tr>
<td>Off</td>
<td>Does not use the Auto power-off function.</td>
</tr>
</tbody>
</table>

**Notes**

- The camera does not turn off automatically in the following situations:
  - During slideshow
  - During playing back movies
  - During Eye-Fi connection
Format

Formats the memory card or the internal memory.
When you use a memory card with this camera for the first time, it is recommended to format the card using the camera for stable performance of the memory card before shooting. Note that formatting permanently erases all data on the memory card, and is unrecoverable. Save precious data on a computer, etc.

1. MENU → (Settings) → (Memory Card Tool) or (Internal Memory Tool) → [Format] → [OK] → ●

Notes
• Note that formatting permanently erases all data including even protected images.
Create REC.Folder

Creates a folder in a memory card for recording images. Images are recorded in the newly created folder until you create another folder or select another recording folder.

1. MENU →  (Settings) →  (Memory Card Tool) → [Create REC.Folder] → [OK] →

On folders

After a new folder is created, you can change the storage destination folder. [Details]

Notes

- This item is not displayed when the internal memory is used to record images.
- When you insert a memory card that was used with other equipment into the camera and shoot images, a new folder may be automatically created.
- Up to 4,000 images can be stored in one folder. When the folder capacity is exceeded, a new folder is automatically created.
Change REC.Folder

Changes the folder in the memory card that is currently used for recording images.

1. MENU → (Settings) → (Memory Card Tool) → [Change REC.Folder]

2. Select a folder with ◀ / ▶ on the control button.

3. [OK] → ●

Notes

- This item is not displayed when the internal memory is used to record images.
- You cannot select a folder with a number that has only " □ □ □ MDCF" or " □ □ □ ANV01" as a recording folder.
- You cannot move recorded images to another folder.
Delete REC.Folder

Deletes a folder for recording images in a memory card.

1. MENU → (Settings) → (Memory Card Tool) → [Delete REC.Folder]
2. Select a folder with ◀ / ▶ on the control button.
3. [OK] → ●

Notes
- This item is not displayed when the internal memory is used to record images.
- If you delete the folder set as the recording folder using [Delete REC.Folder], the folder that has the largest folder number is selected as the next recording folder.
- If a folder contains protected images, images other than protected images are deleted and the folder will remain.
- If a folder contains files that cannot be played back by the camera, you cannot delete a folder.
Copy

Copies all images in the internal memory to a memory card.

1. Insert a memory card with sufficient free capacity into the camera.

2. MENU → (Settings) → (Memory Card Tool) → [Copy] → [OK] →

Notes

- Make sure there is sufficient battery power. Otherwise, the battery power may run out when you attempt to copy image files, causing the copy to fail and possibly corrupt the data.
- Images cannot be copied individually.
- The original images in the internal memory are retained even after copying. To delete the contents of the internal memory, remove the memory card after copying, then format the internal memory ([Format] in [Internal Memory Tool]).
- A new folder is created on the memory card and all the data will be copied to it. You cannot choose a specific folder and copy images to it.
File Number

Selects the method used to assign file numbers to images.

1. MENU → (Settings) → (Memory Card Tool) → [File Number] → desired mode → ●

<table>
<thead>
<tr>
<th>Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Series</td>
<td>Assigns numbers to files in sequence even if the recording folder or the memory card is changed. (When the replaced memory card contains a file with a number higher than the last assigned number, a number one higher than the largest number is assigned.)</td>
</tr>
<tr>
<td>Reset</td>
<td>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.)</td>
</tr>
</tbody>
</table>
Area Setting

Adjusts the time to the local time of a selected area.

1. MENU → 📷 (Settings) → ⌚ (Clock Settings) → [Area Setting] → desired setting → ●

<table>
<thead>
<tr>
<th>Home</th>
<th>Destination</th>
</tr>
</thead>
<tbody>
<tr>
<td>You use the camera in your area. When the currently set area differs from your home area, you must make the Area Setting.</td>
<td>You use the camera set to the time at your destination. Set the destination area.</td>
</tr>
</tbody>
</table>

Changing Area Setting

Setting a frequently visited destination lets you easily adjust the time when you visit that destination.

1. Select the area part for [Destination], then press ●.

2. Press ◀/▶ on the control button to select the desired area, then select Summer Time using ▲/▼.
Date & Time Setting

Sets the date and time again.

1. MENU → 📒 (Settings) → ⌚ (Clock Settings) → [Date & Time Setting] → desired setting → ●

2. Set the numeric value and desired setting with ▲ / ▼ / ◀ / ► on the control button.

3. [OK] → ●

<table>
<thead>
<tr>
<th>Date &amp; Time Format</th>
<th>You can select the date and time display format.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer Time</td>
<td>You can select Summer Time [On]/[Off].</td>
</tr>
<tr>
<td>Date &amp; Time</td>
<td>You can set the date and time.</td>
</tr>
</tbody>
</table>
Viewing an image on a Standard Definition (SD) TV

You can view images recorded on the camera in standard picture quality by connecting the camera to a Standard Definition (SD) TV. Refer also to the operating instructions supplied with the TV.

1. Turn off both the camera and the TV.
2. Connect the USB / A/V OUT terminal (A) and the audio/video input jacks on the TV (B) using the dedicated A/V cable VMC-15CSR1 (sold separately) (C).

3. Turn on the TV and set the input.
4. Press ON/OFF (Power) button, then set the camera to playback mode. Images shot with the camera appear on the TV. Select the desired image with the control button.

**Notes**

- When using the camera abroad, it may be necessary to switch [Video Out].

[Details]
Recommended computer environment

The following computer environment is recommended when using the software “PlayMemories Home.”

**Windows**

<table>
<thead>
<tr>
<th>OS (pre-installed)</th>
<th>Windows Vista* SP2/Windows 7 SP1/Windows 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Intel Pentium III 800 MHz or faster (For playing/editing the High Definition movies: Intel Core Duo 1.66 GHz or faster/Intel Core 2 Duo 1.66 GHz or faster)</td>
</tr>
<tr>
<td>Memory</td>
<td>At least 1 GB</td>
</tr>
<tr>
<td>Hard Disk (Disk space required for installation)</td>
<td>Approximately 600 MB</td>
</tr>
<tr>
<td>Display</td>
<td>At least 1,024×768 dots</td>
</tr>
</tbody>
</table>

* Starter (Edition) is not supported.

**Mac**

<table>
<thead>
<tr>
<th>OS (pre-installed)</th>
<th>Mac OS X v10.6 to v10.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Intel processor, such as Intel Core solo, Core Duo or Core 2 Duo</td>
</tr>
<tr>
<td>Hard Disk (Disk space required for installation)</td>
<td>100 MB</td>
</tr>
<tr>
<td>Display</td>
<td>At least 1,024×768 dots</td>
</tr>
</tbody>
</table>

**Notes**

- Operation is not assured in an environment based on an upgrade of the operating systems described above or in a multi-boot environment.
- If you connect two or more USB devices to a single computer at the same time, some devices, including the camera, may not operate, depending on the types of USB devices you are using.
- When your computer resumes activity from suspend or sleep mode, communication between the camera and your computer may not recover at the same time.
Below are examples of the functions available when using “PlayMemories Home.”

- You can import images shot with the camera to a computer.
- You can play back images imported to a computer.
- You can share images using “PlayMemories Online.”

With Windows, the following functions are also available.

- You can display images stored on a computer by shooting date in a calendar display.
- You can edit (trimming, resizing, etc.) and retouch still images.
- You can upload images to a network service. (An Internet connection is required.)
- For other details, see Help for “PlayMemories Home.”
Installing “PlayMemories Home”

1. Using the Internet browser on your computer, go to the following URL, then click [Install] → [Run].
   www.sony.net/pm/
   • If the software “PMB (Picture Motion Browser)” has already been installed on your computer, it will be overwritten by “PlayMemories Home” during the installation. Use “PlayMemories Home,” the successor software of “PMB.”

2. Follow the instructions on the screen to complete the installation.
   • For details on “PlayMemories Home,” refer to Help for “PlayMemories Home,” or to the “PlayMemories Home” support page (English only):
     http://www.sony.co.jp/pmh-se/

Activating available functions on “PlayMemories Home”

If “PlayMemories Home” has already been installed on your computer, connect the camera with the computer and register your camera with “PlayMemories Home.” The available functions activate.

A: To the USB terminal of a computer
B: To the USB / A/V OUT terminal

Notes
• Log on as Administrator.
• It may be necessary to restart your computer. When the restart confirmation message appears, restart the computer following the instructions on the screen.
• DirectX may be installed depending on your computer’s system environment.
“Music Transfer”

“Music Transfer” allows you to replace the Music files provided in the camera at the factory with your favorite tracks, and to delete and add Music files. You can also restore the tracks stored at the factory to your camera.

Download the software from the following URL and install it on your computer.
Windows: http://www.sony.co.jp/imsoft/Win/
Mac: http://www.sony.co.jp/imsoft/Mac/

- The following track types can be imported using “Music Transfer”.
  - MP3 files stored on the hard disk of your computer
  - Music CD tracks
  - Preset-music saved on the camera

- Before starting up “Music Transfer”, perform MENU → 📷 (Settings) → ꧂ (Main Settings) → [Download Music], and connect the camera to the computer.

For other details, see the help in “Music Transfer”.

Related Topic
Download Music
Empty Music

Copyright 2013 Sony Corporation
Software for Mac

For details on software for Mac, access the following URL:
http://www.sony.co.jp/imsoft/Mac/

Notes
• The available software varies depending on the area.
Importing images to a computer

“PlayMemories Home” allows you to easily import images. For details on “PlayMemories Home” functions, see Help for “PlayMemories Home”.

Importing images to a Windows computer without using “PlayMemories Home”
When the AutoPlay Wizard appears after making a USB connection between the camera and a computer, click [Open folder to view files] → [OK] → [DCIM] or [MP_ROOT]. Then copy the desired images to the computer.

- If Device Stage appears on a Windows 7 or Windows 8 computer, double-click [Browse Files] → media icon → folder in which the image you want to import is stored.

Importing images to a Mac computer without using “PlayMemories Home”
Connect the camera to your Mac computer. Double-click the newly recognized icon on the desktop → the folder in which the image you want to import is stored. Then drag and drop the image file on to the hard disk icon.
Disconnecting the camera from the computer

Perform the procedures from step 1 to 2 below before performing the following operations:

- Disconnecting the cable.
- Removing a memory card.
- Inserting a memory card into the camera after copying images from the internal memory.
- Turning off the camera.

1. Click in the taskbar, then click (disconnect icon).
   - With Windows Vista, click (disconnect icon) in the taskbar.
2. Click the displayed message.

Notes

- For Mac computers, drag and drop the icon of the memory card or the drive icon in the “Trash” icon. The camera is disconnected from the computer.
- The disconnect icon may not appear when you use a Windows 7 or Windows 8 computer. In this case, you can disconnect the camera from the computer without following the above steps.
Printing still images

You can print still images using the following methods.

- Printing directly using a printer which supports your memory card type. For details, see the operating instructions supplied with the printer.
- Printing using a computer
  You can import images to a computer using the “PlayMemories Home” software and print the images. You can print images with the date. For details, see Help for “PlayMemories Home”.
- Printing at a shop
  You can take a memory card to a photo printing service shop. As long as the shop supports photo printing services conforming to DPOF, you can make a DPOF (Print order) mark on images in advance in playback mode so that you do not have to reselect them when you print them out at the shop. Before you take image data to a shop, always copy (back up) your data.

Notes
- When you print still images shot in [16:9] mode, both edges may be cut off.
- You cannot print panoramic images, depending on the printer.
If you experience trouble with the camera, try the following solutions.

1. Check the items under “Troubleshooting”, then check your camera.
2. Remove the batteries for one full minute. Then re-insert the batteries and turn on the camera.
3. Initialize the settings. [Details]
4. 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/
Batteries and power

The remaining charge indicator is incorrect.

- This phenomenon occurs when you use the camera in an extremely hot or cold location.
- When using alkaline batteries (sold separately), the remaining charge indicator may not be correct.
- The batteries are discharged. Insert new batteries or charged Nickel-Metal Hydride batteries (sold separately).
- When using the Nickel-Metal Hydride batteries (sold separately), the remaining charge indicator may differ from the current one due to the memory effect, etc. Fully discharge and then charge the batteries to correct the display.

The batteries run down too quickly.

- You are using the camera in an extremely cold location.
- The batteries are dead. Replace them with new ones.
- When using the Nickel-Metal Hydride batteries (sold separately), charge them sufficiently. If the poles of batteries or the terminals of the camera are dirty, the batteries may not charge properly. Clean the poles and terminals with a cotton swab, etc.

Camera power is turned off automatically when you open the battery/memory card cover.

- This is not a malfunction. Turn off the camera before you open the battery/memory card cover.

Cannot turn on the camera.

- Insert the batteries correctly.
- The batteries are discharged. Insert new batteries or charged Nickel-Metal Hydride batteries (sold separately).
- The batteries are dead. Replace them with new ones.

The power turns off suddenly.

- When [Power Save] is set to [Standard] or [Max], and 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 batteries. Turn on the camera again.

- The batteries are discharged. Insert new batteries or charged Nickel-Metal Hydride batteries (sold separately).
Shooting still images/movies

Cannot record images.

- If images are recorded on the internal memory even when a memory card is inserted into the camera, make sure that the memory card is fully inserted into the camera.
- Check the free capacity of the internal memory or memory card. If it is full, do one of the following:
  - Delete unnecessary images. [Details] [Details]
  - Change the memory card.
- You cannot record images while charging the flash.
- When recording movies, it is recommended that you use the following memory cards:
  - “Memory Stick PRO Duo” (Mark2) media, “Memory Stick PRO-HG Duo” media, “Memory Stick XC-HG Duo” media or “Memory Stick Micro” (Mark2) media
  - SD memory card, SDHC memory card, SDXC memory card, microSD memory card, microSDHC memory card or microSDXC memory card (Class 4 or faster)

Smile Shutter function does not work.

- No image is shot if a smiling face is not detected. [Details]

Anti-blur function does not work.

- The anti-blur function may not work properly when shooting night scenes.
- Shoot after pressing the shutter button halfway down.

The image is out of focus.

- The subject is too close. When shooting, make sure to position the lens farther away from the subject than the shortest shooting distance (approximately 1 cm (0.03 ft.) (W)/150 cm (4.92 ft.) (T) from the lens).
- (Night Scene), (Landscape) or (Fireworks) mode is selected in Scene Selection when shooting still images.

Zoom does not work.

- You cannot use the optical zoom in Sweep Panorama mode.
- You cannot use the smart zoom depending on the image size. [Details]
• You cannot use the digital zoom in the following situations:
  ~[Self-Timer] is set to [Self-portrait One Person] or [Self-portrait Two People].

**Cannot select the Face Detection function.**

• You can select Face Detection only when the focus mode is set to [Multi AF] and
  the metering mode is set to [Multi].

**The flash does not work.**

• You cannot use the flash in the following situations:
  ~[Cont. Shooting Settings] is set to [Continuous Shooting]. [Details]
  ~ [Night Scene] mode, [High Sensitivity] mode or [Fireworks] mode is
  selected in Scene Selection.
  ~ Shooting in [Sweep Panorama]
  ~ Shooting in movie mode.

• Set the flash to [On] when Scene Selection mode is set to [Landscape], [Gourmet], [Pet], [Beach] or [Snow] mode. [Details]

**Fuzzy white circular spots appear in images shot using the flash.**

• Particles (dust, pollen, etc.) in the air reflected the flash light and appeared in the
  image. This is not a malfunction. [Details]

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

• The camera automatically adjusts the focus. Press and hold the shutter button
  halfway down. Focus adjustment may take some time when shooting a close
  subject.

• [Landscape], [Night Scene] or [Fireworks] mode is selected in Scene
  Selection.

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

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

**The F value and shutter speed flash when you press and hold the shutter button halfway down.**

• The exposure is incorrect. Correct the exposure. [Details]

**The image colors are not correct.**

• Adjust the White Balance. [Details]

**White or purple streaks appear in bright areas of the subject, or the whole screen of the image becomes**
reddish.

- This phenomenon is called smearing. This is not a malfunction. Smearing is not recorded on still images, but is recorded as streaks or uneven colors on Sweep Panorama images or movies. (“Bright areas” refers to the sun or electric lights which are much brighter than surroundings.)

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] to [Auto] or [On]. [Details]
- Shoot the subject at a distance closer than the flash range using the flash.
- Light the room and shoot the subject.

Dots appear and remain on the screen.

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

Cannot shoot images in succession.

- The internal memory or memory card is full. Delete unnecessary images. [Details] [Details]
- The battery level is low. Insert new batteries or charged Nickel-Metal Hydride batteries (sold separately).

The same image is shot several times.

- Set [Cont. Shooting Settings] to [Single Shooting]. [Details]

The camera emits a sound when shaken.

- When you shake the camera without the power turned on, you may hear a sound. This is not a malfunction.
Viewing images

Cannot play back images.

- Make sure that the memory card is fully inserted into the camera.
- The folder/file name has been changed on your computer.
- No guarantees are made for playing back, on this camera, files containing images which were processed on a computer or images which were shot using other cameras.
- The camera is in USB mode. Disconnect the USB connection. [Details]
- Use “PlayMemories Home” to play images stored on a computer with this camera.

The date and time are not displayed.

- The screen display is set to display images only. Press DISP (Display Setting) on the control button to display information. [Details]

Cannot hear music during slideshow.

- Slideshow is played back with [Continuous Playback]. Select [Slideshow with music] and play back.
- Transfer music files to the camera with “Music Transfer”. [Details]

The image does not appear on the TV.

- Check [Video Out] to see if the video output signal of the camera is set to the color system of your TV. [Details]
- Check whether the connection is correct. [Details]
Computers

Your computer does not recognize the camera.

- When the battery level is low, insert new batteries or charged Nickel-Metal Hydride batteries (sold separately).
- Set [USB Connect Setting] to [Mass Storage]. [Details]
- Use the dedicated USB cable (supplied).
- Disconnect the dedicated USB 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.

Cannot import images.

- Connect the camera and your computer correctly making a USB connection.
- When you shoot images with a memory card formatted by a computer, you may not be able to import the images to a computer. Shoot using a memory card formatted by the camera. [Details]

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

- Make the USB connection after the computer is turned on.

Cannot play back images on your computer.

- If you are using “PlayMemories Home”, refer to Help for “PlayMemories Home.” [Details]
- 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 or the memory card. Import the movie to your computer using “PlayMemories Home” and play it back. [Details]
Images once exported to a computer cannot be viewed on the camera.

- Export them to a folder recognized by the camera, such as “101MSDCF”, then play back in Folder view. [Details]
- Register the image in the Image Database File and play in [Date View]. [Details]
Memory card

Cannot insert a memory card.
- Insert the memory card in the correct direction.

You have formatted a memory card by mistake.
- All the data on the memory card is deleted by formatting. You cannot restore it.

Images are recorded on the internal memory even when a memory card is inserted into the camera.
- Make sure that the memory card is fully inserted into the camera.
Internal memory

Cannot play back or record images using the internal memory.
• There is a memory card inserted in the camera. Remove it.

Cannot copy the data stored in the internal memory to a memory card.
• The memory card is full. Copy to a memory card with sufficient capacity.

Cannot copy the data on the memory card or the computer to the internal memory.
• This feature is not available.
Printing

Images are printed with both edges cut off.

- Depending on your printer, all the edges of the image may be cut off. Especially when you print an image shot with the image size set to [16:9], the lateral end of the image may be cut off.

- When printing images using your printer, cancel the trimming or borderless settings. Consult the printer manufacturer as to whether the printer provides these functions or not.

- When having images printed at a digital print shop, ask the shop whether they can print the images without cutting off both edges.

Cannot print images with the date.

- Select MENU →  (Settings) →  (Shooting Settings) → [Write Date] → [On] to insert a date on the image. Make sure that once the date is inserted, you cannot remove that date from the image.

- Using “PlayMemories Home”, you can insert the date on still images that have been recorded without a date. [Details]
Others

The lens gets fogged.
- Moisture condensation has occurred. Turn off the camera and leave it for about an hour before using it.

The camera turns off with the lens portion extended.
- Insert new batteries or charged Nickel-Metal Hydride batteries (sold separately), then turn on the camera again.
- Do not attempt to force lens that has stopped moving.

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. [Details]
- The internal rechargeable backup battery has discharged. Insert batteries with enough power remaining, and set aside for 24 hours or more with the power left off.

The date or time is incorrect.
- The Area Setting is set to a different location than your current location. Change the setting by MENU → (Settings) → [Clock Settings] → [Area Setting]. [Details]
Messages

If the following messages appear, follow the instructions.

![Battery Low](image)

- The battery level is low. Insert new batteries or charged Nickel-Metal Hydride batteries (sold separately). Depending on the conditions of use or the type of battery, the indicator may flash even though there are still 5 minutes to 10 minutes of remaining battery time left.

System error. Turn on the device again.

- Turn the power off and then on again.

Internal memory error

- Turn the power off and then on again.

Reinsert the memory card.

- The inserted memory card cannot be used in the camera. [Details]
- The terminal section of the memory card is dirty.
- The memory card is damaged.

Incompatible type of memory card.

- The inserted memory card cannot be used in the camera. [Details]

Buffer overflow. Writing to the media was not completed in time.

- If you use a memory card that has been recorded and erased repeatedly, or that was formatted on a different camera, the data writing speed may be too slow. First back up any data on the card to a computer, and then reformat the card before using it. [Details]
- The writing speed of the memory card you are using is not sufficient for movie recordings. Use one of the memory cards listed below.
  - “Memory Stick PRO Duo” (Mark2) media, “Memory Stick PRO-HG Duo” media, “Memory Stick XC-HG Duo” media or “Memory Stick Micro” (Mark2) media
  - SD memory card, SDHC memory card, SDXC memory card, microSD memory card, microSDHC memory card or microSDXC memory card (Class 4 or
<table>
<thead>
<tr>
<th>Error Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cannot recognize the internal memory. Format and use again.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Cannot recognize this memory card. Format and use again.</strong></td>
<td></td>
</tr>
<tr>
<td>- Format the media again.</td>
<td>[Details]</td>
</tr>
<tr>
<td><strong>The memory card is locked. Check the tab.</strong></td>
<td></td>
</tr>
<tr>
<td>- You are using the memory card with the write-protect switch, and the switch is set to the LOCK position. Set the switch to the recording position.</td>
<td></td>
</tr>
<tr>
<td><strong>This is a read-only memory card.</strong></td>
<td></td>
</tr>
<tr>
<td>- The camera cannot record or delete images on this memory card.</td>
<td></td>
</tr>
<tr>
<td><strong>No images</strong></td>
<td></td>
</tr>
<tr>
<td>- No images that can be played back have been recorded in the internal memory.</td>
<td></td>
</tr>
<tr>
<td>- No images that can be played back have been recorded in this folder of the memory card.</td>
<td></td>
</tr>
<tr>
<td><strong>No still images</strong></td>
<td></td>
</tr>
<tr>
<td>- The selected folder or date does not contain a file that can be played back in a slideshow.</td>
<td></td>
</tr>
<tr>
<td><strong>File found which was not recognized</strong></td>
<td></td>
</tr>
<tr>
<td>- You tried to delete a folder containing a file that cannot be played on this camera. Delete the file on a computer and then delete the folder.</td>
<td></td>
</tr>
<tr>
<td><strong>Folder error. Cannot record to the selected folder. Please select a different folder.</strong></td>
<td></td>
</tr>
<tr>
<td>- A folder with the same first three digit number already exists on the memory card (for example: 123MSDCF and 123ABCDE). Select another folder [Details], or create a new folder [Details].</td>
<td></td>
</tr>
<tr>
<td><strong>Cannot create more folders</strong></td>
<td></td>
</tr>
<tr>
<td>- A folder with a name beginning with “999” exists on the memory card. You cannot create any folders if this is the case.</td>
<td></td>
</tr>
<tr>
<td><strong>Folder protected</strong></td>
<td></td>
</tr>
<tr>
<td>- You tried to delete a folder that is protected as read-only on a computer.</td>
<td></td>
</tr>
</tbody>
</table>
Cannot display file

- An error occurred while the image was playing back. No guarantees are made for playing back, on this camera, files containing images which were processed on a computer or images which were shot using other cameras.

Read only folder

- You have selected a folder that cannot be set as a recording folder on the camera. Select another folder. [Details]

File protected

- Release the protection. [Details]

Image size over limit

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

(Vibration warning indicator)

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

1280x720 (Fine) is not supported with this memory card. 1280x720 (Standard) is not supported with this memory card.

- For recording movies, it is recommended that you use a memory card of 1 GB or larger.

Turn the power off and on again

- The lens malfunction.

Maximum number of images already selected.

- Up to 100 files can be selected when using [Multiple Images].
- You can add DPOF (Print order) marks to up to 999 files.

Operation cannot be executed in unsupported files.

- Processing and other editing functions of the camera cannot be performed on image files that have been processed using a computer or images that were recorded with other cameras.

Preparing image database file. Please wait.

- The camera restores the date information, etc., in cases where images have
been deleted on a computer, etc.

- The necessary Image Database File is created after the memory card is formatted.

---

- The number of images exceeds that for which date management in a database file by the camera is possible. To register additional images in the Image Database File, delete images in [Date View].

---

- It is not possible to record to the camera’s Image Database File or play back using [Date View]. Import all of the images to the computer using “PlayMemories Home”, and format the memory card.

---

**Image Database File error. Cannot recover data.**

- Import all of the images to the computer using “PlayMemories Home”, and format the memory card. [Details]

To view the images again with the camera, export the imported images to the camera with “PlayMemories Home”.

▲ Back to top

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The camera cannot take full advantage of some features under certain circumstances.
When shooting under the following conditions, either recompose the shot or change the shooting mode, then shoot the images again.

**Low light conditions**
- Shooting panoramic images
- Tracking focus

**Overly bright conditions**
- Tracking focus

**Varying levels of brightness**
- Tracking focus

**Flickering lights**
- Shooting panoramic images

**Subjects too close to the camera**
- Shooting panoramic images

**Subjects too far from the camera**
- Shooting panoramic images

**Large moving subjects or subjects that move too quickly**
- Shooting panoramic images
- Tracking focus

**Subjects too small or too large**
- Tracking focus

**Background the same color as the subject**
- Tracking focus

**Scenes with little contrast, such as the sky or a sandy beach**
- Shooting panoramic images

**Scenes changing constantly, such as a waterfall**
- Shooting panoramic images
Precautions

- Internal memory and memory card back up
- On database files
- Do not use/store the camera in the following places
- On operating temperatures
- On moisture condensation
- On image data compatibility
- Notes on the screen and lens

Internal memory and memory card back up

Do not turn off the camera, remove the batteries, or remove the memory card while the access lamp is lit. Otherwise, the internal memory data or the memory card may be damaged. Be sure to make a backup copy to protect your data.

On database files

When you insert a memory card without a database file into the camera and turn on the power, part of the memory card capacity is used to automatically create a database file. It may take some time until you can perform the next operation. If a database file error occurs, export all images to your computer using “PlayMemories Home,” and then format the memory card using the camera.

Do not use/store the camera in the following places

- In an extremely hot, cold or humid place
  In places such as in a car parked in the sun, the camera body may become deformed and this may cause a malfunction.
- Storing under direct sunlight or near a heater
  The camera body may become discolored or deformed, and this may cause a malfunction.
- In a location subject to rocking vibration
- Near strongly 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 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 that if you attempt to shoot with moisture remaining inside the lens, you will be unable to record clear images.

On image data compatibility

- The camera conforms with DCF (Design rule for Camera File system) universal standards 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.

Notes on the screen and lens

- The screen is manufactured using extremely high-precision technology so over 99.99% of the pixels are operational for effective use. However, some tiny black and/or bright dots (white, red, blue or green) may appear on the screen. These dots are a normal result of the manufacturing process and do not affect the recording.
- Exposing the 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 screen. The screen may be discolored and that may cause a malfunction.
- Images may trail across on the screen in a cold location. This is not a malfunction.
- Be careful not to bump the movable lens, and be careful not to apply force to it.
On the internal rechargeable backup battery

This camera has an internal rechargeable battery for maintaining the date and time and other settings regardless of whether the power is on or off. This rechargeable battery is continually charged as long as you are using the camera. However, if you use the camera for only short periods, it discharges gradually, and if you do not use the camera at all for about one month it becomes completely discharged. In this case, be sure to charge this rechargeable battery before using the camera.

However, even if this rechargeable battery is not charged, you can still use the camera, but the date and time will not be indicated.

Charging method of the internal rechargeable backup battery

Insert the batteries with enough power remaining in the camera, and then leave the camera for 24 hours or more with the power off.
Batteries

On the battery

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

About the remaining battery charge

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: High</td>
<td>B: Low</td>
</tr>
</tbody>
</table>

- A remaining charge indicator appears on the screen.
- It takes about one minute until the correct remaining charge indicator appears.
- The remaining charge indicator may not be correct under certain circumstances.
- When [Power Save] is set to [Standard] or [Max], if you do not operate the camera for a certain period of time while the power is on, the screen becomes dark, then the camera turns off automatically. (Auto power-off function)

Batteries you can and cannot use with your camera

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

<table>
<thead>
<tr>
<th>Battery type</th>
<th>Supplied</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>LR6 (size AA) alkaline batteries*</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>HR 15/51: HR6 (size AA) Nickel-Metal Hydride batteries*</td>
<td>—</td>
<td>✓</td>
</tr>
<tr>
<td>Lithium batteries</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Manganese batteries</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Ni-Cd batteries</td>
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</tr>
</tbody>
</table>

* Before using batteries, read the following precaution for each type of battery.

- Nickel-Metal Hydride batteries can be charged using a battery charger (sold separately).
- As for unsupported batteries, operating performance cannot be ensured if voltage drops or other problems are caused by the nature of the battery.

### On alkaline batteries (supplied)
- Alkaline batteries cannot be recharged.
- Alkaline batteries have a shorter life compared to the Nickel-Metal Hydride batteries. For this reason, the power may turn off even though the remaining charge indicator shows sufficient battery life remaining.
- Battery performance differs greatly depending on the manufacturer and the type of battery, and in some cases the battery life may be significantly shorter. This is especially true at low temperatures, and you may not be able to shoot at temperatures below 5°C (41°F).
- Do not mix new and old batteries.
- The remaining charge indicator may not display the correct information when using alkaline batteries.
- Due to characteristics of alkaline batteries, there is a large difference between the available shooting time and the available playback time. For this reason, the camera may turn off with the lens portion extended when you change the shooting mode. In this case, replace the batteries with new ones. Using the Nickel-Metal Hydride batteries allows you to shoot for longer periods of time.

### On Nickel-Metal Hydride batteries (sold separately)
- Do not peel off the external seals or damage the batteries. Never use batteries from which the seals have been partially or completely removed, or batteries that have been split in any way. These may cause leakage, explosion, or heat-up of the battery, and personal scald or injury may be caused. These may cause a malfunction of the battery charger.
- Do not carry or store the Nickel-Metal Hydride batteries with metallic objects. Metallic objects may short the + and – ends, resulting in the risk of heating or fire.
- If the poles of the Nickel-Metal Hydride batteries are dirty, the batteries may not charge properly. Wipe them with a dry cloth, etc.
- At the time of purchase, or when the Nickel-Metal Hydride batteries have not been used for a long time, they may not charge fully. This is typical of this type of battery, and is not a malfunction. If this happens, repeatedly using up the batteries fully, and then recharging them should correct the problem.
- If you recharge Nickel-Metal Hydride batteries before fully using up the existing charge, the low battery warning may be displayed sooner than expected. This is called the “memory effect.”* If this problem occurs, charging the batteries only after using up the existing charge will correct it.

* The “memory effect” – the situation in which the capacity of the battery is temporarily lowered.
• To use up the batteries completely, put the camera in the slideshow mode and leave it that way until the batteries are used up.
• Do not mix new and used batteries.
• Do not expose the battery to water. The battery is not water-resistant.
Memory card

- Memory card
- Note on using the memory card adaptor (sold separately)
- “Memory Stick” media
- When using “Memory Stick Duo” media with standard sized “Memory Stick” media slot
- Notes on using “Memory Stick Micro” media (sold separately)

Memory card

<table>
<thead>
<tr>
<th>Memory card</th>
<th>Representation in User Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory Stick XC-HG Duo</td>
<td>“Memory Stick Duo” media</td>
</tr>
<tr>
<td>Memory Stick PRO Duo</td>
<td></td>
</tr>
<tr>
<td>Memory Stick PRO-HG Duo</td>
<td></td>
</tr>
<tr>
<td>Memory Stick Duo</td>
<td></td>
</tr>
<tr>
<td>Memory Stick Micro (M2)</td>
<td>“Memory Stick Micro” media</td>
</tr>
<tr>
<td>Memory Stick Micro (Mark2)</td>
<td></td>
</tr>
<tr>
<td>SD memory card</td>
<td></td>
</tr>
<tr>
<td>SDHC memory card</td>
<td>SD card</td>
</tr>
<tr>
<td>SDXC memory card</td>
<td></td>
</tr>
<tr>
<td>microSD memory card</td>
<td></td>
</tr>
<tr>
<td>microSDHC memory card</td>
<td>microSD memory card</td>
</tr>
<tr>
<td>microSDXC memory card</td>
<td></td>
</tr>
</tbody>
</table>

- The following products have been tested and proven to operate with your camera.
  - “Memory Stick Duo” media: up to 64 GB
  - “Memory Stick Micro” media: up to 16 GB
  - SD card: up to 64 GB
  - microSD memory card: up to 64 GB

- When recording movies, it is recommended that you use the following memory cards:
  - **Memory Stick PRO Duo** (Mark2) ("Memory Stick PRO Duo" media)
  - **Memory Stick PRO-HG Duo** ("Memory Stick PRO-HG Duo" media)
  - **Memory Stick Micro** (Mark2) ("Memory Stick Micro" media)
  - **Memory Stick XC-HG Duo** ("Memory Stick XC-HG Duo" media)
- SD card (Class 4 or faster)
- microSD memory card (Class 4 or faster)

**Notes**

- To ensure stable operation of the memory card, we recommend that you use this camera to format any memory card being used with this camera for the first time. Note that formatting will erase all data recorded on the memory card. This data cannot be restored. Be sure to back up any important data to a computer or other storage location.
- A memory card formatted with a computer is not guaranteed to operate with the camera.
- Data read/write speeds differ depending on the combination of the memory card and the equipment used.
- Data may be corrupted in the following cases:
  - When the memory card is removed or the camera is turned off during a read or write operations
  - When the memory card is used in locations subject to static electricity or electrical noise
- We recommend backing up important data.
- Do not attach a label on the memory card itself nor on a memory card adaptor.
- Do not touch the terminal section of the memory card with your hand or a metal object.
- Do not strike, bend or drop the memory card.
- Do not disassemble or modify the memory card.
- Do not expose the memory card to water.
- Do not leave the memory card within the reach of small children. They might accidentally swallow it.
- Insert a memory card that fits the memory card slot size. Otherwise, it will cause a malfunction.
- Do not use or store the memory card 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

**Note on using the memory card adaptor (sold separately)**

- When inserting a memory card into a memory card adaptor, make sure the memory card is inserted facing in the correct direction, then insert it all the way in. Incorrect insertion may result in a malfunction.
- When using “Memory Stick Micro” media or a microSD memory card, be sure to insert into the dedicated memory card adaptor.

**“Memory Stick” media**

The types of “Memory Stick Duo” media that can be used with the camera are listed in the table below. However, proper operation cannot be guaranteed for all “Memory Stick Duo” media functions.

<table>
<thead>
<tr>
<th>“Memory Stick” media type</th>
<th>Recording / Playback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory Stick XC-HG Duo</td>
<td>✓ 2 3 4</td>
</tr>
<tr>
<td>Memory Stick Duo (without MagicGate)</td>
<td>✔*1</td>
</tr>
<tr>
<td>Memory Stick Duo (with MagicGate)</td>
<td>✔*2</td>
</tr>
<tr>
<td>MagicGate Memory Stick Duo</td>
<td>✔<em>1</em>2</td>
</tr>
<tr>
<td>Memory Stick PRO Duo</td>
<td>✔<em>2</em>3</td>
</tr>
<tr>
<td>Memory Stick PRO-HG Duo</td>
<td>✔<em>2</em>3*4</td>
</tr>
<tr>
<td>Memory Stick Micro (M2)</td>
<td>✔*2</td>
</tr>
<tr>
<td>Memory Stick Micro (Mark2)</td>
<td>✔<em>2</em>3</td>
</tr>
</tbody>
</table>

*1 High-speed data transfer using a parallel interface is not supported.
*2 “Memory Stick Duo” media, “MagicGate Memory Stick Duo” media, “Memory Stick PRO Duo” media, “Memory Stick PRO-HG Duo” media, “Memory Stick XC-HG Duo” media, “Memory Stick Micro” media and “Memory Stick Micro” (Mark2) media 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 the camera.

*3 [1280x720] size movies can be recorded.
*4 This camera does not support 8-bit parallel data transfer. It performs the same 4-bit parallel data transfer as the “Memory Stick PRO Duo” media.

### When using “Memory Stick Duo” media with standard sized “Memory Stick” media slot

You can use the “Memory Stick Duo” media by inserting it into the “Memory Stick Duo” media Adaptor (sold separately).

![Memory Stick Duo Adaptor](image)

“Memory Stick Duo” media Adaptor

### Notes on using “Memory Stick Micro” media (sold separately)

- This product is compatible with “Memory Stick Micro” media (“M2”). “M2” is an abbreviation for “Memory Stick Micro” media.
- To use a “Memory Stick Micro” media with the camera, be sure to insert the “Memory Stick Micro” media into an “M2” Adaptor as large as of Duo size. If you insert a “Memory Stick Micro” media into the camera without an “M2” Adaptor as large as of Duo size, you might not be able to remove it from the camera.
- Do not leave the “Memory Stick Micro” media within the reach of small children. They might accidentally swallow it.
On cleaning

Cleaning the lens and flash
Wipe the lens and flash with a soft cloth to remove fingerprints, dust, etc.

Cleaning the flash
Clean the flash surface before use. The heat of the flash emission may cause dirt on the flash surface to start smoking or burning. Wipe the flash surface with a soft cloth to remove dirt or dust, etc.

Cleaning the camera surface
Clean the camera surface with a soft cloth slightly moistened with water, then wipe the surface with a dry cloth. To prevent damage to the finish or casing:
- Do not expose the camera to chemical products such as thinner, benzine, alcohol, disposable cloths, insect repellent, sunscreen or insecticide.
- Do not touch the camera with any of the above on your hand.
- Do not leave the camera in contact with rubber or vinyl for a long time.
Number of still images

The number of still images may vary depending on the shooting conditions and the memory card.

(Units: Images)

<table>
<thead>
<tr>
<th>Size</th>
<th>Internal memory</th>
<th>Memory card formatted with this camera</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Approx. 55 MB</td>
<td>2 GB</td>
</tr>
<tr>
<td>20M</td>
<td>5</td>
<td>265</td>
</tr>
<tr>
<td>10M</td>
<td>12</td>
<td>400</td>
</tr>
<tr>
<td>5M</td>
<td>17</td>
<td>580</td>
</tr>
<tr>
<td>VGA</td>
<td>350</td>
<td>11500</td>
</tr>
<tr>
<td>16:9(15M)</td>
<td>7</td>
<td>330</td>
</tr>
<tr>
<td>16:9(2M)</td>
<td>54</td>
<td>1800</td>
</tr>
</tbody>
</table>

Notes

- When the number of remaining shootable images is greater than 99,999, the ">99999" indicator appears.
- When an image shot with other cameras is played back on this camera, the image may not appear in the actual image size.
## Recordable time of movies

The table below shows the approximate maximum recording times. These are the total times for all movie files. The recordable time may vary depending on the shooting conditions and the memory card.

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

<table>
<thead>
<tr>
<th>Quality/Size</th>
<th>Internal memory</th>
<th>Memory card formatted with this camera</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Approx. 55 MB</td>
<td>2 GB 4 GB 8 GB 16 GB 32 GB 64 GB</td>
</tr>
<tr>
<td>1280x720(Fine)</td>
<td>—</td>
<td>25 m (15 m) 50 m (30 m) 1 h 45 m (1 h 15 m) 3 h 40 m (2 h 35 m) 7 h 20 m (5 h 15 m) 14 h 40 m (10 h 35 m)</td>
</tr>
<tr>
<td>1280x720(Standard)</td>
<td>—</td>
<td>35 m (30 m) 1 h 10 m (1 h) 2 h 20 m (2 h) 4 h 40 m (4 h 5 m) 9 h 25 m (8 h 10 m) 18 h 50 m (16 h 20 m)</td>
</tr>
<tr>
<td>VGA</td>
<td>2 m (1 m 30 s)</td>
<td>1 h 5 m (1 h) 2 h 15 m (2 h) 4 h 40 m (4 h 5 m) 9 h 20 m (8 h 10 m) 18 h 45 m (16 h 20 m) 37 h 30 m (32 h 45 m)</td>
</tr>
</tbody>
</table>

The number in ( ) is the minimum recordable time.

Continuous shooting is possible for approximately 29 minutes (limited by product specifications). For [1280x720(Fine)] size movies, continuous shooting is possible for approximately 15 minutes (limited by 2 GB file size).

### Notes
- The recordable time of movies varies because the camera is equipped with VBR (Variable Bit Rate), which automatically adjusts image quality depending on the shooting scene.
  - When you record a fast-moving subject, the image is clearer but the recordable time is shorter because more memory is required for recording.
  - The recordable time also varies depending on the shooting conditions, the subject or the image quality/size settings.
- You cannot record movies to the internal memory when the movie image size is [1280x720(Fine)] or [1280x720(Standard)].
On TV color systems

To view movies shot using this camera on a television, the camera and television must use the same color television system. Check the color TV system for the country or region where you are using the camera.

**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, Romania, 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.
License

Notes on the License

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