Use this manual if you encounter any problems, or have any questions about your product.

**How to transfer images to smartphone**

You can transfer images shot with this camera to smartphone. The application PlayMemories Mobile must be installed in advance.

**Zoom Assist**

This function helps you compose your shot by zooming out temporarily when you lose track of the subject, so that you can relocate the subject quickly.

**DSC-HX99: Accessories compatibility information**

This website provides the accessories compatibility information. (Another window will open.)

---

**Names of parts/Icons and indicators**

- [Identifying parts](#)
- Basic operations
Using the control wheel

Using the control ring

Using MENU items

Using the Fn (Function) button

How to use the Quick Navi screen

How to use the keyboard

Icons and indicators

List of icons on the screen

Switching the screen display (while shooting/during playback)

DISP Button (Monitor/Finder)

Preparing the camera

Checking the camera and the supplied items

Charging the battery pack

Inserting/removing the battery pack

Charging the battery pack while it is inserted in the camera

Charging by connecting to a computer

Battery life and number of recordable images

Supplying power from a wall outlet (wall socket)

Notes on the battery pack

Notes on charging the battery pack

Inserting a memory card (sold separately)

Inserting/removing a memory card

Memory cards that can be used

Notes on memory card

Setting language, date and time

In-Camera Guide

Shooting

Shooting still images

Focusing

Focus Mode
### Auto focus

- **Focus Area**
- **Focus Standard**
- **AF/MF control**
- **Eye AF**
- **Set. Face Ptry in AF**
- **Center Lock-on AF**
- **Pre-AF (still image)**
- **AF Illuminator (still image)**

### Manual focus

- **Manual Focus**
- **Direct manual focus (DMF)**
- **Focus Magnifier**
- **MF Assist (still image)**
- **Focus Magnif. Time**
- **Initial Focus Mag._(still image)**
- **Peaking Setting**

### Selecting a drive mode (Continuous shooting/Self-timer)

- **Drive Mode**
- **Cont. Shooting**
- **Spd Priority Cont.**
- **Self-timer**
- **Self-timer(Cont)**
- **Cont. Bracket**
- **Single Bracket**
- **Indicator during bracket shooting**
- **WB bracket**
- **DRO Bracket**
- **Bracket Settings**

**Taking pictures of yourself by monitoring the screen**
Self-portrait/-timer

Using touch functions

- Touch Operation
- Touch Panel/Pad
- Func. of Touch Oprtn: Touch Shutter
- Func. of Touch Oprtn: Touch Focus
- Touch Pad Settings

Selecting still image size/image quality

- JPEG Image Size (still image)
- JPEG Quality (still image)
- Aspect Ratio (still image)
- File Format (still image)
- Panorama: Size
- Panorama: Direction

Selecting a shooting mode

- List of mode dial function
- Intelligent Auto
- Superior Auto
- Switching the auto mode (Auto Mode)
- About Scene Recognition
- Program Auto
- Aperture Priority
- Shutter Priority
- Manual Exposure
- Sweep Panorama
- Scene Selection
- Recall (Camera Settings1/Camera Settings2)
- Movie: Exposure Mode

Controlling the exposure/metering modes

- Exposure Comp.
Exposure Set, Guide

Metering Mode

Face Prty in Mlti Mtr

AE lock

Zebra Setting

Correcting brightness and contrast automatically

- D-Range Opt. (DRO)
- Auto HDR

Selecting the ISO sensitivity

- ISO

Using the zoom

- The zoom features available with this product
- Zoom
- Zoom Setting
- About zoom scale
- Zoom Assist
- Rng. of Zoom Assist
- Zoom Speed
- Zoom Func. on Ring

White balance

- White Balance
- Priority Set in AWB
- Capturing a basic white color in [Custom Setup] mode

Setting how to process images

- Photo Creativity
- Creative Style
- Picture Effect
- Soft Skin Effect (still image)
- Auto Obj. Framing (still image)
- Color Space (still image)
Shutter settings
- Release w/o Card

Reducing blur
- SteadyShot (still image)

Noise reduction
- High ISO NR (still image)

Face detection
- Regist. Faces Priority
- Smile Shutter
- Face Registration (New Registration)
- Face Registration (Order Exchanging)
- Face Registration (Delete)

Using the flash
- Using flash
- Red Eye Reduction
- Flash Mode
- Flash Comp.

Recording movies
- Shooting movies
- Movie w/ shutter
- Movie recording formats
- File Format (movie)
- Record Setting (movie)
- Proxy Recording
- Audio Recording
- Micref Level
- Wind Noise Reduct.
- Auto Slow Shut. (movie)
- SteadyShot (movie)
- TC/UB Settings
<table>
<thead>
<tr>
<th>TC/UB Disp. Switch</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOVIE Button</td>
</tr>
<tr>
<td>Marker Display (movie)</td>
</tr>
<tr>
<td>Marker Settings (movie)</td>
</tr>
<tr>
<td>4K Output Sel. (movie)</td>
</tr>
</tbody>
</table>

## Viewing

### Viewing images
- Playing back still images
- Enlarging an image being played back (Enlarge Image)
- Rotating recorded images automatically (Display Rotation)
- Rotating an image (Rotate)
- Playing back panoramic images
- Enlarge Init. Mag.
- Enlarge Initial Pos.
- Playing back movies
- Motion Shot Video
- Motion Interval ADJ
- Volume Settings
- Photo Capture
- Playing back images on the image index screen (Image Index)
- Switching between still images and movies (View Mode)
- Disp Cont Shoot Grp
- Playing back images using slideshow (Slide Show)

## Protecting data
- Protecting images (Protect)

## Setting Rating function
- Rating
- Rating Set (Cust Key)

## Designating images for printing (DPOF)
- Specifying images to be printed (Specify Printing)
Deleting images

- Deleting a displayed image
- Deleting multiple selected images (Delete)
- Delete confirm.

Viewing images on a TV

- Viewing images on a TV using an HDMI cable

Customizing the camera

Registering frequently used functions

- Memory (Camera Settings1/Camera Settings2)

Assigning selected functions to the button

- Custom Key (still image/movie/playback)
- Function Menu Set.

Customizing MENU (My Menu)

- Add Item
- Sort Item
- Delete Item
- Delete Page
- Delete All

Checking images before/after recording

- Auto Review

Monitor/viewfinder settings

- Grid Line
- FINDER/MONITOR
- Monitor Brightness
- Viewfinder Bright.
- Finder Color Temp.
- Function for VF close
- Display Quality
- Auto Monitor OFF
- Bright Monitoring
Memory card settings

- Format
- File Number
- Set File Name
- Display Media Info.
- Select REC Folder
- New Folder
- Folder Name
- Recover Image DB

Camera settings

- Audio signals
- Write Date (still image)
- Tile Menu
- Mode Dial Guide
- Pwr Save Start Time
- Auto Pwr OFF Temp.
- NTSC/PAL Selector
- HDMI Settings: HDMI Resolution
  - HDMI Settings: 24p/60p Output (movie) (Only for 1080 60i compatible models)
- HDMI Settings: HDMI Info. Display
- HDMI Settings: TC Output (movie)
- HDMI Settings: REC Control (movie)
- HDMI Settings: CTRL FOR HDMI
- HDMI Settings: HDMI Audio Out. (movie)

USB Connection
- USB LUN Setting
- USB Power Supply

PC Remote Settings: Still Img. Save Dest.
- PC Remote Settings: RAW+J PC Save Img
- Language
Date/Time Setup
Area Setting
Version
Demo Mode

Initializing the camera
Setting Reset

Using network functions

Connecting this product and a Smartphone
- PlayMemories Mobile
- Controlling the camera using an Android smartphone (NFC One-touch remote)
- Controlling the camera using an Android smartphone (QR Code)
- Controlling the camera using an Android smartphone (SSID)
- Controlling the camera using an iPhone or iPad (QR Code)
- Controlling the camera using an iPhone or iPad (SSID)

Transferring images to a Smartphone
- Snd to Smrtphn Func: Send to Smartphone
- Snd to Smrtphn Func: Sending Target (proxy movies)
- Sending images to an Android smartphone (NFC One-touch Sharing)

Transferring images to a computer
- Send to Computer

Transferring images to a TV
- View on TV

Reading location information from a smartphone
- Loc. Info. Link Set.

Changing the network settings
- Airplane Mode
- Wi-Fi Settings: WPS Push
- Wi-Fi Settings: Access Point Set
- Wi-Fi Settings: Disp MAC Address
- Wi-Fi Settings: SSID/PW Reset
Using a computer

Recommended computer environment

Software for Mac computers

Importing images for use on a computer
  - PlayMemories Home
  - Installing PlayMemories Home
  - Connecting to a computer
  - Importing images to the computer without using PlayMemories Home
  - Disconnecting the camera from the computer

Developing RAW images/Remote shooting (Imaging Edge)
  - Imaging Edge

Creating a movie disc
  - Selecting a disc to be created
  - Creating Blu-ray Discs from high-definition image quality movies
  - Creating DVD discs (AVCHD recording discs) from high-definition image quality movies
  - Creating DVD discs from standard image quality movies

List of MENU items

Using MENU items

Camera Settings1
  - File Format (still image)
  - JPEG Quality (still image)
  - JPEG Image Size (still image)
  - Aspect Ratio (still image)
  - Panorama: Size
  - Panorama: Direction
  - High ISO NR (still image)
  - Color Space (still image)
  - Switching the auto mode (Auto Mode)
- Scene Selection
- Drive Mode
- Bracket Settings
- Memory (Camera Settings1/Camera Settings2)
- Focus Mode
- Focus Area
- AF Illuminator (still image)
- Center Lock-on AF
- Set. Face Prty. in AF
- Pre-AF (still image)
- Exposure Comp.
- ISO
- Metering Mode
- Face Prty. in Mlti Mtr
- Flash Mode
- Flash Comp.
- Red Eye Reduction
- White Balance
- Priority Set in AWB
- D-Range Opt. (DRO)
- Auto HDR
- Creative Style
- Picture Effect
- Soft Skin Effect (still image)
- Focus Magnifier
- Focus Magnif. Time
- Initial Focus Mag. (still image)
- MF Assist (still image)
- Peaking Setting
- Face Registration (New Registration)
<table>
<thead>
<tr>
<th>Face Registration (Order Exchanging)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face Registration (Delete)</td>
</tr>
<tr>
<td>Regist. Faces Priority</td>
</tr>
<tr>
<td>Smile Shutter</td>
</tr>
<tr>
<td>Auto Obj. Framing (still image)</td>
</tr>
<tr>
<td>Self-portrait/-timer</td>
</tr>
</tbody>
</table>

**Camera Settings2**

<table>
<thead>
<tr>
<th>Movie: Exposure Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Format (movie)</td>
</tr>
<tr>
<td>Record Setting (movie)</td>
</tr>
<tr>
<td>Proxy Recording</td>
</tr>
<tr>
<td>Auto Slow Shut. (movie)</td>
</tr>
<tr>
<td>Audio Recording</td>
</tr>
<tr>
<td>Micref Level</td>
</tr>
<tr>
<td>Wind Noise Reduct.</td>
</tr>
<tr>
<td>SteadyShot (movie)</td>
</tr>
<tr>
<td>Marker Display (movie)</td>
</tr>
<tr>
<td>Marker Settings (movie)</td>
</tr>
<tr>
<td>Movie w/ shutter</td>
</tr>
<tr>
<td>Release w/o Card</td>
</tr>
<tr>
<td>SteadyShot (still image)</td>
</tr>
<tr>
<td>Rng. of Zoom Assist</td>
</tr>
<tr>
<td>Zoom Setting</td>
</tr>
<tr>
<td>Zoom Speed</td>
</tr>
<tr>
<td>Zoom Func. on Ring</td>
</tr>
<tr>
<td>DISP Button (Monitor/Finder)</td>
</tr>
<tr>
<td>FINDER/MONITOR</td>
</tr>
<tr>
<td>Zebra Setting</td>
</tr>
<tr>
<td>Grid Line</td>
</tr>
<tr>
<td>Exposure Set. Guide</td>
</tr>
</tbody>
</table>
Auto Review

Custom Key (still image/movie/playback)

Function Menu Set

Func. of Touch Oprtn: Touch Shutter

Func. of Touch Oprtn: Touch Focus

MOVIE Button

Audio signals

Write Date (still image)

Network

Snd to Smrtphn Func: Send to Smartphone

Snd to Smrtphn Func: Sending Target (proxy movies)

Send to Computer

View on TV

Ctrl w/ Smartphone

Airplane Mode

Wi-Fi Settings: WPS Push

Wi-Fi Settings: Access Point Set

Wi-Fi Settings: Disp MAC Address

Wi-Fi Settings: SSID/PW Reset

Bluetooth Settings

Loc. Info. Link Set

Edit Device Name

Reset Network Set

Playback

Protecting images (Protect)

Rotating an image (Rotate)

Deleting multiple selected images (Delete)

Rating

Rating Set(Cust Key)

Specifying images to be printed (Specify Printing)
Photo Capture

- Enlarging an image being played back (Enlarge Image)
- Enlarge Init. Mag.
- Enlarge Initial Pos.
- Motion Interval ADJ

Playing back images using slideshow (Slide Show)

- Playing back images on the image index screen (Image Index)
- Disp Cont Shoot Grp

Rotating recorded images automatically (Display Rotation)

Setup

- Monitor Brightness
- Viewfinder Bright.
- Finder Color Temp.
- Volume Settings
- Tile Menu
- Mode Dial Guide
- Delete confirm.
- Display Quality
- Auto Monitor OFF
- Pwr Save Start Time
- Function for VF close
- NTSC/PAL Selector
- Auto Pwr OFF Temp.
- Touch Operation
- Touch Panel/Pad
- Touch Pad Settings
- Demo Mode
- TC/UB Settings
- HDMI Settings: HDMI Resolution
<table>
<thead>
<tr>
<th>Precautions/This product</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Precautions</strong></td>
</tr>
<tr>
<td><strong>On cleaning</strong></td>
</tr>
<tr>
<td><strong>Number of recordable images</strong></td>
</tr>
<tr>
<td><strong>Recordable movie times</strong></td>
</tr>
<tr>
<td><strong>Using the AC Adaptor/battery charger abroad</strong></td>
</tr>
<tr>
<td><strong>AVCHD format</strong></td>
</tr>
<tr>
<td><strong>License</strong></td>
</tr>
<tr>
<td><strong>Specifications</strong></td>
</tr>
<tr>
<td><strong>Trademarks</strong></td>
</tr>
<tr>
<td><strong>If you have problems</strong></td>
</tr>
<tr>
<td><strong>Troubleshooting</strong></td>
</tr>
<tr>
<td><strong>Self-diagnosis display</strong></td>
</tr>
<tr>
<td><strong>Warning messages</strong></td>
</tr>
</tbody>
</table>
Identifying parts

1. ON/OFF (Power) button
2. Shutter button
3. Mode dial
4. For shooting: W/T (zoom) lever
   For viewing: (Index) lever/Playback zoom lever
5. Self-timer lamp/AF illuminator
6. Flash
   - Do not cover the flash with your finger.
   - If not using the flash, press it down manually.
7. Diopter-adjustment lever
   - Move the diopter-adjustment lever until the image is clear in the viewfinder.
8. Viewfinder
   - When you look into the viewfinder, the viewfinder mode is activated, and when you take your face away from the viewfinder, the viewing mode returns to the monitor mode.
9. Viewfinder pop-up switch
10. (N mark)
    - Align this mark when you connect the camera to a smartphone with an NFC function. For details, refer to the operating instructions supplied with your smartphone.
    - NFC (Near Field Communication) is an international standard of the short-range wireless communication technology.
11. Control ring
12. Lens
1. Microphone

2. Flash (Flash pop-up) switch
   - When using the flash, slide the Flash (Flash pop-up) switch.

3. Monitor
   (For touch operation: Touch panel/Touch pad)
   - When shooting from low angles or shooting self-portraits, adjust the monitor angle.

4. Eye sensor

5. For shooting: Fn (Function) button
   For viewing: (Send to Smartphone) button

6. MOVIE (Movie) button

7. MENU button

8. Charge lamp

9. Multi/Micro USB Terminal
   - This terminal supports Micro USB-compatible devices.

10. Wi-Fi/Bluetooth antenna (built-in)

11. Hook for strap
   - Attach the wrist strap and place your hand through the loop to prevent damage caused by dropping the product.
When using the viewfinder

1. Slide down the viewfinder pop-up switch (A).

- If you slide the viewfinder pop-up switch when the power is off, the camera turns on.
- To choose whether or not to turn the camera off when the viewfinder is stowed, select MENU → (Setup) → [Function for VF close].

2. Grasp both sides of the eyepiece (B) and pull it towards the monitor side until it clicks.
3. Adjust the diopter-adjustment lever to your eyesight until the display appears clearly in the viewfinder.

To store the viewfinder
Grasp both sides of the eyepiece and push it back into the viewfinder until it clicks. Then push down the viewfinder.

Note
- Be careful not to push down on the viewfinder when it is being raised.
- Be sure that the eyepiece is stored in the viewfinder unit before attempting to push down the viewfinder. If it is not stored and you try to force the viewfinder down, a malfunction may result.
Using the control wheel

- You can select setting items by turning or pressing the top/bottom/left/right side of the control wheel. Your selection is determined when you press the center of the control wheel.
- The DISP (Display Setting), 📸 (Exposure Comp./Photo Creativity), 📷 / 📡 (Drive Mode), and 🔌 (Flash Mode) functions are assigned to the top/bottom/left/right side of the control wheel. In addition, you can assign selected functions to the left/right side and the center of the control wheel.
- During playback, you can display the next/previous image by pressing the right/left side of the control wheel or by turning the control wheel.

Related Topic
- Focus Standard
- Custom Key (still image/movie/playback)
Using the control ring

By turning the control ring (A), you can change the desired settings instantly for various shooting modes. You can also allocate frequently used functions to the control ring by selecting MENU → 2 (Camera Settings2) → [Custom Key] or [Custom Key] → [Control Ring].

Icons and function names are displayed on the screen as follows.

Ex. : Adjust zoom by turning the control ring.
Using MENU items

You can change settings related to all the camera operations including shooting, playback, and operating method. You can also execute camera functions from the MENU.

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

Select the desired setting you want to adjust using the top/bottom/left/right sides of the control wheel or by turning the control wheel, and then press the center of the control wheel.

- Select an icon at the top of the screen (A) and press the left/right side of the control wheel to move to another MENU item.
- You can go back to the previous screen by pressing the MENU button (B).

3. Select the desired setting value, and press the center to confirm your selection.

Related Topic
- Tile Menu
- Add Item
Using the Fn (Function) button

You can register frequently used functions to the Fn (Function) button and recall them while shooting. Up to 12 frequently used functions can be registered to the Fn (Function) button.

1. Press the DISP on the control wheel repeatedly to display a screen mode other than [For viewfinder], and then press the Fn (Function) button.

2. Select the desired function by pressing the top/bottom/left/right side of the control wheel.

3. Select the desired setting by turning the control wheel, and press the center of the control wheel.

- Some functions can be fine-tuned using the control ring.
To adjust settings from the dedicated setting screens
Select the desired function in step 2, then press the center of the control wheel. The dedicated setting screen for the function will appear. Follow the operating guide (A) to adjust settings.

Related Topic
- Function Menu Set.
How to use the Quick Navi screen

The Quick Navi screen is a function optimized for shooting with the viewfinder, that lets you control settings directly.

1. MENU → 📷 (Camera Settings2) → [DISP Button] → [Monitor].
2. Place a ✓ mark on [For viewfinder] and then select [Enter].
3. Press the DISP on the control wheel to set the screen mode to [For viewfinder].
4. Press the Fn button to switch to the Quick Navi screen.
   - The displayed contents and their positions in the illustrations are just guidelines, and may differ from the actual displays.

**Auto mode/Scene Selection mode**

**P/A/S/M/Sweep Panorama mode**

5. Select the desired function by pressing the top/bottom/left/right side of the control wheel.
6. Turn the control wheel to select the desired setting.

**To adjust settings from the dedicated setting screens**

Select the desired function in step 5, then press the center of the control wheel. The dedicated setting screen for the function will appear. Follow the operating guide (A) to adjust settings.
Note
- Items that are gray on the Quick Navi screen are not adjustable.
- When using [Creative Style], some of the setup tasks can only be accomplished on a dedicated screen.

Related Topic
- Switching the screen display (while shooting/during playback)
How to use the keyboard

When manual character entry is required, a keyboard is displayed on the screen.

Move the cursor on desired key using the control wheel, then press the center to enter.

1. **Input box**  
   The characters you entered are displayed.

2. **Switch character types**  
   Each time you press this key, the character type will switch between alphabet letters, numerals and symbols.

3. **Keyboard**  
   Each time you press this key, the characters corresponding to that key will be displayed one-by-one in order.

   **For example: If you want to enter “abd”**

   Press the key for “abc” once to display “a” → select “” → press the key for “abc” twice to display “b” → press the key for “def” once to display “d.”

4. **Finalize**  
   Finalizes the entered characters.

5. **Move cursor**  
   Moves the cursor in the input box to the right or left.

6. **Delete**  
   Deletes the character preceding the cursor.

7.  
   Switches the next character to a capital or lowercase letter.

8.  
   Enters a space.

   To cancel input, select [Cancel].

---

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List of icons on the screen

The displayed contents and their positions shown below are just a guideline, and may differ from the actual display.

Icons on the shooting screen

Monitor mode

1. Shooting mode/Scene recognition

Shooting mode

1. 2

Register number

Scene Recognition icons

Scene Selection

2. Camera settings

Memory card status

100

Remaining number of recordable images

Writing data / Number of images left to write

Aspect ratio of still images
18M / 16M / 13M / 10M / 8.9M / 7.5M / 5.0M / 4.5M / 3.7M / 2.1M / VGA

Image size of still images

RAW
RAW recording

X.FINE FINE STD
JPEG Quality

XAVC S 4K XAVC S HD AVCHD
File format of movies

Record setting of movies

120p 100p 60p 50p 60i 50i 30p 25p 24p

Frame rate of movies

Proxy Recording

Flash charge in progress

AF Illuminator

SteadyShot Off/On, Camera shake warning

Smart Zoom/ Clear Image Zoom/Digital Zoom

PC Remote

Bright Monitoring

Overlay icon

No audio recording of movies

Micref Level Low

Wind Noise Reduct.

Touch Shutter

Focus Cancel

Lock-on AF Cancel

Spot Focus

Performing Spot Focus

NFC active

Bluetooth connection available / Bluetooth connection unavailable

Connected to smartphone / Not connected to smartphone

Obtaining location information / Location information cannot be obtained

Airplane Mode
Overheating warning

20 sec
Remaining recordable time when overheating warning is displayed

Database file full / Database file error

3. Battery

Remaining battery

Remaining battery warning

USB power supply

4. Shooting settings

Drive Mode

Flash Mode/Red Eye Reduction

±0.0
Flash Comp.

AF-S AF-C DMF MF
Focus Mode

Focus Area

JPEG RAW RAW+J
File Format

Metering Mode

AWB AWB AWB AWB 7500K A5 G5
White Balance (Auto, Preset, Custom, Color temperature, Color filter)

D-Range Opt. /Auto HDR

Creative Style /Contrast, saturation, and sharpness

Smile detection sensitivity indicator

Picture Effect

Face Priority in AF

Soft Skin Effect

5. Focus indicator/exposure settings

Focus indicator

1/250
Shutter speed

F3.5
Aperture value

Exposure compensation/Metered Manual
ISO400
ISO AUTO
ISO sensitivity

AE lock

6. Guides/other
   - Lock-on AF
   - Lock-on AF Cancel
   - Select Focus Point On/Off
   - Focus Cancel
   - Switch Av/Tv

Bracket indicator

Spot metering area
C:32:00
Self-diagnosis display

Exposure Setting Guide

Shutter speed indicator
Aperture indicator

Histogram

Digital level gauge

STBY REC
Movie recording standby/Movie recording in progress
0:12
Movie recording time (minutes: seconds)

Control ring function

Control wheel function

REC Control
00:00:00:00
Time code (hours: minutes: seconds: frames)
00 00 00 00
User Bit

Icons on the playback screen

Single-image playback
1. **Basic information**
   - View Mode
   - Rating
   - Protect
   - DPOF
   - DPOF set
   - Auto object framing image
   - 3/7
   - File number/Number of images in the view mode
   - NFC active
   - Remaining battery
   - Continuous shooting group
   - Proxy movie included

2. **Camera settings**
   Refer to “Icons on the shooting screen.”

3. **Shooting settings**
   - Picture Effect error
   - Auto HDR error

   Refer to “Icons on the shooting screen” for other icons displayed in this area.

4. **Image information**
90°44'55"N
233°44'55"W
Latitude/longitude information

2018-1-1 10:37PM
Date of recording

100-0003
Folder number - file number

Histogram (Luminance/R/G/B)
Switching the screen display (while shooting/during playback)

You can change the display contents on the screen.

1. Press the DISP (Display Setting) button.
   - To switch the information displayed on the viewfinder, press the DISP button while looking into the viewfinder.
   - Each time you press the DISP button, the screen display changes.
   - The displayed contents and their position are just a guideline, and may differ from the actual display.

During shooting (Monitor)
Display All Info. → No Disp. Info. → Histogram → Level → For viewfinder → Display All Info.

During shooting (Viewfinder)
Level → No Disp. Info. → Histogram → Level

During playback (Monitor/Viewfinder)
A histogram shows the luminance distribution, displaying how many pixels there are by luminance. It shows darker toward the left and brighter toward the right. The histogram changes depending on the exposure compensation. A peak at the right or left end of the histogram indicates that the image has an overexposed or underexposed area, respectively. You cannot correct such defects using a computer after shooting. Perform exposure compensation before shooting as necessary.

Note
- The viewfinder display and the monitor display for shooting can be set separately. Look through the viewfinder to set the display settings for the viewfinder.
- [Histogram] is not displayed during panorama shooting.
- The information in the histogram display does not indicate the final photograph. It is information about image displayed on the screen. The final result depends on the aperture value, etc.
- The histogram display is extremely different between shooting and playback in the following cases:
  - When the flash is used
  - When shooting a low luminance subject such as a night scene
- In movie mode, [For viewfinder] cannot be displayed.

Hint

If the image has an overexposed or underexposed area, the corresponding section will blink on the histogram display (overexposed/underexposed warning).
- The settings for playback are also applied in [Auto Review].
The following are not displayed in the default settings.
— Graphic Display
— Monitor Off
— Display All Info. (when using the viewfinder)

To change the display modes that are switched when you press the DISP button, select MENU → (Camera Settings2) → [DISP Button] and change the setting.

Related Topic
- DISP Button (Monitor/Finder)
**DISP Button (Monitor/Finder)**

Allows you to set the screen display modes that can be selected using DISP (Display Setting) in shooting mode.

1. **MENU → 2 (Camera Settings2) → [DISP Button] → [Monitor] or [Finder] → desired setting → [Enter].**

   The items marked with ✔ are available.

**Menu item details**

**Graphic Display:**
Shows basic shooting information. Graphically shows the shutter speed and aperture value.

**Display All Info.:**
Shows recording information.

**No Disp. Info.:**
Does not show recording information.

**Histogram:**
Displays the luminance distribution graphically.

**Level:**
Indicates whether the product is level in both the front-back (A) and horizontal (B) directions. When the product is level in either direction, the indicator turns to green.

For viewfinder*:
Displays only shooting information on the monitor, not the subject. This setting is a display setting for shooting with the viewfinder.

Monitor Off*:
Always turns the monitor off when shooting images. You can use the monitor when playing back images or operating MENU. This setting is a display setting for shooting with the viewfinder.

* These screen modes are available only in the setting for [Monitor].

**Note**

- If you tilt the product forward or backward by a large degree, the level error will be great.
- The product may have a margin of error of almost ±1° even when the inclination is corrected by the level.
Related Topic

- Switching the screen display (while shooting/during playback)
Checking the camera and the supplied items

The number in parentheses indicates the number of pieces.

- Camera (1)
- Power cord (mains lead) (1)
  (supplied in some countries/regions)

- Rechargeable Battery Pack NP-BX1 (1)

- Micro USB cable (1)

- AC Adaptor (1)
  The type of the AC Adaptor may differ depending on the country/region.

- Wrist strap (1)

- Startup Guide (1)
- Reference Guide (1)
Inserting/removing the battery pack

1. Open the battery/memory card cover.

2. Insert the battery pack while pressing the lock lever (A) with the tip of the battery until the battery locks into place.

3. Close the cover.
To remove the battery pack

Make sure that the access lamp is not lit, and turn off the camera. Then, slide the lock lever (A) and remove the battery pack. Be careful not to drop the battery pack.
Charging the battery pack while it is inserted in the camera

1 Turn the power off.

2 Connect the camera with the battery pack inserted to the AC Adaptor (supplied) using the micro USB cable (supplied), and connect the AC Adaptor to the wall outlet (wall socket).

Charge lamp on the camera (A) (orange)
Lit: Charging
Off: Charging finished
Flashing: Charging error or charging paused temporarily because the camera is not within the proper temperature range

- Charging time (Full charge): The charging time is approximately 230 min.
- The above charging time applies when charging a fully depleted battery pack at a temperature of 25 °C (77 °F). Charging may take longer depending on conditions of use and circumstances.
- The charge lamp turns off when charging is completed.
- If the charge lamp lights up and then immediately turns off, the battery pack is fully charged.

Note
- If the charge lamp flashes when the battery pack is not fully charged, remove the battery pack or disconnect the USB cable from the camera and then re-insert it to recharge.
- If the charge lamp on the camera flashes when the AC Adaptor is connected to the wall outlet (wall socket), this indicates that charging is temporarily stopped because the temperature is outside the recommended range. When the temperature gets back within the appropriate range, the charging resumes. We recommend charging the battery pack at an ambient temperature of between 10°C to 30°C (50°F to 86°F).
- Use a nearby wall outlet (wall socket) when using the AC Adaptor/Battery Charger. If any malfunction occurs, disconnect the plug from the wall outlet (wall socket) immediately to disconnect from the power source.
- If you use the product with a charge lamp, note that the product is not disconnected from the power source even when the lamp turns off.
- If you turn on the camera, power will be supplied from the wall outlet (wall socket) and you will be able to operate the camera. However, the battery pack will not be charged.
- When you use a completely new battery pack or a battery pack that has not been used for a long time, the charge lamp may flash quickly when the battery is charged. If this happens, remove the battery pack or disconnect the USB cable from the camera and then re-insert it to recharge.
- Do not continuously or repeatedly charge the battery pack without using it if it is already fully charged or close to fully charged. Doing so may cause a deterioration in battery performance.
- When charging is finished, disconnect the AC Adaptor from the wall outlet (wall socket).
Be sure to use only genuine Sony brand battery packs, micro USB cables (supplied) and AC Adaptors (supplied).

Related Topic
- Notes on the battery pack
- Notes on charging the battery pack
- Using the AC Adaptor/battery charger abroad
Charging by connecting to a computer

The battery pack can be charged by connecting the camera to a computer using a micro USB cable.

1 Turn off the product, and connect to the USB terminal of the computer.

Note

- If the product is connected to a laptop computer that is not connected to a power source, the laptop battery level decreases. Do not leave the product connected to a laptop computer for an extended period of time.

- Do not turn on/off or restart the computer, or wake the computer from sleep mode when a USB connection has been established between the computer and the camera. Doing so may cause a malfunction. Before turning on/off or restarting the computer, or waking the computer from sleep mode, disconnect the camera from the computer.

- Proper operation cannot be guaranteed on all types of computers.

- Charging cannot be guaranteed with a custom-built computer, modified computer, or a computer connected through a USB hub.

- The camera may not operate correctly when other USB devices are used at the same time.

Related Topic

- Notes on the battery pack
- Notes on charging the battery pack
Battery life and number of recordable images

<table>
<thead>
<tr>
<th>Shooting (still images)</th>
<th>Battery life</th>
<th>Number of images</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screen mode</td>
<td>—</td>
<td>Approx. 370</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Approx. 460 (Auto Monitor OFF (2 Sec))</td>
</tr>
<tr>
<td>Viewfinder mode</td>
<td>—</td>
<td>Approx. 300</td>
</tr>
</tbody>
</table>

| Actual shooting (movies) | Screen mode | — | — |
|                         | Viewfinder mode | — | — |

| Continuous shooting (movies) | Screen mode | — | — |
|                             | Viewfinder mode | — | — |

### Note
- The above estimates for battery life and number of recordable images apply when the battery pack has been fully charged. The battery life and number of images may decrease depending on the conditions of use.
- The battery life and number of recordable images are estimates based on shooting with the default settings under the following conditions:
  - Using the battery pack at an ambient temperature of 25°C (77°F).
  - Using a Sony microSDXC memory card (UHS-I U3) (sold separately)
- The numbers for “Shooting (still images)” are based on the CIPA standard and shooting under the following conditions:
  (CIPA: Camera & Imaging Products Association)
  - One picture is taken every 30 seconds.
  - The power is turned on and off once every ten times.
  - The flash strobes once for every two pictures.
  - The zoom is switched alternately between the W and T ends.
- The number of minutes for movie shooting is based on the CIPA standard and shooting under the following conditions:
  - The image quality is set to XAVC S HD 60p 50M /50p 50M.
  - Actual shooting (movies): Battery life based on repeated shooting, zooming, shooting stand-by, turning on/off, etc.
  - Continuous shooting (movies): Battery life based on non-stop shooting until the limit (29 minutes) has been reached, and then continued by pressing the MOVIE (Movie) button again. Other functions, such as zooming, are not operated.
Supplying power from a wall outlet (wall socket)

Use the supplied AC adaptor to shoot and play back images while power is supplied from a wall outlet (wall socket). This conserves the camera's battery power.

1 Insert the battery pack into the camera.

2 Connect the camera to the wall outlet (wall socket) with a micro USB cable (supplied) and an AC adaptor (supplied).

Note

- The camera will not activate if there is no remaining battery. Insert a sufficiently charged battery pack into the camera.

- If you use the camera while power is being supplied from a wall outlet (wall socket), make sure that the icon that shows that powering via USB is in progress ( 插入 ) is displayed on the monitor.

- Do not remove the battery pack while power is supplied from a wall outlet (wall socket). If you remove the battery pack, the camera will be turned off.

- Do not remove the battery pack while the access lamp is lit. The data in the memory card may be damaged.

- As long as the power is on, the battery pack will not be charged even if the camera is connected to the AC Adaptor.

- Under certain conditions, power may be supplied from the battery pack supplementarily even if you are using the AC adaptor.

- Do not remove the Micro USB cable while power is supplied from a wall outlet (wall socket). Before you remove the Micro USB cable, turn off the camera.

- Depending on the camera and battery temperature, the continuous recording time may be shortened while power is supplied from a wall outlet (wall socket).

- When using a mobile charger as a power source, confirm that it is fully charged before use. Also, be careful of the remaining power on the mobile charger during use.
Notes on the battery pack

Notes on using the battery pack

- Be sure to use only battery packs specified for this product.
- The correct remaining battery indicator may not be displayed under some operating or environmental conditions.
- Do not expose the battery pack to water. The battery pack is not water-resistant.
- Do not leave the battery pack in extremely hot places, such as in a car or under direct sunlight.

Charging the battery pack

- Charge the battery pack (supplied) before using the product for the first time.
- The charged battery pack will discharge little by little even if you do not use it. Charge the battery pack each time before you use the product so that you do not miss any opportunities to shoot images.
- Do not charge battery packs except battery packs specified for this product. Doing so can result in leaks, overheating, explosions, electric shocks, burns, or injuries.
- If the charge lamp flashes when the battery pack is not fully charged, remove the battery pack or disconnect the USB cable from the camera and then reinsert it to recharge.
- We recommend charging the battery pack in an ambient temperature of between 10 °C and 30 °C (50 °F and 86 °F). The battery pack may not be effectively charged in temperatures outside this range.
- When you connect this product and a laptop computer that is not connected to a power source, the laptop’s battery charge may decrease. Do not charge this product using the laptop computer for too long.
- Do not turn on/restart a computer, wake a computer from sleep mode, or turn off a computer while this product is connected to the computer via USB cable. Doing so may cause a malfunction of this product. Disconnect the product and the computer before performing the above operations.
- We do not guarantee charging if you are using a self-built or modified computer.
- When charging is finished, disconnect the AC Adaptor from the wall outlet (wall socket) or disconnect the USB cable from the camera. Not doing so may result in a shorter battery life.

Remaining battery indicator

- The remaining battery indicator appears on the screen.

![Battery Indicator]

A: Battery level high
B: Battery exhausted

- It takes about one minute for the correct remaining battery indicator to appear.
- The correct remaining battery indicator may not be displayed under some operating or environmental conditions.
- If you do not operate the product for a certain period of time while the power is on, the product turns off automatically (Auto power-off function).
- If the remaining battery indicator does not appear on the screen, press the DISP (Display Setting) button to display it.

Charging time (Full charge)

The charging time is approximately 230 minutes using the AC adaptor (supplied).
The above charging time applies when charging a fully depleted battery pack at a temperature of 25 °C (77 °F). Charging may take longer depending on conditions of use and circumstances.

Effective use of the battery pack
Battery performance decreases in low temperature environments. So in cold places, the operational time of the battery pack is shorter. To ensure longer battery use, we recommend putting the battery pack in your pocket close to your body to warm it up, and insert it in the product immediately before you start shooting. If there are any metal objects such as keys in your pocket, be careful of causing a short-circuit.

- The battery pack will run down quickly if you use the flash or continuous shooting function frequently, turn the power on/off frequently, or set the monitor very bright.
- We recommend preparing spare battery packs and taking trial shots before taking the actual shots.
- If the battery terminal is dirty, you may not be able to turn on the product or the battery pack may not be properly charged. In that case, clean the battery by lightly wiping off any dust using a soft cloth or a cotton swab.

### How to store the battery pack

To maintain the battery pack's function, charge the battery pack and then fully discharge it in the camera at least once a year before storing it. Store the battery in a cool, dry place after removing it from the camera.

### On battery life

- The battery life is limited. If you use the same battery repeatedly, or use the same battery for a long period, the battery capacity decreases gradually. If the available time of the battery is shortened significantly, it is probably time to replace the battery pack with a new one.
- The battery life varies according to how the battery pack is stored and the operating conditions and environment in which each battery pack is used.
Notes on charging the battery pack

- The supplied AC Adaptor is dedicated to this product. Do not connect with other electronic devices. Doing so may cause a malfunction.
- Make sure to use a genuine Sony AC Adaptor.
- If the product's charge lamp flashes while charging, remove the battery pack being charged, and then insert the same battery pack firmly back into the product. If the charge lamp flashes again, this may indicate a faulty battery or that a battery pack other than the specified type has been inserted. Check that the battery pack is the specified type. If the battery pack is the specified type, remove the battery pack, replace it with a new or different one and check that the newly inserted battery is charging correctly. If the newly inserted battery is charging correctly, the previously inserted battery may be faulty.
- If the charge lamp flashes even if the AC Adaptor is connected to the product and the wall outlet (wall socket), this indicates that charging has stopped temporarily and is on standby. Charging stops and enters standby status automatically when the temperature is outside of the recommended operating temperature. When the temperature returns to the appropriate range, charging resumes and the charge lamp lights up again. We recommend charging the battery pack in an ambient temperature of between 10°C to 30°C (50°F to 86°F).
Inserting/removing a memory card

Explains how to insert a memory card (sold separately) to the product.

1 **Open the battery/memory card cover.**

![Diagram of battery/memory card cover](image)

2 **Insert the memory card.**

![Diagram of inserting memory card](image)

- **microSD memory card/microSDHC memory card/microSDXC memory card:** Insert the card straight with the terminal side facing the monitor side of the camera as illustrated (A).

- **Memory Stick Micro:** Insert the card with the terminal side facing the lens side of the camera as illustrated (B).

3 **Close the cover.**
Hint

When you use a memory card with the camera for the first time, it is recommended that you format the card on the camera for more stable performance of the memory card.

To remove the memory card

Open the memory card cover and make sure that the access lamp (A) is not lit, then push in the memory card lightly once to remove it.

Related Topic

- Memory cards that can be used
- Notes on memory card
- Format
Memory cards that can be used

SD memory cards

<table>
<thead>
<tr>
<th>Recording format</th>
<th>Supported memory card</th>
</tr>
</thead>
<tbody>
<tr>
<td>Still image</td>
<td>microSD/microSDHC/microSDXC card</td>
</tr>
<tr>
<td>AVCHD</td>
<td>microSD/microSDHC/microSDXC card (Class 4 or faster, or U1 or faster)</td>
</tr>
<tr>
<td>XAVC S</td>
<td></td>
</tr>
<tr>
<td>4K 60Mbps*</td>
<td>microSDHC/microSDXC card (Class 10, or U1 or faster)</td>
</tr>
<tr>
<td>HD 50Mbps or lower*</td>
<td></td>
</tr>
<tr>
<td>HD 60Mbps</td>
<td></td>
</tr>
<tr>
<td>4K 100Mbps*</td>
<td>microSDHC/microSDXC card (U3)</td>
</tr>
<tr>
<td>HD 100Mbps</td>
<td></td>
</tr>
</tbody>
</table>

* Including when recording proxy movies at the same time

Memory Stick media

<table>
<thead>
<tr>
<th>Recording format</th>
<th>Supported memory card</th>
</tr>
</thead>
<tbody>
<tr>
<td>Still image</td>
<td>Memory Stick Micro (Mark2)</td>
</tr>
<tr>
<td>AVCHD</td>
<td></td>
</tr>
<tr>
<td>XAVC S</td>
<td></td>
</tr>
<tr>
<td>4K 60Mbps*</td>
<td></td>
</tr>
<tr>
<td>HD 50Mbps or lower*</td>
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<td></td>
</tr>
<tr>
<td>HD 100Mbps</td>
<td></td>
</tr>
</tbody>
</table>

* Including when recording proxy movies at the same time

Note

- When an microSDHC memory card is used to record an XAVC S movie over extended periods of time, the recorded movies will be divided into files 4 GB in size. The divided files can be handled as a single file by importing them to a computer using PlayMemories Home.
- Fully charge the battery pack before attempting to recover the database files on the memory card.

Related Topic

- Notes on memory card
- Number of recordable images
- Recordable movie times
Notes on memory card

- If you repeatedly shoot and delete images for a long time, fragmentation of data in a file in the memory card may occur, and movie recording may be interrupted in the middle of shooting. If this happens, save your images to a computer or other storage location, then execute [Format] using this camera.
- Do not remove the battery pack or the memory card, disconnect the USB cable, or turn the camera off while the access lamp is lit up. This may cause the data on the memory card to become damaged.
- Be sure to back up the data for protection.
- Not all memory cards are guaranteed to operate correctly.
- Images recorded on an microSDXC memory card cannot be imported to or played on computers or AV devices that are not compatible with exFAT when connected using a USB cable. Make sure that the device is compatible with exFAT before connecting it to the camera. If you connect your camera to an incompatible device, you may be prompted to format the card. Never format the card in response to this prompt, as doing so will erase all data on the card. (exFAT is the file system used on microSDXC memory cards.)
- Do not expose the memory card to water.
- Do not strike, bend or drop the memory card.
- Do not use or store the memory card under the following conditions:
  - High temperature locations such as in a car parked under the sun
  - Locations exposed to direct sunlight
  - Humid locations or locations with corrosive substances present
- If the memory card is used near areas with strong magnetization, or used in locations subject to static electricity or electrical noise, the data on the memory card may become damaged.
- Do not touch the terminal section of the memory card with your hand or a metal object.
- Do not leave the memory card within the reach of small children. They might accidentally swallow it.
- Do not disassemble or modify the memory card.
- The memory card may be hot just after it has been used for a long time. Be careful when you handle it.
- Memory card formatted with a computer is not guaranteed to operate with the product. Format the memory card using this product.
- Data read/write speeds differ depending on the combination of the memory card and the equipment used.
- Do not attach a label on the memory card itself nor on a memory card adaptor.
Setting language, date and time

The setting screen for language, date and time is displayed automatically when you turn on this product for the first time, initialize this product or when the internal rechargeable backup battery has discharged.

1 Turn on the camera.
   The language setting screen will appear and then setting screen for date and time will appear.

2 Select your language, and then press the center of the control wheel.

3 Check that [Enter] is selected on the screen, then press the center.

4 Select your desired geographic location, and then press the center.

5 Select a setting item using the top/bottom side of the control wheel or by turning the control wheel, then press the center.

6 Set [Daylight Savings], [Date/Time], and [Date Format] using the top/bottom/left/right sides, then press the center.
   - Midnight is indicated as 12:00 AM, and noon as 12:00 PM when you set [Date/Time].
   - Change the values using the top/bottom when you set [Date/Time].

7 Repeat Steps 5 and 6 to set other items, then select [Enter] and press the center.

On maintaining the date and time

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, or whether the battery pack is charged or discharged.

To charge the internal rechargeable backup battery, insert a charged battery pack into the camera, and leave the product for 24 hours or more with the power off.

If the clock resets every time the battery pack is charged, the internal rechargeable backup battery may be worn out. Consult your service facility.

Hint

- To set the date and time or geographic location again after the date and time setting is finished, select MENU → 📅 (Setup) → [Date/Time Setup] or [Area Setting].

Note

- If the date and time setting is canceled halfway, the setting screen for the date and time appears every time you turn on the camera.

Related Topic

- Date/Time Setup
Area Setting
Using the control wheel
In-Camera Guide

The [In-Camera Guide] displays descriptions of MENU items, Fn (Function) items, and settings. Assign the [In-Camera Guide] function to the desired key in advance using [Custom Key] or [Custom Key].

1. MENU → (Camera Settings2) → [Custom Key] or [Custom Key] → desired key, then assign the [In-Camera Guide] function to the key.
   - The [In-Camera Guide] function cannot be assigned to some keys.

2. Select the MENU or Fn item of which you want to see descriptions, then press the button to which the [In-Camera Guide] function is assigned.
   - The descriptions of the item are displayed.

Related Topic
- Custom Key (still image/movie/playback)
Shooting still images

1. Select the desired shooting mode by turning the mode dial.

2. Adjust the monitor angle, and hold the camera. Or look through the viewfinder and hold the camera.

3. Enlarge images with the W/T (zoom) lever when shooting.

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

5. Press the shutter button fully down.

To shoot images with the focus locked on the desired subject (Focus-lock)
Shoots images with the focus locked on the desired subject in auto focus mode.

1. MENU →  (Camera Settings1) → [Focus Mode] → [Single-shot AF].
2. Place the subject within the AF area and press the shutter button halfway down.
The focus is locked.

- If it is difficult to focus on the desired subject, set [Focus Area] to [Center] or [Flexible Spot].

3. Keep pressing the shutter button halfway down, and place the subject back in the original position to re-compose the shot.

4. Press the shutter button down fully to take the picture.

**Hint**

- When the product cannot focus automatically, the focus indicator flashes and the beep does not sound. Either recompose the shot or change the focus setting.

- An icon indicating that data is being written is displayed after shooting. Do not remove the memory card while the icon is displayed.

**Related Topic**

- List of mode dial function
- Zoom
- Playing back still images
- Auto Review
- Focus Mode
- Focus Area
Focus Mode

Selects the focus method.

1. **MENU → ① (Camera Settings1) → [Focus Mode] → desired setting.**

Menu item details

- **AF-S (Single-shot AF):**
  The product performs auto focusing. The focus locks onto the subject.

- **AF-C (Continuous AF):**
  During movie shooting, the focus mode is locked to [Continuous AF]. The camera maintains focus on the subject. [Continuous AF] cannot be selected when shooting still images.

- **DMF (Manual Focus):**
  You can make fine adjustments manually after performing auto focusing, letting you focus on a subject more quickly than when using the manual focus from the beginning. This is convenient in situations such as macro shooting.

- **MF (Manual Focus):**
  Adjusts the focus manually. If you cannot focus on the intended subject using auto focus, use manual focus.

  - Rotate the control ring to adjust the focus manually in the direct manual focus mode or manual focus mode.

Focus indicator

- **(lit):**
  The subject is in focus and the focus is locked.

- **(flashing):**
  The subject is not in focus.

Subjects on which it is difficult to focus using auto focus

- Dark and distant subjects
- Subjects with poor contrast
- Subjects seen through glass
- Fast-moving subjects
- Reflective light or shiny surfaces
- Flashing light
- Back-lit subjects
- Subjects in the focusing area with different focal distances

**Hint**

- When you set the focus to infinity in the manual focus mode or the direct manual focus mode, make sure that the focus is on a sufficiently distant subject by checking the monitor or the viewfinder.

**Note**

- Only [Continuous AF] and [Manual Focus] are available in the movie shooting mode.

**Related Topic**

- Direct manual focus (DMF)
- Manual Focus
- MF Assist (still image)
Focus Area

Selects the focusing area. Use this function when it is difficult to focus properly in the auto focus mode.

1 MENU →  (Camera Settings1) → [Focus Area] → desired setting.

Menu item details

Wide:
Focuses on a subject covering the whole range of the screen automatically. When you press the shutter button halfway down in the still image shooting mode, a green frame is displayed around the area that is in focus.

Center:
Focuses automatically on a subject in the center of the image. Use together with the focus-lock function to create the composition you want.

Flexible Spot:
Allows you to move the focusing frame to a desired point on the screen and focus on an extremely small subject in a narrow area.
On the Flexible Spot shooting screen, you can change the size of the focusing frame by turning the control wheel.

Expand Flexible Spot:
If the product cannot focus on a single selected point, it uses focus points around the flexible spot as a secondary priority area for focusing.

To move the focus area

- When [Focus Area] is set to [Flexible Spot] or [Expand Flexible Spot], if pressing the button to which [Focus Standard] is assigned, you can shoot while moving the focusing frame using the top/bottom/left/right sides of the control wheel. To return the focusing frame to the center of the monitor, press the C/ button while moving the frame. To change the shooting settings using the control wheel, press the button to which [Focus Standard] is assigned.
- You can move the focusing frame quickly by touching and dragging it on the monitor. Set [Touch Operation] to [On] beforehand.

Note

- [Focus Area] is locked to [Wide] in the following situations:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]
  - During Smile Shutter mode
- The focus area may not light up during continuous shooting or when the shutter button is pressed all the way down at once.
- You cannot execute functions assigned to the control wheel or the custom button while moving the focusing frame.

Related Topic

- Touch Operation
Focus Standard

If you assign [Focus Standard] to the desired custom key, you can recall useful functions such as moving the focusing frame quickly, etc., depending on the focus area settings.

1. **MENU → [ ] (Camera Settings2) → [ ] Custom Key] → desired key, then assign the [Focus Standard] function to the key.**
   - To use the [Focus Standard] function while shooting movies, select **MENU → [ ] (Camera Settings2) → [ ] Custom Key] → the desired button, and then assign [Focus Standard] to the key.**

2. **Press the key to which [Focus Standard] is assigned.**
   - What you can do by pressing the key varies depending on the settings for [Focus Area] and [Center Lock-on AF].

When [Focus Area] is set to [Flexible Spot] or [Expand Flexible Spot]:
Pressing the key moves the position of the focusing frame using the top/bottom/left/right sides of the control wheel.

When [Focus Area] is set to [Wide] or [Center]:
   - When [Center Lock-on AF] is set to [On], [Center Lock-on AF] is activated by pressing the key. The camera detects the subject positioned in the center of the screen and starts tracking by pressing the center of the control wheel. If you press the key while the subject is being tracked, tracking will be canceled.

**Note**
- You cannot set the [Focus Standard] function to [Left Button] or [Right Button].

**Related Topic**
- Custom Key (still image/movie/playback)
- Focus Area
- Center Lock-on AF

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AF/MF control

You can easily switch the focusing mode from auto to manual and vice versa while shooting without changing your holding position.

1. MENU → 2 (Camera Settings2) → [Custom Key] or [Custom Key] → desired button → [AF/MF Control Hold] or [AF/MF Ctrl Toggle].

Menu item details

**AF/MF Control Hold**: Switches the focusing mode while the button is held down.

**AF/MF Ctrl Toggle**: Switches the focusing mode until the button is pressed again.

**Note**

- You cannot set the [AF/MF Control Hold] function to [Left Button] or [Right Button] of the control wheel.

Related Topic

- Custom Key (still image/movie/playback)
Eye AF

The camera focuses on the subject's eyes while you keep the button pressed.

1. **MENU → 📺2 (Camera Settings2) → [壅Custom Key] → desired key, then assign the [Eye AF] function to the key.**

2. Point the camera at a person's face, and press the button to which you have assigned the [Eye AF] function.

3. Press the shutter button while pressing the button.

**Hint**
- When the camera focuses on the eyes, a detection frame is displayed over the eyes. The detection frame over the eyes turns into the face detection frame after a certain period of time. However, [Eye AF] remains active. The camera continues tracking the eyes unless the distance of the subject changes.

**Note**
- Depending on the circumstances, the camera may not be able to focus on the eyes. In such cases, the camera detects a face and focuses on the face.
- If the camera cannot detect a person's face, you cannot use [Eye AF].
- Depending on the circumstances, you cannot use [Eye AF] such as when [Focus Mode] is set to [Manual Focus].
- The [Eye AF] function may not function very well in the following situations:
  - When the person is wearing sunglasses.
  - When the front hair covers the person's eyes.
  - In low-light or back-lit conditions.
  - When the eyes are closed.
  - When the person is in the shade.
  - When the person is out of focus.
  - When the person is moving too much.
- If the person is moving too much, the detection frame may not display correctly over their eyes.
- When the mode dial is set to 🎥 (Movie), or during movie recording, [Eye AF] is unavailable.

**Related Topic**
- Custom Key (still image/movie/playback)
- Set. Face Prty in AF
Set. Face Prty in AF

Sets whether the camera focuses on detected faces with higher priority in the auto-focus mode.

1. MENU → (Camera Settings1) → [Set. Face Prty in AF] → [Face Priority in AF] → desired setting.

Menu item details

On:
The camera focuses on detected faces with higher priority.
Off:
The camera focuses without face detection.

Face Dtct Frame Dsp

Sets whether to display the face detection frame when [Face Priority in AF] is set to [On].

1. MENU → (Camera Settings1) → [Set. Face Prty in AF] → [Face Dtct Frame Dsp] → desired setting.

On:
Displays the face detection frame when [Face Priority in AF] is set to [On].
Off:
Does not display the face detection frame.

Face Detection frame

- When the product detects a face, the gray face detection frame appears. When the product determines that autofocus is enabled, the face detection frame turns white.
- In case you have registered the priority order for each face using [Face Registration], the product automatically selects the first prioritized face and the face detection frame over that face turns white. The face detection frames of other registered faces turn reddish-purple.

Hint

- When [Set. Face Prty in AF] is set to [On], a detection frame is displayed over the eyes when the camera focuses on eyes. The frame displayed over the eyes will disappear after a period of time.

Note

- You cannot use the face detection function with the following functions:
  - Other zoom functions than the optical zoom
  - [Sweep Panorama]
  - [Posterization] under [Picture Effect]
— [Focus Magnifier]
— [Landscape], [Night Scene], [Sunset], [Pet], [Gourmet] or [Fireworks] under [Scene Selection]
— Movie shooting with [ Record Setting] set to [120p]/[ 100p].

- Up to 8 faces of your subjects can be detected.
- Even if [Face Dtct Frame Dsp] is set to [Off], a green focusing frame will be displayed over faces that are in focus.
- When the shooting mode is set to [Intelligent Auto] or [Superior Auto], [Face Priority in AF] is set to [On].
- The product may not detect faces at all or may accidentally detect other objects as faces in some conditions.

Related Topic

- Face Registration (New Registration)
- Face Registration (Order Exchanging)
Center Lock-on AF

When you press the center of the control wheel, the camera detects the subject positioned in the center of the screen and continues to track the subject.

1 MENU → 📷1 (Camera Settings1) → [Center Lock-on AF] → [On].

2 Align the target frame (A) over the subject and press the center of the control wheel.
   - Press the center again to stop tracking.

3 Press the shutter button fully down to shoot the image.

Hint
- If you assign the [Focus Standard] function to the key of your choice, you can activate [Center Lock-on AF] or detect a subject again by pressing the key when [Focus Area] is set to [Wide] or [Center].
- You can select the subject to be tracked by touch operation when shooting using the monitor. With touch panel operations enabled, select MENU → 📷2 (Camera Settings2) → [Func. of Touch Oprtn] → [Touch Focus].

Note
- The [Center Lock-on AF] function may not function very well in the following situations:
  - The subject is moving too quickly.
  - The subject is too small, or too large.
  - The contrast between the subject and the background is poor.
  - It is dark.
  - The ambient light changes.
- Lock-on AF does not work in the following situations:
  - [Sweep Panorama]
  - When [Scene Selection] is set to [Hand-held Twilight], [Anti Motion Blur] or [Fireworks].
  - When shooting in the Manual Focus or Direct Manual Focus (DMF) mode.
  - When using the digital zoom
  - When the shooting mode is set to Movie, and [SteadyShot] is set to [Intelligent Active].
  - When shooting movies with [Record Setting] set to [120p]/[100p]
Related Topic

- Focus Standard
- Touch Operation
Pre-AF (still image)

The product automatically adjusts focus before you press the shutter button halfway down. During focusing operations, the screen may shake.

1. MENU → (Camera Settings1) → [Pre-AF] → desired setting.

Menu item details

On:
Adjusts focus before you press the shutter button halfway down.

Off:
Does not adjust focus before you press the shutter button halfway down.
AF Illuminator (still image)

The AF illuminator supplies fill light to focus more easily on a subject in dark surroundings. In the time between pressing the shutter button halfway down and locking the focus, the AF illuminator lights up to allow the camera to focus easily.

MENU → (Camera Settings1) → [AF Illuminator] → desired setting.

Menu item details

Auto:
The AF illuminator lights up automatically in dark surroundings.

Off:
Does not use the AF illuminator.

Note

- You cannot use [AF Illuminator] in the following situations:
  - In movie mode
  - Sweep Panorama
  - When [Focus Magnifier] is activated.
  - When [Scene Selection] is set to the following modes:
    - [Landscape]
    - [Night Scene]
    - [Pet]
    - [Fireworks]

- The AF illuminator emits a very bright light. Although there is no health hazard, do not look directly into the AF illuminator at close range.
Manual Focus

When it is difficult to focus properly in the autofocus mode, you can adjust the focus manually.

1. **MENU** →  
   (Camera Settings1) → [Focus Mode] → [Manual Focus].

2. Rotate the control ring to achieve sharp focus.

   - When you rotate the control ring, the focus distance is displayed on the screen.

3. Press the shutter button fully down to shoot an image.

**Note**

- When you use the viewfinder, adjust the diopter level to obtain the correct focus on the viewfinder.
- If you re-select the [Focus Mode], any focus distance that you set manually will be canceled.

**Related Topic**

- Focus Magnifier
- Peaking Setting
- MF Assist (still image)
Direct manual focus (DMF)

You can make fine adjustments manually after performing auto focusing, letting you focus on a subject more quickly than when using the manual focus from the beginning. This is convenient in situations such as macro shooting.

1. **MENU → [ ] (Camera Settings1) → [Focus Mode] → [DMF].**

2. Press the shutter button halfway down to focus automatically.

3. Keep the shutter button pressed halfway down, and then rotate the control ring to achieve a sharper focus.

   - When you rotate the control ring, the focus distance is displayed on the screen.

4. Press the shutter button fully down to shoot an image.

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Related Topic

- **Peaking Setting**
Focus Magnifier

You can check the focus by enlarging the image before shooting. Unlike with MF Assist, you can magnify the image without operating the control ring.

1. **MENU → [ ] (Camera Settings1) → [Focus Magnifier].**

2. **Press the center of the control wheel to enlarge the image and select the area you want to enlarge using top/bottom/left/right side of the control wheel.**
   - Each time you press the center, the magnification scale will change.
   - You can set the initial magnification by selecting **MENU → [ ] (Camera Settings1) → [ ] (Initial Focus Mag.).**

3. **Confirm the focus.**
   - Press the (Delete) button to bring the magnified position into the center of an image.
   - When the focus mode is [Manual Focus], you can adjust the focus while an image is magnified. The [Focus Magnifier] function will be canceled when the shutter button is pressed halfway.
   - You can set how long the image is to be shown magnified by selecting **MENU → [ ] (Camera Settings1) → [ ] (Focus Magnif. Time).**

4. **Press the shutter button fully down to shoot the image.**

To use the focus magnifier function by touch operation

You can magnify the image and adjust the focus by touching the monitor. Set [Touch Operation] to [On] beforehand. Then, select the appropriate settings under [Touch Panel/Pad]. When the focus mode is [Manual Focus], you can perform [Focus Magnifier] by double-tapping the area to focus on while shooting with the monitor. While shooting with the viewfinder, a frame is displayed in the center of the monitor by double-tapping and you can move the frame by dragging it. The image is magnified by pressing the center of the control wheel.

**Hint**
- While using the focus magnifier function, you can move the magnified area by dragging it on the touch panel.
- To exit the focus magnifier function, double-tap the monitor again. You can also exit the focus magnifier function by pressing the shutter button halfway down.

**Related Topic**
- MF Assist (still image)
- Focus Magnif. Time
- Initial Focus Mag. (still image)
- Custom Key (still image/movie/playback)
- Touch Operation
MF Assist (still image)

Enlarges the image on the screen automatically to make manual focusing easier. This works in Manual Focus or Direct Manual Focus shooting.

1. MENU →  

   (Camera Settings1) → [ MF Assist] → [On].

2. Turn the control ring to adjust the focus.

   - The image is enlarged. You can magnify images further by pressing the center of the control wheel.

Hint

- You can set how long the image is to be shown magnified by selecting MENU →  

   (Camera Settings1) → [Focus Magnif. Time].

Note

- You cannot use [ MF Assist] when shooting movies. Use the [Focus Magnifier] function instead.

Related Topic

- Manual Focus
- Direct manual focus (DMF)
- Focus Magnif. Time
Focus Magnif. Time

Set the duration for which an image is to be magnified using the [MF Assist] or [Focus Magnifier] function.

1. MENU → (Camera Settings1) → [Focus Magnif. Time] → desired setting.

Menu item details

2 Sec:
Magnifies the images for 2 seconds.

5 Sec:
Magnifies the images for 5 seconds.

No Limit:
Magnifies the images until you press the shutter button.

Related Topic

- Focus Magnifier
- MF Assist (still image)
Help Guide
Digital Still Camera
DSC-HX99

Initial Focus Mag. (still image)
Sets the initial magnification scale when using [Focus Magnifier]. Select a setting that will help you frame your shot.

1 MENU → 📌 (Camera Settings1) → [Initial Focus Mag.] → desired setting.

Menu item details
x1.0:
Displays the image with the same magnification as the shooting screen.

x7.7:
Displays a 7.7-times enlarged image.

Related Topic
• Focus Magnifier
Peaking Setting

Sets the peaking function, which enhances the outline of in-focus areas during shooting with Manual Focus or Direct Manual Focus.

MENU → Camera Settings1 → [Peaking Setting] → desired setting.

Menu item details

Peaking Display:
Sets whether to display peaking.

Peaking Level:
Sets the level of enhancement of in-focus areas.

Peaking Color:
Sets the color used to enhance in-focus areas.

Note
- Since the product recognizes sharp areas as in focus, the effect of peaking differs, depending on the subject.
- The outline of in-focus ranges is not enhanced on devices connected via HDMI.

Related Topic
- Manual Focus
- Direct manual focus (DMF)
**Drive Mode**

Select the appropriate mode for the subject, such as single shooting, continuous shooting or bracketing shooting.

1. Select [Drive Mode] on the control wheel → desired setting.
   - You can also set the drive mode by selecting MENU → (Camera Settings1) → [Drive Mode].

2. Select the desired mode using the right/left side of the control wheel.

### Menu item details

- **Single Shooting:**
  Normal shooting mode.

- **Cont. Shooting:**
  Shoots images continuously while you press and hold down the shutter button.

- **Spd Priority Cont.**:
  Shoots images continuously at high speed while you press and hold down the shutter button.

- **Self-timer:**
  Shoots an image using the self-timer after a designated number of seconds have elapsed since the shutter button was pressed.

- **Self-timer(Cont):**
  Shoots a designated number of images using the self-timer after a designated number of seconds have elapsed since the shutter button was pressed.

- **Cont. Bracket:**
  Shoots images while holding the shutter button down, each with different degrees of exposure.

- **Single Bracket:**
  Shoots a specified number of images, one by one, each with a different degrees of exposure.

- **WB bracket:**
  Shoots a total of three images, each with different color tones according to the selected settings for white balance, color temperature and color filter.

- **DRO Bracket:**
  Shoots a total of three images, each at a different degree of D-Range Optimizer.

### Related Topic

- Cont. Shooting
- Spd Priority Cont.
- Self-timer
- Self-timer(Cont)
- Cont. Bracket
- Single Bracket
- WB bracket
- DRO Bracket
Cont. Shooting

Shoots images continuously while you press and hold down the shutter button.

1. Select ◎/ ◘ (Drive Mode) of the control wheel → [Cont. Shooting].
   - You can also set the continuous shooting by selecting MENU → ◘ (Camera Settings1) → [Drive Mode].

   **Hint**
   - The focus, exposure, and white balance are locked to their values in the first shot.

   **Note**
   - Continuous shooting is unavailable in the following situations:
     - The shooting mode is set to [Sweep Panorama].
     - [Picture Effect] is set to one of the following: [Soft Focus] [HDR Painting] [Rich-tone Mono.] [Miniature] [Watercolor] [Illustration]
     - [DRO/Auto HDR] is set to [Auto HDR].
     - [ISO] is set to [Multi Frame NR].
     - [Smile Shutter] is being used.

   **Related Topic**
   - Focus Mode
Spd Priority Cont.

The product continues to shoot as long as the shutter button is pressed. You can continuously shoot at a rate faster than that of [Cont. Shooting].

Press  (Drive Mode) of the control wheel → [Spd Priority Cont.].

- You can also set the drive mode by selecting MENU→  (Camera Settings1) → [Drive Mode].

Note

- Between continuous shooting frames, an image of each frame is immediately displayed.

- Continuous shooting is unavailable in the following situations:
  - The shooting mode has been set to [Sweep Panorama].
  - The [Picture Effect] is set to [Soft Focus], [HDR Painting], [Rich-tone Mono.], [Miniature], [Watercolor], or [Illustration].
  - The [DRO/Auto HDR] is set to [Auto HDR].
  - [ISO] is set to [Multi Frame NR].
  - [Smile Shutter] is being used.

Hint

- The focus, exposure, and white balance are locked to their values in the first shot.
Self-timer

Shoots an image using the self-timer after a designated number of seconds have elapsed since the shutter button was pressed. Use the 5-second/10-second self-timer when you are going to be in the picture, and use the 2-second self-timer to reduce camera-shake caused by pressing the shutter button.

1. Press  or  (Drive Mode) of the control wheel → [Self-timer].
   - You can also set the drive mode by selecting MENU → 1 (Camera Settings1) → [Drive Mode].

2. Select the desired mode using the right/left side of the control wheel.

3. Adjust the focus and shoot the image.
   - The self-timer lamp flashes, a beep sounds, and a picture is taken after the designated number of seconds have elapsed.

Menu item details

The mode determines the number of seconds until a picture is taken after the shutter button is pressed.

- Self-timer: 10 Sec
- Self-timer: 5 Sec
- Self-timer: 2 Sec

Hint

- Press the shutter button again or press  or  on the control wheel to stop the count of the self-timer.
- Press  or  on the control wheel and select  (Single Shooting) to cancel the self-timer.
- Set [Audio signals] to [Off] to turn off the beeping sound during the self-timer countdown.
- To use the self-timer in bracket mode, select bracket mode under drive mode, then select MENU → 1 (Camera Settings1) → [Bracket Settings] → [Selftimer during Brkt].

Note

- The self-timer is unavailable in the following situations:
  - The shooting mode is set to [Sweep Panorama].
  - [Smile Shutter]

Related Topic

- Audio signals
Self-timer(Cont)

Shoots a designated number of images using the self-timer after a designated number of seconds have elapsed since the shutter button was pressed. You can choose the best from multiple shots.

1. Press  /  (Drive Mode) of the control wheel → [Self-timer(Cont)].
   - You can also set the drive mode by selecting MENU→ 1 (Camera Settings1) → [Drive Mode].

2. Select the desired mode using the right/left side of the control wheel.

3. Adjust the focus and shoot the image.
   - The self-timer lamp flashes, a beep sounds, and pictures are taken after the designated number of seconds has elapsed. The designated number of pictures are taken continuously.

Menu item details

For example, three images are shot when 10 seconds have elapsed after the shutter button is pressed when [Self-timer(Cont.): 10 Sec. 3 Img.] is selected.

- Self-timer(Cont.): 10 Sec. 3 Img.
- Self-timer(Cont.): 10 Sec. 5 Img.
- Self-timer(Cont.): 5 Sec. 3 Img.
- Self-timer(Cont.): 5 Sec. 5 Img.
- Self-timer(Cont.): 2 Sec. 3 Img.
- Self-timer(Cont.): 2 Sec. 5 Img.

Hint

- Press the shutter button again or press  /  on the control wheel to stop the count of the self-timer.
- Press  /  on the control wheel and select  (Single Shooting) to cancel the self-timer.
Cont. Bracket

Shoots multiple images while automatically shifting the exposure from base to darker and then to lighter. You can select an image that suits your purpose after recording.

1. Press  
(Drive Mode) of the control wheel → [Cont. Bracket].
   - You can also set the drive mode by selecting MENU→  (Camera Settings1) → [Drive Mode].

2. Select the desired mode using the right/left side of the control wheel.

3. Adjust the focus and shoot the image.
   - The base exposure is set at the first shot.
   - Keep pressing and holding the shutter button until bracket shooting is finished.

Menu item details

For example, the camera shoots a total of three images continuously with an exposure value shifted by plus or minus 0.3 EV when [Cont. Bracket: 0.3EV 3 Image] is selected.

Note

- The last shot is shown on the auto review.
- When [ISO AUTO] is selected in [Manual Exposure] mode, the exposure is changed by adjusting the ISO value. If a setting other than [ISO AUTO] is selected, the exposure is changed by adjusting the shutter speed.
- When the exposure is compensated, the exposure is shifted based on the compensated value.
- Bracket shooting is unavailable in the following shooting modes:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]
  - [Sweep Panorama]
- When the flash is used, the product performs flash bracket shooting, which shifts the amount of flash light even if [Cont. Bracket] is selected. Press the shutter button for each image.

Related Topic

- Bracket Settings
- Indicator during bracket shooting
Single Bracket

Shoots multiple images while automatically shifting the exposure from base to darker and then to lighter. You can select the image that suits your purpose after recording. Since a single picture is taken each time you press the shutter button, you can adjust the focus or the composition for each shot.

1. Select  φ/ ■ (Drive Mode) of the control wheel → [Single Bracket].
   - You can also set the drive mode by selecting MENU → φ (Camera Settings1) → [Drive Mode].

2. Select the desired mode using the right/left side of the control wheel.

3. Adjust the focus and shoot the image.
   - Press the shutter button for each image.

Menu item details

For example, when [Single Bracket: 0.3EV 3 Image] is selected, three images are shot one at a time with the exposure value shifted up and down in increments of 0.3 EV.

**Note**

- When [ISO AUTO] is selected in [Manual Exposure] mode, the exposure is changed by adjusting the ISO value. If a setting other than [ISO AUTO] is selected, the exposure is changed by adjusting the shutter speed.
- When the exposure is compensated, the exposure is shifted based on the compensated value.
- Bracket shooting is unavailable in the following shooting modes:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]
  - [Sweep Panorama]

**Related Topic**

- Bracket Settings
- Indicator during bracket shooting
Indicator during bracket shooting

Viewfinder

Ambient light* bracketing
3 images shifted by 0.3 EV steps
Exposure compensation ±0.0 EV

Monitor (Display All Info. or Histogram)

Ambient light* bracketing
3 images shifted by 0.3 EV steps
Exposure compensation ±0.0 EV

Flash bracketing
3 images shifted by 0.7 EV steps
Flash compensation -1.0 EV

Monitor (For viewfinder)

Ambient light* bracketing (upper indicator)
3 images shifted by 0.3 EV steps
Exposure compensation ±0.0 EV

Flash bracketing (lower indicator)
3 images shifted by 0.7 EV steps
Flash compensation -1.0 EV

* Ambient light: A generic term for non-flash light including natural light, electric bulb and fluorescent lighting. Whereas the flash light blinks for a moment, ambient light is constant, so this kind of light is called "ambient light."

Note

- During bracket shooting, guides equal to the number of images to be shot are displayed over/under the bracket indicator.
- When you start single bracket shooting, the guides will disappear one by one as the camera records images.
WB bracket

Shoots a total of three images, each with different color tones according to the selected settings for white balance, color temperature and color filter.

1. Select 
   (Drive Mode) of the control wheel → [WB bracket].
   - You can also set the drive mode by selecting MENU→ (Camera Settings1) → [Drive Mode].

2. Select the desired mode using the right/left side of the control wheel.

3. Adjust the focus and shoot the image.

Menu item details

- **White Balance Bracket: Lo:**
  - Records a series of three images with small changes in the white balance (within the range of 10MK^-1).

- **White Balance Bracket: Hi:**
  - Records a series of three images with large changes in the white balance (within the range of 20MK^-1).

  *MK^-1* is the unit that indicates the capability of color temperature conversion filters and indicates the same value as "mired."

**Note**

- The last shot is shown on the auto review.

Related Topic

- Bracket Settings
DRO Bracket

You can record a total of three images, each at a different degree of D-Range Optimizer value.

1. Select 📷/<>(Drive Mode) of the control wheel → [DRO Bracket].
   - You can also set the drive mode by selecting MENU→🎥 (Camera Settings1) → [Drive Mode].

2. Select the desired mode using the right/left side of the control wheel.

3. Adjust the focus and shoot the image.

Menu item details

- **DRO Bracket: Lo:**
  Records a series of three images with small changes in the D-Range Optimizer value (Lv 1, Lv 2, and Lv 3).

- **DRO Bracket: Hi:**
  Records a series of three images with large changes in the D-Range Optimizer value (Lv 1, Lv 3, and Lv 5).

**Note**

- The last shot is shown on the auto review.

Related Topic

- Bracket Settings
Bracket Settings

You can set the self-timer in bracket shooting mode, and the shooting order for exposure bracketing and white balance bracketing.

1. **Select  
   (Drive Mode) of the control wheel → select bracket shooting mode.**
   - You can also set the drive mode by selecting MENU →  (Camera Settings1) → [Drive Mode].

2. **MENU →  (Camera Settings1) → [Bracket Settings] → desired setting.**

**Menu item details**

**Selftimer during Brkt:**
Sets whether to use the self-timer during bracket shooting. Also sets the number of seconds until the shutter is released if using the self-timer.
*(OFF/2 Sec/5 Sec/10 Sec)*

**Bracket order:**
Sets the order of exposure bracketing and white balance bracketing.
*(0→−→+/-→0→+)*

**Related Topic**
- Cont. Bracket
- Single Bracket
- WB bracket
- DRO Bracket
Self-portrait/ -timer

You can change the angle of the monitor and shoot images while watching the monitor.

1. **MENU → 📷 (Camera Settings1) → [Self-portrait/-timer] → [On].**

2. Tilt the monitor approximately 180° upward, and then point the lens at yourself.

3. **Press the shutter button.**

   The product starts the self-timer shooting after three seconds.

**Hint**

- If you want to use another Drive Mode than the 3-second self-timer mode, first set [Self-portrait/-timer] to [Off], then tilt the monitor upward approx. 180 degrees.
Touch Operation

Sets whether or not to activate touch operations on the monitor.

1 MENU → (Setup) → [Touch Operation] → desired setting.

Menu item details

On:
Activates the touch operation.

Off:
Deactivates the touch operation.

Related Topic
- Func. of Touch Oprtn: Touch Shutter
- Func. of Touch Oprtn: Touch Focus
- Touch Pad Settings
- Touch Panel/Pad
**Touch Panel/Pad**

Touch operations when shooting with the monitor are referred to as "touch panel operations," and touch operations when shooting with the viewfinder are referred to as "touch pad operations." You can select whether to activate touch panel operations or touch pad operations.

1. MENU → (Setup) → [Touch Panel/Pad] → desired setting.

**Menu item details**

**Touch Panel+Pad:**
Activates both the touch panel operations when shooting with the monitor and touch pad operations when shooting with the viewfinder.

**Touch Panel Only:**
Activates only the touch panel operations when shooting with the monitor.

**Touch Pad Only:**
Activates only the touch pad operations when shooting with the viewfinder.

**Related Topic**

- Touch Operation
**Func. of Touch Oprtn: Touch Shutter**

When you shoot using the monitor, the camera automatically focuses on the point you touch and shoots a still image. Set MENU → (Setup) → [Touch Operation] to [On] in advance.

1. Select MENU → (Camera Settings2) → [Func. of Touch Oprtn] → [Touch Shutter].

2. Touch the 
   icon on the monitor while the shooting screen is displayed.
   The mark to the left of the icon turns orange.
   - To cancel [Touch Shutter], touch the 
     icon again.

3. Touch the subject to focus on.
   When the subject you touched is in focus, a still image is recorded.

**Hint**
- You can operate the shooting functions below by touching the monitor:
  - Shooting burst images using the touch shutter
    When [Drive Mode] is set to [Cont. Shooting] or [Spd Priority Cont.], you can record burst images while touching the monitor.
  - Shooting continuous bracket images using the touch shutter
    The product shoots three images while automatically shifting the exposure from base, to darker, and then to lighter. When [Drive Mode] is set to [Cont. Bracket], keep touching the monitor until the shooting ends. After the recording you can select the image you prefer.

**Note**
- The [Touch Shutter] function is unavailable in the following situations:
  - During viewfinder shooting
  - When the shooting mode is set to [Movie]
  - When the shooting mode is set to [Sweep Panorama]
  - During [Smile Shutter] mode
  - When [Focus Mode] is [Manual Focus]
  - When [Focus Area] is [Flexible Spot]
  - When [Focus Area] is [Expand Flexible Spot]
  - While using the digital zoom function
  - While using the [Clear Image Zoom]

**Related Topic**
- Touch Operation
- Touch Panel/Pad
Func. of Touch Oprtn: Touch Focus

You can select a subject on which to focus using touch operations in the still image and movie recording modes. Select MENU → (Setup) → [Touch Operation] → [On] beforehand.

1. MENU →  (Camera Settings2) → [Func. of Touch Oprtn] → [Touch Focus].

Specifying the position where you want to focus in the still image mode

You can focus on the desired position by touching the monitor.

1. Select a [Focus Area] other than [Flexible Spot] or [Expand Flexible Spot].
2. MENU →  (Camera Settings1) → [Center Lock-on AF] → [Off].
3. Touch the monitor.
   - When shooting with the monitor, touch the subject to focus.
   - When shooting with the viewfinder, you can move the position of the focus by touching and dragging on the monitor while looking through the viewfinder.

   ![Touch Focus Diagram]

   - When the shutter button is pressed halfway down, the camera focuses on the focusing frame. Press the shutter button all the way down to shoot images.
   - To cancel focusing with touch operations, touch or press the center of the control wheel if shooting with the monitor, and press the center of the control wheel if shooting with the viewfinder.

Specifying the position where you want to focus in the movie recording mode (spot focus)

The camera will focus on the touched subject. Spot focus is not available when shooting with the viewfinder.

1. Select a [Focus Area] other than [Flexible Spot] or [Expand Flexible Spot].
2. MENU →  (Camera Settings1) → [Center Lock-on AF] → [Off].
3. Touch the subject on which you want to focus before or during recording.
   - After focusing on the area that you touched, the focus mode switches to manual focus. You can adjust the focus by rotating the control ring.
   - To cancel spot focus, touch or press the center of the control wheel.

Hint

- In addition to the touch focus function, touch operations such as the following are also available.
  - When [Focus Area] is set to [Flexible Spot] or [Expand Flexible Spot], the focusing frame can be moved using touch operations.
  - When the [Focus Mode] is set to [Manual Focus], the focus magnifier can be used by double-tapping the monitor.
Note

- The touch focus function is not available in the following situations:
  - When the shooting mode is set to [Sweep Panorama].
  - When [Focus Mode] is set to [Manual Focus].
  - When using the digital zoom

Related Topic

- Touch Operation
- Touch Panel/Pad
Touch Pad Settings

You can adjust settings related to touch pad operations during viewfinder shooting.

1. MENU → (Setup) → [Touch Pad Settings] → desired setting.

Menu item details

Operation in V Orien.: Sets whether to enable touch pad operations during vertically oriented viewfinder shooting. You can prevent erroneous operations during vertically oriented shooting caused by your nose, etc. touching the monitor.

Touch Pos. Mode: Sets whether to move the focusing frame to the position touched on the screen ([Absolute Position]), or move the focusing frame to the desired position based on the direction of dragging and the amount of movement ([Relative Position]).

Operation Area: Sets the area to be used for touch pad operations. Restricting the operational area can prevent erroneous operations caused by your nose, etc. touching the monitor.

About Touch Positioning Mode

Selecting [Absolute Position] lets you move the focusing frame to a distant position more quickly because you can directly specify the position of the focusing frame with touch operations.

Selecting [Relative Position] lets you operate the touch pad from wherever is easiest, without having to move your finger over a wide area.

Hint

- In touch pad operations when [Touch Pos. Mode] is set to [Absolute Position], the area set in [Operation Area] is treated as the entire screen.
Related Topic

- Touch Operation

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JPEG Image Size (still 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.

MENU → (Camera Settings1) → [JPEG Image Size] → desired setting.

Menu item details

When [Aspect Ratio] is set to 3:2

<table>
<thead>
<tr>
<th>Setting</th>
<th>Image Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>L: 16M</td>
<td>4896×3264 pixels</td>
</tr>
<tr>
<td>M: 8.9M</td>
<td>3648×2432 pixels</td>
</tr>
<tr>
<td>S: 4.5M</td>
<td>2592×1728 pixels</td>
</tr>
</tbody>
</table>

When [Aspect Ratio] is set to 4:3

<table>
<thead>
<tr>
<th>Setting</th>
<th>Image Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>L: 18M</td>
<td>4896×3672 pixels</td>
</tr>
<tr>
<td>M: 10M</td>
<td>3648×2736 pixels</td>
</tr>
<tr>
<td>S: 5.0M</td>
<td>2592×1944 pixels</td>
</tr>
<tr>
<td>VGA</td>
<td>640×480 pixels</td>
</tr>
</tbody>
</table>

When [Aspect Ratio] is set to 16:9

<table>
<thead>
<tr>
<th>Setting</th>
<th>Image Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>L: 13M</td>
<td>4896×2752 pixels</td>
</tr>
<tr>
<td>M: 7.5M</td>
<td>3648×2056 pixels</td>
</tr>
<tr>
<td>S: 2.1M</td>
<td>1920×1080 pixels</td>
</tr>
</tbody>
</table>

When [Aspect Ratio] is set to 1:1

<table>
<thead>
<tr>
<th>Setting</th>
<th>Image Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>L: 13M</td>
<td>3664×3664 pixels</td>
</tr>
<tr>
<td>M: 7.5M</td>
<td>2736×2736 pixels</td>
</tr>
<tr>
<td>S: 3.7M</td>
<td>1920×1920 pixels</td>
</tr>
</tbody>
</table>

Note

- When [File Format] is set to [RAW] or [RAW & JPEG], the image size for RAW images corresponds to “L.”

Related Topic

- Aspect Ratio (still image)
**JPEG Quality (still image)**

Selects the JPEG image quality when [File Format] is set to [RAW & JPEG] or [JPEG].

1. **MENU → [ ] (Camera Settings1) → [ ] JPEG Quality] → desired setting.**

**Menu item details**

**Extra fine/Fine/Standard:**
Since the compression rate increases from [Extra fine] to [Fine] to [Standard], the file size decreases in the same order. This allows more files to be recorded on one memory card, but the image quality is lower.

**Related Topic**

- File Format (still image)
Aspect Ratio (still image)

1 MENU → [ ] (Camera Settings1) → [ ] Aspect Ratio] → desired setting.

Menu item details

3:2:
Same aspect ratio as 35 mm plate film

4:3:
An aspect ratio suitable for viewing on a TV that does not support high definition

16:9:
An aspect ratio suitable for viewing on a TV that supports high definition

1:1:
The horizontal and vertical ratio is equal.
File Format (still image)

Sets the file format for still images.

1. MENU → 📚 (Camera Settings1) → [File Format] → desired setting.

Menu item details

**RAW:**
Digital processing is not performed on this file format. Select this format to process images on a computer for professional purposes.

**RAW & JPEG:**
A RAW image and a JPEG image are created at the same time. This is suitable when you need two image files, a JPEG for viewing, and a RAW for editing.

**JPEG:**
The image is recorded in the JPEG format.

About RAW images

- To open a RAW image file recorded with this camera, the software Imaging Edge is needed. With Imaging Edge, you can open a RAW image file, then convert it into a popular image format such as JPEG or TIFF, or readjust the white balance, saturation or contrast of the image.
- RAW images shot by the camera are recorded in the compressed RAW format.

**Note**

- If you do not intend to edit the images on your computer, we recommend that you record in JPEG format.
- You cannot add DPOF (print order) registration marks to RAW images.

Related Topic

- JPEG Image Size (still image)
Panorama: Size

Sets the image size when shooting panoramic images. The image size varies depending on the [Panorama: Direction] setting.

1. MENU →  (Camera Settings1) → [Panorama: Size] → desired setting.

Menu item details

When [Panorama: Direction] is set to [Up] or [Down]

- **Standard**: 3872×2160
- **Wide**: 5536×2160

When [Panorama: Direction] is set to [Left] or [Right]

- **Standard**: 8192×1856
- **Wide**: 12416×1856

Related Topic

- Sweep Panorama
- Panorama: Direction
Panorama: Direction

Sets the direction to pan the camera when shooting panoramic images.

1 MENU → (Camera Settings1) → [Panorama: Direction] → desired setting.

Menu item details

Right:
Pan the camera from the left to the right.

Left:
Pan the camera from the right to the left.

Up:
Pan the camera from the bottom to the top.

Down:
Pan the camera from the top to the bottom.

Related Topic

- Sweep Panorama
List of mode dial function

You can switch the shooting mode according to the subject or purpose of shooting.

1 Turn the mode dial to select the desired shooting mode.

Available functions

**AUTO (Auto Mode):**
Allows you to shoot still images of any subject under any condition with good results by setting the values determined appropriate by the product.

**P (Program Auto):**
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.

**A (Aperture Priority):**
Allows you to adjust the aperture and shoot when you want to blur the background, etc.

**S (Shutter Priority):**
Allows you to shoot fast-moving subjects etc., by manually adjusting the shutter speed.

**M (Manual Exposure):**
Allows you to shoot still images with the desired exposure by adjusting the exposure (both the shutter speed and the aperture value (F value)).

**1/2(Memory recall):**
Allows you to shoot an image after recalling often-used modes or numeric settings registered in advance.

**Movie:**
Allows you to change the exposure mode for movie recording.

**S (Sweep Panorama):**
Allows you to shoot a panoramic image by compositing the images.

**SCN (Scene Selection):**
Allows you to shoot with preset settings according to the scene.

Related Topic

- Intelligent Auto
- Superior Auto
- Program Auto
- Aperture Priority
- Shutter Priority
- Manual Exposure
- Recall (Camera Settings1/Camera Settings2)
- Movie: Exposure Mode
- Sweep Panorama
- Scene Selection
Intelligent Auto

The camera shoots with automatic scene recognition.

1. Set the mode dial to AUTO (Auto Mode).

2. MENU → (Camera Settings1) → [Auto Mode] → [Intelligent Auto].

3. Point the camera at the subject.
   When the camera recognized the scene, the icon for the recognized scene appears on the screen.

4. Adjust the focus and shoot the image.

**Note**
- The product will not recognize the scene when you shoot images with zoom functions other than optical zoom.
- The product may not properly recognize the scene under certain shooting conditions.
- For [Intelligent Auto] mode, most of the functions are set automatically, and you cannot adjust the settings on your own.

**Related Topic**
- Switching the auto mode (Auto Mode)
- About Scene Recognition
- Mode Dial Guide
Superior Auto

The camera shoots with automatic scene recognition. This mode takes clear images of dark or backlit scenes.

For low-lit or backlit scenes, if necessary the camera may shoot multiple images and create a composite image, etc., to record higher quality images than in Intelligent Auto mode.

1. **Set the mode dial to [AUTO] (Auto Mode).**

2. **MENU → [ ] (Camera Settings1) → [Auto Mode] → [Superior Auto].**

3. **Point the camera to the subject.**

   When the camera recognizes a scene, scene recognition icon appears on the screen. If necessary, (overlay icon) may appear.

4. **Adjust the focus and shoot the image.**

**Note**

- When the product is used to create composite images, the recording process takes longer than usual. In this case, the (overlay icon) is displayed and the shutter sound is heard multiple times, but only one image is recorded.
- When the (overlay icon) is displayed, be sure not to move the camera before the multiple shots are recorded.
- The product will not recognize the scene when you use zoom functions other than optical zoom.
- The product may not properly recognize a scene under some shooting conditions.
- When [File Format] is set to [RAW] or [RAW & JPEG], the product cannot create a composite image.
- For [Superior Auto] mode, most of the functions are set automatically, and you cannot adjust the settings on your own.

**Related Topic**

- Switching the auto mode (Auto Mode)
- Mode Dial Guide
- About Scene Recognition
Switching the auto mode (Auto Mode)

This camera is equipped with the following two automatic shooting modes: [Intelligent Auto] and [Superior Auto]. You can switch the auto mode to shoot according to the subject and your preferences.

1. Set the mode dial to **AUTO**.

2. **MENU → 📷]**(Camera Settings1) → [Auto Mode] → desired setting.

Menu item details

- **Intelligent Auto:** Allows you to shoot with automatic scene recognition.
- **Superior Auto:** Allows you to shoot with automatic scene recognition. This mode takes clear images of dark or backlit scenes.

**Note**

- In [Superior Auto] mode, the recording process takes longer, since the product creates a composite image. In this case, the **️**(overlay icon) is displayed and the shutter sound is heard multiple times, but only one image is recorded.
- In [Superior Auto] mode and when the **️**(overlay icon) is displayed, be sure not to move the camera before the multiple shots are recorded.
- For [Intelligent Auto] and [Superior Auto] mode, most of the functions are set automatically, and you cannot adjust the settings on your own.

**Related Topic**

- Intelligent Auto
- Superior Auto
- Program Auto
About Scene Recognition

Scene Recognition operates in [Intelligent Auto] mode and [Superior Auto] mode.

This function allows the product to automatically recognize the shooting conditions and shoot the image.

Scene Recognition

When the product recognizes certain scenes, the following icons and guides are displayed on the first line:

- (Portrait)
- (Infant)
- (Night Portrait)
- (Night Scene)
- (Backlight Portrait)
- (Backlight)
- (Landscape)
- (Macro)
- (Spotlight)
- (Low Light)

When the product recognizes certain conditions, the following icons are displayed on the second line:

- (Tripod)
- (Walk) *
- (Move)
- (Move (Bright))
- (Move (Dark))

* The condition (Walk) is recognized only when [SteadyShot] is set to [Active] or [Intelligent Active].

Related Topic

- Intelligent Auto
- Superior Auto
Program Auto

Allows you to shoot with the exposure adjusted automatically (both the shutter speed and the aperture value).

You can set shooting functions such as [ISO].

1. **Set the mode dial to P (Program Auto).**

2. **Set the shooting functions to your desired settings.**

3. **Adjust the focus and shoot the subject.**

Program Shift

When you are not using a flash, you can change the shutter speed and aperture (F-value) combination without changing the appropriate exposure set by the camera.

Turn the control wheel to select the aperture value and shutter speed combination.

- "P" on the screen changes to "P*" when you turn the control wheel.
- To cancel program shift, set the shooting mode to other than [Program Auto], or turn off the camera.

**Note**

- According to the brightness of the environment, the program shift may not be used.
- Set the shooting mode to another one than "P" or turn off the power to cancel the setting you made.
- When the brightness changes, the aperture (F-value) and shutter speed also change while maintaining the shift amount.

**Related Topic**

- Switching the auto mode (Auto Mode)
Aperture Priority

You can shoot by adjusting the aperture and changing the range in focus, or by defocusing the background.

1. **Set the mode dial to A (Aperture Priority).**

2. **Select the desired value by turning the control wheel.**
   - Smaller F-value: The subject is in focus, but objects in front of and beyond the subject are blurred.
   - Larger F-value: The subject and its foreground and background are all in focus.
   - If the aperture value you have set is not suitable for appropriate exposure, the shutter speed on the shooting screen will blink. If this happens, change the aperture value.

3. **Adjust the focus and shoot the subject.**
   - The shutter speed is automatically adjusted to obtain proper exposure.

**Note**
- The brightness of the image on the screen may differ from the actual image being shot.
**Shutter Priority**

You can express the movement of a moving subject in various ways by adjusting the shutter speed, for example, at the instant of the movement with high speed shutter, or as a trailing image with low speed shutter.

1. **Set the mode dial to S (Shutter Priority).**
2. **Select the desired value by turning the control wheel.**
   - If proper exposure cannot be obtained after setup, the aperture value on the shooting screen blinks. If this happens, change the shutter speed.
3. **Adjust the focus and shoot the subject.**
   - The aperture is automatically adjusted to obtain proper exposure.

**Hint**

- Use a tripod to prevent camera-shake when you have selected a slow shutter speed.
- When you shoot indoor sports scenes, set the ISO sensitivity to a higher value.

**Note**

- The SteadyShot warning indicator does not appear in shutter speed priority mode.
- When the shutter speed is 1/3 second(s) or longer, noise reduction will be done after shooting for the same amount of time that the shutter was open. However, you cannot shoot any more while noise reduction is in progress.
- The brightness of the image on the screen may differ from the actual image being shot.
Manual Exposure

You can shoot with the desired exposure setting by adjusting both the shutter speed and aperture.

1. Set the mode dial to M (Manual Exposure).

2. Press the down side of the control wheel to select the shutter speed or aperture value, then turn the control wheel to select a value.

   - You can also set [ISO] to [ISO AUTO] in manual exposure mode. The ISO value automatically changes to achieve the appropriate exposure using the aperture value and shutter speed you have set.
   - When [ISO] is set to [ISO AUTO], the ISO value indicator will blink if the value you have set is not suitable for appropriate exposure. If this happens, change the shutter speed or aperture value.
   - When [ISO] is set to other than [ISO AUTO], use MM (Metered Manual)* to check the exposure value.

   **Toward +**: Images become brighter.
   **Toward -**: Images become darker.

   0: Appropriate exposure analyzed by the product.

   * Indicates under/over for appropriate exposure.
   It is displayed using a numerical value on the monitor and with a metering indicator on the viewfinder.

3. Adjust the focus and shoot the subject.

Hint

- By assigning [AEL hold] or [AEL toggle] to a desired key using [Custom Key] or [Custom Key] and turning the control ring or control wheel while pressing that key, you can change the shutter speed and aperture (F-value) combination without changing the set exposure value. (Manual shift)

Note

- The Metered Manual indicator does not appear when [ISO] is set to [ISO AUTO].
- When the amount of ambient light exceeds the metering range of the Metered Manual, the Metered Manual indicator flashes.
- The SteadyShot warning indicator does not appear in manual exposure mode.
- The brightness of the image on the screen may differ from the actual image being shot.
Sweep Panorama

Allows you to create a single panoramic image from multiple images shot while panning the camera.

1. Set the mode dial to (Sweep Panorama).

2. Point the camera at the subject.

3. While pressing the shutter button halfway down, aim the camera at one end of the desired panoramic composition.
   - You can change the shooting direction prior to shooting using the control wheel.

4. Press the shutter button fully down.

5. Pan the camera to the end of the guide in the direction of the arrow on the monitor.

(A) This part will not be shot.
If the entire angle of the panoramic shot is not achieved within the set time, a gray area occurs in the composite image. If this happens, move the product faster to record the full panoramic image.

- When [Wide] is selected for [Panorama: Size], the entire angle of the panoramic shot may not be achieved within the given time. If this happens, try shooting after changing [Panorama: Size] to [Standard].
- Since several images are stitched together, the stitched part may not be recorded smoothly in some cases.
- When a light source such as a fluorescent light flickers, the brightness and color of a stitched image may not be consistent.
- When the whole angle of panoramic shooting and the AE/AF locked angle are very different in brightness and focus, the shooting may not be successful. If this happens, change AE/AF locked angle and shoot again.

The following situations are not suited for shooting Sweep Panorama:
- Moving subjects.
- Subjects that are too close to the product.
- Subjects with continuously similar patterns, such as the sky, beach, or a lawn.
- Subjects with constant change such as waves or water falls.
- Subjects with brightness widely different from its surroundings such as the sun or a light bulb.

The Sweep Panorama shooting may be interrupted in the following situations:
- When the camera is panned too fast or too slow.
- When the camera shakes too much.

Continuous shooting is performed during shooting Sweep Panorama and the shutter sound keeps beeping until shooting is finished.

The following functions are not available with Sweep Panorama:
- Smile Shutter
- Set. Face Prty in AF
- Face Prty in Mlti Mtr
- Auto Obj. Framing
- DRO/Auto HDR
- Picture Effect
- Soft Skin Effect
- Center Lock-on AF
- Zoom
- Drive Mode
- Bright Monitoring

The values of the settings for some functions are fixed with Sweep Panorama, as follows:
- [ISO] is fixed to [ISO AUTO].
- [Focus Area] is fixed to [Wide].
- [High ISO NR] is fixed to [Normal].
- [Flash Mode] is fixed to [Flash Off].
Related Topic

- Panorama: Size
- Panorama: Direction
Scene Selection

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

1 Set the mode dial to SCN (Scene Selection).

2 Turn the control wheel to select the desired setting.

Menu item details

 Portrait:
Blurs background and sharpens the subject. Accentuates the skin tones softly.

 Macro:
Shoots close-ups of the subjects, such as flowers, insects, food, or small items.

 Landscape:
Shoots the entire range of a scenery in sharp focus with vivid colors.

 Sunset:
Shoots the red of the sunset beautifully.

 Night Scene:
Shoots night scenes without losing the dark atmosphere.
Hand-held Twilight:
Shoots night scenes with less noise and blur without using a tripod. A burst of shots are taken, and image processing is applied to reduce subject blur, camera-shake, and noise.

Night Portrait:
Shoots night scene portraits using the flash. The flash does not pop up automatically. Pop up the flash manually before shooting.

Anti Motion Blur:
Allows you to shoot indoor shots without using the flash and reduces subject blur. The product shoots burst images and combines them to create the image, reducing subject blur and noise.

Pet:
Allows you to shoot images of your pet with the best settings.

Gourmet:
Allows you to shoot food arrangements in delicious and bright colors.

Fireworks:
Allows you to shoot images of fireworks in all their splendor.
High Sensitivity:
Allows you to shoot still images even in dark locations without using the flash, and reduces subject blur. Also allows you to shoot dark movie scenes more brightly.

Hint
- To change the scene, rotate the control wheel on the shooting screen and select a new scene.

Note
- Under the following settings, the shutter speed is slower, so use of a tripod, etc. is recommended to prevent the image from blurring:
  - [Night Scene]
  - [Night Portrait]
  - [Fireworks]
- In the [Hand-held Twilight] or [Anti Motion Blur] mode, the shutter clicks 4 times and an image is recorded.
- If you select [Hand-held Twilight] or [Anti Motion Blur] with [RAW] or [RAW & JPEG], the [File Format] becomes [JPEG] temporarily.
- Reducing blur is less effective even in [Hand-held Twilight] or [Anti Motion Blur] when shooting the following subjects:
  - Subjects with erratic movement.
  - Subjects that are too close to the product.
  - Subjects with continuously similar patterns, such as the sky, a beach, or a lawn.
  - Subjects with constant change such as waves or water falls.
- In the case of [Hand-held Twilight] or [Anti Motion Blur], block noise may occur when using a light source that flickers, such as fluorescent lighting.
- The minimum distance that you can come close to a subject does not change even if you select [Macro]. For the minimum in-focus range, refer to the minimum distance of the lens.

Related Topic
- Using flash
Recall (Camera Settings1/Camera Settings2)

Allows you to shoot an image after recalling often-used modes or camera settings registered with [Memory] in advance.

1. Set the mode dial to 1, 2 (Memory recall).
2. Press the center of the control wheel to confirm.

Note
- If you set [Memory] after completing the shooting settings, the registered settings are given priority and the original settings may become invalid. Check the indicators on the screen before shooting.

Related Topic
- Memory (Camera Settings1/Camera Settings2)
Movie: Exposure Mode

You can set the exposure mode for movie shooting.

1 Set the mode dial to (Movie).

2 MENU → (Camera Settings 2) → [Exposure Mode] → desired setting.

3 Press the MOVIE (movie) button to start recording.

   Press the MOVIE button again to stop recording.

Menu item details

Program Auto:
Allows you to shoot with the exposure adjusted automatically (both the shutter speed and the aperture value).

Aperture Priority:
Allows you to shoot after adjusting the aperture value manually.

Shutter Priority:
Allows you to shoot after adjusting the shutter speed manually.

Manual Exposure:
Allows you to shoot after adjusting the exposure (both the shutter speed and the aperture value) manually.
Exposure Comp.

Normally, exposure is set automatically (auto exposure). Based on the exposure value set by auto exposure, you can make the entire image brighter or darker if you adjust [Exposure Comp.] to the plus side or minus side, respectively (exposure compensation).

1. 
   
   - (over) side:
     - Images become brighter.
   - (under) side:
     - Images become darker.

   - When using [Intelligent Auto] or [Superior Auto], you can display the setting screen for [Photo Creativity] by pressing 
   - You can also select MENU → [ ] (Camera Settings1) → [Exposure Comp.].

   - You can adjust the exposure compensation value within the range of -3.0 EV to +3.0 EV.
   - You can confirm the exposure compensation value that you set on the shooting screen.

Monitor

Viewfinder
Note

- You cannot perform the exposure compensation in the following shooting modes:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]

- When using [Manual Exposure], you can perform the exposure compensation only when [ISO] is set to [ISO AUTO].
- You can adjust the exposure compensation value within the range of -2.0 EV to +2.0 EV for movies.
- If you shoot a subject in extremely bright or dark conditions, or when you use the flash, you may not be able to get a satisfactory effect.

Related Topic

- Cont. Bracket
- Single Bracket
- Zebra Setting
Exposure Set. Guide

You can set whether to display a guide when you change the exposure.

MENU → (Camera Settings2) → [Exposure Set. Guide] → desired setting.

Menu item details

Off:
Does not display the guide.

On:
Displays the guide.
Help Guide

Digital Still Camera
DSC-HX99

Metering Mode

Selects the metering mode that sets which part of the screen to measure for determining the exposure.

1. MENU →  SETTINGS1 → [Metering Mode] → desired setting.

Menu item details

- **[Multi]**
  - Measures light on each area after dividing the total area into multiple areas and determines the proper exposure of the entire screen (Multi-pattern metering).

- **[Center]**
  - Measures the average brightness of the entire screen, while emphasizing the central area of the screen (Center-weighted metering).

- **[Spot]**
  - Measures only the central area (Spot metering). This mode is suitable for measuring light on a specified part of the entire screen. The size of the metering circle can be selected from [Spot: Standard] and [Spot: Large].

- **[Entire Screen Avg.]**
  - Measures the average brightness of the entire screen. The exposure will be stable even if the composition or the position of the subject changes.

- **[Highlight]**
  - Measures the brightness while emphasizing the highlighted area on the screen. This mode is suitable for shooting the subject while avoiding overexposure.

**Hint**

- When [Multi] is selected and [Face Prty in Mlti Mtr] is set to [On], the camera measures brightness based on detected faces.
- When [Metering Mode] is set to [Highlight] and the [D-Range Opt.] or [Auto HDR] function is activated, the brightness and the contrast will be corrected automatically by dividing the image into small areas and analyzing the contrast of light and shadow. Make settings based on the shooting circumstances.

**Note**

- [Metering Mode] is locked to [Multi] in the following shooting modes:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]
  - Other zoom functions than the optical zoom
- In [Highlight] mode, the subject may be dark if a brighter part exists on the screen.

**Related Topic**

- AE lock
- Face Prty in Mlti Mtr
- D-Range Opt. (DRO)
- Auto HDR
**Face Prty in Mlti Mtr**

Sets whether the camera measures brightness based on detected faces when [Metering Mode] is set to [Multi].

1. MENU → ¹ (Camera Settings) → [Face Prty in Mlti Mtr] → desired setting.

**Menu item details**

**On:**
The camera measures brightness based on detected faces.

**Off:**
The camera measures brightness using the [Multi] setting, without detecting faces.

---

**Note**
- When the shooting mode is set to [Intelligent Auto] or [Superior Auto], [Face Prty in Mlti Mtr] is locked to [On].

---

**Related Topic**
- Metering Mode
AE lock

When the contrast between the subject and background is high, such as when shooting a backlit subject or a subject near a window, meter the light at a spot where the subject appears to have the appropriate brightness and lock the exposure before shooting. To reduce the brightness of the subject, meter the light at a spot brighter than the subject and lock the exposure of the entire screen. To make the subject brighter, meter the light at a spot darker than the subject and lock the exposure of the entire screen.

1. MENU →  (Camera Settings2) → [Custom Key] or [Custom Key] → desired key, then assign [AEL toggle] to the key.

2. Adjust the focus on the spot at which the exposure is adjusted.

3. Press the button to which [AEL toggle] is assigned.
   The exposure is locked, and ✈️ (AE lock) is displayed.

4. Focus on the subject again and press the shutter button.
   To cancel the exposure lock, press the button to which the [AEL toggle] function is assigned.

Hint
- If you select the [AEL hold] function in [Custom Key] or [Custom Key], you can lock the exposure as long as you are holding down the button. You cannot set the [AEL hold] function to [Left Button] or [Right Button].

Note
- [AEL hold] and [AEL toggle] are not available when using zoom functions other than optical zoom.
**Zebra Setting**

Sets a zebra pattern, which appears over part of an image if the brightness level of that part meets the IRE level that you have set. Use this zebra pattern as a guide to adjust the brightness.

1. **MENU → 2 (Camera Settings2) → [Zebra Setting] → desired setting.**

**Menu item details**

**Zebra Display:**
Sets whether to display the zebra pattern.

**Zebra Level:**
Adjusts the brightness level of the zebra pattern.

**Hint**
- You can register values to check the correct exposure or overexposure as well as the brightness level for [Zebra Level]. The settings for correct exposure confirmation and overexposure confirmation are registered to [Custom1] and [Custom2] respectively in the default settings.
- To check the correct exposure, set a standard value and the range for the brightness level. The zebra pattern will appear on areas that fall within the range you set.
- To check the overexposure, set a minimum value for the brightness level. The zebra pattern will appear over areas with a brightness level equal to or higher than the value you set.

**Note**
- The zebra pattern is not displayed on devices connected via HDMI.
D-Range Opt. (DRO)

By dividing the image into small areas, the product analyzes the contrast of light and shadow between the subject and the background, and creates an image with the optimal brightness and gradation.

1. MENU → (Camera Settings1) → [DRO/Auto HDR] → [D-Range Opt.].
2. Select the desired setting using the left/right sides of the control wheel.

Menu item details

- **D-Range Optimizer: Auto:**
  Corrects the brightness automatically.

- **D-Range Optimizer: Lv1 — D-Range Optimizer: Lv5:**
  Optimizes the gradation of a recorded image for each divided area. Select the optimization level from Lv1 (weak) to Lv5 (strong).

**Note**

- In the following situations, [D-Range Opt.] is fixed to [Off]:
  - The shooting mode is set to [Sweep Panorama].
  - Multi Frame NR
  - When [Picture Effect] is set to other than [Off]
- [DRO/Auto HDR] is fixed to [Off] when the following modes are selected in [Scene Selection].
  - [Sunset]
  - [Night Scene]
  - [Night Portrait]
  - [Hand-held Twilight]
  - [Anti Motion Blur]
  - [Fireworks]

The setting is fixed to [D-Range Optimizer: Auto] when [Scene Selection] modes other than the above modes are selected.

- When shooting with [D-Range Opt.], the image may be noisy. Select the proper level by checking the recorded image, especially when you enhance the effect.
Auto HDR

Shoots three images using different exposures and combines the images with correct exposure, the bright parts of an underexposed image, and the dark parts of an overexposed image to create images with a greater range of gradation (High Dynamic Range). One image with proper exposure and one overlaid image are recorded.

1. MENU → (Camera Settings1) → [DRO/Auto HDR] → [Auto HDR].

2. Select the desired setting using the left/right sides of the control wheel.

Menu item details

- **Auto HDR: Exposure Diff. Auto:**
  Corrects the brightness automatically.

- **Auto HDR: Exposure Diff. 1.0EV — Auto HDR: Exposure Diff. 6.0EV:**
  Sets the exposure difference, based on the contrast of the subject. Select the optimization level from 1.0EV (weak) to 6.0EV (strong).
  For example, if you set the exposure value to 2.0 EV, three images will be composed with the following exposure levels: -1.0 EV, correct exposure and +1.0 EV.

**Hint**

- The shutter is released three times for one shot. Be careful about the following:
  - Use this function when the subject is motionless or does not flash light.
  - Do not change the composition before shooting.

**Note**

- This function is not available when the [File Format] is [RAW] or [RAW & JPEG].

- [Auto HDR] is not available in the following shooting modes:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Sweep Panorama]
  - [Scene Selection]

- [Auto HDR] is not available in the following situations:
  - When [Multi Frame NR] is selected.
  - When [Picture Effect] is set to other than [Off].

- You cannot start the next shot until the capture process is completed after you shoot.

- You may not obtain the desired effect depending on the luminance difference of a subject and the shooting conditions.

- When the flash is used, this function has little effect.

- When the contrast of the scene is low or when product shake or subject blur occurs, you may not obtain good HDR images. **ADNR** will be displayed over the recorded image to inform you when the camera detects image blurring. Change the composition or re-shoot the image carefully to avoid image blur, as needed.
ISO

Sensitivity to light is expressed by the ISO number (recommended exposure index). The larger the number, the higher the sensitivity.

1. MENU → Camera Settings1 → ISO → desired setting.

Menu item details

Multi Frame NR:
Combines continuous shots to create an image with less noise. Press the right side to display the setting screen, then select a desired value using the top/bottom sides of the control wheel.
Select the desired ISO number from ISO AUTO or ISO 100 – ISO 12800.

ISO AUTO:
Sets the ISO sensitivity automatically.

ISO 80 – ISO 6400:
Sets the ISO sensitivity manually. Selecting a larger number increases the ISO sensitivity.

Hint
- You can change the range of ISO sensitivity that is set automatically in [ISO AUTO] mode. Select [ISO AUTO] and press the right side of the control wheel, and set the desired values for [ISO AUTO Maximum] and [ISO AUTO Minimum]. The values are also applied when shooting in [ISO AUTO] mode under [Multi Frame NR].

Note
- When [File Format] is set to [RAW] or [RAW & JPEG], [Multi Frame NR] cannot be selected.
- When [Multi Frame NR] is selected, the flash, [D-Range Opt.], or [Auto HDR] cannot be used.
- When [Picture Effect] is set to other than [Off], [Multi Frame NR] cannot be selected.
- [ISO AUTO] is selected when using the following functions:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]
  - [Sweep Panorama]
- The higher the ISO value, the more noise will appear on the images.
- When shooting movies, ISO values between 80 and 6400 are available.
- When you use [Multi Frame NR], it takes some time for the product to perform the overlay processing of images.
- When you select [ISO AUTO] with the shooting mode set to [P], [A], [S] or [M], the ISO sensitivity will be automatically adjusted within the set range.
The zoom features available with this product

The zoom feature of the product provides a higher magnification zoom by combining various zoom features. The icon displayed on the screen changes, according to the selected zoom feature.

1. **Optical zoom range**
   Images are magnified within the optical zoom range of this product.

2. **Smart Zoom range ( )**
   Zoom images without causing the original quality to deteriorate by partially cropping an image (only when JPEG Image Size is set to [M], [S] or [VGA]).

3. **Clear Image Zoom range ( )**
   Zoom images using an image process with less deterioration. When you set [Zoom Setting] to [On:ClearImage Zoom] or [On:Digital Zoom], you can use this zoom function.

4. **Digital Zoom range ( )**
   You can magnify images using an image process. When you set [Zoom Setting] to [On:Digital Zoom], you can use this zoom function.

**Note**

- The default setting for the [Zoom Setting] is [Optical zoom only].
- The default setting for the JPEG Image Size is [L]. To use the smart zoom, change JPEG Image Size to [M], [S] or [VGA].
- Zooming is not available when shooting panoramic images.
- The Smart Zoom, Clear Image Zoom and Digital Zoom functions are not available when shooting in the following situations:
  - File Format is set to [RAW] or [RAW & JPEG].
  - Record Setting is set to [120p]/[100p].
- You cannot use the Smart Zoom function with movies.
- When you use the Smart Zoom, Clear Image Zoom or Digital Zoom function, [Metering Mode] is fixed to [Multi].
- When using the Smart Zoom, Clear Image Zoom or Digital Zoom function, the following functions are not available:
  - Face Priority in AF
  - Face Prty in Multi Mtr
  - Lock-on AF
  - Auto Obj. Framing

**Related Topic**

- Zoom
- Zoom Setting
- About zoom scale
- Zoom Speed
**Zoom**

Enlarge images using the W/T (zoom) lever when shooting.

1. **Enlarge images with the W/T (zoom) lever when shooting.**
   - Move the W/T (zoom) lever to the T side to zoom in and to the W side to zoom out.

**Hint**

- When you select other than [Optical zoom only] for [Zoom Setting], you can exceed the zoom range of the optical zoom to zoom images.
- You can assign the zoom function to the control ring.

**Related Topic**

- Zoom Setting
- The zoom features available with this product
- Zoom Assist
- Zoom Speed
- Zoom Func. on Ring
Zoom Setting

You can select the zoom setting of the product.

1. MENU → (Camera Settings2) → [Zoom Setting] → desired setting.

Menu item details

Optical zoom only:
Limits the zoom range to the optical zoom. You can use the Smart Zoom function if you set [JPEG Image Size] to [M], [S] or [VGA].

On:ClearImage Zoom:
Select this setting to use Clear Image Zoom. Even if the zoom range exceeds the optical zoom, the product magnifies images within the range in which image quality does not deteriorate significantly.

On:Digital Zoom:
When the zoom range of the Clear Image Zoom is exceeded, the product magnifies images to the largest scale. However, the image quality will deteriorate.

Note
- Set [Optical zoom only] if you want to magnify images within the range in which image quality does not deteriorate.

Related Topic
- The zoom features available with this product
- About zoom scale
- Zoom Speed

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About zoom scale

The zoom scale that is used in combination with the zoom of the lens changes according to the selected image size.

When [Aspect Ratio] is [4:3]

<table>
<thead>
<tr>
<th>JPEG Image Size</th>
<th>Optical zoom only (smart zoom)</th>
<th>On:ClearImage Zoom</th>
<th>On:Digital Zoom</th>
</tr>
</thead>
<tbody>
<tr>
<td>L: 18M</td>
<td>-</td>
<td>Approx. 2.0×</td>
<td>Approx. 4.0×</td>
</tr>
<tr>
<td>M: 10M</td>
<td>Approx. 1.3×</td>
<td>Approx. 2.7×</td>
<td>Approx. 5.4×</td>
</tr>
<tr>
<td>S: 5.0M</td>
<td>Approx. 1.9×</td>
<td>Approx. 3.8×</td>
<td>Approx. 7.6×</td>
</tr>
</tbody>
</table>

Related Topic

- Zoom
- The zoom features available with this product
- Zoom Setting
- JPEG Image Size (still image)
Zoom Assist

Zooms out temporarily and displays wider area when shooting a subject at the telephoto end (T end) of the zoom range. Quickly locates subjects you have lost track of and makes it easier to compose your shot. Be sure to assign the [Zoom Assist] function to a key using [Custom Key] or [Custom Key] in advance.

1 Hold down the key to which you have assigned [Zoom Assist].

The zoom scale will become lower and the shooting screen display will zoom out. The angle of view before the key was pressed is displayed as a frame (A: zoom assist frame).

2 Compose your shot so that the subject fits inside the zoom assist frame, and release the key.

The previous zoom scale is restored and the area inside the zoom assist frame is displayed full-screen.

Hint

- You can change the size of the zoom assist frame by using the standard zoom function while pressing the key to which [Zoom Assist] has been assigned. After you release the key, the zoom scale changes to the new size of the zoom assist frame.
- You can change how much to zoom out by selecting MENU → (Camera Settings2) → [Rng. of Zoom Assist].

Note

- If you press the shutter button all the way down while pressing the key, the previous zoom scale will not be restored and shooting will be performed with the angle of view set during zoom assist.
- When you use the [Zoom Assist] function during movie shooting, the captured area is not displayed inside the zoom assist frame but on the screen. In addition, the zoom sound may be recorded.

Related Topic

- Rng. of Zoom Assist
Rng. of Zoom Assist

Selects how much to zoom out with the [Zoom Assist] function.

1 MENU → (Camera Settings2) → [Rng. of Zoom Assist] → desired setting.

Menu item details

S:
Zooms out a small amount.

M:
Zooms out a medium amount.

L:
Zooms out a large amount.

Related Topic

* Zoom Assist
Zoom Speed

Sets the zoom speed of the camera’s zoom lever.

MENU → (Camera Settings2) → [Zoom Speed] → desired setting.

Menu item details

Normal:
Sets the zoom speed of the zoom lever to normal.

Fast:
Sets the zoom speed of the zoom lever to fast.

Hint

- The [Zoom Speed] settings are also used when you are zooming with a remote controller (sold separately) connected to the camera.

Note

- Selecting [Fast] increases the likelihood that the zoom sound will be recorded.

Related Topic

- Zoom
- The zoom features available with this product
- Zoom Setting
## Zoom Func. on Ring

Sets the zoom functions when using the control ring to change zoom scales. The settings for [Zoom Func. on Ring] are valid only when auto-focusing.

1. **MENU → \[\] \(\) (Camera Settings2) → [Zoom Func. on Ring] → desired setting.**

### Menu item details

**Standard:**
Zooms in/out smoothly when you operate the zoom by turning the control ring.

**Quick:**
Zooms in/out to an angle of view corresponding to how far the control ring has been rotated.

**Step:**
Zooms in/out at certain angle steps when you operate the zoom by turning the control ring.

### Note
- In the following situations, the zoom function activates as if [Zoom Func. on Ring] is set to [Standard], even if it is set to [Step].
  - When using the W/T (zoom) lever to change the zoom scale.
  - When recording movies.
  - When using zoom functions other than the optical zoom.
- When the shooting mode is set to something other than [Intelligent Auto] or [Superior Auto], assign the [Zoom] function to the control ring before using the control ring.
- Selecting [Quick] increases the likelihood that the zoom sound will be recorded.
White Balance

Corrects the tone effect of the ambient light condition to record a neutral white subject in white. Use this function when the color tones of the image did not come out as you expected, or when you want to change the color tones on purpose for photographic expression.

MENU → 1 (Camera Settings1) → [White Balance] → desired setting.

Menu item details

- **Auto** / **Daylight** / **Shade** / **Cloudy** / **Incandescent** / **Fluor.: Warm White** / **Fluor.: Cool White** / **Fluor.: Day White** / **Fluor.: Daylight** / **Flash**: When you select a light source that illuminates the subject, the product adjusts the color tones to suit to the selected light source (preset white balance). When you select [Auto], the product automatically detects the light source and adjusts the color tones.

- **C.Temp./Filter**: Adjusts the color tones depending on the light source. Achieves the effect of CC (Color Compensation) filters for photography.

- **Custom 1/Custom 2/Custom 3**: Uses the white balance setting saved in [Custom Setup].

- **Custom Setup**: Memorizes the basic white color under the light conditions for the shooting environment. Select a memorized custom white balance number.

**Hint**

- You can display the fine adjustment screen and perform fine adjustments of the color tones as required by pressing the right side of the control wheel.

- If the color tones do not come out as you expected in the selected settings, perform [WB bracket] shooting.

- **AWB** or **AWB** is displayed only when [Priority Set in AWB] is set to [Ambience] or [White].

**Note**

- [White Balance] is fixed to [Auto] in the following shooting modes:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]

- If you use a mercury lamp or a sodium lamp as a light source, the accurate white balance will not be obtained because of the characteristics of the light. It is recommended to shoot images using a flash or select [Custom Setup].

**Related Topic**

- Capturing a basic white color in [Custom Setup] mode
- Priority Set in AWB
- WB bracket
**Priority Set in AWB**

Selects which tone to prioritize when shooting under lighting conditions such as incandescent light when [White Balance] is set to [Auto].

MENU → 1 (Camera Settings1) → [Priority Set in AWB] → desired setting.

**Menu item details**

- **Standard:**
  Shoots with standard auto white balance. The camera automatically adjusts the color tones.

- **Ambience:**
  Prioritizes the color tone of the light source. This is suitable when you want to produce a warm atmosphere.

- **White:**
  Prioritizes a reproduction of white color when the color temperature of the light source is low.

**Related Topic**

- [White Balance](#)
Capturing a basic white color in [Custom Setup] mode

In a scene where the ambient light consists of multiple types of light sources, it is recommended to use the custom white balance in order to accurately reproduce the whiteness. You can register 3 settings.

1. **MENU → (Camera Settings1) → [White Balance] → [Custom Setup].**

2. **Hold the product so that the white area fully covers the circle located in the center of the screen, and then press the center of the control wheel.**
   After the shutter sound beeps, the calibrated values (Color Temperature and Color Filter) are displayed.

3. **Select a registration number using the left/right sides of the control wheel, and then press the center.**
   The monitor returns to the recording information display while retaining the memorized custom white balance setting.
   - The registered custom white balance setting will remain memorized until overwritten by the another setting.

**Note**
- The message [Custom WB Error] indicates that the value is in the unexpected range, for example when the subject is too vivid.
  You can register the setting at this point, but it is recommended that you set the white balance again. When an error value is set, the indicator 
  turns orange on the recording information display. The indicator will be displayed in white when the set value is in the expected range.
- If you use a flash when capturing a basic white color, the custom white balance will be registered with the lighting from the flash.
  Be sure to use a flash whenever you shoot with recalled settings that were registered with a flash.
Photo Creativity

[Photo Creativity] is a mode that allows you to operate the camera intuitively with a different screen display. When the shooting mode is set to [Intelligent Auto] or [Superior Auto], you can change the settings easily and shoot images.

1. Set the mode dial to AUTO (Auto Mode).
2. Set the shooting mode to [Intelligent Auto] or [Superior Auto].
3. Press (Photo Creativity) on the control wheel.
4. Select the item to be changed using the control wheel.
   - **Brightness**: Adjusts brightness.
   - **Color**: Adjusts color.
   - **Vividness**: Adjusts vividness.
   - **Picture Effect**: You can select a desired effect and shoot images with the specific texture.
5. Select the desired settings.
   - You can use some settings together by repeating steps 4 and 5.
   - To reset the changed settings to the default settings, press the C/ (Delete) button. (Brightness), (Color), and (Vividness) are set to [AUTO], and (Picture Effect) is set to off.
6. For shooting still images: Press the shutter button.
   When recording movies: Press the MOVIE button to start recording.

Note
- When [File Format] is set to [RAW] or [RAW & JPEG], you cannot use [Photo Creativity].
- When you record movies using the [Photo Creativity] function, you cannot change any settings during the recording.
- If you switch the shooting mode to [Intelligent Auto] mode or [Superior Auto] mode, or turn off the product, the settings you have changed revert to the default settings.
- When the shooting mode is set to [Superior Auto], and you use [Photo Creativity], the product does not perform the overlay processing of images.

Related Topic
- Picture Effect
Creative Style

Allows you to set the desired image processing and finely adjust contrast, saturation and sharpness for each image style. You can adjust exposure (shutter speed and aperture) as you like with this function, unlike with [Scene Selection], where the product adjusts the exposure.

1. MENU → 1 (Camera Settings1) → [Creative Style].

2. Select the desired style using the top/bottom sides of the control wheel.

3. To adjust  (Contrast),  (Saturation) and  (Sharpness), select the desired item using the right/left sides, and then select the value using the top/bottom sides.

Menu item details

Standard:
For shooting various scenes with rich gradation and beautiful colors.

Vivid:
The saturation and contrast are heightened for shooting striking images of colorful scenes and subjects such as flowers, spring greenery, blue sky, or ocean views.

Portrait:
For capturing skin in a soft tone, ideally suited for shooting portraits.

Landscape:
The saturation, contrast, and sharpness are heightened for shooting vivid and crisp scenery. Distant landscapes also stand out more.

Sunset:
For shooting the beautiful red of the setting sun.

Black & White:
For shooting images in black and white monotone.

Sepia:
For shooting images in sepia monotone.

To set [Contrast], [Saturation] and [Sharpness]

[Contrast], [Saturation], and [Sharpness] can be adjusted for each image style preset such as [Standard] and [Landscape].

Select an item to be set by pressing the right/left sides of the control wheel, then set the value using the top/bottom sides of the control wheel.
The higher the value selected, the more the difference of light and shadow is accentuated, and the bigger the effect on the image.

**Saturation:**
The higher the value selected, the more vivid the color. When a lower value is selected, the color of the image is restrained and subdued.

**Sharpness:**
Adjusts the sharpness. The higher the value selected, the more the contours are accentuated, and the lower the value selected, the more the contours are softened.

### Note
- [Creative Style] is fixed to [Standard] in the following situations:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]
  - [Picture Effect] is set to other than [Off].
- When this function is set to [Black & White] or [Sepia], [Saturation] cannot be adjusted.
Picture Effect

Select the desired effect filter to achieve more impressive and artistic images.

1. MENU → 📷 [(Camera Settings1) → [Picture Effect] → desired setting.]

Menu item details

- **Off:**
  Disables the [Picture Effect] function.

- **Toy Camera:**
  Creates a soft image with shaded corners and reduced sharpness.

- **Pop Color:**
  Creates a vivid look by emphasizing color tones.

- **Posterization:**
  Creates a high contrast, abstract look by heavily emphasizing primary colors, or in black and white.

- **Retro Photo:**
  Creates the look of an aged photo with sepia color tones and faded contrast.

- **Soft High-key:**
  Creates an image with the indicated atmosphere: bright, transparent, ethereal, tender, soft.

- **Partial Color:**
  Creates an image which retains a specific color, but converts others to black and white.

- **High Contrast Mono.:**
  Creates a high-contrast image in black and white.

- **Soft Focus:**
  Creates an image filled with a soft lighting effect.

- **HDR Painting:**
  Creates the look of a painting, enhancing the colors and details.

- **Rich-tone Mono.:**
  Creates an image in black and white with rich gradation and reproduction of details.

- **Miniature:**
  Creates an image which enhances the subject vividly, with the background defocused considerably. This effect may often be found in pictures of miniature models.

- **Watercolor:**
  Creates an image with ink bleed and blurring effects as if painted using watercolors.

- **Illustration:**
  Creates an illustration-like image by emphasizing the outlines.

**Hint**

- You can perform detailed settings for some items using the left/right sides of the control wheel.

**Note**

- When you use a zoom function other than the optical zoom, setting the zoom scale larger makes [Toy Camera] less effective.
- When [Partial Color] is selected, images may not retain the selected color, depending on the subject or shooting conditions.
- You cannot check the following effects on the shooting screen, because the product processes the image after the shot. Also, you cannot shoot another image until image processing is finished. You cannot use these effects with movies.
  - [Soft Focus]
  - [HDR Painting]
In the case of [HDR Painting] and [Rich-tone Mono.], the shutter is released three times for one shot. Be careful about the following:

- Use this function when the subject is motionless or does not flash light.
- Do not change the composition during shooting.

When the contrast of the scene is low or when significant camera-shake or subject blur has occurred, you may not be able to obtain good HDR images. If the product detects such a situation, the following appear on the recorded image to inform you of this situation. Change the composition or re-shoot the image carefully to avoid image blur, as needed.

This function is not available in the following shooting modes:

- [Intelligent Auto]
- [Superior Auto]
- [Scene Selection]
- [Sweep Panorama]

When [File Format] is set to [RAW] or [RAW & JPEG], this function is not available.
Soft Skin Effect (still image)

Sets the effect used for shooting the skin smoothly in the Face Detection function.

1. MENU → 📷 (Camera Settings1) → [Soft Skin Effect] → desired setting.

Menu item details

- **Off:** Does not use the [Soft Skin Effect] function.
- **On:** Uses the [Soft Skin Effect].

**Hint**

- When [Soft Skin Effect] is set to [On], you can select the effect level. Select the effect level by pressing the right/left side of the control wheel.

**Note**

- [Soft Skin Effect] is not available when [File Format] is [RAW].
- [Soft Skin Effect] is not available for RAW images when the [File Format] is [RAW & JPEG].
Auto Obj. Framing (still image)

When this product detects and shoots faces, macro shooting subjects or subjects that are tracked by [Lock-on AF], the product automatically trims the image into an appropriate composition, and then saves it. Both the original and the trimmed images are saved. The trimmed image is recorded in the same size as the original image size.

MENU → [Camera Settings1] → [Auto Obj. Framing] → desired setting.

Menu item details

Off:
Does not trim images.

Auto:
Automatically trims images into an appropriate composition.

Note

- [Auto Obj. Framing] is not available when the shooting mode is set to [Sweep Panorama], [Movie], or when [Scene Selection] is set to [Hand-held Twilight], or [Anti Motion Blur].

- The trimmed image may not be the best possible composition, depending on the shooting conditions.

- [Auto Obj. Framing] cannot be set when [File Format] is set to [RAW] or [RAW & JPEG].

- [Auto Obj. Framing] is not available in the following situations.
  - [Drive Mode] is set to [Cont. Shooting], [Spd Priority Cont.], [Self-timer(Cont)], [Cont. Bracket], [Single Bracket], [WB bracket], or [DRO Bracket].
  - The ISO sensitivity is set to [Multi Frame NR].
  - [DRO/Auto HDR] is set to [Auto HDR].
  - Other zoom functions than the optical zoom
  - When shooting in Manual Focus mode
  - [Picture Effect] is set to [Soft Focus], [HDR Painting], [Rich-tone Mono.], [Miniature], [Watercolor], or [Illustration].
Color Space (still image)

The way colors are represented using combinations of numbers or the range of color reproduction is called “color space.” You can change the color space depending on the purpose of the image.

1. MENU → 📷 (Camera Settings1) → [Color Space] → desired setting.

Menu item details

sRGB:
This is the standard color space of the digital camera. Use [sRGB] in normal shooting, such as when you intend to print out the images without any modification.

AdobeRGB:
This color space has a wide range of color reproduction. When a large part of the subject is vivid green or red, Adobe RGB is effective. The file name of the recorded image starts with “._.”

Note

- [AdobeRGB] is for applications or printers that support color management and DCF2.0 option color space. Images may not be printed or viewed in the correct colors if you use applications or printers that do not support Adobe RGB.
- When displaying images that were recorded with [AdobeRGB] on non-Adobe RGB-compliant devices, the images will be displayed with low saturation.
Release w/o Card

Sets whether the shutter can be released when no memory card has been inserted.

1. MENU → 2 (Camera Settings2) → [Release w/o Card] → desired setting.

Menu item details

**Enable:**
Releases the shutter even if no memory card has been inserted.

**Disable:**
Does not release the shutter when no memory card has been inserted.

**Note**
- When no memory card has been inserted, the images shot will not be saved.
- The default setting is [Enable]. It is recommended that you select [Disable] prior to actual shooting.
SteadyShot (still image)

Sets whether or not to use the SteadyShot function.

1 MENU → 2 (Camera Settings2) → [SteadyShot] → desired setting.

Menu item details

On:
Uses [SteadyShot].

Off:
Does not use [SteadyShot].
We recommend that you set the camera to [Off] when using a tripod.
High ISO NR (still image)

When shooting with high ISO sensitivity, the product reduces noise that becomes more noticeable when the product sensitivity is high.

1. **MENU → 
   (Camera Settings1) → ** [High ISO NR] → desired setting.

### Menu item details

**Normal:**
Activates high ISO noise reduction normally.

**Low:**
Activates high ISO noise reduction moderately.

### Note

- [High ISO NR] is fixed to [Normal] in the following shooting modes:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]
  - [Sweep Panorama]

- When [File Format] is set to [RAW], this function is not available.

- [High ISO NR] does not work for RAW images when the [File Format] is [RAW & JPEG].
Regist. Faces Priority

Sets whether to focus with higher priority on faces registered using [Face Registration] when [Face Priority in AF] is set to [On].

MENU →  \( \)  (Camera Settings1) → [Regist. Faces Priority] → desired setting.

Menu item details

On:
Focuses with higher priority on faces registered using [Face Registration].

Off:
Focuses without giving higher priority to registered faces.

Related Topic

- Set. Face Prty in AF
- Face Registration (New Registration)
- Face Registration (Order Exchanging)
**Smile Shutter**

The camera automatically shoots an image when it detects a smiling face.

1. **MENU → 📷 (Camera Settings1) → [Smile Shutter] → desired setting.**

**Menu item details**

**Off:**
Does not use the [Smile Shutter] function.

**On:**
The camera automatically shoots an image when it detects a smiling face. You can select [On: Slight Smile], [On: Normal Smile], or [On: Big Smile] for the sensitivity of detection.

**Tips for capturing smiles more effectively**

- Do not cover the eyes with front hair and keep the eyes narrowed.
- Do not obscure the face by a hat, masks, sunglasses, etc.
- Try to orient the face in front of the product and be as level as possible.
- Give a clear smile with an open mouth. The smile is easier to be detected when the teeth are shown.
- If you press the shutter button during Smile Shutter, the product shoots the image. After shooting, the product returns to Smile Shutter mode.

**Note**

- You cannot use the [Smile Shutter] function with the following functions:
  - [Sweep Panorama]
  - [Picture Effect]
  - When using the [Focus Magnifier] function.
  - [Scene Selection] is set to [Landscape], [Night Scene], [Sunset], [Hand-held Twilight], [Anti Motion Blur], [Pet], [Gourmet] or [Fireworks].
  - When recording movies.
- Up to 8 faces of your subjects can be detected.
- The product may not detect faces at all or may accidentally detect other objects as faces in some conditions.
- If the product cannot detect a smile, adjust the Smile Detection Sensitivity.
- If you track a face using [Lock-on AF] while executing Smile Shutter function, Smile Detection is performed only for that face.
Face Registration (New Registration)

If you register faces in advance, the product can focus on the registered face as a priority. Set both [Face Priority in AF] and [Regist. Faces Priority] to [On] before shooting.

1. MENU → (Camera Settings1) → [Face Registration] → [New Registration].

2. Align the guide frame with the face to be registered, and press the shutter button.

3. When a confirmation message appears, select [Enter].

Note
- Up to eight faces can be registered.
- Shoot the face from the front in a brightly lit place. The face may not be registered correctly if it is obscured by a hat, a mask, sunglasses, etc.

Related Topic
- Regist. Faces Priority
- Set. Face Prty in AF
- Smile Shutter
Face Registration (Order Exchanging)

When multiple faces are registered to be given priority, the face registered first will be given priority. You can change the priority order.

1. **MENU → [ ] (Camera Settings1) → [Face Registration] → [Order Exchanging].**

2. Select a face to change the order of priority.

3. Select the destination.

Related Topic
- Regist. Faces Priority
- Set. Face Prty in AF
- Smile Shutter
Face Registration (Delete)

Deletes a registered face.

1. MENU → (Camera Settings1) → [Face Registration] → [Delete].

If you select [Delete All], you can delete all registered faces.

**Note**
- Even if you execute [Delete], the data for registered face will remain in the product. To delete the data for registered faces from the product, select [Delete All].
Using flash

In dark environments, use the flash to light up the subject while shooting. Also use the flash to prevent camera-shake.

1 Slide the ✳ (Flash pop-up) switch to pop up the flash.
   - The flash does not pop up automatically.

2 Press the shutter button fully down.
   - The available flash modes depend on the shooting mode and function.

When you do not use the flash

When not using the flash, press it back into the camera body.

Note

- If you fire the flash before the flash unit pops up entirely, it may cause malfunction.
- You cannot use the flash when recording movies.
- 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, shoot away from the subject or set the zoom to T and shoot with the flash again.
- When the monitor is tilted upward 90 degrees or more, it is difficult to operate the ✳ (Flash pop-up) switch. Raise the flash unit before adjusting the monitor angle.
- When using flash to shoot pictures of yourself, be careful not to look directly at the light, because the flash will go off at a close distance. To prevent the flash from hitting the monitor when you press it back down into the camera body after use, first return the monitor to its original position.

Related Topic

- Flash Mode
Red Eye Reduction

When using the flash, it is fired two or more times before shooting to reduce the red-eye phenomenon.

MENU → (Camera Settings1) → [Red Eye Reduction] → desired setting.

Menu item details

On:
The flash is always fired to reduce the red-eye phenomenon.

Off:
Does not use Red Eye Reduction.

Note
Red Eye Reduction may not produce the desired effects. It depends on individual differences and conditions, such as distance to the subject, or whether the subject looks at the pre-strobe or not.
Flash Mode

You can set the flash mode.

Select 
(Flash Mode) on the control wheel → desired setting.

You can also set the flash mode by selecting MENU → (Camera Settings1) → [Flash Mode].

Menu item details

Flash Off:
The flash does not operate.

Autoflash:
The flash works in dark environments or when shooting towards bright light.

Fill-flash:
The flash works every time you trigger the shutter.

Slow Sync.:
The flash works every time you trigger the shutter. Slow sync shooting allows you to shoot a clear image of both the subject and the background by slowing the shutter speed.

Rear Sync.:
The flash works right before the exposure is completed every time you trigger the shutter. Rear sync shooting allows you to shoot a natural image of the trail of a moving subject such as a moving car or a walking person.

Note

- The default setting depends on the shooting mode.
- Some [Flash Mode] settings are not available, depending on the shooting mode.

Related Topic

- Using flash

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Flash Comp.

Adjusts the amount of flash light in a range of –3.0 EV to +3.0 EV. Flash compensation changes the amount of flash light only. Exposure compensation changes the amount of flash light along with the change of the shutter speed and aperture.

MENU →  (Camera Settings1) → [Flash Comp.] → desired setting.

- Selecting higher values (+ side) makes the flash level higher, and lower values (- side) makes the flash level lower.

Note

- [Flash Comp.] does not work when the shooting mode is set to the following modes:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Sweep Panorama]
  - [Scene Selection]

- The higher flash effect (+ side) may not be visible due to the limited amount of flash light available, if the subject is outside the maximum range of the flash. If the subject is very close, the lower flash effect (- side) may not be visible.

Related Topic

- Using flash

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Shooting movies

You can record movies by pressing the MOVIE (Movie) button.

1 Press the MOVIE button to start recording.

   - Since the [MOVIE Button] is set to [Always] in the default setting, movie recording can be started from any shooting mode.

   ![MOVIE button](image)

2 Press the MOVIE button again to stop recording.

Hint

- You can assign the start/stop movie recording function to a preferred key. MENU → [Camera Settings2] → [Custom Key] → set [MOVIE] to the preferred key.
- When you want to specify the area to be focused on, set the area using [Focus Area].
- To keep the focus on a face, arrange the composition so that the focusing frame and face detection frame overlap, or set the [Focus Area] to [Wide].
- To adjust the shutter speed and aperture value to the desired settings, set the shooting mode to (Movie) and select the desired exposure mode.
- An icon indicating that data is being written is displayed after shooting. Do not remove the memory card while the icon is displayed.
- The following settings for still image shooting are applied to the movie shooting:
  - White Balance
  - Creative Style
  - Metering Mode
  - Face Priority in AF
  - Face Prty in Mlti Mtr
  - D-Range Opt.
- You can change the settings for ISO sensitivity, exposure compensation, and focus area while shooting movies.
- While shooting movies, the recorded image can be output without the shooting information display by setting [HDMI Info. Display] to [Off].

Note

- You cannot record still images during movie recording.
The sound of the lens and the product in operation may be recorded during movie recording. The sound of the zoom is particularly likely to be recorded during movie recording if [Zoom Speed] is set to [Fast] or [Zoom Func. on Ring] is set to [Quick]. You can turn the sound off by selecting MENU → \(\text{2} (\text{Camera Settings2}) \rightarrow [\text{Audio Recording}] \rightarrow [\text{Off}].

The temperature of the camera tends to rise when shooting movies continuously, and you may feel that the camera is warm. This is not a malfunction. Also, [Internal temp. high. Allow it to cool.] may appear. In such cases, turn the power off and cool the camera and wait until the camera is ready to shoot again.

If the \(\text{3}\) icon appears, the temperature of the camera has risen. Turn the power off and cool the camera and wait until the camera is ready to shoot again.

For the continuous shooting time of a movie recording, refer to “Recordable movie times.” When movie recording is finished, you can record another movie by pressing the MOVIE button again. Recording may stop to protect the product, depending on the temperature of the product or the battery.

In [Program Auto] mode when shooting movies, the aperture value and the shutter speed will be set automatically and cannot be changed. For that reason, the shutter speed may become fast in a bright environment, and the motion of the subject may not be recorded smoothly. By changing the exposure mode and adjusting the aperture value and the shutter speed, the motion of the subject can be recorded smoothly.

When ISO sensitivity is set to [Multi Frame NR], [ISO AUTO] will be set temporarily.

In movie shooting mode, the following settings cannot be set in [Picture Effect]. When a movie recording starts, [Off] will be set temporarily.
- Soft Focus
- HDR Painting
- Rich-tone Mono.
- Miniature
- Watercolor
- Illustration

If you point the camera at an extremely strong light source while shooting a movie at low ISO sensitivity, the highlighted area in the image may be recorded as a black area.

If the display mode of the monitor is set to [For viewfinder], the display mode will switch to [Display All Info.] when movie shooting starts.

Use PlayMemories Home when importing XAVC S movies and AVCHD movies to a computer.

Related Topic
- MOVIE Button
- Movie w/ shutter
- File Format (movie)
- Recordable movie times
- Custom Key (still image/movie/playback)
- Focus Area

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Movie w/ shutter

You can start or stop recording movies by pressing the shutter button, which is bigger and easier to press than the MOVIE (Movie) button.

1. MENU → 2 (Camera Settings2) → [Movie w/ shutter] → desired setting.

Menu item details

On:
Enables movie recording using the shutter button when the shooting mode is set to [Movie].

Off:
Disables movie recording using the shutter button.

Hint

- When [Movie w/ shutter] is set to [On], you can still start or stop recording movies using the MOVIE button.
- When [Movie w/ shutter] is set to [On], you can use the shutter button to start or stop recording movies on an external recording/playback device using [REC Control].

Related Topic

- Shooting movies
Movie recording formats

The following movie recording formats are available with this camera.

What is XAVC S?

Records movies in high definition such as 4K by converting them into MP4 movies using the MPEG-4 AVC/H.264 codec. MPEG-4 AVC/H.264 is capable of compressing images with higher efficiency. You can record high-quality images while reducing the amount of data.

XAVC S/AVCHD recording format

**XAVC S 4K:**
Bit-rate: Approx. 100 Mbps or approx. 60 Mbps
Records movies in 4K resolution (3840×2160).

**XAVC S HD:**
Bit-rate: Approx. 100 Mbps, approx. 60 Mbps, approx. 50 Mbps, approx. 25 Mbps, or approx. 16 Mbps
Records movies in crisper quality than AVCHD with larger amounts of data.

**AVCHD:**
Bit-rate: Approx. 24 Mbps (maximum) or approx. 17 Mbps (average)
The AVCHD format has a high degree of compatibility with storage devices other than computers.

- Bit rate is the amount of data processed within a given period of time.

Related Topic

- File Format (movie)
- Record Setting (movie)
- AVCHD format
File Format (movie)

Selects the movie file format.

1. MENU → 📱2 (Camera Settings2) → [File Format] → desired setting.

Menu item details

<table>
<thead>
<tr>
<th>File Format</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>XAVC S 4K</td>
<td>Records movies in 4K resolution (3840×2160). You can save movies on a computer using the PlayMemories Home software.</td>
</tr>
<tr>
<td>XAVC S HD</td>
<td>Records movies in crisper quality than AVCHD with larger amounts of data.</td>
</tr>
<tr>
<td>AVCHD</td>
<td>The AVCHD format has a high degree of compatibility with storage devices other than computers. You can save movies on a computer or create a disc that supports this format using the PlayMemories Home software.</td>
</tr>
</tbody>
</table>

Note

- When recording XAVC S 4K or XAVC S HD movies in 120p/100p, the amount of time available for continuous recording is approximately 5 minutes. The remaining time for movie recording is displayed on the monitor. If you want to record another session of 4K or HD 120p/100p movie shooting, turn off the camera and wait for some time before you start the next session of shooting. Even if the recording time was less than 5 minutes, recording may stop to protect the product, depending on the temperature of the shooting environment.

- When [File Format] is set to [AVCHD], the file size of movies is limited to approx. 2 GB. If the movie file size reaches approx. 2 GB during recording, a new movie file will be created automatically.

- If you set [File Format] to [XAVC S 4K] and shoot movies while the camera is connected to an HDMI device, images will not be displayed on the monitor of the camera.
Record Setting (movie)

Selects the frame rate and bit-rate for movie recording.

1. MENU → (Camera Settings2) → [Record Setting] → desired setting.

- The higher the bit-rate, the higher the image quality.

**Menu item details**

When [File Format] is set to [XAVC S 4K]

<table>
<thead>
<tr>
<th>Record Setting</th>
<th>Bit-rate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>30p 100M/25p 100M</td>
<td>Approx. 100 Mbps</td>
<td>Records movies in 3840×2160 (30p/25p).</td>
</tr>
<tr>
<td>30p 60M/25p 60M</td>
<td>Approx. 60 Mbps</td>
<td>Records movies in 3840×2160 (30p/25p).</td>
</tr>
<tr>
<td>24p 100M*</td>
<td>Approx. 100 Mbps</td>
<td>Records movies in 3840×2160 (24p).</td>
</tr>
<tr>
<td>24p 60M*</td>
<td>Approx. 60 Mbps</td>
<td>Records movies in 3840×2160 (24p).</td>
</tr>
</tbody>
</table>

* Only when [NTSC/PAL Selector] is set to NTSC

When [File Format] is set to [XAVC S HD]

<table>
<thead>
<tr>
<th>Record Setting</th>
<th>Bit-rate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>60p 50M/50p 50M</td>
<td>Approx. 50 Mbps</td>
<td>Records movies in 1920×1080 (60p/50p).</td>
</tr>
<tr>
<td>60p 25M/50p 25M</td>
<td>Approx. 25 Mbps</td>
<td>Records movies in 1920×1080 (60p/50p).</td>
</tr>
<tr>
<td>30p 50M/25p 50M</td>
<td>Approx. 50 Mbps</td>
<td>Records movies in 1920×1080 (30p/25p).</td>
</tr>
<tr>
<td>24p 50M*</td>
<td>Approx. 50 Mbps</td>
<td>Records movies in 1920×1080 (24p).</td>
</tr>
</tbody>
</table>
| 120p 100M/100p 100M | Approx. 100 Mbps | Records high-speed movies in 1920×1080 (120p/100p). You can record movies in 120 fps or 100 fps.
  - You can create smoother slow-motion movies by using compatible editing devices. |
When [File Format] is set to [AVCHD]

<table>
<thead>
<tr>
<th>Record Setting</th>
<th>Bit-rate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>120p 60M/100p 60M</td>
<td>Approx. 60 Mbps</td>
<td>Records high-speed movies in 1920×1080 (120p/100p). You can record movies in 120 fps or 100 fps. You can create smoother slow-motion movies by using compatible editing devices.</td>
</tr>
<tr>
<td>120p 60M/100p 60M</td>
<td>Approx. 60 Mbps</td>
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</tr>
</tbody>
</table>

* Only when [NTSC/PAL Selector] is set to NTSC

**Note**

- Creating an AVCHD recording disc from movies that were recorded with [60i 24M(FX)]/[50i 24M(FX)] as the [Record Setting] takes a long time because the image quality of movies is converted. If you want to store movies without converting them, use a Blu-ray Disc.

- [120p]/[100p] cannot be selected for the following settings.
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]

- When [Record Setting] is set to [120p]/[100p], the image quality becomes almost equal to HD quality.
Proxy Recording

Sets whether to simultaneously record low-bit-rate proxy movies when recording XAVC S movies. Since proxy movies are small in file size, they are suitable for transferring to smartphones or uploading to websites.

MENU → 2 (Camera Settings2) → [Proxy Recording] → desired setting.

Menu item details

**On:**
Proxy movies are simultaneously recorded.

**Off:**
Proxy movies are not recorded.

**Hint**
- Proxy movies are recorded in the XAVC S HD format (1280×720) at 9 Mbps. The frame rate of the proxy movie is the same as that of the original movie.
- Proxy movies are not displayed on the playback screen (single-image playback screen or image index screen). [_PROXY] is displayed over movies for which a proxy movie was simultaneously recorded.

**Note**
- Proxy movies cannot be played back on this camera.
- Proxy recording is not available in the following situations.
  - When [File Format] is set to [AVCHD]
  - When [Record Setting] is set to [120p]/[100p]
  - When [SteadyShot] is set to [Intelligent Active]
- Deleting/protecting movies that have proxy movies removes/protects both the original and proxy movies. You cannot delete/protect only original movies or proxy movies.
- Movies cannot be edited on this camera.

Related Topic

- Snd to Smrtphn Func: Sending Target (proxy movies)
- Movie recording formats
- Playing back images on the image index screen (Image Index)
- Memory cards that can be used
Audio Recording

Sets whether to record sounds when shooting movies. Select [Off] to avoid recording the sounds of the lens and the camera operating.

1. MENU → 2 (Camera Settings2) → [Audio Recording] → desired setting.

Menu item details

On:
Records sound (stereo).

Off:
Does not record sound.
**Micref Level**

You can select the microphone level for movie recording.

1. **MENU → 2 (Camera Settings2) → [Micref Level] → desired setting.**

**Menu item details**

**Normal:**
Records the ambient sounds within a certain level. This setting is suitable for recording everyday conversations.

**Low:**
Records the ambient sounds faithfully. This setting is suitable for recording realistic sounds, for example at a concert.
Wind Noise Reduct.

Sets whether or not to reduce wind noise by cutting the low-range sound of the input audio from the built-in microphone.

MENU →  [Camera Settings2] → [Wind Noise Reduct.] → desired setting.

Menu item details

On:
Reduces wind noise.

Off:
Does not reduce wind noise.

Note
Setting this item to [On] where wind is not blowing sufficiently hard may cause normal sound to be recorded with too low volume.
Auto Slow Shut. (movie)

Sets whether or not to adjust the shutter speed automatically when recording movies if the subject is dark.

1 MENU → [Camera Settings2] → [Auto Slow Shut.] → desired setting.

Menu item details

On:
Uses Auto Slow Shutter. The shutter speed automatically slows when recording in dark locations. You can reduce noise in the movie by using a slow shutter speed when recording in dark locations.

Off:
Does not use Auto Slow Shutter. The recorded movie will be darker than when [On] is selected, but you can record movies with smoother motion and less object blur.

Note

- [Auto Slow Shut.] does not function in the following situations:
  - [S] (Shutter Priority)
  - [M] (Manual Exposure)
  - When [ISO] is set to other than [ISO AUTO]
SteadyShot (movie)

Sets [SteadyShot] effect when shooting movies. If you set the [SteadyShot] effect to [Off] when using a tripod (sold separately), a natural image is produced.

1. MENU → 2 (Camera Settings2) → [SteadyShot] → desired setting.

Menu item details

**Intelligent Active:**
Provides a more powerful SteadyShot effect than [Active].

**Active:**
Provides a more powerful SteadyShot effect.

**Standard:**
Reduces camera shake under stable movie shooting conditions.

**Off:**
Does not use [SteadyShot].

**Note**
- If you change the setting for [SteadyShot], the angle of view will change.
- [Intelligent Active] and [Active] cannot be selected when [File Format] is set to [XAVC S 4K] or [XAVC S HD 120p/100p].
TC/UB Settings

The time code (TC) and the user bit (UB) information can be recorded as data attached to movies.

MENU → (Setup) → [TC/UB Settings] → setting value you want to change.

Menu item details

**TC/UB Disp. Setting:**
Sets the display for the counter, time code, and user bit.

**TC Preset:**
Sets the time code.

**UB Preset:**
Sets the user bit.

**TC Format:**
Sets the recording method for the time code. (Only when [NTSC/PAL Selector] is set to NTSC.)

**TC Run:**
Sets the count up format for the time code.

**TC Make:**
Sets the recording format for the time code on the recording medium.

**UB Time Rec:**
Sets whether or not to record the time as a user bit.

**How to set the time code (TC Preset)**

1. MENU → (Setup) → [TC/UB Settings] → [TC Preset].
2. Turn the control wheel and select the first two digits.
   - The time code can be set between the following range.
     - When [60i] is selected: 00:00:00:00 to 23:59:59:29
     - When [24p] is selected, you can select the last two digits of the time code in multiples of four from 0 to 23 frames.
     - When [50i] is selected: 00:00:00:00 to 23:59:59:24
3. Set the other digits following the same procedure as in step 2, then press in the center of the control wheel.

**Note**
- When you tilt the monitor to shoot a self-portrait, the time code and user bit will not be displayed.

**How to reset the time code**

1. MENU → (Setup) → [TC/UB Settings] → [TC Preset].
2. Press the (Delete) button to reset the time code (00:00:00:00).

You can also reset the time code (00:00:00:00) using the RMT-VP1K remote commander (sold separately).

**How to set the user bit (UB Preset)**

1. MENU → (Setup) → [TC/UB Settings] → [UB Preset].
2. Turn the control wheel and select the first two digits.
3. Set the other digits following the same procedure as in step 2, then press in the center of the control wheel.

**How to reset the user bit**
How to select the recording method for the time code (TC Format *1)

1. MENU → (Setup) → [TC/UB Settings] → [TC Format].

**DF:**
Records the time code in Drop Frame*2 format.

**NDF:**
Records the time code in Non-Drop Frame format.

*1 Only when [NTSC/PAL Selector] is set to NTSC.
*2 The time code is based on 30 frames per second. However, a gap between the actual time and the time code will occur during extended periods of recording as the frame frequency of the NTSC image signal is approximately 29.97 frames per second. Drop frame corrects this gap to make the time code and actual time equal. In drop frame, the first 2 frame numbers are removed every minute except for every tenth minute. The time code without this correction is called non-drop frame.

The setting is fixed to [NDF] when recording in 4K/24p or 1080/24p.

How to select the count up format for the time code (TC Run)

1. MENU → (Setup) → [TC/UB Settings] → [TC Run].

**Rec Run:**
Sets the stepping mode for the time code to advance only while recording. The time code is recorded sequentially from the last time code of the previous recording.

**Free Run:**
Sets the stepping mode for the time code to advance anytime, regardless of the camera operation.

The time code may not be recorded sequentially in the following situations even when the time code advances in [Rec Run] mode.

- When the recording format is changed.
- When the recording medium is removed.

How to select how the time code is recorded (TC Make)

1. MENU → (Setup) → [TC/UB Settings] → [TC Make].

**Preset:**
Records the newly set time code on the recording medium.

**Regenerate:**
Reads the last time code for the previous recording from the recording medium and records the new time code consecutively from the last time code. The time code advances in [Rec Run] mode regardless of the [TC Run] setting.
TC/UB Disp. Switch

Allows you to display the time code (TC) and user bit (UB) of a movie by pressing the key to which [TC/UB Disp. Switch] function has been assigned.

1. MENU → (Camera Settings2) → [ ] Custom Key], [ ] Custom Key], or [ ] Custom Key] → assign the [TC/UB Disp. Switch] function to the desired key.

2. Press the key to which [TC/UB Disp. Switch] is assigned.
   - Each time you press the key, the monitor display will switch from the movie recording time counter → time code (TC) → user bit (UB), in that order.

**Note**
- When the monitor is flipped while in a shooting mode, such as during self-portrait shooting, TC/UB information is not displayed. In the playback mode, TC/UB information is displayed even when the monitor is flipped.
MOVIE Button

Sets whether or not to activate the MOVIE (Movie) button.

1 MENU → 2(Camera Settings2) → [MOVIE Button] → desired setting.

Menu item details

Always:
Starts movie recording when you press the MOVIE button in any mode.

Movie Mode Only:
Starts movie recording when you press the MOVIE button only if the shooting mode is set to [ Movie] mode.
**Marker Display (movie)**

Sets whether or not to display markers set using [Marker Settings] on the monitor or the viewfinder while shooting movies.

1. **MENU → 2(Camera Settings2) → [Marker Display] → desired setting.**

**Menu item details**

**On:**
Markers are displayed. The markers are not recorded.

**Off:**
No marker is displayed.

**Note**
- The markers are displayed when the mode dial is set to (Movie) or when shooting movies.
- You cannot display markers when using [Focus Magnifier].
- The markers are displayed on the monitor or viewfinder. (You cannot output the markers.)

**Related Topic**
- Marker Settings (movie)
Marker Settings (movie)

Sets the markers to be displayed while shooting movies.

1 MENU →  

Menu item details

Center:
Sets whether or not to display the center marker in the center of the shooting screen.
[Off]/[On]

Aspect:
Sets the aspect marker display.
[Off]/[4:3]/[13:9]/[16:9]/[1.66:1]/[1.85:1]/[2.35:1]

Safety Zone:
Sets the safety zone display. This becomes the standard range that can be received by a general household TV.
[Off]/[80%]/[90%]

Guideframe:
Sets whether or not to display the guide frame. You can verify whether the subject is level or perpendicular to the ground.
[Off]/[On]

Hint

- You can display several markers at the same time.
- Place the subject on the cross point of the [Guideframe] to make a balanced composition.
**4K Output Sel. (movie)**

You can set how to record movies and perform HDMI output when your camera is connected to 4K-compatible external recording/playback devices, etc.

1. **Turn the mode dial to **(movie).**

2. **Connect the camera to the desired device via an HDMI cable.**

3. **MENU → **(Setup) → **[[4K Output Sel.]] → desired setting.**

**Menu item details**

**Memory Card+HDMI:**
Simultaneously outputs to the external recording/playback device and records on the camera’s memory card.

**HDMI Only(30p):**
Outputs a 4K movie in 30p to the external recording/playback device without recording on the camera’s memory card.

**HDMI Only(24p):**
Outputs a 4K movie in 24p to the external recording/playback device without recording on the camera’s memory card.

**HDMI Only(25p):**
Outputs a 4K movie in 25p to the external recording/playback device without recording on the camera’s memory card.

* Only when [NTSC/PAL Selector] is set to PAL.

**Note**

- This item can be set only when the camera is in movie mode and connected to a 4K-compatible device.
- When [HDMI Only(30p)], [HDMI Only(24p)] or [HDMI Only(25p)] is set, [HDMI Info. Display] will temporarily be set to [Off].
- When [HDMI Only(30p)], [HDMI Only(24p)] or [HDMI Only(25p)] is set, the counter does not move forward (the actual recording time is not counted) while the movie is being recorded on an external recording/playback device.
- When [[File Format] is set to [XAVC S 4K] and the camera is connected via HDMI, the following functions are not available.
  - [Face Priority in AF]
  - [Face Prty in Mlti Mtr]
  - [Center Lock-on AF]

**Related Topic**

- **HDMI Settings: REC Control (movie)**
- **File Format (movie)**
- **Record Setting (movie)**
- **HDMI Settings: HDMI Info. Display**
Playing back still images

Plays back the recorded images.

1 Press the (Playback) button to switch to the playback mode.

2 Select the image with the control wheel.
   - Continuously shot images are displayed as one group. To play back the images in the group, press the center of the control wheel.

Hint
   - The product creates an image database file on a memory card to record and play back images. An image that is not registered in the image database file may not be played back correctly. To play back images shot using other devices, register those images to the image database file using MENU → (Setup) → [Recover Image DB].
   - If you play back the images right after continuous shooting, the monitor may display an icon indicating that data is being written/the number of images left to write. During writing, some functions are not available.
   - You can also enlarge an image by double-tapping the monitor. In addition, you can drag and move the magnified position on the monitor. Set [Touch Operation] to [On] beforehand.

Related Topic
   - Recover Image DB
Enlarging an image being played back (Enlarge Image)

Enlarges the image being played back. Use this function to check the focus of the image, etc.

1. Display the image you want to enlarge, and slide the W/T (zoom) lever to the T side.
   - Slide the W/T (zoom) lever to the W side to adjust the zoom scale.
   - The view will zoom in on the part of the image where the camera focused during shooting. If the focus location information cannot be obtained, the camera will zoom in on the center of the image.

2. Select the portion you want to enlarge by pressing the top/bottom/right/left sides of the control wheel.

3. Press the MENU button or the center of the control wheel to exit the playback zoom.

Hint
- You can also enlarge an image being played back using MENU.
- You can change the initial magnification and initial position of enlarged images by selecting MENU → [Playback] → [Enlarge Init. Mag.] or [Enlarge Initial Pos.].
- You can also enlarge an image by double-tapping the monitor. In addition, you can drag and move the magnified position on the monitor. Set [Touch Operation] to [On] beforehand.

Note
- You cannot enlarge movies.

Related Topic
- Touch Operation
- Enlarge Init. Mag.
- Enlarge Initial Pos.
Rotating recorded images automatically (Display Rotation)

Selects the orientation when playing back recorded images.

1. MENU → ▪️ (Playback) → [Display Rotation] → desired setting.

Menu item details

Auto:
When you rotate the camera, the displayed image rotates automatically by detecting the orientation of the camera.

Manual:
Images shot vertically are displayed vertically. If you have set the image orientation using the [Rotate] function, the image will be displayed accordingly.

Off:
Images are always displayed horizontally.

Related Topic

Rotating an image (Rotate)
Rotating an image (Rotate)

Rotates a recorded still image counter-clockwise.

1. Display the image to be rotated, then select MENU → (Playback) → [Rotate].

2. Press the center of the control wheel.

   The image is rotated counter-clockwise. The image rotates as you press the center.
   If you rotate the image once, the image remains rotated even after the product is turned off.

Note

- You cannot rotate the movies.
- You may not be able to rotate images shot using other products.
- When viewing rotated images on a computer, the images may be displayed in their original orientation depending on the software.
Playing back panoramic images

The product automatically scrolls a panoramic image from end to end.

1. Press the (Playback) button to switch to playback mode.

2. Select the panoramic image to be played back using the control wheel and press the center to start playback.

- To pause playback, press the center again.
- To scroll panoramic images manually, press the top/bottom/right/left during pause.
- To return to the display of the entire image, press the MENU button.

Note

- Panoramic images shot using other products may be displayed in a different size from the actual size, or may not scroll correctly.
Enlarge Init. Mag.

Sets the initial magnification scale when playing back enlarged images.

1. MENU →  (Playback) → [Enlarge Init. Mag.] → desired setting.

Menu item details

**Standard. Mag.:**
Displays an image with the standard magnification.

**Previous Mag.:**
Displays an image with the previous magnification. The previous magnification is stored even after exiting the playback zoom mode.

Related Topic

- **Enlarging an image being played back (Enlarge Image)**
- **Enlarge Initial Pos.**
Enlarge Initial Pos.

Sets the initial position when enlarging an image in playback.

1. MENU → (Playback) → [Enlarge Initial Pos.] → desired setting.

Menu item details

Focused Position:
Enlarges the image from the point of focus during shooting.

Center:
Enlarges the image from the center of the screen.

Related Topic

- Enlarging an image being played back (Enlarged Image)
- Enlarge Init. Mag.
Playing back movies

Plays back the recorded movies.

1 Press the  (playback) button to switch to playback mode.

2 Select the movie to be played back using the control wheel and press the center of the control wheel to start playback.

Available operations during movie playback

You can perform slow playback and sound volume adjustment, etc. by pressing the down side of the control wheel.

- : Playback
- : Pause
- : Fast-forward
- : Fast-rewind
- : Forward slow playback
- : Reverse slow playback
- : Next movie file
- : Previous movie file
- : Displays the next frame
- : Displays the previous frame
- : Motion Shot Video (Shows the tracking of a subject in motion.)
- : Photo Capture
- : Sound volume adjustment
- : Closes the operation panel

Hint

- “Forward slow playback,” “Reverse slow playback,” “Displays the next frame” and “Displays the previous frame” are available during pause.
- Movie files recorded using other products may not be able to be playable on this camera.

Related Topic

- Switching between still images and movies (View Mode)
- Motion Shot Video
Motion Shot Video

You can see the tracking of the subject's motion in high-speed, like a stroboscopic image.

1 Press the bottom side of the control wheel during movie playback, then select [şa].
   - To exit [Motion Shot Video] playback, select [şa].
   - If you fail to make the trail, you can adjust the interval of the image tracking using [şa].

Hint

- You can also change the interval of the image tracking using MENU → (Playback) → [Motion Interval ADJ].

Note

- You cannot save the images made with [Motion Shot Video] as a movie file.
- If the motion of the subject is too slow or the subject does not move enough, the product may fail to create the image.

Related Topic

- Motion Interval ADJ
Motion Interval ADJ

You can adjust the interval of the tracking of the subject’s motion.

1. MENU → (Playback) → [Motion Interval ADJ] → desired setting.

Related Topic
- Motion Shot Video
Volume Settings

Sets the sound volume for movie playback.

1. **MENU** → **(Setup)** → [Volume Settings] → desired setting.

Adjusting the volume during playback

Press the bottom side of the control wheel while playing back movies to display the operation panel, then adjust the volume. You can adjust the volume while listening to the actual sound.
Photo Capture

Captures a chosen scene in a movie to save as a still image. First shoot a movie, then pause the movie during playback to capture decisive moments that tend to be missed when shooting still images, and save them as still images.

1. Display the movie that you want to capture as a still image.

2. MENU → (Playback) → [Photo Capture].

3. Play back the movie and pause it.

4. Find the desired scene using forward slow playback, reverse slow playback, displays the next frame, and displays the previous frame, and then stop the movie.

5. Press (Photo Capture) to capture the chosen scene.
   The scene is saved as a still image.

Related Topic
- Shooting movies
- Playing back movies
Playing back images on the image index screen (Image Index)

You can display multiple images at the same time in playback mode.

1. Slide the W/T (zoom) lever to the W side while the image is being played back.

2. Select the image by pressing the top/bottom/right/left sides of the control wheel or turning the control wheel.

To change the number of images to be displayed

MENU → [Playback] → [Image Index] → desired setting.

Menu item details

9 Images/25 Images

To return to single-image playback

Select the desired image and press the center of the control wheel.

To display a desired image quickly

Select the bar on the left of the image index screen using the control wheel, then press the top/bottom sides of the control wheel. While the bar is being selected, you can display the calendar screen or folder selection screen by pressing the center. In addition, you can switch View Mode by selecting an icon.

Related Topic

- Switching between still images and movies (View Mode)
Switching between still images and movies (View Mode)

Sets the View Mode (image display method).

1. MENU → (Playback) → [View Mode] → desired setting.

Menu item details

- **Date View:** Displays the images by date.
- **Folder View (Still):** Displays only still images.
- **AVCHD View:** Displays only AVCHD-format movies.
- **XAVC S HD View:** Displays only XAVC S HD-format movies.
- **XAVC S 4K View:** Displays only XAVC S 4K-format movies.
Disp Cont Shoot Grp

Sets whether to display continuously shot images as a group.

1. MENU → (Playback) → [Disp Cont Shoot Grp] → desired setting.

Menu item details

On:
Displays continuously shot images as a group.

Off:
Does not display continuously shot images as a group.

**Hint**
- Images shot with [Drive Mode] set to [Cont. Shooting] or [Spd Priority Cont.] are grouped. One sequence of images shot continuously by holding down the shutter button during continuous shooting becomes one group.
- On the image index screen, is displayed over the continuous shooting group.

**Note**
- Images can be grouped and displayed only when [View Mode] is set to [Date View]. When it is not set to [Date View], images cannot be grouped and displayed, even if [Disp Cont Shoot Grp] is set to [On].
- If you delete the continuous shooting group, all the images in the group will be deleted.

Related Topic
- Cont. Shooting
- Spd Priority Cont.
Playing back images using slideshow (Slide Show)

Automatically plays back images continuously.

1. **MENU → (Playback) → [Slide Show] → desired setting.**
2. Select [Enter].

**Menu item details**

**Repeat:**
Select [On], in which images are played back in a continuous loop, or [Off], in which the product exits the slideshow when all the images are played back once.

**Interval:**
Select the display interval for images from among [1 Sec], [3 Sec], [5 Sec], [10 Sec] or [30 Sec].

**To quit the slideshow in the middle of playback**
Press the MENU button to quit the slideshow. You cannot pause the slideshow.

**Hint**
- During playback, you can display the next/previous image by pressing the right/left side of the control wheel.
- You can activate a slideshow only when [View Mode] is set to [Date View] or [Folder View(Still)].
Protecting images (Protect)

Protects recorded images against accidental erasure. The " mark is displayed on protected images.

1. MENU → (Playback) → [Protect] → desired setting.

Menu item details

Multiple Img.:
Applies the protection of the selected multiple images.
(1) Select the image to be protected, then press the center of the control wheel. The " mark is displayed in the check box. To cancel the selection, press the center again to remove the " mark.
(2) To protect other images, repeat step (1).
(3) MENU → [OK].

All in this Folder:
Protects all images in the selected folder.

All with this date:
Protects all images taken on the selected date.

Cancel All in this Folder:
Cancels the protection of all images in the selected folder.

Cancel All with this date:
Cancels the protection of all images taken on the selected date.

All in Cont. Shoot Grp:
Protects all the images in the selected continuous shooting group.

Cancel All in Cnt Sht Grp:
Cancels the protection of all the images in the selected continuous shooting group.

Hint
- If you select a continuous shooting group in [Multiple Img.], all the images in the group will be protected. To select and protect particular images within the group, execute [Multiple Img.] while displaying the images within the group.

Note
- The menu items that can be selected vary according to the [View Mode] setting and the selected content.
Rating

You can assign ratings to recorded images on a scale from ★ to ★★★★★ to make it easier to find images.

1. **MENU → [Playback] → [Rating].**
   The image rating selection screen will appear.

2. Press the left/right sides of the control wheel to display an image to which you want to assign a rating, and then press the center.

3. Select the number of ★ (Rating) by pressing the left/right sides of the control wheel, and then press the center.

4. Press the MENU button to exit the rating setting screen.

**Hint**
- You can also assign ratings when playing back images by using the custom key. Assign [Rating] to the desired key using [Custom Key] beforehand, and then press the custom key while playing back an image to which you want to assign a rating. The number of ★ (Rating) changes each time you press the custom key.

**Note**
- You can assign ratings to still images only.

**Related Topic**
- Custom Key (still image/movie/playback)
- Rating Set(Cust Key)
Rating Set(Cust Key)

Sets the available number of ★ when rating images with the key to which you have assigned [Rating] using [ ] Custom Key].

1. MENU → ➤ (Playback) → [Rating Set(Cust Key)].

2. Add a ✔ mark to the number of ★ that you want to activate.
   You can select the checked number when setting [Rating] using the custom key.

Related Topic

- Rating
- Custom Key (still image/movie/playback)
Specifying images to be printed (Specify Printing)

You can specify in advance on the memory card which still images you want to print out later. The DPOF (print order) icon will appear on the specified images. DPOF refers to “Digital Print Order Format.”

DPOF setting will be retained after the image is printed. We recommend that you cancel this setting after printing.

1. MENU → [Playback] → [Specify Printing] → desired setting.

Menu item details

Multiple Img.:
Selects images to order printing.
(1) Select an image and press the center of the control wheel. The ✔ mark is displayed in the check box. To cancel the selection, press the center again and delete the ✔ mark.
(2) Repeat step (1) to print other images. To select all the images from a certain date or in a certain folder, select the check box for the date or folder.
(3) MENU → [OK].

Cancel All:
Clears all DPOF marks.

Print Setting:
Sets whether to print the date on images registered with DPOF marks.
- The position or size of the date (inside or outside of the image) may differ depending on the printer.

Note
- You cannot add the DPOF mark to the following files:
  - RAW images
- The number of copies cannot be specified.
- Some printers do not support the date print function.
Deleting a displayed image

You can delete an image displayed. Once you have deleted an image, you cannot restore it. Confirm the image to be deleted beforehand.

1. Display the image you want to delete.
2. Press the (Delete) button.
3. Select [Delete] using the control wheel.

**Note**
- The protected images cannot be deleted.

**Related Topic**
- Deleting multiple selected images (Delete)
Deleting multiple selected images (Delete)

You can delete multiple selected images. Once you have deleted an image, you cannot restore it. Confirm the image to be deleted beforehand.

1. MENU → (Playback) → [Delete] → desired setting.

Menu item details

- **Multiple Img.**:
  Deletes the selected images.
  (1) Select the images to be deleted, then press the center of the control wheel. The ✓ mark is displayed in the check box. To cancel the selection, press the center again to remove the ✓ mark.
  (2) To delete other images, repeat step (1).
  (3) MENU → [OK].

- **All in this Folder**:
  Deletes all images in the selected folder.

- **All with this date**:
  Deletes all images taken on the selected date.

- **All Other Than This Img.**:
  Deletes all images in the continuous shooting group except the selection.

- **All in Cont. Shoot Grp**:
  Deletes all images in the selected continuous shooting group.

**Hint**

- Perform [Format] to delete all images, including protected images.
- To display the desired folder or date, select the desired folder or date during playback by performing the following procedure: 
  (Image Index) lever → select the bar on the left using the control wheel → select the desired folder or date using the top/bottom sides of the control wheel.
- If you select a continuous shooting group in [Multiple Img.], all the images in the group will be deleted. To select and delete particular images within the group, execute [Multiple Img.] while displaying the images within the group.

**Note**

- The protected images cannot be deleted.

- The menu items that can be selected vary according to the [View Mode] setting and the selected content.

**Related Topic**

- Deleting a displayed image
- Format
Delete confirm.

You can set whether [Delete] or [Cancel] is selected as a default on the delete confirmation screen.

1. MENU → (Setup) → [Delete confirm.] → desired setting.

Menu item details

"Delete" first:
[Delete] is selected as the default setting.

"Cancel" first:
[Cancel] is selected as the default setting.
Viewing images on a TV using an HDMI cable

To view images stored on this product using a TV, an HDMI cable (sold separately) and an HD TV equipped with an HDMI jack are required.

1. Turn off both this product and the TV.

2. Connect the HDMI micro terminal of this product to the HDMI jack of the TV using an HDMI cable (sold separately).

3. Turn on the TV and switch the input.

4. Turn on this product.

   Images shot with the product appear on the TV screen.

5. Select an image using the right/left sides of the control wheel.
   - The monitor of this camera is not lit up on the playback screen.
   - If the playback screen is not displayed, press the (Playback) button.

"BRAVIA" Sync

By connecting this product to a TV that supports “BRAVIA” Sync using an HDMI cable (sold separately), you can operate this product's playback functions with the TV remote control.

1. After performing the steps above to connect this camera to a TV, select MENU → (Setup) → [HDMI Settings] → [CTRL FOR HDMI] → [On].

2. Press the SYNC MENU button on the TV remote control, and select the desired mode.
   - If you connect this camera to a TV using an HDMI cable, available menu items are limited.
   - Only TVs that support “BRAVIA” Sync can provide SYNC MENU operations. For details, refer to the operating instructions supplied with the TV.
   - If the product performs unwanted operations in response to the TV remote control when the product is connected to another manufacturer’s TV using an HDMI connection, select MENU → (Setup) → [HDMI Settings] → [CTRL FOR HDMI] → [Off].

Hint

Turn off both this product and the TV.

1. Connect the HDMI micro terminal of this product to the HDMI jack of the TV using an HDMI cable (sold separately).

2. Turn on the TV and switch the input.

3. Turn on this product.

   Images shot with the product appear on the TV screen.

5. Select an image using the right/left sides of the control wheel.
   - The monitor of this camera is not lit up on the playback screen.
   - If the playback screen is not displayed, press the (Playback) button.
This product is compatible with the PhotoTV HD standard. If you connect Sony PhotoTV HD-compatible devices using an HDMI cable (sold separately), the TV is set to the image quality suitable for viewing still images, and a whole new world of photos can be enjoyed in breathtaking high quality.

You can connect this product to Sony PhotoTV HD-compatible devices with a USB terminal using the USB cable.

The PhotoTV HD allows for a highly-detailed, photo-like expression of subtle textures and colors.

For details, refer to the operating instructions supplied with the compatible TV.

**Note**

- Do not connect this product and another device using the output terminals of both. Doing so may cause a malfunction.
- Some devices may not work properly when connected to this product. For example, they may not output video or audio.
- Use an HDMI cable with the HDMI logo or a genuine Sony cable.
- Use an HDMI cable that is compatible with the HDMI micro terminal of the product and the HDMI jack of the TV.
- When [TC Output] is set to [On], the image may not be output properly to the TV or recording device. In such cases, set [TC Output] to [Off].
- If images do not appear on the TV screen properly, select MENU → (Setup) → [HDMI Settings] → [HDMI Resolution] → [2160p/1080p], [1080p] or [1080i] according to the TV to be connected.
- During HDMI output, when you switch the movie from 4K to HD image quality or vice-versa, or change the movie to a different frame rate, the screen may become dark. This is not a malfunction.
- If you set [File Format] to [XAVC S 4K] and shoot movies while the camera is connected to an HDMI device, images will not be displayed on the monitor.
Memory (Camera Settings1/Camera Settings2)

Allows you to register up to 2 often-used modes or product settings in the product. You can recall the settings using just the mode dial.

1. Set the product to the setting you want to register.

2. MENU → 📷 [Camera Settings1] → [MR 📷 1/ 📷 2 Memory] → desired number.

3. Press the center of the control wheel to confirm.

Items that can be registered

- You can register various functions for shooting. The items that can actually be registered are displayed on the menu of the camera.
- Aperture (F number)
- Shutter speed
- Optical zoom scale

To change registered settings

Change the setting to the desired one and re-register the setting to the same mode number.

Note

- Program Shift cannot be registered.

Related Topic

- Recall (Camera Settings1/Camera Settings2)
Custom Key (still image/movie/playback)

You can assign a desired function to a desired key. Some functions are available only when they are assigned to a custom key. For example, if you assign [Eye AF] to [Center Button] for [Custom Key], you can easily recall [Eye AF] simply by pressing the center of the control wheel while shooting.

1. MENU → 2 (Camera Settings2) → [Custom Key], [Custom Key] or [Custom Key].

2. Select the key to which you want to assign the function on the selection screen, and press the center of the control wheel.
   - The keys that can be assigned functions are different for [Custom Key], [Custom Key] and [Custom Key].
   - You can assign the desired functions to the following keys.

   1. Control Ring
   2. Fn/ Button
   3. Center Button/Left Button/Right Button
   4. C Button

3. Select the function to be assigned.
   - The functions that can be assigned differ depending on the keys.

Menu item details

[Custom Key]:
Sets the custom key function to use when shooting still images.

[Custom Key]:
Sets the custom key function to use when recording movies. You can assign a different function from the one used when shooting still images.

[Custom Key]:
Sets the custom key function to use when playing back images.
Related Topic

- Using the control wheel
- Focus Standard
Function Menu Set.

You can assign the functions to be called up when you press the Fn (Function) button.

1. **MENU → 📷2 (Camera Settings2) → [Function Menu Set.] →** set a function to the desired location.

   - The functions that can be assigned are displayed on the setup item selection screen.
Add Item

You can register the desired menu items to ★ (My Menu) under MENU.

1. MENU → ★ (My Menu) → [Add Item].
2. Select an item that you want to add to ★ (My Menu) using the top/bottom/left/right sides of the control wheel.
3. Select a destination using the top/bottom/left/right sides of the control wheel.

Hint
- You can add up to 30 items to ★ (My Menu).

Note
- You cannot add the following items to ★ (My Menu).
  - Any item under MENU → [View on TV]
  - [View on TV]

Related Topic
- Sort Item
- Delete Item
- Using MENU items
Sort Item

You can rearrange the menu items added to ★ (My Menu) under MENU.

1. MENU → ★ (My Menu) → [Sort Item].

2. Select an item that you want to move using the top/bottom/left/right sides of the control wheel.

3. Select a destination using the top/bottom/left/right sides of the control wheel.

Related Topic

- Add Item
Delete Item

You can delete menu items added to ★ (My Menu) of MENU.

1. MENU → ★ (My Menu) → [Delete Item].

2. Select an item that you want to delete using the top/bottom/left/right sides of the control wheel, and then press the center to delete the selected item.

Hint

- To delete all the items on a page, select MENU → ★ (My Menu) → [Delete Page].
- You can delete all the items added to ★ (My Menu) by selecting MENU → ★ (My Menu) → [Delete All].

Related Topic

- Delete Page
- Delete All
- Add Item
Delete Page

You can delete all the menu items added to a page under ★ (My Menu) in MENU.

1. **MENU → ★ (My Menu) → [Delete Page].**

2. Select a page that you want to delete using the left/right sides of the control wheel, and then press the center of the control wheel to delete the items.

Related Topic

- Add Item
- Delete All
Delete All

You can delete all the menu items added to ★ (My Menu) in MENU.

1. MENU → ★ (My Menu) → [Delete All].

2. Select [OK].

Related Topic
- Add Item
- Delete Page
Auto Review

You can check the recorded image on the screen right after the shooting. You can also set the display time for Auto Review.

1. MENU →  
   (Camera Settings2) → [Auto Review] → desired setting.

Menu item details

10 Sec/5 Sec/2 Sec:
Displays the recorded image on the screen right after shooting for the selected duration of time. If you perform a magnifying operation during Auto Review, you can check that image using the magnified scale.

Off:
Does not display the Auto Review.

Note

- When you use a function that performs image processing, the image before processing may be displayed temporarily, followed by the image after processing.
- The DISP (Display Setting) settings are applied for the Auto Review display.

Related Topic

- Enlarging an image being played back (Enlarge Image)
Grid Line

Sets whether the grid line is displayed or not. The grid line will help you to adjust the composition of images.

MENU → 2 (Camera Settings2) → [Grid Line] → desired setting.

Menu item details

Rule of 3rds Grid:
Place main subjects close to one of the grid lines that divide the image into thirds for a well-balanced composition.

Square Grid:
Square grids make it easier to confirm the horizontal level of your composition. This is useful for assessing the composition when shooting landscapes, closeups, or when performing camera scanning.

Diag. + Square Grid:
Place a subject on the diagonal line to express an uplifting and powerful feeling.

Off:
Does not display the grid line.
**FINDER/MONITOR**

Sets the method for switching the display between the viewfinder and the monitor.

1. MENU → (Camera Settings2) → [FINDER/MONITOR] → desired setting.

**Menu item details**

**Auto:**
When you look into the viewfinder, the eye sensor reacts and the display is switched to the viewfinder automatically.

**Viewfinder(Manual):**
The monitor is turned off and the image is displayed only in the viewfinder.

**Monitor(Manual):**
The viewfinder is turned off and the image is always displayed on the monitor.

**Hint**
- You can assign the [FINDER/MONITOR] function to your preferred key.
  MENU → (Camera Settings2) → [Custom Key], [Custom Key] or [Custom Key] → set [Finder/Monitor Sel.] to the preferred key.
- If you want to retain the viewfinder display or the monitor display, set [FINDER/MONITOR] to [Viewfinder(Manual)] or [Monitor(Manual)] beforehand.
  You can keep the monitor off when you take your eyes off the viewfinder during recording by setting the monitor display to [Monitor Off] using the DISP button. Select MENU → (Camera Settings2) → [DISP Button] → [Monitor] and add a check mark to [Monitor Off] beforehand.

**Note**
- When the viewfinder is pushed down, the images are always displayed on the monitor regardless of the [FINDER/MONITOR] setting.
- When the monitor is pulled out, the eye sensor will not detect your eye's approach even if the viewfinder is popped up and [FINDER/MONITOR] is set to [Auto]. The image will continue to be displayed on the monitor.

**Related Topic**
- Custom Key (still image/movie/playback)
- DISP Button (Monitor/Finder)
Monitor Brightness

Adjust the brightness of the screen.

1. **MENU → (Setup) → [Monitor Brightness] → desired setting.**

**Menu item details**

**Manual:**
Adjusts the brightness within the range of –2 to +2.

**Sunny Weather:**
Sets the brightness appropriately for shooting outdoors.

**Note**
- The monitor brightness cannot be adjusted in the following situations. The maximum brightness will be [±0].
  - When [File Format] is set to [XAVC S 4K].
  - When [File Format] is set to [XAVC S HD] and [Record Setting] is set to [120p]/[100p].
- The monitor brightness is locked at [-2] when shooting a movie using the Wi-Fi functions.
Viewfinder Bright.

When using the viewfinder, this product adjusts the brightness of the viewfinder according to the surrounding environment.

1. **MENU → (Setup) → [Viewfinder Bright.] → desired setting.**

**Menu item details**

**Auto:**
Adjusts the brightness automatically.

**Manual:**
Selects the brightness of the viewfinder within the range of –2 to +2.

**Note**

- The viewfinder brightness cannot be adjusted in the following situations. The maximum brightness will be [±0].
  - When [File Format] is set to [XAVC S 4K].
  - When [File Format] is set to [XAVC S HD] and [Record Setting] is set to [120p]/[100p].
Finder Color Temp.

Adjusts the color temperature of the electronic viewfinder.

1. MENU →  (Setup) → [Finder Color Temp.] → desired setting.

Menu item details

-2 to +2:
When you select “-,” the viewfinder screen changes to a warmer color, and when you select “+,” it changes to a colder color.
Function for VF close

Sets whether to turn the power off when the viewfinder is stowed.

1. MENU → (Setup) → [Function for VF close] → desired setting.

Menu item details

**Power OFF:**
Turns the power off when the viewfinder is stowed.

**Not Power OFF:**
Does not turn the power off when the viewfinder is stowed.

**Note**
- Push the eyepiece into the viewfinder before stowing the viewfinder. If you try to squeeze the viewfinder into the camera with the eyepiece pulled out, the viewfinder may be subjected to force and become damaged.
Display Quality

You can change the display quality.

1. MENU → (Setup) → [Display Quality] → desired setting.

Menu item details

High:
Displays in high quality.

Standard:
Displays in standard quality.

Note
- When [High] is set, battery consumption will be higher than when [Standard] is set.
- When the temperature of the camera rises, the setting may become locked to [Standard].
Auto Monitor OFF

The camera automatically switches to the power-saving mode if you do not operate the camera for a certain period of time in the still-image shooting mode. This function is useful for reducing the power consumption.

1. MENU →  (Setup) → [Auto Monitor OFF] → desired setting

Menu item details

**Does not turn OFF:**
The camera does not switch to the power-saving mode automatically.

**2 Sec/5 Sec/10 Sec:**
The camera switches to the power-saving mode and the monitor turns off if a certain number of seconds elapses without any operations.
When [5 Sec] or [10 Sec] is selected, the monitor darkens two seconds before the end of the duration you have set.

**Note**

- [Auto Monitor OFF] does not activate in the following situations:
  - When the monitor is flipped up by approximately 180 degrees
  - When the shooting mode is set to [Sweep Panorama]
  - When the power-saving function is not activated
Bright Monitoring

Allows you to adjust the composition when shooting in dark environments. By extending the exposure time, you can check the composition on the viewfinder/monitor even in dark locations such as under the night sky.

1. **MENU → 2 (Camera Settings2) → [Custom Key] → assign the [Bright Monitoring] function to the desired key.**

2. **Press the key to which you assigned the [Bright Monitoring] function, then shoot an image.**
   - The brightness due to [Bright Monitoring] will continue after shooting.
   - To return the monitor brightness to normal, press the key to which you assigned the [Bright Monitoring] function once again.

**Note**

- During [Bright Monitoring], setting values such as exposure compensation will not be reflected in the live view display. It is recommended that you use [Bright Monitoring] only in dark locations.
- [Bright Monitoring] will be automatically cancelled in the following situations.
  - When the camera is turned off.
  - When the shooting mode is changed from P/A/S/M to a mode that is not P/A/S/M.
  - When the focus mode is set to other than manual focus.
  - When [MF Assist] is executed.
  - When [Focus Magnifier] is selected.
- During [Bright Monitoring], the shutter speed may be slower than normal while shooting in dark locations. Also, because the measured brightness range is expanded, the exposure may change.
Format

When you use a memory card with this camera for the first time, we recommend that you format the card using the camera for stable performance of the memory card. Note that formatting permanently erases all data on the memory card, and is unrecoverable. Save valuable data on a computer, etc.

1 MENU → (Setup) → [Format].

Note

- Formatting permanently erases all data including even protected images.
- The access lamp lights up during formatting. Do not remove the memory card while the access lamp is lit up.
- Format the memory card on this camera. If you format the memory card on the computer, the memory card may not be usable depending on the format type.
- It may take a few minutes to complete formatting, depending on the memory card.
- You cannot format the memory card if the remaining battery charge is less than 1%.
Help Guide

Digital Still Camera
DSC-HX99

File Number

Selects how to assign file numbers to still images.

1 MENU → (Setup) → [File Number] → desired setting.

Menu item details

Series:
The product will assign numbers to files sequentially up to "9999" without resetting.

Reset:
The product resets numbers when a file is recorded in a new folder and assigns numbers to files starting with "0001". (When the recording folder contains a file, a number one higher than the largest number is assigned.)
Set File Name

You can specify the first three characters of the file name for images you shoot.

1. MENU → (Setup) → [Set File Name].

2. Select the entry field for the file name to display a keyboard on the screen, and then enter three characters of your choice.

Note
- Only capital letters, numbers, and underscores can be entered. However, an underscore cannot be used as the first character.
- The three characters of the file name you specify using [Set File Name] will only be applied to images you shoot after changing the setting.

Related Topic
- How to use the keyboard
Display Media Info.

Displays the recordable time of movies for the inserted memory card. Also displays the number of recordable still images for the inserted memory card.

MENU → (Setup) → [Display Media Info.].
Select REC Folder

If [Folder Name] is set to [Standard Form] and there are 2 folders or more, you can select the folder on the memory card to which images are to be recorded.

MENU→(Setup)→[Select REC Folder]→desired folder.

Note

- You cannot select the folder when [Folder Name] is set to [Date Form].

Related Topic

- Folder Name
New Folder

Creates a new folder on the memory card for recording still images. A new folder is created with a folder number one greater than the largest folder number currently used. Images are recorded in the newly created folder.

1. **MENU**→ 文件 (Setup)→[New Folder].

**Note**
- When you insert a memory card that was used with other equipment into this product and shoot images, a new folder may be automatically created.
- Up to 4,000 images in total can be stored in one folder. When the folder capacity is exceeded, a new folder may be automatically created.
Folder Name

Still images are recorded in a folder that is automatically created inside the DCIM folder on the memory card. You can change the way folder names are assigned.

1. **MENU → 📒 (Setup) → [Folder Name] → desired setting.**

**Menu item details**

**Standard Form:**
The folder name form is as follows: folder number + MSDCF.
Example: 100MSDCF

**Date Form:**
The folder name form is as follows: folder number + Y (the last digit)/MM/DD.
Example: 10080405(Folder number: 100, date: 04/05/2018)

**Note**
- You cannot change the [Folder Name] settings for movies.
Recover Image DB

If image files were processed on a computer, problems may occur in the image database file. In such cases, the images on the memory card will not be played back on this product. If these problems happen, repair the file using [Recover Image DB].

1. MENU → (Setup) → [Recover Image DB] → [Enter].

Note

- Use a sufficiently charged battery pack. Low battery power during repairing can cause damage to data.
Audio signals

Selects whether the product produces a sound or not.

1. MENU → ② (Camera Settings2) → [Audio signals] → desired setting.

Menu item details

On:all:
Sounds are produced for example when the focus is achieved by pressing the shutter button halfway down.

On:Shutter Only:
Only the shutter sound is produced.

Off:
Sounds are not produced.
Write Date (still image)

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

1. MENU → 2 (Camera Settings2) → [Write Date] → desired setting.

Menu item details

On:
Records a shooting date.

Off:
Does not record a shooting date.

Note

- If you shoot images with the date once, you cannot delete the date from the images later.
- The dates are doubly printed if you set the product to print dates when printing the images using PCs or printers.
- The recorded time of the image cannot be superimposed on the image.
- [Write Date] is not available for RAW images.
Tile Menu

Selects whether to always display the first screen of the menu when you press the MENU button.

1. `MENU` → `(Setup)` → `[Tile Menu]` → desired setting.

Menu item details

On:
Always displays the first screen of the menu (Tile Menu).

Off:
Deactivates the Tile Menu display.
Mode Dial Guide

You can display the description of a shooting mode when you turn the mode dial and change the settings available for that shooting mode.

1. MENU → (Setup) → [Mode Dial Guide] → desired setting.

Menu item details

On:
Displays the Mode Dial Guide.

Off:
Does not display the Mode Dial Guide.
Pwr Save Start Time

You can set the time by which the power goes off automatically.

1. MENU → [Setup] → [Pwr Save Start Time] → desired setting.

Menu item details
30 Min/5 Min/2 Min/1 Min

Note
- The power save function is not activated when power is being supplied via USB, when playing back slideshows, when recording movies, or when connected to a computer or TV.
Auto Pwr OFF Temp.

Sets the temperature of the camera at which the camera turns off automatically during shooting. When it is set to [High], you can continue shooting even when the temperature of the camera gets hotter than normal.

1 MENU → (Setup) → [Auto Pwr OFF Temp.] → desired setting.

Menu item details

Standard:
Sets the standard temperature at which the camera turns off.

High:
Sets a higher temperature than the standard at which the camera turns off.

Notes when [Auto Pwr OFF Temp.] is set to [High]

- Do not shoot while holding the camera in your hand. Use a tripod.
- Using the camera while holding it in your hand for a long period of time may cause low-temperature burns.

Continuous recording time for movies when [Auto Pwr OFF Temp.] is set to [High]

The duration of time available for continuous movie recording is as follows when the camera starts recording with the default settings after the power has been turned off for a while. The following values indicate the continuous time from when the camera starts recording until the camera stops recording.

Ambient temperature: 20°C (68°F)
Continuous recording time for movies (HD): Approx. 29 minutes
Continuous recording time for movies (4K): Approx. 5 minutes

Ambient temperature: 30°C (86°F)
Continuous recording time for movies (HD): Approx. 29 minutes
Continuous recording time for movies (4K): Approx. 5 minutes

Ambient temperature: 40°C (104°F)
Continuous recording time for movies (HD): Approx. 15 minutes
Continuous recording time for movies (4K): Approx. 5 minutes

HD: XAVC S HD (60p 50M/50p 50M, not connected via Wi-Fi)
4K: XAVC S 4K (30p 60M/25p 60M, not connected via Wi-Fi)

Note

- Even if [Auto Pwr OFF Temp.] is set to [High], depending on the conditions or the temperature of the camera, the recordable time for movies may not change.

- Continuous movie shooting is possible for a maximum of approximately 29 minutes at a time. The recording time is approximately 5 minutes when shooting movies in XAVC S 4K/XAVC S HD 120p/100p format. (A product specification limit)

Related Topic

- Recordable movie times
NTSC/PAL Selector

Plays back movies recorded with the product on a NTSC/PAL system TV.

1 MENU → 📦 (Setup) → [NTSC/PAL Selector] → [Enter]

Note

- If you insert a memory card that has previously been formatted with a different video system, a message telling you that you must reformat the card will appear.
  If you want to record using another system, re-format the memory card or use another memory card.
- When you perform [NTSC/PAL Selector], and the setting is changed from the default one, a message "Running on NTSC." or "Running on PAL." will appear on the start-up screen.
HDMI Settings: HDMI Resolution

When you connect the product to a High Definition (HD) TV with HDMI terminals using an HDMI cable (sold separately), you can select HDMI Resolution to output images to the TV.

MENU → (Setup) → [HDMI Settings] → [HDMI Resolution] → desired setting.

Menu item details

Auto:
The product automatically recognizes an HD TV and sets the output resolution.

2160p/1080p:
Outputs signals in 2160p/1080p.

1080p:
Outputs signals in HD picture quality (1080p).

1080i:
Outputs signals in HD picture quality (1080i).

Note

If the images are not displayed properly using the [Auto] setting, select either [1080i], [1080p] or [2160p/1080p], based on which TV is to be connected.
HDMI Settings: 24p/60p Output (movie) (Only for 1080 60i compatible models)

You can set 1080/24p or 1080/60p as the HDMI output format when [Record Setting] is set to [24p 50M], [24p 60M] or [24p 100M].

1. MENU → (Setup) → [HDMI Settings] → [HDMI Resolution] → [1080p] or [2160p/1080p].
2. MENU → (Setup) → [HDMI Settings] → [24p/60p Output] → desired setting.

Menu item details

60p:
Movies are output as 60p.

24p:
Movies are output as 24p.

Note
Steps 1 and 2 can be set in either order.

Related Topic
- Record Setting (movie)
HDMI Settings: HDMI Info. Display

Selects whether to display the shooting information when this product and the TV are connected using an HDMI cable (sold separately).

1. MENU → (Setup) → [HDMI Settings] → [HDMI Info. Display] → desired setting.

Menu item details

On:
Displays the shooting information on the TV. The recorded image and the shooting information are displayed on the TV, while nothing is displayed on the camera’s monitor.

Off:
Does not display the shooting information on the TV. Only the recorded image is displayed on the TV, while the recorded image and the shooting information are displayed on the camera’s monitor.

Note

- When this product is connected to a 4K-compatible TV, [Off] is selected automatically.
- If you set [Video Format] to [XAVC S 4K] and shoot movies while the camera is connected to an HDMI device, images will not be displayed on the monitor.
HDMI Settings: TC Output (movie)

Sets whether or not to layer the TC (time code) information on the output signal via the HDMI terminal when outputting the signal to other professional-use devices.

This function layers the time code information on the HDMI output signal. The product sends the time code information as digital data, not as an image displayed on the screen. The connected device can then refer to the digital data to recognize the time data.

MENU → (Setup) → [HDMI Settings] → [TC Output] → desired setting.

Menu item details

**On:**
Time code is output to other devices.

**Off:**
Time code is not output to other devices.

**: Note**
- When [TC Output] is set to [On], the image may not be output properly to the TV or recording device. In such cases, set [TC Output] to [Off].
HDMI Settings: REC Control (movie)

If you connect the camera to an external recorder/player, you can remotely command the recorder/player to start/stop recording using the camera.

1. MENU → (Setup) → [HDMI Settings] → [REC Control] → desired setting.

Menu item details

On:
- The camera can send a recording command to an external recorder/player.
- The camera is sending a recording command to an external recorder/player.

Off:
The camera is not able to send a command to an external recorder/player to start/stop recording.

Note
- Available for external recorders/players compatible with [REC Control].
- When you use the [REC Control] function, set the shooting mode to (Movie).
- When [TC Output] is set to [Off], you cannot use the [REC Control] function.
- Even when [REC] is displayed, the external recorder/player may not work properly depending on the settings or status of the recorder/player. Check if the external recorder/player works properly before use.
HDMI Settings: CTRL FOR HDMI

When connecting this product to a “BRAVIA” Sync-compatible TV using an HDMI cable (sold separately), you can operate this product by aiming the TV remote control at the TV.

1. **MENU → (Setup) → [HDMI Settings] → [CTRL FOR HDMI] → desired setting.**

2. **Connect this product to a “BRAVIA” Sync-compatible TV.**
   The input of the TV is switched automatically and images on this product are displayed on the TV screen.

3. **Press the SYNC MENU button of the TV’s remote control.**

4. **Operate this product using the TV’s remote control.**

**Menu item details**

**On:**
You can operate this product with a TV’s remote control.

**Off:**
You cannot operate this product with a TV’s remote control.

**Note**

- If you connect this product to a TV using an HDMI cable, available menu items are limited.

- [CTRL FOR HDMI] is available only with a “BRAVIA” Sync-compatible TV. Also, the SYNC MENU operation differs depending on the TV you are using. For details, refer to the operating instructions supplied with the TV.

- If the product performs unwanted operations in response to the TV remote control when the product is connected to another manufacturer’s TV using an HDMI connection, select **MENU → (Setup) → [HDMI Settings] → [CTRL FOR HDMI] → [Off].**
HDMI Settings: HDMI Audio Out. (movie)

When the camera is connected to an external device such as a television via an HDMI cable (sold separately), the audio picked up by the camera's microphone is output to the external device during movie shooting and standby mode. During shooting, you can check both the image and sound from the external device.

Standby for movie shooting

This is the state before you start movie shooting by pressing the MOVIE button, after turning the mode dial to (Movie) and setting the values for shutter speed and aperture. The icon “STBY” is displayed on the screen.

1 MENU → (Setup) → [HDMI Settings] → [HDMI Audio Out.] → desired setting.

Menu item details

On:
Sound is output to the external device.

Off:
Sound is not output to the external device.

Note

During HDMI audio output, no electronic sound is produced when performing or ending movie recording even if [Audio signals] is set to [On].

Related Topic

- Viewing images on a TV using an HDMI cable
USB Connection

Selects the USB connection method when this product is connected to a computer, etc.
Select MENU → (Network) → [Ctrl w/ Smartphone] → [Ctrl w/ Smartphone] → [Off] beforehand.

1 MENU → (Setup) → [USB Connection] → desired setting.

Menu item details

Auto:
Establishes a Mass Storage or MTP connection automatically, depending on the computer or other USB devices to be connected. Windows 7, Windows 8.1, or Windows 10 computers are connected in MTP, and their unique functions are enabled for use.

Mass Storage:
Establishes a Mass Storage connection between this product, a computer, and other USB devices.

MTP:
Establishes an MTP connection between this product, a computer, and other USB devices. Windows 7, Windows 8.1, or Windows 10 computers are connected in MTP, and their unique functions are enabled for use.

PC Remote:
Uses Imaging Edge to control the product from a computer, including such functions as shooting and storing images on the computer.

Note
- It may take some time to make the connection between this product and a computer when [USB Connection] is set to [Auto].

Related Topic
- PC Remote Settings: Still Img. Save Dest.
- PC Remote Settings: RAW+J PC Save Img

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USB LUN Setting

Enhances compatibility by limiting of USB connection functions.

1. MENU → (Setup) → [USB LUN Setting] → desired setting.

Menu item details

Multi:
Normally, use [Multi].

Single:
Set [USB LUN Setting] to [Single] only if you cannot make a connection.
USB Power Supply

Sets whether to supply power via the micro USB cable when the product is connected to a computer or an USB device.

1. MENU →  (Setup) → [USB Power Supply] → desired setting.

Menu item details

On:
Power is supplied to the product via a micro USB cable when the product is connected to a computer, etc.

Off:
Power is not supplied to the product via a micro USB cable when the product is connected to a computer, etc. If you use the supplied AC Adaptor, power will be supplied even when [Off] is selected.

Operations available while supplying power via a USB cable

The following table shows you which operations are available/unavailable while supplying power via a USB cable. A checkmark indicates that the operation is available, and “—” indicates that the operation is unavailable.

<table>
<thead>
<tr>
<th>Operation</th>
<th>Available / Unavailable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shooting images</td>
<td>✔</td>
</tr>
<tr>
<td>Playing back images</td>
<td>✔</td>
</tr>
<tr>
<td>Wi-Fi/NFC/Bluetooth connections</td>
<td>✔</td>
</tr>
<tr>
<td>Charging a battery pack</td>
<td>—</td>
</tr>
<tr>
<td>Turning the camera on without a battery pack inserted</td>
<td>—</td>
</tr>
</tbody>
</table>

Note

- Insert the battery pack into the product to supply power via USB cable.
PC Remote Settings: Still Img. Save Dest.

Sets whether to save still images stored in both the camera and the computer during PC Remote shooting. This setting is useful when you want to check recorded images on the camera without leaving the camera.

* PC Remote: Uses Imaging Edge to control the product from a computer, including such functions as shooting and storing images on the computer.

1. **MENU → (Setup) → [PC Remote Settings] → [Still Img. Save Dest.] → desired setting.**

Menu item details

**PC Only:**
Saves still images only on the computer.

**PC+Camera:**
Saves still images on the computer and the camera.

**Note**
- During PC Remote shooting, you cannot change settings for [Still Img. Save Dest.]. Adjust the settings before you start shooting.
- If you insert a memory card that is not recordable, you cannot shoot still images even if you select [PC+Camera].
- If you select [PC+Camera] and you have not inserted a memory card into the camera, you cannot release the shutter even if [Release w/o Card] is set to [Enable].
- While you are playing back still images on the camera, you cannot shoot using PC Remote.

Related Topic
- USB Connection
- Release w/o Card
- PC Remote Settings: RAW+J PC Save Img
PC Remote Settings: RAW+J PC Save Img

Selects the file type for images to be transferred to the computer in PC Remote shooting. When shooting still images using PC Remote, the application on the computer does not display the image until the image has been completely transferred. When performing RAW+JPEG shooting, you can accelerate the display processing speed by transferring only JPEG images instead of transferring both RAW and JPEG images.

* PC Remote: Uses Imaging Edge to control the product from a computer, including such functions as shooting and storing images on the computer.

MENU → (Setup) → [PC Remote Settings] → [RAW+J PC Save Img] → desired setting.

Menu item details

RAW & JPEG:
Transfers both RAW and JPEG files to the computer.

JPEG Only:
Transfers only JPEG files to the computer.

RAW Only:
Transfers only RAW files to the computer.

Note
- The setting for [RAW+J PC Save Img] cannot be changed during PC Remote shooting. Adjust the setting before shooting.
- [RAW+J PC Save Img] can be set only when [File Format] is set to [RAW & JPEG].

Related Topic
- USB Connection
- File Format (still image)
- PC Remote Settings: Still Img. Save Dest.
Language

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

1. MENU → (Setup) → [Language] → desired language.
Date/Time Setup

The Clock Set screen is displayed automatically when you turn on this product for the first time or when the internal rechargeable backup battery has fully discharged. Select this menu when setting the date and time after the first time.

1 MENU → (Setup) → [Date/Time Setup] → desired setting.

Menu item details

Daylight Savings:
Selects Daylight Savings [On]/[Off].

Date/Time:
Sets the date and time.

Date Format:
Selects the date and time display format.

Hint

- To charge the internal rechargeable backup battery, insert a charged battery pack, and leave the product for 24 hours or more with the power off.

- If the clock resets every time the battery is charged, the internal rechargeable backup battery may be worn out. Consult your service facility.

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Area Setting

Sets the area where you are using the product.

1. MENU → (Setup) → [Area Setting] → desired area.
Version

Displays the version of this product’s software. Check the version when updates for this product’s software are released, etc.

1 MENU → (Setup) → [Version].

Note

- Updating can be performed only when the battery level is (3 remaining battery bars) or more. Use a sufficiently charged battery pack.
Demo Mode

The [Demo Mode] function displays the movies recorded on the memory card automatically (demonstration), when the camera has not been operated for a certain time. Normally select [Off].

MENU → (Setup) → [Demo Mode] → desired setting.

Menu item details

On:
The movie playback demonstration starts automatically if the product is not operated for about one minute. Only protected AVCHD movies can be played back.
Set the view mode to [AVCHD View], and protect the movie file with the oldest recorded date and time.

Off:
Does not show the demonstration.

Note

- You can activate this function only when the product is connected using a dedicated AC Adaptor.
- When there is no protected AVCHD movies on the memory card, you cannot select [On].
Setting Reset

Resets the product to the default settings. Even if you perform [Setting Reset], the recorded images are retained.

1. MENU → (Setup) → [Setting Reset] → desired setting.

Menu item details

Camera Settings Reset:
Initializes the main shooting settings to the default settings.

Initialize:
Initializes all the settings to the default settings.

Note

- Be sure not to eject the battery pack while resetting.
PlayMemories Mobile

Using the smartphone application PlayMemories Mobile, you can shoot an image while controlling the camera using a smartphone or transfer the images recorded on the camera to the smartphone. Download and install the application PlayMemories Mobile from your smartphone’s application store. If PlayMemories Mobile is already installed on your smartphone, be sure to update it to the latest version.

For details on PlayMemories Mobile, refer to the support page (http://www.sony.net/pmm/).

Note
- Depending on future version upgrades, the operational procedures or screen displays are subject to change without notice.
Controlling the camera using an Android smartphone (NFC One-touch remote)

You can connect this product to an NFC-enabled Android smartphone by touching them together and then operate the product using the smartphone. Make sure that [Ctrl w/ Smartphone] is set to [On] by selecting MENU → ☰ (Network) → [Ctrl w/ Smartphone].

1. Activate the NFC function of the smartphone.

2. Switch this product to shooting mode.
   - The NFC function is available only when the N (N mark) is displayed on the screen.

3. Touch the smartphone to the product.
   - The smartphone and the product are connected, and PlayMemories Mobile launches.
   - You can shoot an image by remote control while checking the composition of the image on the smartphone screen.
   - Touch the smartphone to the product for 1-2 seconds until PlayMemories Mobile launches.

About “NFC”
NFC is a technology that enables short-range wireless communication between various devices, such as mobile phones or IC tags, etc. NFC makes data communication simpler with just a touch on the designated touch-point.

- NFC (Near Field Communication) is an international standard of short-range wireless communication technology.

Note
- If you cannot make a connection, do as the following:
  - Launch PlayMemories Mobile on your smartphone, and then move the smartphone slowly toward the N (N mark) of this product.
  - If the smartphone is in a case, remove it.
  - If the product is in a case, remove it.
  - Check whether the NFC function is activated on your smartphone.
- Radio wave interference may occur as Bluetooth communications and Wi-Fi communications use the same frequency band. If your Wi-Fi connection is unstable, it may be improved by turning off the Bluetooth function of the smartphone. If you do this, the location information link function is not available.
When you record movies using a smartphone as a remote controller, the monitor of the product becomes darker.

When [Airplane Mode] is set to [On], you cannot connect this product and the smartphone. Set [Airplane Mode] to [Off].

If this product and the smartphone are connected when the product is in playback mode, the displayed image is sent to the smartphone.

**Related Topic**

- PlayMemories Mobile
- Airplane Mode
Controlling the camera using an Android smartphone (QR Code)

You can control this product using your smartphone by connecting your smartphone to the camera using the QR Code. Make sure that [Ctrl w/ Smartphone] is set to [On] by selecting MENU → (Network) → [Ctrl w/ Smartphone].

1. MENU → (Network) → [Ctrl w/ Smartphone] → [Connection].
   QR Code (A) and the SSID (B) are displayed on the monitor of this product.

2. Launch PlayMemories Mobile on your smartphone and select [Scan QR Code of the Camera].

   When a message is displayed, select [OK] again.

4. Read the QR Code displayed on the monitor of this product with the smartphone.
Once the QR Code has been read, a message [Connect with the camera?] will be displayed on the smartphone screen.

5 Select [OK] on the smartphone screen.

The smartphone is connected to the product.
- You can now shoot images remotely while checking the composition on the smartphone screen.

Hint

- Once the QR Code has been read, this product’s SSID (DIRECT-xxxx) and password are registered to the smartphone. This enables you to easily connect the smartphone to the product via Wi-Fi at a later date by selecting the SSID. (Set [Ctrl w/ Smartphone] to [On] in advance.)

Note

- Radio wave interference may occur as Bluetooth communications and Wi-Fi communications use the same frequency band. If your Wi-Fi connection is unstable, it may be improved by turning off the Bluetooth function of the smartphone. If you do this, the location information link function is not available.
- When you record movies using a smartphone as a remote controller, the monitor of the product becomes darker.
- If you cannot connect your smartphone to this product using the [One-touch(NFC)] function or QR Code, use the SSID and password.

Related Topic

- PlayMemories Mobile
- Controlling the camera using an Android smartphone (SSID)
Controlling the camera using an Android smartphone (SSID)

You can control this product using your smartphone by connecting your smartphone to the camera using the SSID and password. Make sure that [Ctrl w/ Smartphone] is set to [On] by selecting MENU → (Network) → [Ctrl w/ Smartphone].

1. MENU → (Network) → [Ctrl w/ Smartphone] → [Connection].
   QR Code is displayed on the monitor of this product.

2. Press the (Delete) button of this product.
   This product’s SSID and password are displayed on the monitor of this product.

3. Launch PlayMemories Mobile on your smartphone.

4. Select the model name of this product (DIRECT-xxxx: xxxx).

5. Input the password that is displayed on this product.
The smartphone is connected to the product.
- You can now shoot images remotely while checking the composition on the smartphone screen.

**Note**
- Radio wave interference may occur as Bluetooth communications and Wi-Fi communications use the same frequency band. If your Wi-Fi connection is unstable, it may be improved by turning off the Bluetooth function of the smartphone. If you do this, the location information link function is not available.
- When you record movies using a smartphone as a remote controller, the monitor of the product becomes darker.

**Related Topic**
- PlayMemories Mobile
Controlling the camera using an iPhone or iPad (QR Code)

You can connect an iPhone or iPad to the camera using the QR Code and operate the camera using the iPhone or iPad. Make sure that [Ctrl w/ Smartphone] is set to [On] by selecting MENU → (Network) → [Ctrl w/ Smartphone].

1. MENU → (Network) → [Ctrl w/ Smartphone] → [Connection].

QR Code (A) and the SSID (B) are displayed on the monitor of this product.

2. Launch PlayMemories Mobile on your iPhone or iPad and select [Scan QR Code of the Camera].

3. Select [OK] on the iPhone or iPad screen.
   - When a message is displayed, select [OK] again.

4. Read the QR Code displayed on the monitor of this product with the iPhone or iPad.
5 Install the profile (setting information) by following the instructions shown on the iPhone or iPad screen and select [OK].

The profile will be installed to the iPhone or iPad.
- If you have activated the passcode lock function for your iPhone or iPad, you will need to enter the passcode. Enter the passcode that you set for your iPhone or iPad.

6 Select [Settings] on the "Home" screen → [Wi-Fi] → the SSID for this product on the iPhone or iPad.

The iPhone or iPad will connect to the product.

7 Return to the "Home" screen of the iPhone or iPad and launch PlayMemories Mobile.

- You can now shoot images remotely while checking the composition on the screen of your iPhone or iPad.

**Hint**
- Once the QR Code has been read, this product’s SSID (DIRECT-xxxx) and password are registered to the iPhone or iPad. This enables you to easily connect the iPhone or iPad to the product via Wi-Fi at a later date by selecting the SSID. (Set [Ctrl w/ Smartphone] to [On] in advance.)
Note

- Radio wave interference may occur as Bluetooth communications and Wi-Fi communications use the same frequency band. If your Wi-Fi connection is unstable, it may be improved by turning off the Bluetooth function of the smartphone. If you do this, the location information link function is not available.

- When you record movies using a smartphone as a remote controller, the monitor of the product becomes darker.

- If you cannot connect your iPhone or iPad to this product using the QR Code, use the SSID and password.

Related Topic

- PlayMemories Mobile

- Controlling the camera using an iPhone or iPad (SSID)
**Controlling the camera using an iPhone or iPad (SSID)**

You can control the camera using an iPhone or iPad by connecting the iPhone or iPad to the camera using the SSID and password.

Make sure that [Ctrl w/ Smartphone] is set to [On] by selecting MENU → (Network) → [Ctrl w/ Smartphone].

1. **MENU → (Network) → [Ctrl w/ Smartphone] → [Connection].**
   - QR Code is displayed on the monitor of this product.

2. **Press the (Delete) button of this product.**
   - This product’s SSID and password are displayed on the monitor of this product.

3. **Select the model name of this product (DIRECT-xxxx: xxxx) on the Wi-Fi setting screen of your iPhone or iPad.**

4. **Input the password that is displayed on this product.**
The iPhone or iPad is connected to the product.

5 Confirm that your iPhone or iPad was connected to the “SSID” shown on this product.

![SSID](image)

6 Return to the "Home" screen of the iPhone or iPad and launch PlayMemories Mobile.

![PlayMemories Mobile](image)

- You can now shoot images remotely while checking the composition on the screen of your iPhone or iPad.

**Note**

- Radio wave interference may occur as Bluetooth communications and Wi-Fi communications use the same frequency band. If your Wi-Fi connection is unstable, it may be improved by turning off the Bluetooth function of the smartphone. If you do this, the location information link function is not available.

- When you record movies using a smartphone as a remote controller, the monitor of the product becomes darker.

**Related Topic**

- PlayMemories Mobile
Snd to Smrtphn Func: Send to Smartphone

You can transfer still images or XAVC S movies to a smartphone and view them. The application PlayMemories Mobile must be installed on your smartphone.

1. **MENU → (Network) → [Snd to Smrtphn Func] → [Send to Smartphone] → desired setting.**
   - If you press the (Send to Smartphone) button in playback mode, the setting screen for [Send to Smartphone] will appear.

2. **If the product is ready for the transfer, the information screen appears on the product. Connect the smartphone and the product using that information.**
   - The setting method for connecting the smartphone and the product varies depending on the smartphone.

### Menu item details

**Select on This Device:**
Selects an image on the product to be transferred to the smartphone.
(1) Select from among [This Image], [All with this date] or [Multiple Images].
   - The options displayed may differ depending on the View Mode selected on the camera.

(2) If you select [Multiple Images], select the desired images using the center of the control wheel, then press MENU → [Enter].

**Select on Smartphone:**
Displays all images recorded on the product’s memory card on the smartphone.

### Note

- You can only transfer images that are saved on the camera’s memory card.
- You can select an image size to be sent to the smartphone from [Original], [2M] or [VGA].
  - To change the image size, refer to the following steps.
    - For Android smartphone
      - Start PlayMemories Mobile, and change the image size by [Settings] → [Copy Image Size].
    - For iPhone/iPad
      - Select PlayMemories Mobile in the setting menu, and change the image size by [Copy Image Size].
- RAW images are converted to JPEG format when they are sent.
- You cannot send AVCHD format movies.
- You cannot transfer XAVC S 4K movies or the original data of XAVC S HD movies recorded in [120p]/[100p] to a smartphone. You can only transfer proxy movies.
Depending on the smartphone, the transferred movie may not be played back correctly. For example, the movie may not play smoothly, or there may be no sound.

Depending on the format of the still image or movie, it may not be possible to play it back on a smartphone.

This product shares the connection information for [Send to Smartphone] with a device that has permission to connect. If you want to change the device that is permitted to connect to the product, reset the connection information by following these steps. MENU → [Network] → [Wi-Fi Settings] → [SSID/PW Reset]. After resetting the connection information, you must register the smartphone again.

When [Airplane Mode] is set to [On], you cannot connect this product and the smartphone. Set [Airplane Mode] to [Off].

While you transfer many images or long movies, we recommend that you supply power to the camera from a wall outlet (wall socket) using the AC Adaptor (supplied).

Related Topic

- PlayMemories Mobile
- Controlling the camera using an Android smartphone (NFC One-touch remote)
- Controlling the camera using an Android smartphone (QR Code)
- Controlling the camera using an Android smartphone (SSID)
- Controlling the camera using an iPhone or iPad (QR Code)
- Controlling the camera using an iPhone or iPad (SSID)
- Sending images to an Android smartphone (NFC One-touch Sharing)
- Send to Smrtphn Func: Sending Target (proxy movies)
- Airplane Mode
**Snd to Smrtphn Func: Sending Target (proxy movies)**

When transferring XAVC S video to a smartphone with [Send to Smartphone], you can set whether to transfer the low-bit-rate proxy movie or the high-bit-rate original movie.

1. MENU → 🌐 (Network) → [Snd to Smrtphn Func] → [Proxy Only/Original Only/Proxy & Original] → desired setting.

**Menu item details**

- **Proxy Only:** Transfers only proxy movies.
- **Original Only:** Transfers only original movies.
- **Proxy & Original:** Transfers both proxy and original movies.

**Note**

- You cannot transfer XAVC S 4K movies or the original data of XAVC S HD movies recorded in [120p]/[100p] to a smartphone. You can only transfer proxy movies.
- While you transfer many images or long movies, we recommend that you supply power to the camera from a wall outlet (wall socket) using the AC Adaptor (supplied).

**Related Topic**

- Snd to Smrtphn Func: Send to Smartphone
- Proxy Recording
Sending images to an Android smartphone (NFC One-touch Sharing)

With just one touch, you can connect this product and an NFC-enabled Android smartphone, and send an image displayed on the product screen directly to the smartphone. You can transfer still images and XAVC S movies.

1. Activate the NFC function of the smartphone.
2. Display a single image on the product.
3. Touch the smartphone to the product.

The product and the smartphone are connected, and PlayMemories Mobile automatically launches on the smartphone, and then the displayed image is sent to the smartphone.

- Before you touch the smartphone, cancel the sleep and lock-screen functions of the smartphone.
- The NFC function is available only when the N (N mark) is displayed on the product.
- Touch the smartphone to the product for 1-2 seconds until PlayMemories Mobile launches.
- To transfer two or more images, select MENU → Network → [Snd to Smrtphn Func] → [Send to Smartphone] to select images. After the connection enabled screen appears, use NFC to connect the product and the smartphone.

About “NFC”

NFC is a technology that enables short-range wireless communication between various devices, such as mobile phones or IC tags, etc. NFC makes data communication simpler with just a touch on the designated touch-point.

- NFC (Near Field Communication) is an international standard of short-range wireless communication technology.

Note

- You can select an image size to be sent to the smartphone from [Original], [2M] or [VGA]. To change the image size, refer to the following steps.
  - Start PlayMemories Mobile, and change the image size by [Settings] → [Copy Image Size].
- RAW images are converted to JPEG format when they are sent.
- You cannot send AVCHD format movies.
You cannot transfer XAVC S 4K movies or the original data of XAVC S HD movies recorded in [120p]/[100p] to a smartphone. You can only transfer proxy movies.

Depending on the smartphone, the transferred movie may not be played back correctly. For example, the movie may not play smoothly, or there may be no sound.

If the Image Index is displayed on the product, you cannot transfer images using the NFC function.

If you cannot make a connection, do as the following:
- Launch PlayMemories Mobile on your smartphone, and then move the smartphone slowly toward the N (N mark) of this product.
- If the smartphone is in a case, remove it.
- If the product is in a case, remove it.
- Check whether the NFC function is activated on your smartphone.

When [Airplane Mode] is set to [On], you cannot connect the product and the smartphone. Set [Airplane Mode] to [Off].

Related Topic
- PlayMemories Mobile
- Snd to Smrtphn Func: Send to Smartphone
- Snd to Smrphn Func: Sending Target (proxy movies)
- Airplane Mode
Send to Computer

You can transfer images stored in the product to a computer connected to a wireless access point or wireless broadband router and easily make backup copies using this operation. Before starting this operation, install PlayMemories Home on your computer and register the access point on the product.

1. Start your computer.
2. MENU → (Network) → [Send to Computer].

**Note**
- Depending on the application settings of your computer, the product will turn off after saving the images to your computer.
- You can transfer images from the product to only one computer at a time.
- If you want to transfer images to another computer, connect the product and the computer via a USB connection and follow the instructions in PlayMemories Home.
- Proxy movies cannot be transferred.

**Related Topic**
- Installing PlayMemories Home
- Wi-Fi Settings: WPS Push
- Wi-Fi Settings: Access Point Set.
Help Guide
Digital Still Camera
DSC-HX99

View on TV

You can view images on a network-enabled TV by transferring them from the product without connecting the product and TV with a cable. For some TVs, you may need to perform operations on the TV. For details, refer to the operating instructions supplied with the TV.

1. **MENU → (Network) → [View on TV] → desired device to be connected.**

2. When you want to play back images using slideshow, press the center of the control wheel.

- To display the next/previous image manually, press the right/left sides of the control wheel.
- To change the device to be connected, press the down side of the control wheel, then select [Device list].

**Slideshow settings**

You can change the slideshow settings by pressing the down side of the control wheel.

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

**Folder View (Still):**
Selects from [All] and [All in Folder].

**Date View:**
Selects from [All] and [All in Date Rng.].

**Interval:**
Selects from [Short] and [Long].

**Effects:**
Selects from [On] and [Off].

**Playback Image Size:**
Selects from [HD] and [4K].

*The settings are effective only for BRAVIA TV which is compatible with the functions.*

**Note**

- You can use this function on a TV that supports DLNA renderer.
- You can view images on a Wi-Fi Direct-enabled TV or network-enabled TV (including wired network-enabled TVs).
- If you connect TV and this product and do not use Wi-Fi Direct, you need to register your access point first.
- Displaying the images on the TV may take time.
- Movies cannot be shown on a TV via Wi-Fi. Use an HDMI cable (sold separately).
Related Topic

- Wi-Fi Settings: WPS Push
- Wi-Fi Settings: Access Point Set.
**Loc. Info. Link Set.**

You can use the application PlayMemories Mobile to obtain location information from a smartphone that is connected with your camera using Bluetooth communication. You can record the obtained location information when shooting images.

### Preparation in advance

To use the location information linking function of the camera, the application PlayMemories Mobile is required. If “Location Information Linkage” is not displayed on the top page of PlayMemories Mobile, you need to perform the following steps beforehand.

1. Install PlayMemories Mobile on your smartphone.
   - You can install PlayMemories Mobile from the application store of your smartphone. If you have already installed the application, update it to the latest version.

2. Transfer a pre-recorded image to your smartphone using the [Send to Smartphone] function of the camera.
   - After you transfer an image recorded using the camera to your smartphone, “Location Information Linkage” will appear on the top page of the application.

### Operating procedure

- : Operations performed on the smartphone  
- : Operations performed on the camera

1. : Confirm that the Bluetooth function of your smartphone is activated.
   - Do not perform the Bluetooth pairing operation on the smartphone setting screen. In steps 2 to 7, the pairing operation is performed using the camera and the application PlayMemories Mobile.
   - If you accidentally perform the pairing operation on the smartphone setting screen in step 1, cancel the pairing and then perform the pairing operation by following Steps 2 through 7 using the camera and the application PlayMemories Mobile.

2. : On the camera, select MENU → (Network) → [Bluetooth Settings] → [Bluetooth Function] → [On].

3. : On the camera, select MENU → (Network) → [Bluetooth Settings] → [Pairing].

4. : Launch PlayMemories Mobile on your smartphone and tap “Location Information Linkage.”
   - If “Location Information Linkage” is not displayed, follow the steps in “Preparation in advance” above.


6. : Follow the instructions on the [Location Information Linkage] setting screen of PlayMemories Mobile, and then select your camera from the list.

7. : Select [OK] when a message is displayed on the monitor of the camera.
   - Pairing of the camera and PlayMemories Mobile is complete.
Menu item details

Location Info. Link:
Sets whether to obtain the location information by linking with a smartphone.

Auto Time Correct.:
Sets whether to automatically correct the date setting of the camera using information from a linked smartphone.

Auto Area Adjust.:
Sets whether to automatically correct the area setting of the camera using information from a linked smartphone.

Icons displayed when obtaining the location information

- 📍 (Obtaining location information): The camera is obtaining the location information.
- 📡 (Location information cannot be obtained): The camera cannot obtain the location information.
- 📡 (Bluetooth connection available): Bluetooth connection with the smartphone is established.
- 📡 (Bluetooth connection unavailable): Bluetooth connection with the smartphone is not established.

Hint

- Location information can be linked when PlayMemories Mobile is running on your smartphone even if the smartphone monitor is off. However, if the camera has been turned off for a while, location information may not be linked immediately when you turn the camera back on. In this case, location information will be linked immediately if you open the PlayMemories Mobile screen on the smartphone.
- When PlayMemories Mobile is not operating, such as when the smartphone is restarted, launch PlayMemories Mobile to resume location information linking.
- In the application PlayMemories Home, you can view images on a map by importing images with location information to your computer. For details, refer to Help for PlayMemories Home.
- If the location information linking function does not work properly, see the following notes and perform pairing again.
  - Confirm that the Bluetooth function of your smartphone is activated.
  - Confirm that the camera is not connected with other devices using the Bluetooth function.
  - Confirm that [Airplane Mode] for the camera is set to [Off].
  - Delete the pairing information for the camera registered in PlayMemories Mobile.
  - Execute [Reset Network Set.] of the camera.
- For more detailed video instructions, refer to the following support page.
  http://www.sony.net/pmm/btg/

Note

- When you initialize the camera, the pairing information is also deleted. To perform pairing again, delete the pairing information for the camera registered in PlayMemories Mobile before trying again.
- The location information will not be recorded when it cannot be obtained, such as when the Bluetooth connection is disconnected.
- The camera can be paired with up to 15 Bluetooth devices, but can link the location information with that of only one smartphone. If you want to link the location information with that of another smartphone, turn off the [Location Information Linkage] function of the smartphone that is already linked.
- If the Bluetooth connection is unstable, remove any obstacles, such as people or metal objects from between the camera and the paired smartphone.
- When pairing the camera and your smartphone, be sure to use the [Location Information Linkage] menu on PlayMemories Mobile.

Supported smartphones

- Android smartphones: Android 5.0 or later and compatible with Bluetooth 4.0 or later
- iPhone/iPad: iPhone 4S or later/iPad 3rd generation or later
* For the latest information, refer to the support site.
* For the Bluetooth version, refer to the website for your smartphone.

Related Topic
- PlayMemories Home
- PlayMemories Mobile
- Snd to Smrtphn Func: Send to Smartphone
- Bluetooth Settings
Airplane Mode

When you board an airplane, etc., you can temporarily disable all the wireless-related functions including Wi-Fi.

1. MENU → 🌐 (Network) → [Airplane Mode] → desired setting.

   If you set [Airplane Mode] to [On], an airplane mark will be displayed on the screen.
Wi-Fi Settings: WPS Push

If your access point has a Wi-Fi Protected Setup (WPS) button, you can register the access point to this product easily.

1. **MENU → (Network) → [Wi-Fi Settings] → [WPS Push].**

2. **Push the Wi-Fi Protected Setup (WPS) button on the access point to connect.**

**Note**
- [WPS Push] works only if the security setting of your access point is set to WPA or WPA2 and your access point supports the Wi-Fi Protected Setup (WPS) button method. If the security setting is set to WEP or your access point does not support the Wi-Fi Protected Setup (WPS) button method, perform [Access Point Set.].
- For details about the available functions and settings of your access point, see the access point operating instructions or contact the administrator of the access point.
- A connection may not be possible or the communication distance may be shorter depending on the surrounding conditions, such as the type of wall material and the presence of obstructions or radio waves between the product and access point. In this case, change the location of the product or move the product closer to the access point.

**Related Topic**
- **Wi-Fi Settings: Access Point Set.**
Wi-Fi Settings: Access Point Set.

You can register your access point manually. Before starting the procedure, check the SSID name of the access point, security system, and password. The password may be preset in some devices. For details, see the access point operating instructions, or consult the access point administrator.

1. MENU → (Network) → [Wi-Fi Settings] → [Access Point Set].

2. Select the access point you want to register.

   - Access points without the 🗝️ mark do not require a password.

3. Input the password, and select [OK].

4. Select [OK].

Other setting items

Depending on the status or the setting method of your access point, you may want to set more items.

**WPS PIN:**
Displays the PIN code you enter into the connected device.

**Priority Connection:**
Select [On] or [Off].

**IP Address Setting:**
Select [Auto] or [Manual].

**IP Address:**
If you are entering the IP address manually, enter the set address.

**Subnet Mask/Default Gateway:**
If you have set [IP Address Setting] to [Manual], enter each address according to your network environment.

**Note**
- To give the registered access point priority in the future, set [Priority Connection] to [On].

**Related Topic**
- Wi-Fi Settings: WPS Push
- How to use the keyboard
Wi-Fi Settings: Disp MAC Address

Displays the MAC address of this product.

1. MENU → 🌐 (Network) → [Wi-Fi Settings] → [Disp MAC Address].
Wi-Fi Settings: SSID/PW Reset

This product shares the connection information for [Send to Smartphone] and [Connection] with a device that has permission to connect. If you want to change the device that is permitted to connect, reset the connection information.

MENU → (Network) → [Wi-Fi Settings] → [SSID/PW Reset] → [OK].

Note
- If you connect this product to a smartphone after resetting the connection information, you must make the settings for the smartphone again.

Related Topic
- Snd to Smrtpn Func: Send to Smartphone
- Ctrl w/ Smartphone
Edit Device Name

You can change the device name for the Wi-Fi Direct or Bluetooth connection.

1. **MENU → 🌐 (Network) → [Edit Device Name].**

2. Select the input box, then input the device name→[OK].

Related Topic

- Wi-Fi Settings: WPS Push
- Wi-Fi Settings: Access Point Set.
- How to use the keyboard
Reset Network Set.

Resets all the network settings to default settings.

1 MENU → (Network) → [Reset Network Set.] → [Enter].
Recommended computer environment

You can confirm the operating computer environment of the software from the following URL:
http://www.sony.net/pcenv/
Software for Mac computers

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

Note
- The software that can be used varies depending on the region.

Related Topic
- Send to Computer
PlayMemories Home

With PlayMemories Home, you can do the following:

- You can import images shot with this product to your computer.
- You can play back the images imported to your computer.
- You can share your images using PlayMemories Online.
- You can edit movies such as by cutting or merging.
- You can add various effects such as BGM and subtitles to movies.

Also for Windows, you can do the following:

- You can organize images on the computer on a calendar by shooting date to view them.
- You can edit and correct images, such as by trimming and resizing.
- You can create a disc from movies imported to a computer.
  - Blu-ray discs or AVCHD discs can be created from XAVC S-format movies.
- You can upload images to a network service. (An Internet connection is required.)
- You can import images recorded with location information to a computer and view them on a map.
- For other details, please refer to the Help of PlayMemories Home.

Related Topic

- Installing PlayMemories Home
Installing PlayMemories Home

1 Using your computer's Internet browser, go to the URL below and download PlayMemories Home by following the on-screen instructions.

http://www.sony.net/pm/
- An Internet connection is required.
- For detailed instructions, visit the PlayMemories Home support page (English only).
  http://www.sony.co.jp/pmh-se/

2 Connect the product to your computer using the micro USB cable (supplied), then turn the product on.

- New functions may be added to PlayMemories Home. Even if PlayMemories Home has already been installed on your computer, connect this product and your computer again.
- Do not remove the micro USB cable (supplied) from the camera while the camera is in operation or the access screen is displayed. Doing so may damage the data.

A: To the Multi/Micro USB Terminal
B: To the USB jack of the computer

Note

- 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.
Connecting to a computer

1. Insert a sufficiently charged battery pack into the camera.

2. Turn on the camera and the computer.

3. Check that [USB Connection] under (Setup) is set to [Mass Storage].

4. Connect the camera to the computer using the micro USB cable (supplied) (A).

- When you connect the camera to the computer for the first time, the procedure for recognizing the camera may start automatically on the computer. Wait until the procedure is finished.

- If you connect the product to your computer using the micro USB cable when [USB Power Supply] is set to [On], power is supplied from your computer. (Default setting: [On])

**Note**

- Do not turn on/off or restart the computer, or wake the computer from sleep mode when a USB connection has been established between the computer and the camera. Doing so may cause a malfunction. Before turning on/off or restarting the computer, or waking the computer from sleep mode, disconnect the camera from the computer.

**Related Topic**

- USB Connection
- USB LUN Setting
Importing images to the computer without using PlayMemories Home

PlayMemories Home allows you to easily import images. For details on PlayMemories Home functions, see the Help of PlayMemories Home.

Importing images to the computer without using PlayMemories Home (For Windows)
When the AutoPlay Wizard appears after making a USB connection between this product and a computer, click [Open folder to view files] → [OK] → [DCIM]. Then copy the desired images to the computer.

Importing images to the computer without using PlayMemories Home (For Mac)
Connect the product 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.

Note
- For operations such as importing XAVC S movies or AVCHD movies to the computer, use PlayMemories Home.
- Do not edit or otherwise process AVCHD or XAVC S movie files/folders from the connected computer. Movie files may be damaged or become unplayable. Do not delete or copy AVCHD movies or XAVC S movies on the memory card from the computer. Sony is not held liable for consequences resulting from such operations via the computer.
Disconnecting the camera from the computer

Perform steps 1 and 2 below before performing the following operations:

- Disconnecting the micro USB cable.
- Removing a memory card.
- Turning off the product.

1. Click (Safely Remove Hardware and Eject Media) in the taskbar.

2. Click the displayed message.

**Note**

- On Mac computers, drag and drop the memory card icon or the drive icon into the “Trash” icon. The camera will be disconnected from the computer.
- On Windows 7/Windows 8 computers, the disconnection icon may not appear. In that case, you can skip the steps above.
- Do not remove the micro USB cable from the camera while the access lamp is lit. The data may be damaged.
Imaging Edge

Imaging Edge is a software suite that includes functions such as remote shooting from a computer, and adjusting or developing RAW images recorded with the camera.

**Viewer:**
You can display and search images.

**Edit:**
You can edit images with various corrections such as tone curve and sharpness, and develop images recorded in RAW format.

**Remote:**
You can adjust the camera settings or shoot images from a computer connected to the camera with a USB cable. To control the camera using a computer, select MENU → (Setup) → [USB Connection] → [PC Remote] before connecting the camera to the computer with a USB cable.

For details on how to use Imaging Edge, refer to the support page.
http://www.sony.net/disoft/help/

Installing Imaging Edge on your computer

Download and install the software by accessing the following URL:
http://www.sony.net/disoft/d/

Related Topic
- USB Connection
Selecting a disc to be created

You can create a disc that can be played back on other devices from a movie recorded on this camera. What devices can play back the disc depends on the disc type. Select a disc type suitable for the playback devices you will be using. Depending on the movie type, the movie format may be converted when creating a disc.

Blu-ray

High-definition image quality (HD) (Blu-ray Disc)
High-definition image quality (HD) movies can be recorded on a Blu-ray Disc, creating a high-definition image quality (HD) disc. A Blu-ray Disc enables you to record longer-duration high-definition image quality (HD) movies than DVD discs.
Writable movie formats: XAVC S, AVCHD
Players: Blu-ray Disc playback devices (Sony Blu-ray Disc players, PlayStation 4, etc.)

DVD

High-definition image quality (HD) (AVCHD recording disc)
High-definition image quality (HD) movies can be recorded on DVD media such as DVD-R discs, creating a high-definition image quality (HD) disc.
Writable movie formats: XAVC S, AVCHD
Players: AVCHD format playback devices (Sony Blu-ray Disc players, PlayStation 4, etc.)
You cannot play these kinds of discs on ordinary DVD players.

Standard definition image quality (STD)
Standard definition image quality (STD) movies converted from high-definition image quality (HD) movies can be recorded on DVD media such as DVD-R discs, creating a standard image quality (STD) disc.
Writable movie formats: AVCHD
Players: Ordinary DVD playback devices (DVD players, computers that can play back DVD discs, etc.)

Hint
- You can use the following types of 12 cm discs with PlayMemories Home.
  - BD-R/DVD-R/DVD+R/DVD+R DL: Non-rewritable
  - BD-RE/DVD-RW/DVD+RW: Rewritable
  - Additional recording is not possible.
- Always maintain your “PlayStation 4” to use the latest version of the “PlayStation 4” system software.

Note
- 4K movies cannot be recorded on a disc in 4K image quality.

Related Topic
- Creating Blu-ray Discs from high-definition image quality movies
- Creating DVD discs (AVCHD recording discs) from high-definition image quality movies
Creating DVD discs from standard image quality movies
Creating Blu-ray Discs from high-definition image quality movies

You can create Blu-ray Discs that can be played back on Blu-ray Disc playback devices (such as Sony Blu-ray Disc players or the PlayStation 4, etc.).

A. How to create using a computer
With a Windows computer, you can copy movies imported to the computer and create Blu-ray Discs using PlayMemories Home.

Your computer must be able to create Blu-ray Discs.

When you create a Blu-ray Disc for the first time, connect your camera to the computer using a USB cable. The necessary software is automatically added to your computer. (An Internet connection is needed.)

For details on how to create a disc using PlayMemories Home, refer to the Help guide for PlayMemories Home.

B. How to create using a device other than a computer
You can also create Blu-ray Discs using a Blu-ray recorder, etc.

For details, refer to the device's operating instructions.

Note
- When creating Blu-ray discs using PlayMemories Home from movies recorded in the XAVC S movie format, the image quality is converted to 1920×1080 (60i/50i). It is not possible to create discs with the original image quality.
- To record movies with the original image quality, copy movies to a computer or an external medium.

Related Topic
- Selecting a disc to be created
- Creating DVD discs (AVCHD recording discs) from high-definition image quality movies
- Creating DVD discs from standard image quality movies
Creating DVD discs (AVCHD recording discs) from high-definition image quality movies

You can create DVD discs (AVCHD recording discs) that can be played back on AVCHD-compatible playback devices (such as Sony Blu-ray Disc players or the PlayStation 4, etc.).

A. How to create using a computer
With a Windows computer, you can copy movies imported to the computer and create DVD discs (AVCHD recording discs) using PlayMemories Home.
Your computer must be able to create DVD discs (AVCHD recording discs).
When you create a DVD disc for the first time, connect your camera to the computer using a USB cable. The necessary software is automatically added to your computer. (An Internet connection is needed.)
For details on how to create a disc using PlayMemories Home, refer to the Help guide for PlayMemories Home.

B. How to create using a device other than a computer
You can also create DVD discs (AVCHD recording discs) using a Blu-ray recorder, etc.
For details, refer to the device’s operating instructions.

Note
- When creating DVD discs (AVCHD recording discs) using PlayMemories Home from movies recorded in the XAVC S movie format, the image quality is converted to 1920×1080 (60i/50i). It is not possible to create discs with the original image quality.
  To record movies with the original image quality, copy movies to a computer or an external medium.

- When creating AVCHD recording discs using PlayMemories Home from movies recorded in the AVCHD movie format with [Record Setting] set to [60i 24M(FX)]/[50i 24M(FX)], the image quality is converted and it is not possible to create discs with the original image quality.
  This conversion can take a long time. To record movies with the original image quality, use a Blu-ray Disc.

Related Topic
- Selecting a disc to be created
- Creating Blu-ray Discs from high-definition image quality movies
- Creating DVD discs from standard image quality movies
Creating DVD discs from standard image quality movies

You can create DVD discs that can be played back on ordinary DVD playback devices (DVD players, computers that can play back DVD discs, etc.).

A. How to create using a computer
With a Windows computer, you can copy movies imported to the computer and create DVD disc using PlayMemories Home.
Your computer must be able to create DVD discs.
When you create a DVD disc for the first time, connect your camera to the computer using a USB cable. Install the dedicated add-on software following the on-screen instructions. (An internet connection is needed.)
For details on how to create a disc using PlayMemories Home, refer to the Help for PlayMemories Home.

B. How to create using a device other than a computer
You can also create DVD discs using a Blu-ray recorder, HDD recorder, etc.
For details, refer to the device's operating instructions.

Related Topic
- Selecting a disc to be created
- Creating Blu-ray Discs from high-definition image quality movies
- Creating DVD discs (AVCHD recording discs) from high-definition image quality movies
Using MENU items

You can change settings related to all the camera operations including shooting, playback, and operating method. You can also execute camera functions from the MENU.

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

   ![MENU button](image)

2. Select the desired setting you want to adjust using the top/bottom/left/right sides of the control wheel or by turning the control wheel, and then press the center of the control wheel.
   - Select an icon at the top of the screen (A) and press the left/right side of the control wheel to move to another MENU item.
   - You can go back to the previous screen by pressing the MENU button (B).

3. Select the desired setting value, and press the center to confirm your selection.

Related Topic
- Tile Menu
- Add Item
File Format (still image)

Sets the file format for still images.

1. **MENU → (Camera Settings1) → File Format** → desired setting.

### Menu item details

**RAW:**
Digital processing is not performed on this file format. Select this format to process images on a computer for professional purposes.

**RAW & JPEG:**
A RAW image and a JPEG image are created at the same time. This is suitable when you need two image files, a JPEG for viewing, and a RAW for editing.

**JPEG:**
The image is recorded in the JPEG format.

### About RAW images

- To open a RAW image file recorded with this camera, the software Imaging Edge is needed. With Imaging Edge, you can open a RAW image file, then convert it into a popular image format such as JPEG or TIFF, or readjust the white balance, saturation or contrast of the image.
- RAW images shot by the camera are recorded in the compressed RAW format.

### Note
- If you do not intend to edit the images on your computer, we recommend that you record in JPEG format.
- You cannot add DPOF (print order) registration marks to RAW images.

### Related Topic
- JPEG Image Size (still image)
JPEG Quality (still image)

Selects the JPEG image quality when [File Format] is set to [RAW & JPEG] or [JPEG].

1. MENU → (Camera Settings1) → [JPEG Quality] → desired setting.

Menu item details

Extra fine/Fine/Standard:
Since the compression rate increases from [Extra fine] to [Fine] to [Standard], the file size decreases in the same order. This allows more files to be recorded on one memory card, but the image quality is lower.

Related Topic

- File Format (still image)
JPEG Image Size (still 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.

1. MENU → [Camera Settings1] → [JPEG Image Size] → desired setting.

Menu item details

<table>
<thead>
<tr>
<th>Aspect Ratio</th>
<th>L: 16M</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:2</td>
<td>4896×3264 pixels</td>
</tr>
<tr>
<td></td>
<td>3648×2432 pixels</td>
</tr>
<tr>
<td></td>
<td>2592×1728 pixels</td>
</tr>
</tbody>
</table>

When [Aspect Ratio] is set to 4:3

<table>
<thead>
<tr>
<th>L: 18M</th>
</tr>
</thead>
<tbody>
<tr>
<td>4896×3672 pixels</td>
</tr>
<tr>
<td>M: 10M</td>
</tr>
<tr>
<td>3648×2736 pixels</td>
</tr>
<tr>
<td>S: 5.0M</td>
</tr>
<tr>
<td>2592×1944 pixels</td>
</tr>
<tr>
<td>VGA</td>
</tr>
<tr>
<td>640×480 pixels</td>
</tr>
</tbody>
</table>

When [Aspect Ratio] is set to 16:9

<table>
<thead>
<tr>
<th>L: 13M</th>
</tr>
</thead>
<tbody>
<tr>
<td>4896×2752 pixels</td>
</tr>
<tr>
<td>M: 7.5M</td>
</tr>
<tr>
<td>3648×2056 pixels</td>
</tr>
<tr>
<td>S: 2.1M</td>
</tr>
<tr>
<td>1920×1080 pixels</td>
</tr>
</tbody>
</table>

When [Aspect Ratio] is set to 1:1

<table>
<thead>
<tr>
<th>L: 13M</th>
</tr>
</thead>
<tbody>
<tr>
<td>3664×3664 pixels</td>
</tr>
<tr>
<td>M: 7.5M</td>
</tr>
<tr>
<td>2736×2736 pixels</td>
</tr>
<tr>
<td>S: 3.7M</td>
</tr>
<tr>
<td>1920×1920 pixels</td>
</tr>
</tbody>
</table>

Note
- When [File Format] is set to [RAW] or [RAW & JPEG], the image size for RAW images corresponds to "L."

Related Topic
- Aspect Ratio (still image)
Aspect Ratio (still image)

1. MENU → 1 (Camera Settings1) → [ Aspect Ratio ] → desired setting.

Menu item details

3:2:  
Same aspect ratio as 35 mm plate film

4:3:  
An aspect ratio suitable for viewing on a TV that does not support high definition

16:9:  
An aspect ratio suitable for viewing on a TV that supports high definition

1:1:  
The horizontal and vertical ratio is equal.
Panorama: Size

Sets the image size when shooting panoramic images. The image size varies depending on the [Panorama: Direction] setting.

1. MENU → 📊 (Camera Settings1) → [Panorama: Size] → desired setting.

Menu item details

When [Panorama: Direction] is set to [Up] or [Down]
- **Standard**: 3872×2160
- **Wide**: 5536×2160

When [Panorama: Direction] is set to [Left] or [Right]
- **Standard**: 8192×1856
- **Wide**: 12416×1856

Related Topic

- Sweep Panorama
- Panorama: Direction
Panorama: Direction

Sets the direction to pan the camera when shooting panoramic images.

1. MENU → (Camera Settings1) → [Panorama: Direction] → desired setting.

Menu item details

Right:
Pan the camera from the left to the right.

Left:
Pan the camera from the right to the left.

Up:
Pan the camera from the bottom to the top.

Down:
Pan the camera from the top to the bottom.

Related Topic

- Sweep Panorama
High ISO NR (still image)

When shooting with high ISO sensitivity, the product reduces noise that becomes more noticeable when the product sensitivity is high.

1. MENU →  ámb (Camera Settings1) → [High ISO NR] → desired setting.

Menu item details

Normal:
Activates high ISO noise reduction normally.

Low:
Activates high ISO noise reduction moderately.

Note
- [High ISO NR] is fixed to [Normal] in the following shooting modes:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]
  - [Sweep Panorama]
- When [File Format] is set to [RAW], this function is not available.
- [High ISO NR] does not work for RAW images when the [File Format] is [RAW & JPEG].
Color Space (still image)

The way colors are represented using combinations of numbers or the range of color reproduction is called “color space.” You can change the color space depending on the purpose of the image.

1. MENU → (Camera Settings1) → [Color Space] → desired setting.

Menu item details

sRGB:
This is the standard color space of the digital camera. Use [sRGB] in normal shooting, such as when you intend to print out the images without any modification.

AdobeRGB:
This color space has a wide range of color reproduction. When a large part of the subject is vivid green or red, Adobe RGB is effective. The file name of the recorded image starts with “_.

Note

- [AdobeRGB] is for applications or printers that support color management and DCF2.0 option color space. Images may not be printed or viewed in the correct colors if you use applications or printers that do not support Adobe RGB.

- When displaying images that were recorded with [AdobeRGB] on non-Adobe RGB-compliant devices, the images will be displayed with low saturation.
Switching the auto mode (Auto Mode)

This camera is equipped with the following two automatic shooting modes: [Intelligent Auto] and [Superior Auto]. You can switch the auto mode to shoot according to the subject and your preferences.

1. Set the mode dial to AUTO.
2. MENU → (Camera Settings1) → [Auto Mode] → desired setting.

Menu item details

- **Intelligent Auto:** Allows you to shoot with automatic scene recognition.
- **Superior Auto:** Allows you to shoot with automatic scene recognition. This mode takes clear images of dark or backlit scenes.

**Note**

- In [Superior Auto] mode, the recording process takes longer, since the product creates a composite image. In this case, the (overlay icon) is displayed and the shutter sound is heard multiple times, but only one image is recorded.
- In [Superior Auto] mode and when the (overlay icon) is displayed, be sure not to move the camera before the multiple shots are recorded.
- For [Intelligent Auto] and [Superior Auto] mode, most of the functions are set automatically, and you cannot adjust the settings on your own.

Related Topic

- Intelligent Auto
- Superior Auto
- Program Auto
Scene Selection

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

1. Set the mode dial to SCN (Scene Selection).

2. Turn the control wheel to select the desired setting.

Menu item details

Portraits:
Blurs background and sharpens the subject. Accentuates the skin tones softly.

Macro:
Shoots close-ups of the subjects, such as flowers, insects, food, or small items.

Landscape:
Shoots the entire range of a scenery in sharp focus with vivid colors.

Sunset:
Shoots the red of the sunset beautifully.

Night Scene:
Shoots night scenes without losing the dark atmosphere.
Hand-held Twilight:
Shoots night scenes with less noise and blur without using a tripod. A burst of shots are taken, and image processing is applied to reduce subject blur, camera-shake, and noise.

Night Portrait:
Shoots night scene portraits using the flash.
The flash does not pop up automatically. Pop up the flash manually before shooting.

Anti Motion Blur:
Allows you to shoot indoor shots without using the flash and reduces subject blur. The product shoots burst images and combines them to create the image, reducing subject blur and noise.

Pet:
Allows you to shoot images of your pet with the best settings.

Gourmet:
Allows you to shoot food arrangements in delicious and bright colors.

Fireworks:
Allows you to shoot images of fireworks in all their splendor.
High Sensitivity:
Allows you to shoot still images even in dark locations without using the flash, and reduces subject blur. Also allows you to shoot dark movie scenes more brightly.

Hint
- To change the scene, rotate the control wheel on the shooting screen and select a new scene.

Note
- Under the following settings, the shutter speed is slower, so use of a tripod, etc. is recommended to prevent the image from blurring:
  - [Night Scene]
  - [Night Portrait]
  - [Fireworks]

- In the [Hand-held Twilight] or [Anti Motion Blur] mode, the shutter clicks 4 times and an image is recorded.

- If you select [Hand-held Twilight] or [Anti Motion Blur] with [RAW] or [RAW & JPEG], [File Format] becomes [JPEG] temporarily.

- Reducing blur is less effective even in [Hand-held Twilight] or [Anti Motion Blur] when shooting the following subjects:
  - Subjects with erratic movement.
  - Subjects that are too close to the product.
  - Subjects with continuously similar patterns, such as the sky, a beach, or a lawn.
  - Subjects with constant change such as waves or water falls.

- In the case of [Hand-held Twilight] or [Anti Motion Blur], block noise may occur when using a light source that flickers, such as fluorescent lighting.

- The minimum distance that you can come close to a subject does not change even if you select [Macro]. For the minimum in-focus range, refer to the minimum distance of the lens.

Related Topic
- Using flash
Drive Mode

Select the appropriate mode for the subject, such as single shooting, continuous shooting or bracketing shooting.

1. Select (Drive Mode) on the control wheel → desired setting.
   - You can also set the drive mode by selecting MENU → (Camera Settings1) → [Drive Mode].

2. Select the desired mode using the right/left side of the control wheel.

Menu item details

- **Single Shooting:**
  Normal shooting mode.

- **Cont. Shooting:**
  Shoots images continuously while you press and hold down the shutter button.

- **Spd Priority Cont.:**
  Shoots images continuously at high speed while you press and hold down the shutter button.

- **Self-timer:**
  Shoots an image using the self-timer after a designated number of seconds have elapsed since the shutter button was pressed.

- **Self-timer(Cont):**
  Shoots a designated number of images using the self-timer after a designated number of seconds have elapsed since the shutter button was pressed.

- **Cont. Bracket:**
  Shoots images while holding the shutter button down, each with different degrees of exposure.

- **Single Bracket:**
  Shoots a specified number of images, one by one, each with a different degrees of exposure.

- **WB bracket:**
  Shoots a total of three images, each with different color tones according to the selected settings for white balance, color temperature and color filter.

- **DRO Bracket:**
  Shoots a total of three images, each at a different degree of D-Range Optimizer.

Related Topic

- Cont. Shooting
- Spd Priority Cont.
- Self-timer
- Self-timer(Cont)
- Cont. Bracket
- Single Bracket
- WB bracket
- DRO Bracket
Bracket Settings

You can set the self-timer in bracket shooting mode, and the shooting order for exposure bracketing and white balance bracketing.

1. Select (Drive Mode) of the control wheel → select bracket shooting mode.
   - You can also set the drive mode by selecting MENU → (Camera Settings1) → [Drive Mode].

2. MENU → (Camera Settings1) → [Bracket Settings] → desired setting.

Menu item details

Selftimer during Brkt:
Sets whether to use the self-timer during bracket shooting. Also sets the number of seconds until the shutter is released if using the self-timer.
(Off/2 Sec/5 Sec/10 Sec)

Bracket order:
Sets the order of exposure bracketing and white balance bracketing.
(0→→→+/→→0→+)

Related Topic
- Cont. Bracket
- Single Bracket
- WB bracket
- DRO Bracket
Memory (Camera Settings1/Camera Settings2)

Allows you to register up to 2 often-used modes or product settings in the product. You can recall the settings using just the mode dial.

1. Set the product to the setting you want to register.

2. MENU → 1 (Camera Settings1) → [Memory] → desired number.

3. Press the center of the control wheel to confirm.

Items that can be registered
- You can register various functions for shooting. The items that can actually be registered are displayed on the menu of the camera.
- Aperture (F number)
- Shutter speed
- Optical zoom scale

To change registered settings
Change the setting to the desired one and re-register the setting to the same mode number.

Note
- Program Shift cannot be registered.

Related Topic
- Recall (Camera Settings1/Camera Settings2)
Focus Mode

Selects the focus method.

1. MENU → (Camera Settings1) → [Focus Mode] → desired setting.

Menu item details

**AF-S** (Single-shot AF):
The product performs auto focusing. The focus locks onto the subject.

**AF-C** (Continuous AF):
During movie shooting, the focus mode is locked to [Continuous AF]. The camera maintains focus on the subject. [Continuous AF] cannot be selected when shooting still images.

**DMF** (DMF):
You can make fine adjustments manually after performing auto focusing, letting you focus on a subject more quickly than when using the manual focus from the beginning. This is convenient in situations such as macro shooting.

**MF** (Manual Focus):
Adjusts the focus manually. If you cannot focus on the intended subject using auto focus, use manual focus.

- Rotate the control ring to adjust the focus manually in the direct manual focus mode or manual focus mode.

Focus indicator

- **(lit):**
The subject is in focus and the focus is locked.

- **(flashing):**
The subject is not in focus.

Subjects on which it is difficult to focus using auto focus

- Dark and distant subjects
- Subjects with poor contrast
- Subjects seen through glass
- Fast-moving subjects
- Reflective light or shiny surfaces
- Flashing light
- Back-lit subjects
- Subjects in the focusing area with different focal distances

Hint

- When you set the focus to infinity in the manual focus mode or the direct manual focus mode, make sure that the focus is on a sufficiently distant subject by checking the monitor or the viewfinder.

Note

- Only [Continuous AF] and [Manual Focus] are available in the movie shooting mode.

Related Topic

- Direct manual focus (DMF)
- Manual Focus
- MF Assist (still image)
Focus Area

Selects the focusing area. Use this function when it is difficult to focus properly in the auto focus mode.

MENU →  (Camera Settings1) → [Focus Area] → desired setting.

Menu item details

Wide : Focuses on a subject covering the whole range of the screen automatically. When you press the shutter button halfway down in the still image shooting mode, a green frame is displayed around the area that is in focus.

Center : Focuses automatically on a subject in the center of the image. Use together with the focus-lock function to create the composition you want.

Flexible Spot : Allows you to move the focusing frame to a desired point on the screen and focus on an extremely small subject in a narrow area. On the Flexible Spot shooting screen, you can change the size of the focusing frame by turning the control wheel.

Expand Flexible Spot : If the product cannot focus on a single selected point, it uses focus points around the flexible spot as a secondary priority area for focusing.

To move the focus area

- When [Focus Area] is set to [Flexible Spot] or [Expand Flexible Spot], if pressing the button to which [Focus Standard] is assigned, you can shoot while moving the focusing frame using the top/bottom/left/right sides of the control wheel. To return the focusing frame to the center of the monitor, press the C/ button while moving the frame. To change the shooting settings using the control wheel, press the button to which [Focus Standard] is assigned.
- You can move the focusing frame quickly by touching and dragging it on the monitor. Set [Touch Operation] to [On] beforehand.

Note

- [Focus Area] is locked to [Wide] in the following situations:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]
  - During Smile Shutter mode
- The focus area may not light up during continuous shooting or when the shutter button is pressed all the way down at once.
- You cannot execute functions assigned to the control wheel or the custom button while moving the focusing frame.

Related Topic

- Touch Operation
AF Illuminator (still image)

The AF illuminator supplies fill light to focus more easily on a subject in dark surroundings. In the time between pressing the shutter button halfway down and locking the focus, the AF illuminator lights up to allow the camera to focus easily.

1. MENU → (Camera Settings1) → [AF Illuminator] → desired setting.

Menu item details

Auto:
The AF illuminator lights up automatically in dark surroundings.

Off:
Does not use the AF illuminator.

Note

You cannot use [AF Illuminator] in the following situations:
- In movie mode
- Sweep Panorama
- When [Focus Magnifier] is activated.
- When [Scene Selection] is set to the following modes:
  - [Landscape]
  - [Night Scene]
  - [Pet]
  - [Fireworks]

The AF illuminator emits a very bright light. Although there is no health hazard, do not look directly into the AF illuminator at close range.
Center Lock-on AF

When you press the center of the control wheel, the camera detects the subject positioned in the center of the screen and continues to track the subject.

1. **MENU → 1 (Camera Settings1) → [Center Lock-on AF] → [On].**

2. Align the target frame (A) over the subject and press the center of the control wheel.
   - Press the center again to stop tracking.

3. Press the shutter button fully down to shoot the image.

**Hint**
- If you assign the [Focus Standard] function to the key of your choice, you can activate [Center Lock-on AF] or detect a subject again by pressing the key when [Focus Area] is set to [Wide] or [Center].
- You can select the subject to be tracked by touch operation when shooting using the monitor. With touch panel operations enabled, select **MENU → 2 (Camera Settings2) → [Func. of Touch Oprtn] → [Touch Focus].**

**Note**
- The [Center Lock-on AF] function may not function very well in the following situations:
  - The subject is moving too quickly.
  - The subject is too small, or too large.
  - The contrast between the subject and the background is poor.
  - It is dark.
  - The ambient light changes.
- Lock-on AF does not work in the following situations:
  - [Sweep Panorama]
  - When [Scene Selection] is set to [Hand-held Twilight], [Anti Motion Blur] or [Fireworks].
  - When shooting in the Manual Focus or Direct Manual Focus (DMF) mode.
  - When using the digital zoom
  - When the shooting mode is set to Movie, and [SteadyShot] is set to [Intelligent Active].
  - When shooting movies with [Record Setting] set to [120p]/[100p].
Related Topic

- Focus Standard
- Touch Operation
Set. Face Prty in AF

Sets whether the camera focuses on detected faces with higher priority in the auto-focus mode.

1. MENU → (Camera Settings1) → [Set. Face Prty in AF] → [Face Priority in AF] → desired setting.

Menu item details

On:
The camera focuses on detected faces with higher priority.

Off:
The camera focuses without face detection.

Face Dtct Frame Dsp

Sets whether to display the face detection frame when [Face Priority in AF] is set to [On].

1. MENU → (Camera Settings1) → [Set. Face Prty in AF] → [Face Dtct Frame Dsp] → desired setting.

On:
Displays the face detection frame when [Face Priority in AF] is set to [On].

Off:
Does not display the face detection frame.

Face Detection frame

- When the product detects a face, the gray face detection frame appears. When the product determines that autofocus is enabled, the face detection frame turns white.
- In case you have registered the priority order for each face using [Face Registration], the product automatically selects the first prioritized face and the face detection frame over that face turns white. The face detection frames of other registered faces turn reddish-purple.

Hint

- When [Set. Face Prty in AF] is set to [On], a detection frame is displayed over the eyes when the camera focuses on eyes. The frame displayed over the eyes will disappear after a period of time.

Note

- You cannot use the face detection function with the following functions:
  - Other zoom functions than the optical zoom
  - [Sweep Panorama]
  - [Posterization] under [Picture Effect]
— [Focus Magnifier]
— [Landscape], [Night Scene], [Sunset], [Pet], [Gourmet] or [Fireworks] under [Scene Selection]
— Movie shooting with [Record Setting] set to [120p]/[100p].

- Up to 8 faces of your subjects can be detected.
- Even if [Face Dtct Frame Dsp] is set to [Off], a green focusing frame will be displayed over faces that are in focus.
- When the shooting mode is set to [Intelligent Auto] or [Superior Auto], [Face Priority in AF] is set to [On].
- The product may not detect faces at all or may accidentally detect other objects as faces in some conditions.

Related Topic
- Face Registration (New Registration)
- Face Registration (Order Exchanging)
Pre-AF (still image)

The product automatically adjusts focus before you press the shutter button halfway down. During focusing operations, the screen may shake.

MENU →  (Camera Settings1) → [Pre-AF] → desired setting.

Menu item details

On:
Adjusts focus before you press the shutter button halfway down.

Off:
Does not adjust focus before you press the shutter button halfway down.
Exposure Comp.

Normally, exposure is set automatically (auto exposure). Based on the exposure value set by auto exposure, you can make the entire image brighter or darker if you adjust [Exposure Comp.] to the plus side or minus side, respectively (exposure compensation).

1. \( \mathbb{Z} / \mathbb{H} \) (Exposure Comp.) on the control wheel → press the left/right side of the control wheel or turn the control wheel, and select the desired setting.

* + (over) side:
Images become brighter.

* - (under) side:
Images become darker.

- When using [Intelligent Auto] or [Superior Auto], you can display the setting screen for [Photo Creativity] by pressing \( \mathbb{Z} / \mathbb{H} \).

- You can also select MENU → \( \mathbb{H} \) (Camera Settings1) → [Exposure Comp.].

- You can adjust the exposure compensation value within the range of -3.0 EV to +3.0 EV.

- You can confirm the exposure compensation value that you set on the shooting screen.

Monitor

Viewfinder
Note

- You cannot perform the exposure compensation in the following shooting modes:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]

- When using [Manual Exposure], you can perform the exposure compensation only when [ISO] is set to [ISO AUTO].
- You can adjust the exposure compensation value within the range of -2.0 EV to +2.0 EV for movies.
- If you shoot a subject in extremely bright or dark conditions, or when you use the flash, you may not be able to get a satisfactory effect.

Related Topic

- Cont. Bracket
- Single Bracket
- Zebra Setting
ISO

Sensitivity to light is expressed by the ISO number (recommended exposure index). The larger the number, the higher the sensitivity.

1 MENU →  
   [Camera Settings1] → [ISO] → desired setting.

Menu item details

Multi Frame NR:
Combines continuous shots to create an image with less noise. Press the right side to display the setting screen, then select a desired value using the top/bottom sides of the control wheel.

Select the desired ISO number from ISO AUTO or ISO 100 – ISO 12800.

ISO AUTO:
Sets the ISO sensitivity automatically.

ISO 80 – ISO 6400:
Sets the ISO sensitivity manually. Selecting a larger number increases the ISO sensitivity.

Hint
- You can change the range of ISO sensitivity that is set automatically in [ISO AUTO] mode. Select [ISO AUTO] and press the right side of the control wheel, and set the desired values for [ISO AUTO Maximum] and [ISO AUTO Minimum]. The values are also applied when shooting in [ISO AUTO] mode under [Multi Frame NR].

Note
- When [ File Format] is set to [RAW] or [RAW & JPEG], [Multi Frame NR] cannot be selected.
- When [Multi Frame NR] is selected, the flash, [D-Range Opt.], or [Auto HDR] cannot be used.
- When [Picture Effect] is set to other than [Off], [Multi Frame NR] cannot be selected.
- [ISO AUTO] is selected when using the following functions:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]
  - [Sweep Panorama]
- The higher the ISO value, the more noise will appear on the images.
- When shooting movies, ISO values between 80 and 6400 are available.
- When you use [Multi Frame NR], it takes some time for the product to perform the overlay processing of images.
- When you select [ISO AUTO] with the shooting mode set to [P], [A], [S] or [M], the ISO sensitivity will be automatically adjusted within the set range.
Help Guide
Digital Still Camera
DSC-HX99

Metering Mode

Selects the metering mode that sets which part of the screen to measure for determining the exposure.

1 MENU → (Camera Settings1) → [Metering Mode] → desired setting.

Menu item details

Multi:
Measures light on each area after dividing the total area into multiple areas and determines the proper exposure of the entire screen (Multi-pattern metering).

Center:
Measures the average brightness of the entire screen, while emphasizing the central area of the screen (Center-weighted metering).

Spot:
Measures only the central area (Spot metering). This mode is suitable for measuring light on a specified part of the entire screen. The size of the metering circle can be selected from [Spot: Standard] and [Spot: Large].

Entire Screen Avg.:
Measures the average brightness of the entire screen. The exposure will be stable even if the composition or the position of the subject changes.

Highlight:
Measures the brightness while emphasizing the highlighted area on the screen. This mode is suitable for shooting the subject while avoiding overexposure.

Hint

- When [Multi] is selected and [Face Prty in Mlti Mtr] is set to [On], the camera measures brightness based on detected faces.
- When [Metering Mode] is set to [Highlight] and the [D-Range Opt.] or [Auto HDR] function is activated, the brightness and the contrast will be corrected automatically by dividing the image into small areas and analyzing the contrast of light and shadow. Make settings based on the shooting circumstances.

Note

- [Metering Mode] is locked to [Multi] in the following shooting modes:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]
  - Other zoom functions than the optical zoom
- In [Highlight] mode, the subject may be dark if a brighter part exists on the screen.

Related Topic

- AE lock
- Face Prty in Mlti Mtr
- D-Range Opt. (DRO)
- Auto HDR

MENU → (Camera Settings1) → [Metering Mode] → desired setting.
**Face Prty in Mlti Mtr**

Sets whether the camera measures brightness based on detected faces when [Metering Mode] is set to [Multi].

1. MENU → [ ] (Camera Settings1) → [Face Prty in Mlti Mtr] → desired setting.

**Menu item details**

**On:**
The camera measures brightness based on detected faces.

**Off:**
The camera measures brightness using the [Multi] setting, without detecting faces.

**Note**
- When the shooting mode is set to [Intelligent Auto] or [Superior Auto], [Face Prty in Mlti Mtr] is locked to [On].

**Related Topic**
- Metering Mode
Flash Mode

You can set the flash mode.

1. Select 
   (Flash Mode) on the control wheel → desired setting.
   - You can also set the flash mode by selecting MENU → 
     (Camera Settings1) → [Flash Mode].

Menu item details

Flash Off:
The flash does not operate.

Auto:
The flash works in dark environments or when shooting towards bright light.

Fill:
The flash works every time you trigger the shutter.

Slow Sync.:
The flash works every time you trigger the shutter. Slow sync shooting allows you to shoot a clear image of both the subject and the background by slowing the shutter speed.

Rear Sync.:
The flash works right before the exposure is completed every time you trigger the shutter. Rear sync shooting allows you to shoot a natural image of the trail of a moving subject such as a moving car or a walking person.

Note
- The default setting depends on the shooting mode.
- Some [Flash Mode] settings are not available, depending on the shooting mode.

Related Topic
- Using flash
Flash Comp.

Adjusts the amount of flash light in a range of –3.0 EV to +3.0 EV. Flash compensation changes the amount of flash light only. Exposure compensation changes the amount of flash light along with the change of the shutter speed and aperture.

1. **MENU →  \[Camera Settings1\] → [Flash Comp.] → desired setting.**

   - Selecting higher values (+ side) makes the flash level higher, and lower values (- side) makes the flash level lower.

**Note**

- [Flash Comp.] does not work when the shooting mode is set to the following modes:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Sweep Panorama]
  - [Scene Selection]

- The higher flash effect (+ side) may not be visible due to the limited amount of flash light available, if the subject is outside the maximum range of the flash. If the subject is very close, the lower flash effect (- side) may not be visible.

**Related Topic**

- Using flash

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Red Eye Reduction

When using the flash, it is fired two or more times before shooting to reduce the red-eye phenomenon.

1. MENU → \(\text{[Camera Settings1]}\) → [Red Eye Reduction] → desired setting.

Menu item details

On:
The flash is always fired to reduce the red-eye phenomenon.

Off:
Does not use Red Eye Reduction.

Note

Red Eye Reduction may not produce the desired effects. It depends on individual differences and conditions, such as distance to the subject, or whether the subject looks at the pre-strobe or not.
White Balance

Corrects the tone effect of the ambient light condition to record a neutral white subject in white. Use this function when the color tones of the image did not come out as you expected, or when you want to change the color tones on purpose for photographic expression.

MENU → 1 (Camera Settings1) → [White Balance] → desired setting.

Menu item details

- **Auto**, **Daylight**, **Shade**, **Cloudy**, **Incandescent**, **Fluor.: Warm White**, **Fluor.: Cool White**, **Fluor.: Day White**, **Fluor.: Daylight**, **Flash**: When you select a light source that illuminates the subject, the product adjusts the color tones to suit the selected light source (preset white balance). When you select [Auto], the product automatically detects the light source and adjusts the color tones.
- **C.Temp./Filter**: Adjusts the color tones depending on the light source. Achieves the effect of CC (Color Compensation) filters for photography.
- **Custom 1/Custom 2/Custom 3**: Uses the white balance setting saved in [Custom Setup].
- **Custom Setup**: Memorizes the basic white color under the light conditions for the shooting environment. Select a memorized custom white balance number.

Hint

- You can display the fine adjustment screen and perform fine adjustments of the color tones as required by pressing the right side of the control wheel.
- If the color tones do not come out as you expected in the selected settings, perform [WB bracket] shooting.
- **AWB** or **AWB** is displayed only when [Priority Set in AWB] is set to [Ambience] or [White].

Note

- [White Balance] is fixed to [Auto] in the following shooting modes:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]
- If you use a mercury lamp or a sodium lamp as a light source, the accurate white balance will not be obtained because of the characteristics of the light. It is recommended to shoot images using a flash or select [Custom Setup].

Related Topic

- Capturing a basic white color in [Custom Setup] mode
- Priority Set in AWB
- WB bracket
Priority Set in AWB

Selects which tone to prioritize when shooting under lighting conditions such as incandescent light when [White Balance] is set to [Auto].

1. MENU → 1 (Camera Settings1) → [Priority Set in AWB] → desired setting.

Menu item details

**Standard:**
Shoots with standard auto white balance. The camera automatically adjusts the color tones.

**Ambience:**
Prioritizes the color tone of the light source. This is suitable when you want to produce a warm atmosphere.

**White:**
Prioritizes a reproduction of white color when the color temperature of the light source is low.

Related Topic

* White Balance
D-Range Opt. (DRO)

By dividing the image into small areas, the product analyzes the contrast of light and shadow between the subject and the background, and creates an image with the optimal brightness and gradation.

1. **MENU → \[\] (Camera Settings1) → [DRO/Auto HDR] → [D-Range Opt.].**

2. Select the desired setting using the left/right sides of the control wheel.

**Menu item details**

- **D-Range Optimizer: Auto:**
  Corrects the brightness automatically.

- **D-Range Optimizer: Lv1 — D-Range Optimizer: Lv5:**
  Optimizes the gradation of a recorded image for each divided area. Select the optimization level from Lv1 (weak) to Lv5 (strong).

**Note**

- In the following situations, [D-Range Opt.] is fixed to [Off]:
  - The shooting mode is set to [Sweep Panorama].
  - Multi Frame NR
  - When [Picture Effect] is set to other than [Off]

- [DRO/Auto HDR] is fixed to [Off] when the following modes are selected in [Scene Selection].
  - [Sunset]
  - [Night Scene]
  - [Night Portrait]
  - [Hand-held Twilight]
  - [Anti Motion Blur]
  - [Fireworks]

  The setting is fixed to [D-Range Optimizer: Auto] when [Scene Selection] modes other than the above modes are selected.

- When shooting with [D-Range Opt.], the image may be noisy. Select the proper level by checking the recorded image, especially when you enhance the effect.
Auto HDR

Shoots three images using different exposures and combines the images with correct exposure, the bright parts of an underexposed image, and the dark parts of an overexposed image to create images with a greater range of gradation (High Dynamic Range). One image with proper exposure and one overlaid image are recorded.

1. MENU →  (Camera Settings1) → [DRO/Auto HDR] → [Auto HDR].
2. Select the desired setting using the left/right sides of the control wheel.

Menu item details

Auto HDR: Exposure Diff. Auto:
Corrects the brightness automatically.

Auto HDR: Exposure Diff. 1.0EV — Auto HDR: Exposure Diff. 6.0EV:
Sets the exposure difference, based on the contrast of the subject. Select the optimization level from 1.0EV (weak) to 6.0EV (strong).

For example, if you set the exposure value to 2.0 EV, three images will be composed with the following exposure levels:
-1.0 EV, correct exposure and +1.0 EV.

Hint

- The shutter is released three times for one shot. Be careful about the following:
  - Use this function when the subject is motionless or does not flash light.
  - Do not change the composition before shooting.

Note

- This function is not available when the [File Format] is [RAW] or [RAW & JPEG].

- [Auto HDR] is not available in the following shooting modes:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Sweep Panorama]
  - [Scene Selection]

- [Auto HDR] is not available in the following situations:
  - When [Multi Frame NR] is selected.
  - When [Picture Effect] is set to other than [Off].

- You cannot start the next shot until the capture process is completed after you shoot.

- You may not obtain the desired effect depending on the luminance difference of a subject and the shooting conditions.

- When the flash is used, this function has little effect.

- When the contrast of the scene is low or when product shake or subject blur occurs, you may not obtain good HDR images. [HDR] will be displayed over the recorded image to inform you when the camera detects image blurring. Change the composition or re-shoot the image carefully to avoid image blur, as needed.
Creative Style

Allows you to set the desired image processing and finely adjust contrast, saturation and sharpness for each image style. You can adjust exposure (shutter speed and aperture) as you like with this function, unlike with [Scene Selection], where the product adjusts the exposure.

1. MENU → 1 (Camera Settings1) → [Creative Style].

2. Select the desired style using the top/bottom sides of the control wheel.

3. To adjust (Contrast), (Saturation) and (Sharpness), select the desired item using the right/left sides, and then select the value using the top/bottom sides.

Menu item details

- **Standard:**
  For shooting various scenes with rich gradation and beautiful colors.

- **Vivid:**
  The saturation and contrast are heightened for shooting striking images of colorful scenes and subjects such as flowers, spring greenery, blue sky, or ocean views.

- **Portrait:**
  For capturing skin in a soft tone, ideally suited for shooting portraits.

- **Landscape:**
  The saturation, contrast, and sharpness are heightened for shooting vivid and crisp scenery. Distant landscapes also stand out more.

- **Sunset:**
  For shooting the beautiful red of the setting sun.

- **Black & White:**
  For shooting images in black and white monotone.

- **Sepia:**
  For shooting images in sepia monotone.

To set [Contrast], [Saturation] and [Sharpness]

[Contrast], [Saturation], and [Sharpness] can be adjusted for each image style preset such as [Standard] and [Landscape].

Select an item to be set by pressing the right/left sides of the control wheel, then set the value using the top/bottom sides of the control wheel.
The higher the value selected, the more the difference of light and shadow is accentuated, and the bigger the effect on the image.

**Saturation:**
The higher the value selected, the more vivid the color. When a lower value is selected, the color of the image is restrained and subdued.

**Sharpness:**
Adjusts the sharpness. The higher the value selected, the more the contours are accentuated, and the lower the value selected, the more the contours are softened.

### Note
- [Creative Style] is fixed to [Standard] in the following situations:
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]
  - [Picture Effect] is set to other than [Off].
- When this function is set to [Black & White] or [Sepia], [Saturation] cannot be adjusted.
Picture Effect

Select the desired effect filter to achieve more impressive and artistic images.

MENU → (Camera Settings1) → [Picture Effect] → desired setting.

Menu item details

- **Off:**
  Disables the [Picture Effect] function.

- **Toy Camera:**
  Creates a soft image with shaded corners and reduced sharpness.

- **Pop Color:**
  Creates a vivid look by emphasizing color tones.

- **Posterization:**
  Creates a high contrast, abstract look by heavily emphasizing primary colors, or in black and white.

- **Retro Photo:**
  Creates the look of an aged photo with sepia color tones and faded contrast.

- **Soft High-key:**
  Creates an image with the indicated atmosphere: bright, transparent, ethereal, tender, soft.

- **Partial Color:**
  Creates an image which retains a specific color, but converts others to black and white.

- **High Contrast Mono.:**
  Creates a high-contrast image in black and white.

- **Soft Focus:**
  Creates an image filled with a soft lighting effect.

- **HDR Painting:**
  Creates the look of a painting, enhancing the colors and details.

- **Rich-tone Mono.:**
  Creates an image in black and white with rich gradation and reproduction of details.

- **Miniature:**
  Creates an image which enhances the subject vividly, with the background defocused considerably. This effect may often be found in pictures of miniature models.

- **Watercolor:**
  Creates an image with ink bleed and blurring effects as if painted using watercolors.

- **Illustration:**
  Creates an illustration-like image by emphasizing the outlines.

**Hint**

- You can perform detailed settings for some items using the left/right sides of the control wheel.

**Note**

- When you use a zoom function other than the optical zoom, setting the zoom scale larger makes [Toy Camera] less effective.
- When [Partial Color] is selected, images may not retain the selected color, depending on the subject or shooting conditions.
- You cannot check the following effects on the shooting screen, because the product processes the image after the shot. Also, you cannot shoot another image until image processing is finished. You cannot use these effects with movies.
  - [Soft Focus]
  - [HDR Painting]
In the case of [HDR Painting] and [Rich-tone Mono.], the shutter is released three times for one shot. Be careful about the following:

- Use this function when the subject is motionless or does not flash light.
- Do not change the composition during shooting.

When the contrast of the scene is low or when significant camera-shake or subject blur has occurred, you may not be able to obtain good HDR images. If the product detects such a situation, 

![image]

appear on the recorded image to inform you of this situation. Change the composition or re-shoot the image carefully to avoid image blur, as needed.

This function is not available in the following shooting modes:

- [Intelligent Auto]
- [Superior Auto]
- [Scene Selection]
- [Sweep Panorama]

When [File Format] is set to [RAW] or [RAW & JPEG], this function is not available.
Soft Skin Effect (still image)

Sets the effect used for shooting the skin smoothly in the Face Detection function.

MENU → (Camera Settings1) → [Soft Skin Effect] → desired setting.

Menu item details

- **Off:**
  - Does not use the [Soft Skin Effect] function.

- **On:**
  - Uses the [Soft Skin Effect].

**Hint**

- When [Soft Skin Effect] is set to [On], you can select the effect level. Select the effect level by pressing the right/left side of the control wheel.

**Note**

- [Soft Skin Effect] is not available when [File Format] is [RAW].
- [Soft Skin Effect] is not available for RAW images when the [File Format] is [RAW & JPEG].

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Focus Magnifier

You can check the focus by enlarging the image before shooting. Unlike with [MF Assist], you can magnify the image without operating the control ring.

1. **MENU → ① (Camera Settings1) → [Focus Magnifier].**

2. **Press the center of the control wheel to enlarge the image and select the area you want to enlarge using top/bottom/left/right side of the control wheel.**
   - Each time you press the center, the magnification scale will change.
   - You can set the initial magnification by selecting **MENU → ① (Camera Settings1) → [Initial Focus Mag.]**.

3. **Confirm the focus.**
   - Press the [ ] (Delete) button to bring the magnified position into the center of an image.
   - When the focus mode is [Manual Focus], you can adjust the focus while an image is magnified. The [Focus Magnifier] function will be canceled when the shutter button is pressed halfway.
   - You can set how long the image is to be shown magnified by selecting **MENU → ① (Camera Settings1) → [Focus Magnif. Time].**

4. **Press the shutter button fully down to shoot the image.**

To use the focus magnifier function by touch operation

You can magnify the image and adjust the focus by touching the monitor. Set [Touch Operation] to [On] beforehand. Then, select the appropriate settings under [Touch Panel/Pad]. When the focus mode is [Manual Focus], you can perform [Focus Magnifier] by double-tapping the area to focus on while shooting with the monitor.

While shooting with the viewfinder, a frame is displayed in the center of the monitor by double-tapping and you can move the frame by dragging it. The image is magnified by pressing the center of the control wheel.

**Hint**
- While using the focus magnifier function, you can move the magnified area by dragging it on the touch panel.
- To exit the focus magnifier function, double-tap the monitor again. You can also exit the focus magnifier function by pressing the shutter button halfway down.

**Related Topic**
- MF Assist (still image)
- Focus Magnif. Time
- Initial Focus Mag. (still image)
- Custom Key (still image/movie/playback)
- Touch Operation
Focus Magnif. Time

Set the duration for which an image is to be magnified using the [MF Assist] or [Focus Magnifier] function.

1. MENU → (Camera Settings1) → [Focus Magnif. Time] → desired setting.

Menu item details

2 Sec:
Magnifies the images for 2 seconds.

5 Sec:
Magnifies the images for 5 seconds.

No Limit:
Magnifies the images until you press the shutter button.

Related Topic
- Focus Magnifier
- MF Assist (still image)
Initial Focus Mag. (still image)

Sets the initial magnification scale when using [Focus Magnifier]. Select a setting that will help you frame your shot.

MENU → (Camera Settings1) → [Initial Focus Mag.] → desired setting.

Menu item details

x1.0:
Displays the image with the same magnification as the shooting screen.

x7.7:
Displays a 7.7-times enlarged image.

Related Topic

Focus Magnifier
MF Assist (still image)

Enlarges the image on the screen automatically to make manual focusing easier. This works in Manual Focus or Direct Manual Focus shooting.

1. MENU →  (Camera Settings1) → [MF Assist] → [On].

2. Turn the control ring to adjust the focus.
   - The image is enlarged. You can magnify images further by pressing the center of the control wheel.

**Hint**
- You can set how long the image is to be shown magnified by selecting MENU →  (Camera Settings1) → [Focus Magnif. Time].

**Note**
- You cannot use [MF Assist] when shooting movies. Use the [Focus Magnifier] function instead.

**Related Topic**
- Manual Focus
- Direct manual focus (DMF)
- Focus Magnif. Time
Peaking Setting

Sets the peaking function, which enhances the outline of in-focus areas during shooting with Manual Focus or Direct Manual Focus.

MENU → \[Camera Settings1\] → [Peaking Setting] → desired setting.

Menu item details

**Peaking Display:**
Sets whether to display peaking.

**Peaking Level:**
Sets the level of enhancement of in-focus areas.

**Peaking Color:**
Sets the color used to enhance in-focus areas.

**Note**
- Since the product recognizes sharp areas as in focus, the effect of peaking differs, depending on the subject.
- The outline of in-focus ranges is not enhanced on devices connected via HDMI.

Related Topic

- Manual Focus
- Direct manual focus (DMF)
Face Registration (New Registration)

If you register faces in advance, the product can focus on the registered face as a priority. Set both [Face Priority in AF] and [Regist. Faces Priority] to [On] before shooting.

1. **MENU → (Camera Settings1) → [Face Registration] → [New Registration].**

2. Align the guide frame with the face to be registered, and press the shutter button.

3. When a confirmation message appears, select [Enter].

**Note**
- Up to eight faces can be registered.
- Shoot the face from the front in a brightly lit place. The face may not be registered correctly if it is obscured by a hat, a mask, sunglasses, etc.

**Related Topic**
- Regist. Faces Priority
- Set. Face Prty in AF
- Smile Shutter
Face Registration (Order Exchanging)

When multiple faces are registered to be given priority, the face registered first will be given priority. You can change the priority order.

1. MENU → 📷1 (Camera Settings1) → [Face Registration] → [Order Exchanging].
2. Select a face to change the order of priority.
3. Select the destination.

Related Topic
- Regist. Faces Priority
- Set. Face Prty in AF
- Smile Shutter
Face Registration (Delete)

Deletes a registered face.

1. **MENU** → **(Camera Settings1) → [Face Registration] → [Delete].**

   If you select [Delete All], you can delete all registered faces.

**Note**

- Even if you execute [Delete], the data for registered face will remain in the product. To delete the data for registered faces from the product, select [Delete All].
Regist. Faces Priority

Sets whether to focus with higher priority on faces registered using [Face Registration] when [Face Priority in AF] is set to [On].

1. MENU → 1 (Camera Settings1) → [Regist. Faces Priority] → desired setting.

Menu item details

On:
Focuses with higher priority on faces registered using [Face Registration].

Off:
Focuses without giving higher priority to registered faces.

Related Topic
- Set. Face Prty in AF
- Face Registration (New Registration)
- Face Registration (Order Exchanging)
Smile Shutter

The camera automatically shoots an image when it detects a smiling face.

1. **MENU → 📷 (Camera Settings1) → [Smile Shutter] → desired setting.**

**Menu item details**

**Off:**
Does not use the [Smile Shutter] function.

**On:**
The camera automatically shoots an image when it detects a smiling face. You can select [On: Slight Smile], [On: Normal Smile], or [On: Big Smile] for the sensitivity of detection.

**Tips for capturing smiles more effectively**
- Do not cover the eyes with front hair and keep the eyes narrowed.
- Do not obscure the face by a hat, masks, sunglasses, etc.
- Try to orient the face in front of the product and be as level as possible.
- Give a clear smile with an open mouth. The smile is easier to be detected when the teeth are shown.
- If you press the shutter button during Smile Shutter, the product shoots the image. After shooting, the product returns to Smile Shutter mode.

**Note**
- You cannot use the [Smile Shutter] function with the following functions:
  - [Sweep Panorama]
  - [Picture Effect]
  - When using the [Focus Magnifier] function.
  - [Scene Selection] is set to [Landscape], [Night Scene], [Sunset], [Hand-held Twilight], [Anti Motion Blur], [Pet], [Gourmet] or [Fireworks].
  - When recording movies.
- Up to 8 faces of your subjects can be detected.
- The product may not detect faces at all or may accidentally detect other objects as faces in some conditions.
- If the product cannot detect a smile, adjust the Smile Detection Sensitivity.
- If you track a face using [Lock-on AF] while executing Smile Shutter function, Smile Detection is performed only for that face.
Auto Obj. Framing (still image)

When this product detects and shoots faces, macro shooting subjects or subjects that are tracked by [Lock-on AF], the product automatically trims the image into an appropriate composition, and then saves it. Both the original and the trimmed images are saved. The trimmed image is recorded in the same size as the original image size.

MENU → [ ] (Camera Settings1) → [Auto Obj. Framing] → desired setting.

Menu item details

**Off:**
Does not trim images.

**Auto:**
Automatically trims images into an appropriate composition.

**Note**
- [Auto Obj. Framing] is not available when the shooting mode is set to [Sweep Panorama], [Movie], or when [Scene Selection] is set to [Hand-held Twilight], or [Anti Motion Blur].

- The trimmed image may not be the best possible composition, depending on the shooting conditions.

- [Auto Obj. Framing] cannot be set when [File Format] is set to [RAW] or [RAW & JPEG].

- [Auto Obj. Framing] is not available in the following situations.
  - [Drive Mode] is set to [Cont. Shooting], [Spd Priority Cont.], [Self-timer(Cont)], [Cont. Bracket], [Single Bracket], [WB bracket], or [DRO Bracket].
  - The ISO sensitivity is set to [Multi Frame NR].
  - [DRO/Auto HDR] is set to [Auto HDR].
  - Other zoom functions than the optical zoom
  - When shooting in Manual Focus mode
  - [Picture Effect] is set to [Soft Focus], [HDR Painting], [Rich-tone Mono.], [Miniature], [Watercolor], or [Illustration].
Self-portrait/ -timer

You can change the angle of the monitor and shoot images while watching the monitor.

1. **MENU → [Camera Settings1] → [Self-portrait/-timer] → [On].**

2. Tilt the monitor approximately 180° upward, and then point the lens at yourself.

3. **Press the shutter button.**
   The product starts the self-timer shooting after three seconds.

**Hint**

- If you want to use another Drive Mode than the 3-second self-timer mode, first set [Self-portrait/-timer] to [Off], then tilt the monitor upward approx. 180 degrees.
Movie: Exposure Mode

You can set the exposure mode for movie shooting.

1. Set the mode dial to (Movie).
2. MENU → 2 (Camera Settings2) → [Exposure Mode] → desired setting.
3. Press the MOVIE (movie) button to start recording.
   - Press the MOVIE button again to stop recording.

Menu item details

Program Auto:
Allows you to shoot with the exposure adjusted automatically (both the shutter speed and the aperture value).

Aperture Priority:
Allows you to shoot after adjusting the aperture value manually.

Shutter Priority:
Allows you to shoot after adjusting the shutter speed manually.

Manual Exposure:
Allows you to shoot after adjusting the exposure (both the shutter speed and the aperture value) manually.
File Format (movie)

Selects the movie file format.

1. **MENU → 2 (Camera Settings2) → [File Format] → desired setting.**

### Menu item details

<table>
<thead>
<tr>
<th>File Format</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>XAVC S 4K</td>
<td>Records movies in 4K resolution (3840×2160). You can save movies on a computer using the PlayMemories Home software.</td>
</tr>
<tr>
<td>XAVC S HD</td>
<td>Records movies in crisper quality than AVCHD with larger amounts of data.</td>
</tr>
<tr>
<td>AVCHD</td>
<td>The AVCHD format has a high degree of compatibility with storage devices other than computers. You can save movies on a computer or create a disc that supports this format using the PlayMemories Home software.</td>
</tr>
</tbody>
</table>

### Note

- When recording XAVC S 4K or XAVC S HD movies in 120p/100p, the amount of time available for continuous recording is approximately 5 minutes. The remaining time for movie recording is displayed on the monitor. If you want to record another session of 4K or HD 120p/100p movie shooting, turn off the camera and wait for some time before you start the next session of shooting. Even if the recording time was less than 5 minutes, recording may stop to protect the product, depending on the temperature of the shooting environment.

- When [File Format] is set to [AVCHD], the file size of movies is limited to approx. 2 GB. If the movie file size reaches approx. 2 GB during recording, a new movie file will be created automatically.

- If you set [File Format] to [XAVC S 4K] and shoot movies while the camera is connected to an HDMI device, images will not be displayed on the monitor of the camera.
Record Setting (movie)

Selects the frame rate and bit-rate for movie recording.

1. MENU → 2 (Camera Settings2) →  Record Setting → desired setting.

- The higher the bit-rate, the higher the image quality.

Menu item details

When [File Format] is set to [XAVC S 4K]

<table>
<thead>
<tr>
<th>Record Setting</th>
<th>Bit-rate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>30p 100M/25p 100M</td>
<td>Approx. 100 Mbps</td>
<td>Records movies in 3840×2160 (30p/25p).</td>
</tr>
<tr>
<td>30p 60M/25p 60M</td>
<td>Approx. 60 Mbps</td>
<td>Records movies in 3840×2160 (30p/25p).</td>
</tr>
<tr>
<td>24p 100M*</td>
<td>Approx. 100 Mbps</td>
<td>Records movies in 3840×2160 (24p).</td>
</tr>
<tr>
<td>24p 60M*</td>
<td>Approx. 60 Mbps</td>
<td>Records movies in 3840×2160 (24p).</td>
</tr>
</tbody>
</table>

* Only when [NTSC/PAL Selector] is set to NTSC

When [File Format] is set to [XAVC S HD]

<table>
<thead>
<tr>
<th>Record Setting</th>
<th>Bit-rate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>60p 50M/50p 50M</td>
<td>Approx. 50 Mbps</td>
<td>Records movies in 1920×1080 (60p/50p).</td>
</tr>
<tr>
<td>60p 25M/50p 25M</td>
<td>Approx. 25 Mbps</td>
<td>Records movies in 1920×1080 (60p/50p).</td>
</tr>
<tr>
<td>30p 50M/25p 50M</td>
<td>Approx. 50 Mbps</td>
<td>Records movies in 1920×1080 (30p/25p).</td>
</tr>
<tr>
<td>24p 50M*</td>
<td>Approx. 50 Mbps</td>
<td>Records movies in 1920×1080 (24p).</td>
</tr>
<tr>
<td>120p 100M/100p 100M</td>
<td>Approx. 100 Mbps</td>
<td>Records high-speed movies in 1920×1080 (120p/100p). You can record movies in 120 fps or 100 fps. You can create smoother slow-motion movies by using compatible editing devices.</td>
</tr>
</tbody>
</table>
When [File Format] is set to [AVCHD]

<table>
<thead>
<tr>
<th>Record Setting</th>
<th>Bit-rate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>120p 60M/100p 60M</td>
<td>Approx. 60 Mbps</td>
<td>Records high-speed movies in 1920×1080 (120p/100p). You can record movies in 120 fps or 100 fps. You can create smoother slow-motion movies by using compatible editing devices.</td>
</tr>
<tr>
<td>120p 60M/100p 50M</td>
<td>24 Mbps at maximum</td>
<td>Records movies in 1920×1080 (60i/50i).</td>
</tr>
<tr>
<td>60i 24M(FX)/50i 24M(FX)</td>
<td>Approx. 17 Mbps on average</td>
<td>Records movies in 1920×1080 (60i/50i).</td>
</tr>
</tbody>
</table>

* Only when [NTSC/PAL Selector] is set to NTSC

**Note**
- Creating an AVCHD recording disc from movies that were recorded with [60i 24M(FX)]/[50i 24M(FX)] as the [Record Setting] takes a long time because the image quality of movies is converted. If you want to store movies without converting them, use a Blu-ray Disc.
- [120p]/[100p] cannot be selected for the following settings.
  - [Intelligent Auto]
  - [Superior Auto]
  - [Scene Selection]
- When [Record Setting] is set to [120p]/[100p], the image quality becomes almost equal to HD quality.
Proxy Recording

Sets whether to simultaneously record low-bit-rate proxy movies when recording XAVC S movies. Since proxy movies are small in file size, they are suitable for transferring to smartphones or uploading to websites.

1. MENU → 2 (Camera Settings2) → [PX Proxy Recording] → desired setting.

Menu item details

On:
Proxy movies are simultaneously recorded.

Off:
Proxy movies are not recorded.

Hint

- Proxy movies are recorded in the XAVC S HD format (1280×720) at 9 Mbps. The frame rate of the proxy movie is the same as that of the original movie.
- Proxy movies are not displayed on the playback screen (single-image playback screen or image index screen). PX is displayed over movies for which a proxy movie was simultaneously recorded.

Note

- Proxy movies cannot be played back on this camera.
- Proxy recording is not available in the following situations.
  - When [File Format] is set to [AVCHD]
  - When [File Format] is set to [XAVC S HD] and [Record Setting] is set to [120p]/[100p]
  - When [SteadyShot] is set to [Intelligent Active]
- Deleting/protecting movies that have proxy movies removes/protects both the original and proxy movies. You cannot delete/protect only original movies or proxy movies.
- Movies cannot be edited on this camera.

Related Topic

- Snd to Smrtpn Func: Sending Target (proxy movies)
- Movie recording formats
- Playing back images on the image index screen (Image Index)
- Memory cards that can be used
Auto Slow Shut. (movie)

Sets whether or not to adjust the shutter speed automatically when recording movies if the subject is dark.

1. MENU → (Camera Settings2) → [Auto Slow Shut.] → desired setting.

Menu item details

On:
Uses Auto Slow Shutter. The shutter speed automatically slows when recording in dark locations. You can reduce noise in the movie by using a slow shutter speed when recording in dark locations.

Off:
Does not use Auto Slow Shutter. The recorded movie will be darker than when [On] is selected, but you can record movies with smoother motion and less object blur.

Note

[Auto Slow Shut.] does not function in the following situations:

- [S] (Shutter Priority)
- [M] (Manual Exposure)
- When [ISO] is set to other than [ISO AUTO]
Audio Recording

Sets whether to record sounds when shooting movies. Select [Off] to avoid recording the sounds of the lens and the camera operating.

MENU → 2 (Camera Settings2) → [Audio Recording] → desired setting.

Menu item details

On:
Records sound (stereo).

Off:
Does not record sound.
Micref Level

You can select the microphone level for movie recording.

1. MENU →  \((\text{Camera Settings2})\) → [Micref Level] → desired setting.

Menu item details

**Normal:**
Records the ambient sounds within a certain level. This setting is suitable for recording everyday conversations.

**Low:**
Records the ambient sounds faithfully. This setting is suitable for recording realistic sounds, for example at a concert.
Wind Noise Reduct.

Sets whether or not to reduce wind noise by cutting the low-range sound of the input audio from the built-in microphone.

1. MENU → (Camera Settings2) → [Wind Noise Reduct.] → desired setting.

Menu item details

On:
Reduces wind noise.

Off:
Does not reduce wind noise.

Note
- Setting this item to [On] where wind is not blowing sufficiently hard may cause normal sound to be recorded with too low volume.
SteadyShot (movie)

Sets [SteadyShot] effect when shooting movies. If you set the [SteadyShot] effect to [Off] when using a tripod (sold separately), a natural image is produced.

```
 MENU →  (Camera Settings2) →  [SteadyShot] → desired setting.
```

Menu item details

**Intelligent Active:**
Provides a more powerful SteadyShot effect than [Active].

**Active:**
Provides a more powerful SteadyShot effect.

**Standard:**
Reduces camera shake under stable movie shooting conditions.

**Off:**
Does not use [SteadyShot].

**Note**
- If you change the setting for [SteadyShot], the angle of view will change.
- [Intelligent Active] and [Active] cannot be selected when [File Format] is set to [XAVC S 4K] or [XAVC S HD 120p/100p].
Marker Display (movie)

Sets whether or not to display markers set using [Marker Settings] on the monitor or the viewfinder while shooting movies.

1. **MENU → (Camera Settings2) → [Marker Display] → desired setting.**

**Menu item details**

**On:**
Markers are displayed. The markers are not recorded.

**Off:**
No marker is displayed.

**Note**
- The markers are displayed when the mode dial is set to (Movie) or when shooting movies.
- You cannot display markers when using [Focus Magnifier].
- The markers are displayed on the monitor or viewfinder. (You cannot output the markers.)

**Related Topic**
- Marker Settings (movie)
Marker Settings (movie)

Sets the markers to be displayed while shooting movies.

1. MENU → ② (Camera Settings2) → [ ] (Marker Settings) → desired setting.

Menu item details

Center:
Sets whether or not to display the center marker in the center of the shooting screen.
[Off]/[On]

Aspect:
Sets the aspect marker display.
[Off]/[4:3]/[13:9]/[14:9]/[15:9]/[1.66:1]/[1.85:1]/[2.35:1]

Safety Zone:
Sets the safety zone display. This becomes the standard range that can be received by a general household TV.
[Off]/[80%]/[90%]

Guideframe:
Sets whether or not to display the guide frame. You can verify whether the subject is level or perpendicular to the ground.
[Off]/[On]

Hint

- You can display several markers at the same time.
- Place the subject on the cross point of the [Guideframe] to make a balanced composition.
Movie w/ shutter

You can start or stop recording movies by pressing the shutter button, which is bigger and easier to press than the MOVIE (Movie) button.

1. MENU → 2 (Camera Settings2) → [Movie w/ shutter] → desired setting.

Menu item details

On:
Enables movie recording using the shutter button when the shooting mode is set to [Movie].

Off:
Disables movie recording using the shutter button.

Hint
- When [Movie w/ shutter] is set to [On], you can still start or stop recording movies using the MOVIE button.
- When [Movie w/ shutter] is set to [On], you can use the shutter button to start or stop recording movies on an external recording/playback device using [REC Control].

Related Topic
- Shooting movies
Release w/o Card

Sets whether the shutter can be released when no memory card has been inserted.

MENU → (Camera Settings2) → [Release w/o Card] → desired setting.

Menu item details

Enable:
Releases the shutter even if no memory card has been inserted.

Disable:
Does not release the shutter when no memory card has been inserted.

Note

- When no memory card has been inserted, the images shot will not be saved.
- The default setting is [Enable]. It is recommended that you select [Disable] prior to actual shooting.
SteadyShot (still image)

Sets whether or not to use the SteadyShot function.

1. MENU → (Camera Settings2) → [SteadyShot] → desired setting.

Menu item details

On:
Uses [SteadyShot].

Off:
Does not use [SteadyShot].
We recommend that you set the camera to [Off] when using a tripod.
Rng. of Zoom Assist

Selects how much to zoom out with the [Zoom Assist] function.

1. MENU → 2 (Camera Settings2) → [Rng. of Zoom Assist] → desired setting.

Menu item details

S:
Zooms out a small amount.

M:
Zooms out a medium amount.

L:
Zooms out a large amount.

Related Topic

- Zoom Assist
Zoom Setting

You can select the zoom setting of the product.

1. **MENU → [Camera Settings2] → [Zoom Setting] → desired setting.**

Menu item details

**Optical zoom only:**
Limits the zoom range to the optical zoom. You can use the Smart Zoom function if you set [JPEG Image Size] to [M], [S] or [VGA].

**On: Clear Image Zoom:**
Select this setting to use Clear Image Zoom. Even if the zoom range exceeds the optical zoom, the product magnifies images within the range in which image quality does not deteriorate significantly.

**On: Digital Zoom:**
When the zoom range of the Clear Image Zoom is exceeded, the product magnifies images to the largest scale. However, the image quality will deteriorate.

**Note**
- Set [Optical zoom only] if you want to magnify images within the range in which image quality does not deteriorate.

Related Topic

- The zoom features available with this product
- About zoom scale
- Zoom Speed
**Zoom Speed**

Sets the zoom speed of the camera's zoom lever.

1. **MENU → 2 (Camera Settings2) → [Zoom Speed] → desired setting.**

**Menu item details**

- **Normal:** Sets the zoom speed of the zoom lever to normal.
- **Fast:** Sets the zoom speed of the zoom lever to fast.

**Hint**

- The [Zoom Speed] settings are also used when you are zooming with a remote controller (sold separately) connected to the camera.

**Note**

- Selecting [Fast] increases the likelihood that the zoom sound will be recorded.

**Related Topic**

- [Zoom]
- [The zoom features available with this product]
- [Zoom Setting]
**Zoom Func. on Ring**

Sets the zoom functions when using the control ring to change zoom scales. The settings for [Zoom Func. on Ring] are valid only when auto-focusing.

1. **MENU → 2 (Camera Settings2) → [Zoom Func. on Ring] → desired setting.**

**Menu item details**

**Standard:**
Zooms in/out smoothly when you operate the zoom by turning the control ring.

**Quick:**
Zooms in/out to an angle of view corresponding to how far the control ring has been rotated.

**Step:**
Zooms in/out at certain angle steps when you operate the zoom by turning the control ring.

**Note**
- In the following situations, the zoom function activates as if [Zoom Func. on Ring] is set to [Standard], even if it is set to [Step].
  - When using the W/T (zoom) lever to change the zoom scale.
  - When recording movies.
  - When using zoom functions other than the optical zoom.
- When the shooting mode is set to something other than [Intelligent Auto] or [Superior Auto], assign the [Zoom] function to the control ring before using the control ring.
- Selecting [Quick] increases the likelihood that the zoom sound will be recorded.
DISP Button (Monitor/Finder)

Allows you to set the screen display modes that can be selected using DISP (Display Setting) in shooting mode.

MENU → 2 (Camera Settings2) → [DISP Button] → [Monitor] or [Finder] → desired setting → [Enter].

The items marked with ✓ are available.

Menu item details

Graphic Display:
Shows basic shooting information. Graphically shows the shutter speed and aperture value.

Display All Info.:
Shows recording information.

No Disp. Info.:
Does not show recording information.

Histogram:
Displays the luminance distribution graphically.

Level:
Indicates whether the product is level in both the front-back (A) and horizontal (B) directions. When the product is level in either direction, the indicator turns to green.

For viewfinder*:
Displays only shooting information on the monitor, not the subject. This setting is a display setting for shooting with the viewfinder.

Monitor Off*:
Always turns the monitor off when shooting images. You can use the monitor when playing back images or operating MENU. This setting is a display setting for shooting with the viewfinder.

* These screen modes are available only in the setting for [Monitor].

Note

- If you tilt the product forward or backward by a large degree, the level error will be great.
- The product may have a margin of error of almost ±1° even when the inclination is corrected by the level.
Related Topic

- Switching the screen display (while shooting/during playback)
**FINDER/MONITOR**

Sets the method for switching the display between the viewfinder and the monitor.

MENU → (Camera Settings2) → [FINDER/MONITOR] → desired setting.

### Menu item details

**Auto:**
When you look into the viewfinder, the eye sensor reacts and the display is switched to the viewfinder automatically.

**Viewfinder(Manual):**
The monitor is turned off and the image is displayed only in the viewfinder.

**Monitor(Manual):**
The viewfinder is turned off and the image is always displayed on the monitor.

### Hint
- You can assign the [FINDER/MONITOR] function to your preferred key. MENU → (Camera Settings2) → [Custom Key], [Custom Key] or [Custom Key] → set [Finder/Monitor Sel.] to the preferred key.
- If you want to retain the viewfinder display or the monitor display, set [FINDER/MONITOR] to [Viewfinder(Manual)] or [Monitor(Manual)] beforehand. You can keep the monitor off when you take your eyes off the viewfinder during recording by setting the monitor display to [Monitor Off] using the DISP button. Select MENU → (Camera Settings2) → [DISP Button] → [Monitor] and add a check mark to [Monitor Off] beforehand.

### Note
- When the viewfinder is pushed down, the images are always displayed on the monitor regardless of the [FINDER/MONITOR] setting.
- When the monitor is pulled out, the eye sensor will not detect your eye's approach even if the viewfinder is popped up and [FINDER/MONITOR] is set to [Auto]. The image will continue to be displayed on the monitor.

### Related Topic
- Custom Key (still image/movie/playback)
- DISP Button (Monitor/Finder)
Zebra Setting

Sets a zebra pattern, which appears over part of an image if the brightness level of that part meets the IRE level that you have set. Use this zebra pattern as a guide to adjust the brightness.

MENU → 2 (Camera Settings2) → [Zebra Setting] → desired setting.

Menu item details

**Zebra Display:**
Sets whether to display the zebra pattern.

**Zebra Level:**
Adjusts the brightness level of the zebra pattern.

**Hint**
- You can register values to check the correct exposure or overexposure as well as the brightness level for [Zebra Level]. The settings for correct exposure confirmation and overexposure confirmation are registered to [Custom1] and [Custom2] respectively in the default settings.
- To check the correct exposure, set a standard value and the range for the brightness level. The zebra pattern will appear on areas that fall within the range you set.
- To check the overexposure, set a minimum value for the brightness level. The zebra pattern will appear over areas with a brightness level equal to or higher than the value you set.

**Note**
- The zebra pattern is not displayed on devices connected via HDMI.
Grid Line

Sets whether the grid line is displayed or not. The grid line will help you to adjust the composition of images.

1 MENU → (Camera Settings2) → [Grid Line] → desired setting.

Menu item details

Rule of 3rd Grid:
Place main subjects close to one of the grid lines that divide the image into thirds for a well-balanced composition.

Square Grid:
Square grids make it easier to confirm the horizontal level of your composition. This is useful for assessing the composition when shooting landscapes, closeups, or when performing camera scanning.

Diag. + Square Grid:
Place a subject on the diagonal line to express an uplifting and powerful feeling.

Off:
Does not display the grid line.
Exposure Set. Guide

You can set whether to display a guide when you change the exposure.

MENU → 2 (Camera Settings2) → [Exposure Set. Guide] → desired setting.

Menu item details

Off:
Does not display the guide.

On:
Displays the guide.
Auto Review

You can check the recorded image on the screen right after the shooting. You can also set the display time for Auto Review.

1 MENU → 2 (Camera Settings2) → [Auto Review] → desired setting.

Menu item details

10 Sec/5 Sec/2 Sec:
Displays the recorded image on the screen right after shooting for the selected duration of time. If you perform a magnifying operation during Auto Review, you can check that image using the magnified scale.

Off:
Does not display the Auto Review.

Note
- When you use a function that performs image processing, the image before processing may be displayed temporarily, followed by the image after processing.
- The DISP (Display Setting) settings are applied for the Auto Review display.

Related Topic
- Enlarging an image being played back (Enlarge Image)
Custom Key (still image/movie/playback)

You can assign a desired function to a desired key. Some functions are available only when they are assigned to a custom key. For example, if you assign [Eye AF] to [Center Button] for [Custom Key], you can easily recall [Eye AF] simply by pressing the center of the control wheel while shooting.

1. **MENU → [Camera Settings2] → [Custom Key], [Custom Key], or [Custom Key].**

2. **Select the key to which you want to assign the function on the selection screen, and press the center of the control wheel.**

   - The keys that can be assigned functions are different for [Custom Key], [Custom Key], and [Custom Key].
   - You can assign the desired functions to the following keys.

   1. Control Ring
   2. Fn/ Button
   3. Center Button/Left Button/Right Button
   4. C Button

3. **Select the function to be assigned.**

   - The functions that can be assigned differ depending on the keys.

Menu item details

- **Custom Key:**
  Sets the custom key function to use when shooting still images.

- **Custom Key:**
  Sets the custom key function to use when recording movies. You can assign a different function from the one used when shooting still images.

- **Custom Key:**
  Sets the custom key function to use when playing back images.
Related Topic
- Using the control wheel
- Focus Standard
Function Menu Set.

You can assign the functions to be called up when you press the Fn (Function) button.

1 MENU → 2(Camera Settings2) → [Function Menu Set.] → set a function to the desired location.
- The functions that can be assigned are displayed on the setup item selection screen.
**Func. of Touch Oprtn: Touch Shutter**

When you shoot using the monitor, the camera automatically focuses on the point you touch and shoots a still image. Set MENU → (Setup) → [Touch Operation] to [On] in advance.

1. **Select MENU →  (Camera Settings2) → [Func. of Touch Oprtn] → [Touch Shutter].**

2. **Touch the icon on the monitor while the shooting screen is displayed.**
   - The mark to the left of the icon turns orange.
   - To cancel [Touch Shutter], touch the icon again.

3. **Touch the subject to focus on.**
   - When the subject you touched is in focus, a still image is recorded.

**Hint**
- You can operate the shooting functions below by touching the monitor:
  - Shooting burst images using the touch shutter
    When [Drive Mode] is set to [Cont. Shooting] or [Spd Priority Cont.], you can record burst images while touching the monitor.
  - Shooting continuous bracket images using the touch shutter
    The product shoots three images while automatically shifting the exposure from base, to darker, and then to lighter. When [Drive Mode] is set to [Cont. Bracket], keep touching the monitor until the shooting ends. After the recording you can select the image you prefer.

**Note**
- The [Touch Shutter] function is unavailable in the following situations:
  - During viewfinder shooting
  - When the shooting mode is set to [Movie]
  - When the shooting mode is set to [Sweep Panorama]
  - During [Smile Shutter] mode
  - When [Focus Mode] is [Manual Focus]
  - When [Focus Area] is [Flexible Spot]
  - When [Focus Area] is [Expand Flexible Spot]
  - While using the digital zoom function
  - While using the Clear Image Zoom

**Related Topic**
- Touch Operation
- Touch Panel/Pad
You can select a subject on which to focus using touch operations in the still image and movie recording modes. Select MENU → (Setup) → [Touch Operation] → [On] beforehand.

1. **MENU → 2 (Camera Settings2) → [Func. of Touch Oprtn] → [Touch Focus].**

### Specifying the position where you want to focus in the still image mode

You can focus on the desired position by touching the monitor.

1. Select a [Focus Area] other than [Flexible Spot] or [Expand Flexible Spot].
2. **MENU → 1 (Camera Settings1) → [Center Lock-on AF] → [Off].**
3. Touch the monitor.
   - When shooting with the monitor, touch the subject to focus.
   - When shooting with the viewfinder, you can move the position of the focus by touching and dragging on the monitor while looking through the viewfinder.

   ![Touch Focus in Still Image Mode]

   - When the shutter button is pressed halfway down, the camera focuses on the focusing frame. Press the shutter button all the way down to shoot images.
   - To cancel focusing with touch operations, touch \( \text{x} \) or press the center of the control wheel if shooting with the monitor, and press the center of the control wheel if shooting with the viewfinder.

### Specifying the position where you want to focus in the movie recording mode (spot focus)

The camera will focus on the touched subject. Spot focus is not available when shooting with the viewfinder.

1. Select a [Focus Area] other than [Flexible Spot] or [Expand Flexible Spot].
2. **MENU → 1 (Camera Settings1) → [Center Lock-on AF] → [Off].**
3. Touch the subject on which you want to focus before or during recording.
   - After focusing on the area that you touched, the focus mode switches to manual focus. You can adjust the focus by rotating the control ring.
   - To cancel spot focus, touch \( \text{x} \) or press the center of the control wheel.

**Hint**

- In addition to the touch focus function, touch operations such as the following are also available.
  - When [Focus Area] is set to [Flexible Spot] or [Expand Flexible Spot], the focusing frame can be moved using touch operations.
  - When the [Focus Mode] is set to [Manual Focus], the focus magnifier can be used by double-tapping the monitor.
Note

- The touch focus function is not available in the following situations:
  - When the shooting mode is set to [Sweep Panorama].
  - When [Focus Mode] is set to [Manual Focus].
  - When using the digital zoom

Related Topic

- Touch Operation
- Touch Panel/Pad
MOVIE Button

Sets whether or not to activate the MOVIE (Movie) button.

MENU → [Camera Settings2] → [MOVIE Button] → desired setting.

Menu item details

**Always:**
Starts movie recording when you press the MOVIE button in any mode.

**Movie Mode Only:**
Starts movie recording when you press the MOVIE button only if the shooting mode is set to [Movie] mode.
Audio signals

Selects whether the product produces a sound or not.

MENU → (Camera Settings2) → [Audio signals] → desired setting.

Menu item details

**On:**
Sounds are produced for example when the focus is achieved by pressing the shutter button halfway down.

**On: Shutter Only:**
Only the shutter sound is produced.

**Off:**
Sounds are not produced.
Help Guide

Digital Still Camera
DSC-HX99

Write Date (still image)

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

1 MENU →  2 (Camera Settings2) → [Write Date] → desired setting.

Menu item details

On:
Records a shooting date.

Off:
Does not record a shooting date.

Note

- If you shoot images with the date once, you cannot delete the date from the images later.
- The dates are doubly printed if you set the product to print dates when printing the images using PCs or printers.
- The recorded time of the image cannot be superimposed on the image.
- [Write Date] is not available for RAW images.
Snd to Smrtphn Func: Send to Smartphone

You can transfer still images or XAVC S movies to a smartphone and view them. The application PlayMemories Mobile must be installed on your smartphone.

1. **MENU → Network → Snd to Smrtphn Func → Send to Smartphone → desired setting.**
   - If you press the Send to Smartphone button in playback mode, the setting screen for [Send to Smartphone] will appear.

2. If the product is ready for the transfer, the information screen appears on the product. Connect the smartphone and the product using that information.
   - The setting method for connecting the smartphone and the product varies depending on the smartphone.

---

**Menu item details**

**Select on This Device:**
Selects an image on the product to be transferred to the smartphone.

(1) Select from among [This Image], [All with this date] or [Multiple Images].
   - The options displayed may differ depending on the View Mode selected on the camera.

(2) If you select [Multiple Images], select the desired images using the center of the control wheel, then press MENU → [Enter].

**Select on Smartphone:**
Displays all images recorded on the product’s memory card on the smartphone.

---

**Note**

- You can only transfer images that are saved on the camera’s memory card.
- You can select an image size to be sent to the smartphone from [Original], [2M] or [VGA].
  - To change the image size, refer to the following steps.
    - For Android smartphone
      - Start PlayMemories Mobile, and change the image size by [Settings] → [Copy Image Size].
    - For iPhone/iPad
      - Select PlayMemories Mobile in the setting menu, and change the image size by [Copy Image Size].
- RAW images are converted to JPEG format when they are sent.
- You cannot send AVCHD format movies.
- You cannot transfer XAVC S 4K movies or the original data of XAVC S HD movies recorded in [120p]/[100p] to a smartphone.
  - You can only transfer proxy movies.
Depending on the smartphone, the transferred movie may not be played back correctly. For example, the movie may not play smoothly, or there may be no sound.

Depending on the format of the still image or movie, it may not be possible to play it back on a smartphone.

This product shares the connection information for [Send to Smartphone] with a device that has permission to connect. If you want to change the device that is permitted to connect to the product, reset the connection information by following these steps. MENU → (Network) → [Wi-Fi Settings] → [SSID/PW Reset]. After resetting the connection information, you must register the smartphone again.

When [Airplane Mode] is set to [On], you cannot connect this product and the smartphone. Set [Airplane Mode] to [Off].

While you transfer many images or long movies, we recommend that you supply power to the camera from a wall outlet (wall socket) using the AC Adaptor (supplied).

Related Topic
- PlayMemories Mobile
- Controlling the camera using an Android smartphone (NFC One-touch remote)
- Controlling the camera using an Android smartphone (QR Code)
- Controlling the camera using an Android smartphone (SSID)
- Controlling the camera using an iPhone or iPad (QR Code)
- Controlling the camera using an iPhone or iPad (SSID)
- Sending images to an Android smartphone (NFC One-touch Sharing)
- Snd to Smrtphn Func: Sending Target (proxy movies)
- Airplane Mode
Help Guide
Digital Still Camera
DSC-HX99

Snd to Smrtphn Func: Sending Target (proxy movies)

When transferring XAVC S video to a smartphone with [Send to Smartphone], you can set whether to transfer the low-bit-rate proxy movie or the high-bit-rate original movie.

1. **MENU → 🌐 (Network) → [Snd to Smrtphn Func] → [Proxy Sending Target] → desired setting.**

**Menu item details**

- **Proxy Only:** Transfers only proxy movies.
- **Original Only:** Transfers only original movies.
- **Proxy & Original:** Transfers both proxy and original movies.

**Note**

- You cannot transfer XAVC S 4K movies or the original data of XAVC S HD movies recorded in [120p]/[100p] to a smartphone. You can only transfer proxy movies.
- While you transfer many images or long movies, we recommend that you supply power to the camera from a wall outlet (wall socket) using the AC Adaptor (supplied).

**Related Topic**

- Snd to Smrtphn Func: Send to Smartphone
- Proxy Recording
Send to Computer

You can transfer images stored in the product to a computer connected to a wireless access point or wireless broadband router and easily make backup copies using this operation. Before starting this operation, install PlayMemories Home on your computer and register the access point on the product.

1. Start your computer.

2. MENU → (Network) → [Send to Computer].

Note
- Depending on the application settings of your computer, the product will turn off after saving the images to your computer.
- You can transfer images from the product to only one computer at a time.
- If you want to transfer images to another computer, connect the product and the computer via a USB connection and follow the instructions in PlayMemories Home.
- Proxy movies cannot be transferred.

Related Topic
- Installing PlayMemories Home
- Wi-Fi Settings: WPS Push
- Wi-Fi Settings: Access Point Set.
View on TV

You can view images on a network-enabled TV by transferring them from the product without connecting the product and TV with a cable. For some TVs, you may need to perform operations on the TV. For details, refer to the operating instructions supplied with the TV.

1. MENU → (Network) → [View on TV] → desired device to be connected.

2. When you want to play back images using slideshow, press the center of the control wheel.

- To display the next/previous image manually, press the right/left sides of the control wheel.
- To change the device to be connected, press the down side of the control wheel, then select [Device list].

Slideshow settings

You can change the slideshow settings by pressing the down side of the control wheel.

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

Folder View(Still):
Selects from [All] and [All in Folder].

Date View:
Selects from [All] and [All in Date Rng.].

Interval:
Selects from [Short] and [Long].

Effects*:
Selects from [On] and [Off].

Playback Image Size:
Selects from [HD] and [4K].

* The settings are effective only for BRAVIA TV which is compatible with the functions.

Note
- You can use this function on a TV that supports DLNA renderer.
- You can view images on a Wi-Fi Direct-enabled TV or network-enabled TV (including wired network-enabled TVs).
- If you connect TV and this product and do not use Wi-Fi Direct, you need to register your access point first.
- Displaying the images on the TV may take time.
- Movies cannot be shown on a TV via Wi-Fi. Use an HDMI cable (sold separately).
Related Topic

- Wi-Fi Settings: WPS Push
- Wi-Fi Settings: Access Point Set.
Digital Still Camera
DSC-HX99

Ctrl w/ Smartphone

Sets the condition for connecting the camera to a smartphone.

1. **MENU → 🌐 (Network) → [Ctrl w/ Smartphone] → desired setting.**

Menu item details

**Ctrl w/ Smartphone:**
Sets whether to connect the camera and a smartphone using Wi-Fi. ([On]/[Off])

**Connection:**
Displays the QR code or SSID used to connect the camera to a smartphone.

**Always Connected:**
Sets whether to keep the camera connected to a smartphone. If this item is set to [On], once you connect the camera to a smartphone, it will remain connected to the smartphone at all times. If it is set to [Off], the camera will connect to a smartphone only when the connection procedure is performed.

**Note**
- If [Always Connected] is set to [On], the power consumption will be greater than when it is set to [Off].
- If [Always Connected] is set to [On], it will take a while for the camera to turn off.

Related Topic

- Controlling the camera using an Android smartphone (NFC One-touch remote)
- Controlling the camera using an Android smartphone (QR Code)
- Controlling the camera using an Android smartphone (SSID)
- Controlling the camera using an iPhone or iPad (QR Code)
- Controlling the camera using an iPhone or iPad (SSID)
- Snd to Smrtphn Func: Send to Smartphone

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Airplane Mode

When you board an airplane, etc., you can temporarily disable all the wireless-related functions including Wi-Fi.

1. MENU →  Network) → [Airplane Mode] → desired setting.

If you set [Airplane Mode] to [On], an airplane mark will be displayed on the screen.
Wi-Fi Settings: WPS Push

If your access point has a Wi-Fi Protected Setup (WPS) button, you can register the access point to this product easily.

1. **MENU → (Network) → [Wi-Fi Settings] → [WPS Push].

2. Push the Wi-Fi Protected Setup (WPS) button on the access point to connect.

### Note
- [WPS Push] works only if the security setting of your access point is set to WPA or WPA2 and your access point supports the Wi-Fi Protected Setup (WPS) button method. If the security setting is set to WEP or your access point does not support the Wi-Fi Protected Setup (WPS) button method, perform [Access Point Set.].
- For details about the available functions and settings of your access point, see the access point operating instructions or contact the administrator of the access point.
- A connection may not be possible or the communication distance may be shorter depending on the surrounding conditions, such as the type of wall material and the presence of obstructions or radio waves between the product and access point. In this case, change the location of the product or move the product closer to the access point.

### Related Topic
- **Wi-Fi Settings: Access Point Set.**

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Wi-Fi Settings: Access Point Set.

You can register your access point manually. Before starting the procedure, check the SSID name of the access point, security system, and password. The password may be preset in some devices. For details, see the access point operating instructions, or consult the access point administrator.

1. **MENU → (Network) → [Wi-Fi Settings] → [Access Point Set].**

2. **Select the access point you want to register.**

   ![Access Point Set](image)

   **When the desired access point is displayed on the screen:** Select the desired access point.

   **When the desired access point is not displayed on the screen:** Select [Manual Setting] and set the access point.

   - If you select [Manual Setting], input the SSID name of the access point, then select the security system.

3. **Input the password, and select [OK].**

   ![Access Point Set](image)

   - Access points without the mark do not require a password.

4. **Select [OK].**

Other setting items

Depending on the status or the setting method of your access point, you may want to set more items.

**WPS PIN:**
Displays the PIN code you enter into the connected device.

**Priority Connection:**
Select [On] or [Off].

**IP Address Setting:**
Select [Auto] or [Manual].

**IP Address:**
If you are entering the IP address manually, enter the set address.

**Subnet Mask/Default Gateway:**
If you have set [IP Address Setting] to [Manual], enter each address according to your network environment.

**Note**
- To give the registered access point priority in the future, set [Priority Connection] to [On].

**Related Topic**
- Wi-Fi Settings: WPS Push
- How to use the keyboard
**Wi-Fi Settings: Disp MAC Address**

Displays the MAC address of this product.

1. **MENU → (Network) → [Wi-Fi Settings] → [Disp MAC Address].**
Wi-Fi Settings: SSID/PW Reset

This product shares the connection information for [Send to Smartphone] and [Connection] with a device that has permission to connect. If you want to change the device that is permitted to connect, reset the connection information.

1. MENU → (Network) → [Wi-Fi Settings] → [SSID/PW Reset] → [OK].

Note
- If you connect this product to a smartphone after resetting the connection information, you must make the settings for the smartphone again.

Related Topic
- Snd to Smrtphn Func: Send to Smartphone
- Ctrl w/ Smartphone
Bluetooth Settings

Controls the settings for connecting the camera to a smartphone via a Bluetooth connection. You need to pair the camera and smartphone before using the location information link function. If you want to pair the camera and smartphone in order to use the location information link function, refer to “Loc. Info. Link Set.”

MENU →  (Network) → [Bluetooth Settings] → desired setting.

Menu item details

Bluetooth Function (On/Off):
Sets whether to activate or not the Bluetooth function of the camera.

Pairing:
Displays the screen for pairing the camera and smartphone using PlayMemories Mobile.

Disp Device Address:
Displays the BD address of the camera.

Note

- If [Bluetooth Function] is set to [On], it will take a while for the camera to turn off.

Related Topic

- Loc. Info. Link Set.

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Loc. Info. Link Set.

You can use the application PlayMemories Mobile to obtain location information from a smartphone that is connected with your camera using Bluetooth communication. You can record the obtained location information when shooting images.

### Preparation in advance

To use the location information linking function of the camera, the application PlayMemories Mobile is required. If “Location Information Linkage” is not displayed on the top page of PlayMemories Mobile, you need to perform the following steps beforehand.

1. Install PlayMemories Mobile on your smartphone.
   - You can install PlayMemories Mobile from the application store of your smartphone. If you have already installed the application, update it to the latest version.
2. Transfer a pre-recorded image to your smartphone using the [Send to Smartphone] function of the camera.
   - After you transfer an image recorded using the camera to your smartphone, “Location Information Linkage” will appear on the top page of the application.

### Operating procedure

- Operations performed on the smartphone
- Operations performed on the camera

1. : Confirm that the Bluetooth function of your smartphone is activated.
   - Do not perform the Bluetooth pairing operation on the smartphone setting screen. In steps 2 to 7, the pairing operation is performed using the camera and the application PlayMemories Mobile.
   - If you accidentally perform the pairing operation on the smartphone setting screen in step 1, cancel the pairing and then perform the pairing operation by following Steps 2 through 7 using the camera and the application PlayMemories Mobile.
2. : On the camera, select MENU → [Network] → [Bluetooth Settings] → [Bluetooth Function] → [On].
3. : On the camera, select MENU → [Network] → [Bluetooth Settings] → [Pairing].
4. : Launch PlayMemories Mobile on your smartphone and tap “Location Information Linkage.”
   - If “Location Information Linkage” is not displayed, follow the steps in “Preparation in advance” above.
6. : Follow the instructions on the [Location Information Linkage] setting screen of PlayMemories Mobile, and then select your camera from the list.
7. : Select [OK] when a message is displayed on the monitor of the camera.
   - Pairing of the camera and PlayMemories Mobile is complete.
Menu item details

Location Info. Link:
Sets whether to obtain the location information by linking with a smartphone.

Auto Time Correct.:
Sets whether to automatically correct the date setting of the camera using information from a linked smartphone.

Auto Area Adjust.:
Sets whether to automatically correct the area setting of the camera using information from a linked smartphone.

Icons displayed when obtaining the location information

- (Obtaining location information): The camera is obtaining the location information.
- (Location information cannot be obtained): The camera cannot obtain the location information.
- (Bluetooth connection available): Bluetooth connection with the smartphone is established.
- (Bluetooth connection unavailable): Bluetooth connection with the smartphone is not established.

Hint

- Location information can be linked when PlayMemories Mobile is running on your smartphone even if the smartphone monitor is off. However, if the camera has been turned off for a while, location information may not be linked immediately when you turn the camera back on. In this case, location information will be linked immediately if you open the PlayMemories Mobile screen on the smartphone.
- When PlayMemories Mobile is not operating, such as when the smartphone is restarted, launch PlayMemories Mobile to resume location information linking.
- In the application PlayMemories Home, you can view images on a map by importing images with location information to your computer. For details, refer to Help for PlayMemories Home.
- If the location information linking function does not work properly, see the following notes and perform pairing again.
  - Confirm that the Bluetooth function of your smartphone is activated.
  - Confirm that the camera is not connected with other devices using the Bluetooth function.
  - Confirm that [Airplane Mode] for the camera is set to [Off].
  - Delete the pairing information for the camera registered in PlayMemories Mobile.
  - Execute [Reset Network Set.] of the camera.
- For more detailed video instructions, refer to the following support page.
  http://www.sony.net/pmm/btg/

Note

- When you initialize the camera, the pairing information is also deleted. To perform pairing again, delete the pairing information for the camera registered in PlayMemories Mobile before trying again.
- The location information will not be recorded when it cannot be obtained, such as when the Bluetooth connection is disconnected.
- The camera can be paired with up to 15 Bluetooth devices, but can link the location information with that of only one smartphone. If you want to link the location information with that of another smartphone, turn off the [Location Information Linkage] function of the smartphone that is already linked.
- If the Bluetooth connection is unstable, remove any obstacles, such as people or metal objects from between the camera and the paired smartphone.
- When pairing the camera and your smartphone, be sure to use the [Location Information Linkage] menu on PlayMemories Mobile.

Supported smartphones

- Android smartphones: Android 5.0 or later and compatible with Bluetooth 4.0 or later
- iPhone/iPad: iPhone 4S or later/iPad 3rd generation or later
* For the latest information, refer to the support site.
* For the Bluetooth version, refer to the website for your smartphone.

**Related Topic**
- PlayMemories Home
- PlayMemories Mobile
- Snd to Smrtphn Func: Send to Smartphone
- Bluetooth Settings

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Edit Device Name

You can change the device name for the Wi-Fi Direct or Bluetooth connection.

1. MENU → (Network) → [Edit Device Name].

2. Select the input box, then input the device name→[OK].

Related Topic
- Wi-Fi Settings: WPS Push
- Wi-Fi Settings: Access Point Set.
- How to use the keyboard
Reset Network Set.

Resets all the network settings to default settings.

1. MENU → (Network) → [Reset Network Set.] → [Enter].
Protecting images (Protect)

Protects recorded images against accidental erasure. The mark is displayed on protected images.

1. MENU → (Playback) → [Protect] → desired setting.

Menu item details

Multiple Img.:
Applies the protection of the selected multiple images.
(1) Select the image to be protected, then press the center of the control wheel. The mark is displayed in the check box. To cancel the selection, press the center again to remove the mark.
(2) To protect other images, repeat step (1).
(3) MENU → [OK].

All in this Folder:
Protects all images in the selected folder.

All with this date:
Protects all images taken on the selected date.

Cancel All in this Folder:
Cancels the protection of all images in the selected folder.

Cancel All with this date:
Cancels the protection of all images taken on the selected date.

All in Cont. Shoot Grp:
Protects all the images in the selected continuous shooting group.

Cancel All in Cnt Sht Grp:
Cancels the protection of all the images in the selected continuous shooting group.

Hint

- If you select a continuous shooting group in [Multiple Img.], all the images in the group will be protected. To select and protect particular images within the group, execute [Multiple Img.] while displaying the images within the group.

Note

- The menu items that can be selected vary according to the [View Mode] setting and the selected content.
Rotating an image (Rotate)

Rotates a recorded still image counter-clockwise.

1. Display the image to be rotated, then select MENU → (Playback) → [Rotate].

2. Press the center of the control wheel.
   The image is rotated counter-clockwise. The image rotates as you press the center. If you rotate the image once, the image remains rotated even after the product is turned off.

**Note**
- You cannot rotate the movies.
- You may not be able to rotate images shot using other products.
- When viewing rotated images on a computer, the images may be displayed in their original orientation depending on the software.
Deleting multiple selected images (Delete)

You can delete multiple selected images. Once you have deleted an image, you cannot restore it. Confirm the image to be deleted beforehand.

1. MENU →  (Playback) → [Delete] → desired setting.

Menu item details

Multiple Img.:
Deletes the selected images.
(1) Select the images to be deleted, then press the center of the control wheel. The ✔ mark is displayed in the check box. To cancel the selection, press the center again to remove the ✔ mark.
(2) To delete other images, repeat step (1).
(3) MENU → [OK].

All in this Folder:
Deletes all images in the selected folder.

All with this date:
Deletes all images taken on the selected date.

All Other Than This Img.:
Deletes all images in the continuous shooting group except the selection.

All in Cont. Shoot Grp:
Deletes all images in the selected continuous shooting group.

Hint
- Perform [Format] to delete all images, including protected images.
- To display the desired folder or date, select the desired folder or date during playback by performing the following procedure:
  - (Image Index) lever → select the bar on the left using the control wheel → select the desired folder or date using the top/bottom sides of the control wheel.
- If you select a continuous shooting group in [Multiple Img.], all the images in the group will be deleted. To select and delete particular images within the group, execute [Multiple Img.] while displaying the images within the group.

Note
- The protected images cannot be deleted.
- The menu items that can be selected vary according to the [View Mode] setting and the selected content.

Related Topic
- Deleting a displayed image
- Format
Rating

You can assign ratings to recorded images on a scale from ★ to ★★★★★ to make it easier to find images.

1. **MENU → (Playback) → [Rating].**
   The image rating selection screen will appear.

2. Press the left/right sides of the control wheel to display an image to which you want to assign a rating, and then press the center.

3. Select the number of ★ (Rating) by pressing the left/right sides of the control wheel, and then press the center.

4. Press the MENU button to exit the rating setting screen.

**Hint**
- You can also assign ratings when playing back images by using the custom key. Assign [Rating] to the desired key using [Custom Key] beforehand, and then press the custom key while playing back an image to which you want to assign a rating. The number of ★ (Rating) changes each time you press the custom key.

**Note**
- You can assign ratings to still images only.

**Related Topic**
- Custom Key (still image/movie/playback)
- Rating Set(Cust Key)
**Rating Set(Cust Key)**

Sets the available number of ★ when rating images with the key to which you have assigned [Rating] using [Custom Key].

**1** MENU → (Playback) → [Rating Set(Cust Key)].

**2** Add a ✔ mark to the number of ★ that you want to activate.

You can select the checked number when setting [Rating] using the custom key.

---

**Related Topic**

- [Rating](#)
- [Custom Key (still image/movie/playback)](#)
Specifying images to be printed (Specify Printing)

You can specify in advance on the memory card which still images you want to print out later. The DPOF (print order) icon will appear on the specified images. DPOF refers to “Digital Print Order Format.” DPOF setting will be retained after the image is printed. We recommend that you cancel this setting after printing.

1. **MENU → (Playback) → [Specify Printing] → desired setting.**

**Menu item details**

**Multiple Img.:**
Selects images to order printing.

1. Select an image and press the center of the control wheel. The ✓ mark is displayed in the check box. To cancel the selection, press the center again and delete the ✓ mark.
2. Repeat step (1) to print other images. To select all the images from a certain date or in a certain folder, select the check box for the date or folder.
3. **MENU → [OK].**

**Cancel All:**
Clears all DPOF marks.

**Print Setting:**
Sets whether to print the date on images registered with DPOF marks.
- The position or size of the date (inside or outside of the image) may differ depending on the printer.

**Note**
- You cannot add the DPOF mark to the following files:
  - RAW images
- The number of copies cannot be specified.
- Some printers do not support the date print function.
Photo Capture

Captures a chosen scene in a movie to save as a still image. First shoot a movie, then pause the movie during playback to capture decisive moments that tend to be missed when shooting still images, and save them as still images.

1. Display the movie that you want to capture as a still image.

2. MENU → (Playback) → [Photo Capture].

3. Play back the movie and pause it.

4. Find the desired scene using forward slow playback, reverse slow playback, displays the next frame, and displays the previous frame, and then stop the movie.

5. Press (Photo Capture) to capture the chosen scene.
   The scene is saved as a still image.

Related Topic
- Shooting movies
- Playing back movies
Enlarging an image being played back (Enlarge Image)

Enlarges the image being played back. Use this function to check the focus of the image, etc.

1. Display the image you want to enlarge, and slide the W/T (zoom) lever to the T side.
   - Slide the W/T (zoom) lever to the W side to adjust the zoom scale.
   - The view will zoom in on the part of the image where the camera focused during shooting. If the focus location information cannot be obtained, the camera will zoom in on the center of the image.

2. Select the portion you want to enlarge by pressing the top/bottom/right/left sides of the control wheel.

3. Press the MENU button or the center of the control wheel to exit the playback zoom.

Hint
- You can also enlarge an image being played back using MENU.
- You can change the initial magnification and initial position of enlarged images by selecting MENU → (Playback) → [Enlarge Init. Mag.] or [Enlarge Initial Pos.].
- You can also enlarge an image by double-tapping the monitor. In addition, you can drag and move the magnified position on the monitor. Set [Touch Operation] to [On] beforehand.

Note
- You cannot enlarge movies.

Related Topic
- Touch Operation
- Enlarge Init. Mag.
- Enlarge Initial Pos.
Enlarge Init. Mag.

Sets the initial magnification scale when playing back enlarged images.

1. MENU → (Playback) → [Enlarge Init. Mag.] → desired setting.

Menu item details

Standard. Mag.: Displays an image with the standard magnification.

Previous Mag.: Displays an image with the previous magnification. The previous magnification is stored even after exiting the playback zoom mode.

Related Topic

- Enlarging an image being played back (Enlarge Image)
- Enlarge Initial Pos.
Enlarge Initial Pos.

Sets the initial position when enlarging an image in playback.

1  MENU → 

(Playback) → [Enlarge Initial Pos.] → desired setting.

Menu item details

Focused Position:
Enlarges the image from the point of focus during shooting.

Center:
Enlarges the image from the center of the screen.

Related Topic

- Enlarging an image being played back (Enlarge Image)
- Enlarge Init. Mag.
Motion Interval ADJ

You can adjust the interval of the tracking of the subject’s motion.

MENU → (Playback) → [Motion Interval ADJ] → desired setting.

Related Topic
- Motion Shot Video
Playing back images using slideshow (Slide Show)

Automatically plays back images continuously.

1. **MENU → (Playback) → [Slide Show] → desired setting.**

2. Select [Enter].

**Menu item details**

**Repeat:**
Select [On], in which images are played back in a continuous loop, or [Off], in which the product exits the slideshow when all the images are played back once.

**Interval:**
Select the display interval for images from among [1 Sec], [3 Sec], [5 Sec], [10 Sec] or [30 Sec].

**To quit the slideshow in the middle of playback**
Press the MENU button to quit the slideshow. You cannot pause the slideshow.

**Hint**
- During playback, you can display the next/previous image by pressing the right/left side of the control wheel.
- You can activate a slideshow only when [View Mode] is set to [Date View] or [Folder View(Still)].
Switching between still images and movies (View Mode)

Sets the View Mode (image display method).

1 MENU →  (Playback) → [View Mode] → desired setting.

Menu item details

- **Date View:** Displays the images by date.
- **Folder View (Still):** Displays only still images.
- **AVCHD View:** Displays only AVCHD-format movies.
- **XAVC S HD View:** Displays only XAVC S HD-format movies.
- **XAVC S 4K View:** Displays only XAVC S 4K-format movies.
Playing back images on the image index screen (Image Index)

You can display multiple images at the same time in playback mode.

1. Slide the W/T (zoom) lever to the W side while the image is being played back.

2. Select the image by pressing the top/bottom/right/left sides of the control wheel or turning the control wheel.

To change the number of images to be displayed

MENU → (Playback) → [Image Index] → desired setting.

Menu item details

9 Images/25 Images

To return to single-image playback

Select the desired image and press the center of the control wheel.

To display a desired image quickly

Select the bar on the left of the image index screen using the control wheel, then press the top/bottom sides of the control wheel. While the bar is being selected, you can display the calendar screen or folder selection screen by pressing the center. In addition, you can switch View Mode by selecting an icon.

Related Topic

- Switching between still images and movies (View Mode)
Disp Cont Shoot Grp

Sets whether to display continuously shot images as a group.

1. **MENU → 
   (Playback) → [Disp Cont Shoot Grp] → desired setting.**

Menu item details

**On:**
Displays continuously shot images as a group.

**Off:**
Does not display continuously shot images as a group.

**Hint**
- Images shot with [Drive Mode] set to [Cont. Shooting] or [Spd Priority Cont.] are grouped. One sequence of images shot continuously by holding down the shutter button during continuous shooting becomes one group.
- On the image index screen, 📸 is displayed over the continuous shooting group.

**Note**
- Images can be grouped and displayed only when [View Mode] is set to [Date View]. When it is not set to [Date View], images cannot be grouped and displayed, even if [Disp Cont Shoot Grp] is set to [On].
- If you delete the continuous shooting group, all the images in the group will be deleted.

**Related Topic**
- Cont. Shooting
- Spd Priority Cont.
Rotating recorded images automatically (Display Rotation)

Selects the orientation when playing back recorded images.

1. MENU → (Playback) → [Display Rotation] → desired setting.

Menu item details

Auto:
When you rotate the camera, the displayed image rotates automatically by detecting the orientation of the camera.

Manual:
Images shot vertically are displayed vertically. If you have set the image orientation using the [Rotate] function, the image will be displayed accordingly.

Off:
Images are always displayed horizontally.

Related Topic

- Rotating an image (Rotate)
Monitor Brightness

Adjust the brightness of the screen.

MENU → (Setup) → [Monitor Brightness] → desired setting.

Menu item details

**Manual:**
Adjusts the brightness within the range of –2 to +2.

**Sunny Weather:**
Sets the brightness appropriately for shooting outdoors.

**Note**
- The monitor brightness cannot be adjusted in the following situations. The maximum brightness will be [±0].
  - When [File Format] is set to [XAVC S 4K].
  - When [File Format] is set to [XAVC S HD] and [Record Setting] is set to [120p]/[100p].
- The monitor brightness is locked at [-2] when shooting a movie using the Wi-Fi functions.
Viewfinder Bright.

When using the viewfinder, this product adjusts the brightness of the viewfinder according to the surrounding environment.

1. MENU → (Setup) → [Viewfinder Bright.] → desired setting.

Menu item details

Auto:
Adjusts the brightness automatically.

Manual:
Selects the brightness of the viewfinder within the range of –2 to +2.

Note

- The viewfinder brightness cannot be adjusted in the following situations. The maximum brightness will be [±0].
  - When [File Format] is set to [XAVC S 4K].
  - When [File Format] is set to [XAVC S HD] and [Record Setting] is set to [120p]/[100p].
**Finder Color Temp.**

Adjusts the color temperature of the electronic viewfinder.

1. **MENU → (Setup) → [Finder Color Temp.] → desired setting.**

**Menu item details**

-2 to +2:
When you select “-,” the viewfinder screen changes to a warmer color, and when you select “+,” it changes to a colder color.
Volume Settings

Sets the sound volume for movie playback.

1 MENU → (Setup) → [Volume Settings] → desired setting.

Adjusting the volume during playback
Press the bottom side of the control wheel while playing back movies to display the operation panel, then adjust the volume. You can adjust the volume while listening to the actual sound.
Tile Menu

Selects whether to always display the first screen of the menu when you press the MENU button.

1. MENU → (Setup) → [Tile Menu] → desired setting.

Menu item details

On:
Always displays the first screen of the menu (Tile Menu).

Off:
Deactivates the Tile Menu display.
Mode Dial Guide

You can display the description of a shooting mode when you turn the mode dial and change the settings available for that shooting mode.

Menu item details

**On:**
Displays the Mode Dial Guide.

**Off:**
Does not display the Mode Dial Guide.

1. **MENU → (Setup) → [Mode Dial Guide] → desired setting.**
Delete confirm.

You can set whether [Delete] or [Cancel] is selected as a default on the delete confirmation screen.

1. MENU → (Setup) → [Delete confirm.] → desired setting.

Menu item details

"Delete" first:
[Delete] is selected as the default setting.

"Cancel" first:
[Cancel] is selected as the default setting.
Display Quality

You can change the display quality.

1. MENU → (Setup) → [Display Quality] → desired setting.

Menu item details

High:
Displays in high quality.

Standard:
Displays in standard quality.

Note

- When [High] is set, battery consumption will be higher than when [Standard] is set.
- When the temperature of the camera rises, the setting may become locked to [Standard].
Auto Monitor OFF

The camera automatically switches to the power-saving mode if you do not operate the camera for a certain period of time in the still-image shooting mode. This function is useful for reducing the power consumption.

1. **MENU → (Setup) → [Auto Monitor OFF] → desired setting**

**Menu item details**

**Does not turn OFF:**
The camera does not switch to the power-saving mode automatically.

**2 Sec/5 Sec/10 Sec:**
The camera switches to the power-saving mode and the monitor turns off if a certain number of seconds elapses without any operations.

When [5 Sec] or [10 Sec] is selected, the monitor darkens two seconds before the end of the duration you have set.

**Note**

- [Auto Monitor OFF] does not activate in the following situations:
  - When the monitor is flipped up by approximately 180 degrees
  - When the shooting mode is set to [Sweep Panorama]
  - When the power-saving function is not activated
Pwr Save Start Time

You can set the time by which the power goes off automatically.

1. MENU →  (Setup) → [Pwr Save Start Time] → desired setting.

Menu item details
30 Min/5 Min/2 Min/1 Min

Note
The power save function is not activated when power is being supplied via USB, when playing back slideshows, when recording movies, or when connected to a computer or TV.
Function for VF close

Sets whether to turn the power off when the viewfinder is stowed.

1. **MENU → (Setup) → [Function for VF close] → desired setting.**

Menu item details

**Power OFF:**
Turns the power off when the viewfinder is stowed.

**Not Power OFF:**
Does not turn the power off when the viewfinder is stowed.

**Note**
- Push the eyepiece into the viewfinder before stowing the viewfinder. If you try to squeeze the viewfinder into the camera with the eyepiece pulled out, the viewfinder may be subjected to force and become damaged.
NTSC/PAL Selector

Plays back movies recorded with the product on a NTSC/PAL system TV.

MENU → (Setup) → [NTSC/PAL Selector] → [Enter]

**Note**

- If you insert a memory card that has previously been formatted with a different video system, a message telling you that you must reformat the card will appear. If you want to record using another system, re-format the memory card or use another memory card.

- When you perform [NTSC/PAL Selector], and the setting is changed from the default one, a message "Running on NTSC." or "Running on PAL." will appear on the start-up screen.
Auto Pwr OFF Temp.

Sets the temperature of the camera at which the camera turns off automatically during shooting. When it is set to [High], you can continue shooting even when the temperature of the camera gets hotter than normal.

1. **MENU → (Setup) → [Auto Pwr OFF Temp.] → desired setting.**

Menu item details

- **Standard:**
  Sets the standard temperature at which the camera turns off.

- **High:**
  Sets a higher temperature than the standard at which the camera turns off.

**Notes when [Auto Pwr OFF Temp.] is set to [High]**

- Do not shoot while holding the camera in your hand. Use a tripod.
- Using the camera while holding it in your hand for a long period of time may cause low-temperature burns.

Continuous recording time for movies when [Auto Pwr OFF Temp.] is set to [High]

The duration of time available for continuous movie recording is as follows when the camera starts recording with the default settings after the power has been turned off for a while. The following values indicate the continuous time from when the camera starts recording until the camera stops recording.

**Ambient temperature: 20°C (68°F)**
- Continuous recording time for movies (HD): Approx. 29 minutes
- Continuous recording time for movies (4K): Approx. 5 minutes

**Ambient temperature: 30°C (86°F)**
- Continuous recording time for movies (HD): Approx. 29 minutes
- Continuous recording time for movies (4K): Approx. 5 minutes

**Ambient temperature: 40°C (104°F)**
- Continuous recording time for movies (HD): Approx. 15 minutes
- Continuous recording time for movies (4K): Approx. 5 minutes

**HD: XAVC S HD (60p 50M/50p 50M, not connected via Wi-Fi)**

**4K: XAVC S 4K (30p 60M/25p 60M, not connected via Wi-Fi)**

**Note**

- Even if [Auto Pwr OFF Temp.] is set to [High], depending on the conditions or the temperature of the camera, the recordable time for movies may not change.
- Continuous movie shooting is possible for a maximum of approximately 29 minutes at a time. The recording time is approximately 5 minutes when shooting movies in XAVC S 4K/XAVC S HD 120p/100p format. (a product specification limit)

**Related Topic**

- Recordable movie times
Help Guide

Digital Still Camera
DSC-HX99

**Touch Operation**

Sets whether or not to activate touch operations on the monitor.

1. **MENU → (Setup) → [Touch Operation] → desired setting.**

**Menu item details**

**On:**
Activates the touch operation.

**Off:**
Deactivates the touch operation.

**Related Topic**

- Func. of Touch Oprtn: Touch Shutter
- Func. of Touch Oprtn: Touch Focus
- Touch Pad Settings
- Touch Panel/Pad

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Touch Panel/Pad

Touch operations when shooting with the monitor are referred to as "touch panel operations," and touch operations when shooting with the viewfinder are referred to as "touch pad operations." You can select whether to activate touch panel operations or touch pad operations.

1. MENU →  (Setup) → [Touch Panel/Pad] → desired setting.

Menu item details

- **Touch Panel+Pad:**
  Activates both the touch panel operations when shooting with the monitor and touch pad operations when shooting with the viewfinder.

- **Touch Panel Only:**
  Activates only the touch panel operations when shooting with the monitor.

- **Touch Pad Only:**
  Activates only the touch pad operations when shooting with the viewfinder.

Related Topic

- Touch Operation
Touch Pad Settings

You can adjust settings related to touch pad operations during viewfinder shooting.

1. **MENU** → (Setup) → [Touch Pad Settings] → desired setting.

**Menu item details**

**Operation in V Orien.:**
Sets whether to enable touch pad operations during vertically oriented viewfinder shooting. You can prevent erroneous operations during vertically oriented shooting caused by your nose, etc. touching the monitor.

**Touch Pos. Mode:**
Sets whether to move the focusing frame to the position touched on the screen ([Absolute Position]), or move the focusing frame to the desired position based on the direction of dragging and the amount of movement ([Relative Position]).

**Operation Area:**
Sets the area to be used for touch pad operations. Restricting the operational area can prevent erroneous operations caused by your nose, etc. touching the monitor.

**About Touch Positioning Mode**
Selecting [Absolute Position] lets you move the focusing frame to a distant position more quickly because you can directly specify the position of the focusing frame with touch operations.

Selecting [Relative Position] lets you operate the touch pad from wherever is easiest, without having to move your finger over a wide area.

**Hint**
- In touch pad operations when [Touch Pos. Mode] is set to [Absolute Position], the area set in [Operation Area] is treated as the entire screen.
Related Topic

- Touch Operation
Demo Mode

The [Demo Mode] function displays the movies recorded on the memory card automatically (demonstration), when the
camera has not been operated for a certain time. Normally select [Off].

1 MENU → (Setup) → [Demo Mode] → desired setting.

Menu item details

On:
The movie playback demonstration starts automatically if the product is not operated for about one minute. Only
protected AVCHD movies can be played back.
Set the view mode to [AVCHD View], and protect the movie file with the oldest recorded date and time.

Off:
Does not show the demonstration.

Note
- You can activate this function only when the product is connected using a dedicated AC Adaptor.
- When there is no protected AVCHD movies on the memory card, you cannot select [On].
TC/UB Settings

The time code (TC) and the user bit (UB) information can be recorded as data attached to movies.

MENU →  (Setup) → [TC/UB Settings] → setting value you want to change.

Menu item details

TC/UB Disp. Setting:
Sets the display for the counter, time code, and user bit.

TC Preset:
Sets the time code.

UB Preset:
Sets the user bit.

TC Format:
Sets the recording method for the time code. (Only when [NTSC/PAL Selector] is set to NTSC.)

TC Run:
Sets the count up format for the time code.

TC Make:
Sets the recording format for the time code on the recording medium.

UB Time Rec:
Sets whether or not to record the time as a user bit.

How to set the time code (TC Preset)

1. MENU →  (Setup) → [TC/UB Settings] → [TC Preset].
2. Turn the control wheel and select the first two digits.
   - The time code can be set between the following range.
     When [60i] is selected: 00:00:00:00 to 23:59:59:29
     When [24p] is selected, you can select the last two digits of the time code in multiples of four from 0 to 23 frames.
     When [50i] is selected: 00:00:00:00 to 23:59:59:24
3. Set the other digits following the same procedure as in step 2, then press in the center of the control wheel.

Note
- When you tilt the monitor to shoot a self-portrait, the time code and user bit will not be displayed.

How to reset the time code

1. MENU →  (Setup) → [TC/UB Settings] → [TC Preset].
2. Press the  (Delete) button to reset the time code (00:00:00:00).
You can also reset the time code (00:00:00:00) using the RMT-VP1K remote commander (sold separately).

How to set the user bit (UB Preset)

1. MENU →  (Setup) → [TC/UB Settings] → [UB Preset].
2. Turn the control wheel and select the first two digits.
3. Set the other digits following the same procedure as in step 2, then press in the center of the control wheel.

How to reset the user bit
How to select the recording method for the time code (TC Format *1)

1. MENU → (Setup) → [TC/UB Settings] → [TC Format].

DF:
Records the time code in Drop Frame format.

NDF:
Records the time code in Non-Drop Frame format.

*1 Only when [NTSC/PAL Selector] is set to NTSC.

*2 The time code is based on 30 frames per second. However, a gap between the actual time and the time code will occur during extended periods of recording as the frame frequency of the NTSC image signal is approximately 29.97 frames per second. Drop frame corrects this gap to make the time code and actual time equal. In drop frame, the first 2 frame numbers are removed every minute except for every tenth minute. The time code without this correction is called non-drop frame.

The setting is fixed to [NDF] when recording in 4K/24p or 1080/24p.

How to select the count up format for the time code (TC Run)

1. MENU → (Setup) → [TC/UB Settings] → [TC Run].

Rec Run:
Sets the stepping mode for the time code to advance only while recording. The time code is recorded sequentially from the last time code of the previous recording.

Free Run:
Sets the stepping mode for the time code to advance anytime, regardless of the camera operation.

- The time code may not be recorded sequentially in the following situations even when the time code advances in [Rec Run] mode.
  - When the recording format is changed.
  - When the recording medium is removed.

How to select how the time code is recorded (TC Make)

1. MENU → (Setup) → [TC/UB Settings] → [TC Make].

Preset:
Records the newly set time code on the recording medium.

Regenerate:
Reads the last time code for the previous recording from the recording medium and records the new time code consecutively from the last time code. The time code advances in [Rec Run] mode regardless of the [TC Run] setting.
HDMI Settings: HDMI Resolution

When you connect the product to a High Definition (HD) TV with HDMI terminals using an HDMI cable (sold separately), you can select HDMI Resolution to output images to the TV.

1. MENU → (Setup) → [HDMI Settings] → [HDMI Resolution] → desired setting.

Menu item details

Auto:
The product automatically recognizes an HD TV and sets the output resolution.

2160p/1080p:
Outputs signals in 2160p/1080p.

1080p:
Outputs signals in HD picture quality (1080p).

1080i:
Outputs signals in HD picture quality (1080i).

Note

- If the images are not displayed properly using the [Auto] setting, select either [1080i], [1080p] or [2160p/1080p], based on which TV is to be connected.
HDMI Settings: 24p/60p Output (movie) (Only for 1080 60i compatible models)

You can set 1080/24p or 1080/60p as the HDMI output format when [Record Setting] is set to [24p 50M], [24p 60M] or [24p 100M].

1. MENU → (Setup) → [HDMI Settings] → [HDMI Resolution] → [1080p] or [2160p/1080p].

2. MENU → (Setup) → [HDMI Settings] → [24p/60p Output] → desired setting.

Menu item details

60p:
Movies are output as 60p.

24p:
Movies are output as 24p.

Note

- Steps 1 and 2 can be set in either order.

Related Topic

- Record Setting (movie)
HDMI Settings: HDMI Info. Display

Selects whether to display the shooting information when this product and the TV are connected using an HDMI cable (sold separately).

1 MENU → (Setup) → [HDMI Settings] → [HDMI Info. Display] → desired setting.

Menu item details

On:
Displays the shooting information on the TV. The recorded image and the shooting information are displayed on the TV, while nothing is displayed on the camera’s monitor.

Off:
Does not display the shooting information on the TV. Only the recorded image is displayed on the TV, while the recorded image and the shooting information are displayed on the camera’s monitor.

Note

- When this product is connected to a 4K-compatible TV, [Off] is selected automatically.
- If you set [File Format] to [XAVC S 4K] and shoot movies while the camera is connected to an HDMI device, images will not be displayed on the monitor.

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HDMI Settings: TC Output (movie)

Sets whether or not to layer the TC (time code) information on the output signal via the HDMI terminal when outputting the signal to other professional-use devices. This function layers the time code information on the HDMI output signal. The product sends the time code information as digital data, not as an image displayed on the screen. The connected device can then refer to the digital data to recognize the time data.

Menu item details

On:
Time code is output to other devices.

Off:
Time code is not output to other devices.

Note

- When [TC Output] is set to [On], the image may not be output properly to the TV or recording device. In such cases, set [TC Output] to [Off].
HDMI Settings: REC Control (movie)

If you connect the camera to an external recorder/player, you can remotely command the recorder/player to start/stop recording using the camera.

1. **MENU → (Setup) → [HDMI Settings] → [REC Control] → desired setting.**

Menu item details

**On:**
- The camera can send a recording command to an external recorder/player.
- The camera is sending a recording command to an external recorder/player.

**Off:**
The camera is not able to send a command to an external recorder/player to start/stop recording.

**Note**
- Available for external recorders/players compatible with [REC Control].
- When you use the [REC Control] function, set the shooting mode to (Movie).
- When [TC Output] is set to [Off], you cannot use the [REC Control] function.
- Even when [REC] is displayed, the external recorder/player may not work properly depending on the settings or status of the recorder/player. Check if the external recorder/player works properly before use.
HDMI Settings: CTRL FOR HDMI

When connecting this product to a “BRAVIA” Sync-compatible TV using an HDMI cable (sold separately), you can operate this product by aiming the TV remote control at the TV.

1. **MENU → (Setup) → [HDMI Settings] → [CTRL FOR HDMI] → desired setting.**

2. **Connect this product to a “BRAVIA” Sync-compatible TV.**
   The input of the TV is switched automatically and images on this product are displayed on the TV screen.

3. **Press the SYNC MENU button of the TV’s remote control.**

4. **Operate this product using the TV’s remote control.**

**Menu item details**

**On:**
You can operate this product with a TV’s remote control.

**Off:**
You cannot operate this product with a TV’s remote control.

**Note**
- If you connect this product to a TV using an HDMI cable, available menu items are limited.
- [CTRL FOR HDMI] is available only with a “BRAVIA” Sync-compatible TV. Also, the SYNC MENU operation differs depending on the TV you are using. For details, refer to the operating instructions supplied with the TV.
- If the product performs unwanted operations in response to the TV remote control when the product is connected to another manufacturer’s TV using an HDMI connection, select **MENU → (Setup) → [HDMI Settings] → [CTRL FOR HDMI] → [Off].**
**HDMI Settings: HDMI Audio Out. (movie)**

When the camera is connected to an external device such as a television via an HDMI cable (sold separately), the audio picked up by the camera's microphone is output to the external device during movie shooting and standby mode. During shooting, you can check both the image and sound from the external device.

**Standby for movie shooting**

This is the state before you start movie shooting by pressing the MOVIE button, after turning the mode dial to (Movie) and setting the values for shutter speed and aperture. The icon “STBY” is displayed on the screen.

1. **MENU → [ (Setup) → [HDMI Settings] → [HDMI Audio Out.] → desired setting.**

**Menu item details**

**On:**
Sound is output to the external device.

**Off:**
Sound is not output to the external device.

**Note**
- During HDMI audio output, no electronic sound is produced when performing or ending movie recording even if [Audio signals] is set to [On].

**Related Topic**
- Viewing images on a TV using an HDMI cable
4K Output Sel. (movie)

You can set how to record movies and perform HDMI output when your camera is connected to 4K-compatible external recording/playback devices, etc.

1. Turn the mode dial to  (movie).

2. Connect the camera to the desired device via an HDMI cable.

3. MENU →  (Setup) → [4K Output Sel.] → desired setting.

Menu item details

Memory Card+HDMI:
Simultaneously outputs to the external recording/playback device and records on the camera’s memory card.

HDMI Only(30p):
Outputs a 4K movie in 30p to the external recording/playback device without recording on the camera’s memory card.

HDMI Only(24p):
Outputs a 4K movie in 24p to the external recording/playback device without recording on the camera’s memory card.

HDMI Only(25p) *:
Outputs a 4K movie in 25p to the external recording/playback device without recording on the camera’s memory card.

* Only when [NTSC/PAL Selector] is set to PAL.

Note

- This item can be set only when the camera is in movie mode and connected to a 4K-compatible device.
- When [HDMI Only(30p)], [HDMI Only(24p)] or [HDMI Only(25p)] is set, [HDMI Info. Display] will temporarily be set to [Off].
- When [HDMI Only(30p)], [HDMI Only(24p)] or [HDMI Only(25p)] is set, the counter does not move forward (the actual recording time is not counted) while the movie is being recorded on an external recording/playback device.
- When [File Format] is set to [XAVC S 4K] and the camera is connected via HDMI, the following functions are not available.
  - [Face Priority in AF]
  - [Face Prty in Mlti Mtr]
  - [Center Lock-on AF]

Related Topic

- HDMI Settings: REC Control (movie)
- File Format (movie)
- Record Setting (movie)
- HDMI Settings: HDMI Info. Display
USB Connection

Selects the USB connection method when this product is connected to a computer, etc.
Select MENU →  (Network) → [Ctrl w/ Smartphone] → [Ctrl w/ Smartphone] → [Off] beforehand.

1 MENU → (Setup) → [USB Connection] → desired setting.

Menu item details

Auto:
Establishes a Mass Storage or MTP connection automatically, depending on the computer or other USB devices to be connected. Windows 7, Windows 8.1, or Windows 10 computers are connected in MTP, and their unique functions are enabled for use.

Mass Storage:
Establishes a Mass Storage connection between this product, a computer, and other USB devices.

MTP:
Establishes an MTP connection between this product, a computer, and other USB devices. Windows 7, Windows 8.1, or Windows 10 computers are connected in MTP, and their unique functions are enabled for use.

PC Remote:
Uses Imaging Edge to control the product from a computer, including such functions as shooting and storing images on the computer.

Note
- It may take some time to make the connection between this product and a computer when [USB Connection] is set to [Auto].

Related Topic
- PC Remote Settings: Still Img. Save Dest.
- PC Remote Settings: RAW+J PC Save Img
USB LUN Setting

Enhances compatibility by limiting of USB connection functions.

1. MENU → (Setup) → [USB LUN Setting] → desired setting.

Menu item details

Multi:
Normally, use [Multi].

Single:
Set [USB LUN Setting] to [Single] only if you cannot make a connection.
USB Power Supply

Sets whether to supply power via the micro USB cable when the product is connected to a computer or an USB device.

1 MENU → (Setup) → [USB Power Supply] → desired setting.

Menu item details

On:
Power is supplied to the product via a micro USB cable when the product is connected to a computer, etc.

Off:
Power is not supplied to the product via a micro USB cable when the product is connected to a computer, etc. If you use the supplied AC Adaptor, power will be supplied even when [Off] is selected.

Operations available while supplying power via a USB cable

The following table shows you which operations are available/unavailable while supplying power via a USB cable. A checkmark indicates that the operation is available, and “—” indicates that the operation is unavailable.

<table>
<thead>
<tr>
<th>Operation</th>
<th>Available / Unavailable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shooting images</td>
<td>✓</td>
</tr>
<tr>
<td>Playing back images</td>
<td>✓</td>
</tr>
<tr>
<td>Wi-Fi/NFC/Bluetooth connections</td>
<td>✓</td>
</tr>
<tr>
<td>Charging a battery pack</td>
<td>—</td>
</tr>
<tr>
<td>Turning the camera on without a battery pack inserted</td>
<td>—</td>
</tr>
</tbody>
</table>

Note

- Insert the battery pack into the product to supply power via USB cable.
PC Remote Settings: Still Img. Save Dest.

Sets whether to save still images stored in both the camera and the computer during PC Remote shooting. This setting is useful when you want to check recorded images on the camera without leaving the camera.

* PC Remote: Uses Imaging Edge to control the product from a computer, including such functions as shooting and storing images on the computer.

1 MENU → (Setup) → [PC Remote Settings] → [Still Img. Save Dest.] → desired setting.

Menu item details

PC Only:
Saves still images only on the computer.

PC+Camera:
Saves still images on the computer and the camera.

Note
- During PC Remote shooting, you cannot change settings for [Still Img. Save Dest.]. Adjust the settings before you start shooting.
- If you insert a memory card that is not recordable, you cannot shoot still images even if you select [PC+Camera].
- If you select [PC+Camera] and you have not inserted a memory card into the camera, you cannot release the shutter even if [Release w/o Card] is set to [Enable].
- While you are playing back still images on the camera, you cannot shoot using PC Remote.

Related Topic
- USB Connection
- Release w/o Card
- PC Remote Settings: RAW+J PC Save Img
PC Remote Settings: RAW+J PC Save Img

Selects the file type for images to be transferred to the computer in PC Remote shooting. When shooting still images using PC Remote, the application on the computer does not display the image until the image has been completely transferred. When performing RAW+JPEG shooting, you can accelerate the display processing speed by transferring only JPEG images instead of transferring both RAW and JPEG images.

* PC Remote: Uses Imaging Edge to control the product from a computer, including such functions as shooting and storing images on the computer.

MENU → (Setup) → [PC Remote Settings] → [RAW+J PC Save Img] → desired setting.

Menu item details

RAW & JPEG:
Transfers both RAW and JPEG files to the computer.

JPEG Only:
Transfers only JPEG files to the computer.

RAW Only:
Transfers only RAW files to the computer.

Note
- The setting for [RAW+J PC Save Img] cannot be changed during PC Remote shooting. Adjust the setting before shooting.
- [RAW+J PC Save Img] can be set only when [File Format] is set to [RAW & JPEG].

Related Topic
- USB Connection
- File Format (still image)
- PC Remote Settings: Still Img. Save Dest.

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Language

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

1. MENU → (Setup) → [Language] → desired language.
Date/Time Setup

The Clock Set screen is displayed automatically when you turn on this product for the first time or when the internal rechargeable backup battery has fully discharged. Select this menu when setting the date and time after the first time.

1 MENU →  (Setup) → [Date/Time Setup] → desired setting.

Menu item details

Daylight Savings:
Selects Daylight Savings [On]/[Off].

Date/Time:
Sets the date and time.

Date Format:
Selects the date and time display format.

Hint

- To charge the internal rechargeable backup battery, insert a charged battery pack, and leave the product for 24 hours or more with the power off.

- If the clock resets every time the battery is charged, the internal rechargeable backup battery may be worn out. Consult your service facility.
Area Setting

Sets the area where you are using the product.

MENU → (Setup) → [Area Setting] → desired area.
Format

When you use a memory card with this camera for the first time, we recommend that you format the card using the camera for stable performance of the memory card. Note that formatting permanently erases all data on the memory card, and is unrecoverable. Save valuable data on a computer, etc.

1. **MENU → (Setup) → [Format].**

**Note**
- Formatting permanently erases all data including even protected images.
- The access lamp lights up during formatting. Do not remove the memory card while the access lamp is lit up.
- Format the memory card on this camera. If you format the memory card on the computer, the memory card may not be usable depending on the format type.
- It may take a few minutes to complete formatting, depending on the memory card.
- You cannot format the memory card if the remaining battery charge is less than 1%.
**File Number**

Selects how to assign file numbers to still images.

1. **MENU** → **(Setup)** → [File Number] → desired setting.

**Menu item details**

**Series:**
The product will assign numbers to files sequentially up to "9999" without resetting.

**Reset:**
The product resets numbers when a file is recorded in a new folder and assigns numbers to files starting with "0001". (When the recording folder contains a file, a number one higher than the largest number is assigned.)
Set File Name

You can specify the first three characters of the file name for images you shoot.

1. **MENU → 
   (Setup) → [Set File Name].**

2. Select the entry field for the file name to display a keyboard on the screen, and then enter three characters of your choice.

**Note**
- Only capital letters, numbers, and underscores can be entered. However, an underscore cannot be used as the first character.
- The three characters of the file name you specify using [Set File Name] will only be applied to images you shoot after changing the setting.

**Related Topic**
- How to use the keyboard
Select REC Folder

If [Folder Name] is set to [Standard Form] and there are 2 folders or more, you can select the folder on the memory card to which images are to be recorded.

1. MENU → (Setup) → [Select REC Folder] → desired folder.

Note
- You cannot select the folder when [Folder Name] is set to [Date Form].

Related Topic
- Folder Name
New Folder

Creates a new folder on the memory card for recording still images. A new folder is created with a folder number one greater than the largest folder number currently used. Images are recorded in the newly created folder.

1. **MENU → (Setup) → [New Folder].**

**Note**

- When you insert a memory card that was used with other equipment into this product and shoot images, a new folder may be automatically created.
- Up to 4,000 images in total can be stored in one folder. When the folder capacity is exceeded, a new folder may be automatically created.
Folder Name

Still images are recorded in a folder that is automatically created inside the DCIM folder on the memory card. You can change the way folder names are assigned.

MENU → (Setup) → [Folder Name] → desired setting.

Menu item details

Standard Form:
The folder name form is as follows: folder number + MSDCF.
Example: 100MSDCF

Date Form:
The folder name form is as follows: folder number + Y (the last digit)/MM/DD.
Example: 10080405 (Folder number: 100, date: 04/05/2018)

Note

- You cannot change the [Folder Name] settings for movies.
Recover Image DB

If image files were processed on a computer, problems may occur in the image database file. In such cases, the images on the memory card will not be played back on this product. If these problems happen, repair the file using [Recover Image DB].

MENU →  📦 (Setup) → [Recover Image DB] → [Enter].

Note

- Use a sufficiently charged battery pack. Low battery power during repairing can cause damage to data.
Display Media Info.

Displays the recordable time of movies for the inserted memory card. Also displays the number of recordable still images for the inserted memory card.

1. MENU → (Setup) → [Display Media Info.].
Version

Displays the version of this product's software. Check the version when updates for this product's software are released, etc.

1. MENU → (Setup) → [Version].

Note

- Updating can be performed only when the battery level is (3 remaining battery bars) or more. Use a sufficiently charged battery pack.
Setting Reset

Resets the product to the default settings. Even if you perform [Setting Reset], the recorded images are retained.

1  MENU → (Setup) → [Setting Reset] → desired setting.

Menu item details

**Camera Settings Reset:**
Initializes the main shooting settings to the default settings.

**Initialize:**
Initializes all the settings to the default settings.

**Note**
- Be sure not to eject the battery pack while resetting.
Add Item

You can register the desired menu items to ★ (My Menu) under MENU.

1. MENU → ★ (My Menu) → [Add Item].
2. Select an item that you want to add to ★ (My Menu) using the top/bottom/left/right sides of the control wheel.
3. Select a destination using the top/bottom/left/right sides of the control wheel.

Hint
- You can add up to 30 items to ★ (My Menu).

Note
- You cannot add the following items to ★ (My Menu).
  - Any item under MENU → [View on TV]

Related Topic
- Sort Item
- Delete Item
- Using MENU items
Sort Item

You can rearrange the menu items added to ★ (My Menu) under MENU.

1. MENU → ★ (My Menu) → [Sort Item].

2. Select an item that you want to move using the top/bottom/left/right sides of the control wheel.

3. Select a destination using the top/bottom/left/right sides of the control wheel.

Related Topic

- Add Item
Delete Item

You can delete menu items added to ★ (My Menu) of MENU.

1  
MENU → ★ (My Menu) → [Delete Item].

2  
Select an item that you want to delete using the top/bottom/left/right sides of the control wheel, and then press the center to delete the selected item.

Hint

- To delete all the items on a page, select MENU → ★ (My Menu) → [Delete Page].
- You can delete all the items added to ★ (My Menu) by selecting MENU → ★ (My Menu) → [Delete All].

Related Topic

- Delete Page
- Delete All
- Add Item
Delete Page

You can delete all the menu items added to a page under ★ (My Menu) in MENU.

1. MENU → ★ (My Menu) → [Delete Page].

2. Select a page that you want to delete using the left/right sides of the control wheel, and then press the center of the control wheel to delete the items.

Related Topic
- Add Item
- Delete All
Delete All

You can delete all the menu items added to ★ (My Menu) in MENU.

1. MENU → ★ (My Menu) → [Delete All].

2. Select [OK].

Related Topic
- Add Item
- Delete Page
Precautions

Refer also to “Notes on use” in the Startup Guide (supplied) for this product.

On the data specifications described in this manual

- The data on performance and specifications in this manual are based on an ordinary ambient temperature of 25°C (77°F), except where otherwise indicated.
- For the battery pack, the data are based on a battery pack that was fully charged until the charge lamp turned off.

On operating temperatures

- Shooting in extremely cold or hot places that exceed this range is not recommended.
- Under high ambient temperatures, the temperature of the camera rises quickly.
- When the temperature of the camera rises, the image quality may deteriorate. It is recommended that you wait until the temperature of the camera drops before continuing to shoot.

Notes on recording for long periods of time or recording 4K movies

Especially during 4K movie shooting, the recording time may be shorter under low temperature conditions. Warm up the battery pack or replace it with a new battery.

Notes on playing movies on other devices

XAVC S movies can be played back only on XAVC S-supported devices.

Backing up memory cards

Data may be corrupted in the following cases. Be sure to back up the data for protection.

- When the memory card is removed, the USB cable is disconnected, or the product is turned off in the middle of a read or write operation.
- When the memory card is used in locations subject to static electricity or electrical noise.

Database file error

- If you insert a memory card that does not contain an image database file into the product and turn on the power, the product automatically creates an image database file using some of the memory card’s capacity. The process may take a long time and you cannot operate the product until the process is completed.
- If a database file error occurs, export all images to your computer using PlayMemories Home, and then format the memory card using this product.

Do not use/store the product 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
  - It may cause malfunctions and an inability to record data. In addition, the recording media may become unusable, and recorded data may be corrupted.
- Near strong magnetic place
In sandy or dusty places
Be careful not to let sand or dust get into the product. This may cause the product to malfunction, and in some cases this malfunction cannot be repaired.

In places with high humidity
This may cause the lens to mold.

In areas where strong radio waves or radiation are being emitted
Recording and playback may not function correctly.

### On moisture condensation

- If the product is brought directly from a cold to a warm location, moisture may condense inside or outside the product. This moisture condensation may cause a malfunction of the product.
- To prevent moisture condensation when you bring the product directly from a cold to a warm location, first put it in a plastic bag and seal it to prevent air from entering. Wait for about an hour until the temperature of the product has reached the ambient temperature.
- If moisture condensation occurs, turn off the product 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.

### Precaution on carrying

- Do not hold, hit, or apply excessive force to the following parts, if your camera is equipped with them:
  - The lens part
  - The movable monitor part
  - The movable flash part
  - The movable viewfinder part

- Do not carry the camera with the tripod attached. This may cause the tripod socket hole to break.
- Do not sit down in a chair or other place with the camera in the back pocket of your trousers or skirt, as this may cause malfunction or damage the camera.

### Notes on handling the product

- Before you connect the cable to the terminal, be sure to check the orientation of the terminal. Then, insert the cable straight. Do not insert or remove the cable forcefully. This may cause the terminal part to break.
- The camera uses magnetic parts including magnets. Do not bring objects affected by magnetism, including credit cards and floppy disks, close to the camera.
- The recorded image may be different from the image you monitored before recording.

### On storing

- For lens-integrated cameras
  Always attach the lens cap when you are not using the camera. (Only for models supplied with a lens cap)

- For interchangeable-lens cameras
  Always attach the lens front cap or body cap when you are not using the camera. To prevent dust or debris from getting inside the camera, remove dust from the body cap before attaching it to the camera.
  If the camera is dirty after use, clean it. Water, sand, dust, salt, etc. left in the camera may cause a malfunction.

### Notes on using lenses

- When using the power zoom lens, be careful not to get your fingers or any other objects caught in the lens. (Only for models with a power zoom feature or interchangeable lens cameras)
- If you must place the camera under a light source such as sunlight, attach the lens cap to the camera. (Only for models supplied with a lens cap or interchangeable lens cameras)
- When you shoot with backlighting, keep the sun sufficiently far away from the angle of view. Otherwise, the sunlight may enter the focus inside the camera and cause smoke or fire. Even if the sun is slightly away from the angle of view, it may still cause smoke or fire.
- Do not directly expose the lens to beams such as laser beams. That may damage the image sensor and cause the camera to malfunction.
- If the subject is too close, the image may show any dust or fingerprints on the lens. Wipe the lens with a soft cloth, etc.
Notes on the flash (Only for models with a flash)
- Keep your fingers away from the flash. The light-emitting part may get hot.
- Remove any dirt from the surface of the flash. Dirt on the surface of the flash may emit smoke or burn due to heat generated by the emission of light. If there is dirt/dust, clean it off with a soft cloth.
- Restore the flash to its original position after using it. Make sure that the flash portion is not sticking up. (Only for models with a movable flash)

Notes on the Multi Interface Shoe (Only for models with a Multi Interface Shoe)
- When attaching or detaching accessories such as an external flash to the Multi Interface Shoe, first turn the power to OFF. When attaching the accessory, confirm that it is firmly fastened to the camera.
- Do not use the Multi Interface Shoe with a commercially available flash that applies voltages of 250 V or more or has the opposite polarity of the camera. It may cause a malfunction.

Notes on the viewfinder and flash (Only for models with a viewfinder or a flash)
- Take care that your finger is not in the way when pushing the viewfinder or flash down. (Only for models with a movable viewfinder or a movable flash)
- If water, dust or sand adheres to the viewfinder or flash unit, it may cause a malfunction. (Only for models with a movable viewfinder or a movable flash)

Notes on the viewfinder (Only for models with a viewfinder)
- When shooting with the viewfinder, you may experience symptoms such as eyestrain, fatigue, travel sickness, or nausea. We recommend that you take a break at regular intervals when you are shooting with the viewfinder.
- Do not forcibly push down the viewfinder when the eyepiece is pulled out. It may cause a malfunction. (Only for models with a movable viewfinder and an eyepiece that can be pulled out)
- If you pan the camera while looking into the viewfinder or move your eyes around, the image in the viewfinder may be distorted or the color of the image may change. This is a characteristic of the lens or display device and is not a malfunction. When you shoot an image, we recommend that you look at the center area of the viewfinder.
- The image may be slightly distorted near the corners of the viewfinder. This is not a malfunction. When you want to see the full composition with all its details, you can also use the monitor.
- If you use the camera in a cold location, the image may have a trailing appearance. This is not a malfunction.

Notes on the monitor
- Do not press against the monitor. The monitor may be discolored and that may cause a malfunction.
- If the monitor has drops of water or other liquids on it, wipe it with a soft cloth. If the monitor stays wet, the surface of the monitor may change or deteriorate. This may cause a malfunction.
- If you use the camera in a cold location, the image may have a trailing appearance. This is not a malfunction.

On image data compatibility
This product conforms with DCF (Design rule for Camera File system) universal standard established by JEITA (Japan Electronics and Information Technology Industries Association).

Services and software provided by other companies
Network services, content, and the [operating system and] software of this Product may be subject to individual terms and conditions and changed, interrupted or discontinued at any time and may require fees, registration and credit card information.
On cleaning

Cleaning the lens, finder and flash

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

Cleaning the lens

- Do not use a cleaning solution containing organic solvents, such as thinner, or benzine.
- When cleaning the lens surface, remove dust with a commercially available blower. In case of dust that sticks to the surface, wipe it off with a soft cloth or tissue paper slightly moistened with lens cleaning solution. Wipe in a spiral pattern from the center to the outside. Do not spray lens cleaning solution directly onto the lens surface.

Cleaning the product surface

Clean the product 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 product to chemical products such as thinner, benzine, alcohol, disposable cloths, insect repellent, sunscreen or insecticide.
- Do not touch the product with any of the above on your hand.
- Do not leave the product in contact with rubber or vinyl for a long time.

Cleaning the monitor

- If you wipe the monitor firmly using tissue paper, etc., the coating may be scratched.
- If the monitor becomes dirty with fingerprints or dust, gently remove the dust from the surface, and then clean the monitor using soft cloth, etc.
Number of recordable images

When you insert a memory card into the camera and turn the camera on, the number of images that can be recorded (should you continue to shoot using the current settings) is displayed on the screen.

Note

- When “0” (the number of recordable images) flashes in orange, the memory card is full. Replace the memory card with another one, or delete images from the current memory card.
- When “NO CARD” flashes in orange, it means no memory card has been inserted. Insert a memory card.

The number of images that can be recorded on a memory card

The table below shows the approximate number of images that can be recorded on a memory card formatted with this camera. The values are defined using Sony standard memory cards for testing. The values may vary depending on the shooting conditions and the type of memory card used.

| JPEG Image Size: [L: 18M] | "" |
| Aspect Ratio | [4:3] |

(Units: Images)

<table>
<thead>
<tr>
<th>JPEG Quality/ File Format</th>
<th>8 GB</th>
<th>32 GB</th>
<th>64 GB</th>
<th>128 GB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>1600</td>
<td>6600</td>
<td>13000</td>
<td>26000</td>
</tr>
<tr>
<td>Fine</td>
<td>1100</td>
<td>4600</td>
<td>9200</td>
<td>18000</td>
</tr>
<tr>
<td>Extra fine</td>
<td>570</td>
<td>2300</td>
<td>4600</td>
<td>9200</td>
</tr>
<tr>
<td>RAW &amp; JPEG *2</td>
<td>290</td>
<td>1150</td>
<td>2350</td>
<td>4700</td>
</tr>
<tr>
<td>RAW</td>
<td>390</td>
<td>1550</td>
<td>3150</td>
<td>6300</td>
</tr>
</tbody>
</table>

*1 When the [Aspect Ratio] is set to other than [4:3], you can record more images than the numbers shown in the table above.
*2 [JPEG Quality] when [RAW & JPEG] is selected: [Fine]

Note

- Even if the number of recordable images is higher than 9999 images, “9999” will appear.
- The numbers shown are when using a Sony memory card.
### Recordable movie times

The table below shows the approximate total recording times using a memory card formatted with this camera. The values may vary depending on the shooting conditions and the type of memory card used.

The recording times for when [File Format] is set to [XAVC S 4K] and [XAVC S HD] are recording times when shooting with [Proxy Recording] set to [Off].

(h (hour), min (minute))

<table>
<thead>
<tr>
<th>Format</th>
<th>8 GB</th>
<th>32 GB</th>
<th>64 GB</th>
<th>128 GB</th>
</tr>
</thead>
<tbody>
<tr>
<td>XAVC S 4K 30p 100M/25p 100M</td>
<td>9 min</td>
<td>35 min</td>
<td>1 h 15 min</td>
<td>2 h 35 min</td>
</tr>
<tr>
<td>XAVC S 4K 30p 60M/25p 60M</td>
<td>10 min</td>
<td>1 h</td>
<td>2 h 5 min</td>
<td>4 h 15 min</td>
</tr>
<tr>
<td>XAVC S 4K 24p 100M*/--</td>
<td>9 min</td>
<td>35 min</td>
<td>1 h 15 min</td>
<td>2 h 35 min</td>
</tr>
<tr>
<td>XAVC S 4K 24p 60M*/--</td>
<td>10 min</td>
<td>1 h</td>
<td>2 h 5 min</td>
<td>4 h 15 min</td>
</tr>
<tr>
<td>XAVC S HD 120p 100M/100p 100M</td>
<td>9 min</td>
<td>35 min</td>
<td>1 h 15 min</td>
<td>2 h 35 min</td>
</tr>
<tr>
<td>XAVC S HD 120p 60M/100p 60M</td>
<td>10 min</td>
<td>1 h</td>
<td>2 h 5 min</td>
<td>4 h 15 min</td>
</tr>
<tr>
<td>XAVC S HD 60p 50M/50p 50M</td>
<td>15 min</td>
<td>1 h 15 min</td>
<td>2 h 35 min</td>
<td>5 h 10 min</td>
</tr>
<tr>
<td>XAVC S HD 60p 25M/50p 25M</td>
<td>30 min</td>
<td>2 h 25 min</td>
<td>5 h</td>
<td>10 h 05 min</td>
</tr>
<tr>
<td>XAVC S HD 30p 50M/25p 50M</td>
<td>15 min</td>
<td>1 h 15 min</td>
<td>2 h 35 min</td>
<td>5 h 10 min</td>
</tr>
<tr>
<td>XAVC S HD 30p 16M/25p 16M</td>
<td>50 min</td>
<td>3 h 50 min</td>
<td>7 h 45 min</td>
<td>15 h 40 min</td>
</tr>
<tr>
<td>XAVC S HD 24p 50M*/--</td>
<td>15 min</td>
<td>1 h 15 min</td>
<td>2 h 35 min</td>
<td>5 h 10 min</td>
</tr>
<tr>
<td>AVCHD 60i 24M(FX)/50i 24M(FX)</td>
<td>40 min</td>
<td>2 h 55 min</td>
<td>6 h</td>
<td>12 h 05 min</td>
</tr>
<tr>
<td>AVCHD 60i 17M(FH)/50i 17M(FH)</td>
<td>55 min</td>
<td>4 h 5 min</td>
<td>8 h 15 min</td>
<td>16 h 35 min</td>
</tr>
</tbody>
</table>

* Only when [NTSC/PAL Selector] is set to NTSC.

Continuous movie shooting is possible for a maximum of approximately 29 minutes at a time with the camera’s default settings and an ambient temperature of approximately 25°C (77°F).

However, the recording time is approximately 5 minutes when shooting movies in XAVC S 4K/XAVC S HD 120p/100p format.

(a product specification limit)

**Note**

- 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.

- The times shown are recordable times using a Sony memory card.

**Notes on continuous movie recording**
High-quality movie recording and high-speed continuous shooting require large amounts of power. Therefore, if you continue to shoot, the temperature inside the camera will rise, especially that of the image sensor. In such cases, the camera will turn off automatically because the surface of the camera is heated to a high temperature or the high temperature affects the quality of the images or the internal mechanism of the camera.

The duration of time available for continuous movie recording when the camera records with the default settings after the power has been turned off for a while is as follows. The values indicate the continuous time from when the camera starts recording until the camera stops recording.

**Ambient temperature: 20°C (68°F)**
- Continuous recording time for movies (HD): Approx. 29 minutes
- Continuous recording time for movies (4K): Approx. 5 minutes

**Ambient temperature: 30°C (86°F)**
- Continuous recording time for movies (HD): Approx. 20 minutes
- Continuous recording time for movies (4K): Approx. 5 minutes

**Ambient temperature: 40°C (104°F)**
- Continuous recording time for movies (HD): Approx. 15 minutes
- Continuous recording time for movies (4K): Approx. 5 minutes

[Auto Pwr OFF Temp.]: [Standard]
- HD: XAVC S HD (60p 50M/50p 50M, when the camera is not connected via Wi-Fi)
- 4K: XAVC S 4K (30p 60M/25p 60M, when the camera is not connected via Wi-Fi)

The duration of time available for movie recording varies with the temperature, file format/record setting for movies, Wi-Fi network environment, or condition of the camera before you start recording. If you frequently recompose or shoot images after the power is turned on, the temperature inside the camera will rise and the recording time available will be shorter.

- If the icon appears, the temperature of the camera has risen.
- If the camera stops movie recording due to a high temperature, leave it for some time with the power turned off. Start recording after the temperature inside the camera drops fully.
- If you observe the following points, you will be able to record movies for longer periods of time.
  - Keep the camera out of direct sunlight.
  - Turn the camera off when it is not being used.

- When [File Format] is set to [AVCHD], the file size of movies is limited to approx. 2 GB. If the movie file size reaches approx. 2 GB during recording, a new movie file will be created automatically.
Using the AC Adaptor/battery charger abroad

You can use the battery charger (sold separately) and the AC Adaptor (supplied) in any country or region where the power supply is within 100 V to 240 V AC and 50 Hz/60 Hz. Depending on the country/region, a converting plug adaptor may be needed to connect to a wall outlet (wall socket). Consult a travel agency, etc., and prepare one in advance.

Note

- Do not use an electronic voltage transformer as doing so may cause a malfunction.
AVCHD format

The AVCHD format was developed for high-definition digital video cameras when recording an HD (High-Definition) signal using high-efficiency compression coding technology. The MPEG-4 AVC/H.264 format is used to compress video data, and the Dolby Digital or Linear PCM system is used to compress audio data. The MPEG-4 AVC/H.264 format is capable of compressing images at higher efficiency than that of the conventional image compressing format.

- As the AVCHD format uses compression coding technology, the picture may be unstable in scenes where the screen, angle of view, or brightness, etc. change drastically, but this is not a malfunction.
License

Notes on the License

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Specifications

<table>
<thead>
<tr>
<th>Camera</th>
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[System]

Camera Type
Digital Still Camera

[Image sensor]

Image format
7.82 mm (1/2.3 type), Exmor R CMOS image sensor
Effective pixel number of camera
Approx. 18 200 000 pixels
Total pixel number of camera:
Approx. 21 100 000 pixels

[Lens]

ZEISS Vario-Sonnar T *
f = 4.25 – 118 mm (84 deg. – 3 deg. 30 min. (24 – 720 mm) (Angle of View (35 mm format equivalent)))
F3.5 (W) – 6.4 (T)

[SteadyShot]

System
Optical

[Auto focus system]

Detection system
Contrast detection system

[Flash]

Flash range (ISO sensitivity (Recommended Exposure Index) set to Auto)
Approx. 0.3 m to 5.4 m (11 13/16 inches to 17 ft. 8 19/32 inches) (W)/Approx. 2.5 m to 3.0 m (8 ft. 2 27/64 inches to 9 ft. 10 7/64 inches) (T)

[Electronic Viewfinder]

Type
Electronic Viewfinder (Organic Electro-Luminescence)
Total number of dots
638 400 dots
Magnification
Approx. 0.50× with 50 mm lens at infinity, −1 m⁻¹
Eye Point
Approx. 20 mm from the eyepiece and approx. 19.2 mm from the eyepiece frame at −1 m⁻¹
Diopter Adjustment
−4.0 m⁻¹ to +3.0 m⁻¹
[Monitor]

**LCD monitor**
7.5 cm (3.0 type) TFT drive, touch panel

**Total number of dots**
921 600 dots

[Recording format]

**File format**
JPEG (DCF Ver. 2.0, Exif Ver. 2.31, MPF Baseline) compliant, RAW (Sony ARW 2.3 format)

**Movie (XAVC S format)**
MPEG-4 AVC/H.264 XAVC S ver.1.0 format compliant
Video: MPEG-4 AVC/H.264
Audio: LPCM 2ch (48 kHz 16 bit)

**Movie (AVCHD format)**
AVCHD format Ver. 2.0 compatible
Video: MPEG-4 AVC/H.264
Audio: Dolby Digital 2ch, equipped with Dolby Digital Stereo Creator

- Manufactured under license from Dolby Laboratories.

[Recording media]

Memory Stick Micro media, microSD memory cards

[Input/output terminals]

**Multi/Micro USB Terminal**
Hi-Speed USB (USB 2.0)
* Supports Micro USB compatible devices.

HDMI
HDMI type D micro jack

[Power, general]

**Rated input**
3.6 V, 1.8 W

**Operating temperature**
0 to 40°C (32 to 104°F)

**Storage temperature**
-20 to 55°C (−4 to 131°F)

**Dimensions (W/H/D) (Approx.)**
102.0 × 58.1 × 35.5 mm (4 1/8 × 2 3/8 × 1 7/16 in.)

**Mass (CIPA compliant) (Approx.)**
242 g (8.6 oz) (including battery pack, microSD memory card)

[Wireless LAN]

**Supported format**
IEEE 802.11 b/g/n

**Frequency band**
2.4 GHz

**Security**
WEP/WPA-PSK/WPA2-PSK

**Connection method**
Wi-Fi Protected Setup™ (WPS)/Manual

**Access method**
Infrastructure mode
[NFC]
Tag type
NFC Forum Type 3 Tag compliant

[Bluetooth communications]
Bluetooth standard Ver. 4.1

Frequency band
2.4 GHz

AC Adaptor AC-UUD12/AC-UUE12

Rated input
100 - 240 V, 50/60 Hz, 0.2 A

Rated output
5 V, 1.5 A

AC Adaptor AC-UB10C

Rated input
100 - 240 V, 50/60 Hz, 70 mA

Rated output
5 V, 0.5 A

Rechargeable battery pack NP-BX1

Rated voltage
3.6 V

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Troubleshooting

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

1. If a message such as “C/E:□□:□□” appears on the screen, refer to the self-diagnosis display.

2. Remove the battery pack, wait for about one minute, re-insert the battery pack, then turn on the power.

3. Initialize the settings.

4. Consult your dealer or local authorized service facility. Additional information on this product and answers to frequently asked questions can be found at our Customer Support Website.
   http://www.sony.net/

Related Topic
- Self-diagnosis display
- Setting Reset
Help Guide

Digital Still Camera
DSC-HX99

Self-diagnosis display

If a code starting with a letter of the alphabet appears, the self-diagnosis function on this product is working. The last two digits (indicated by □□) will differ depending on the state of this product.

If you cannot solve the problem even after trying the following corrective actions a few times, this product may need repair. Contact your Sony dealer or local authorized Sony service facility.

C:32:□□
- There is trouble with the product’s hardware. Turn the power off and on again.

C:13:□□
- This product cannot read or write data on the memory card. Try turning off and on this product again, or taking out and inserting the memory card several times.
- An unformatted memory card is inserted. Format the memory card.
- The inserted memory card cannot be used with this product, or the data is damaged. Insert a new memory card.

E:61:□□

E:62:□□

E:91:□□
- A product malfunction has occurred. Initialize this product, then turn the power on again.

E:94:□□
- There is a malfunction when writing or deleting data. Repair is required. Contact your Sony dealer or local authorized Sony service facility. Be prepared to give all numbers in the error code beginning from the E.

Related Topic
- Format
- Setting Reset

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**Warning messages**

**Set Area/Date/Time.**

- Set the area, date and time. If you have not used the product for a long time, charge the internal rechargeable backup battery.

**Unable to use memory card. Format?**

- The memory card was formatted on a computer and the file format was modified. Select [Enter] and then format the memory card. You can use the memory card again, however, all previous data in the memory card is erased. It may take some time to complete the format. If the message still appears, change the memory card.

**Memory Card Error**

- An incompatible memory card is inserted.
- Formatting has failed. Format the memory card again.

**Unable to read memory card. Reinsert memory card.**

- An incompatible memory card is inserted.
- The memory card is damaged.
- The terminal section of the memory card is dirty.

**Cannot open the shutter since the memory card is not inserted.**

- No memory card has been inserted.
- To release the shutter without inserting a memory card into the camera, set [Release w/o Card] to [Enable]. In this case, images will not be saved.

**This memory card may not be capable of recording and playing normally.**

- An incompatible memory card is inserted.

**Processing...**

- When performing noise reduction, the reduction process takes place. You cannot do any further shooting during this reduction process.

**Unable to display.**

- Images recorded with other products or images modified with a computer may not be displayed.
- Processing on the computer such as deletion of the image files may cause inconsistencies in the image database files. Repair the image database files.

**Unable to print.**

- You tried to mark RAW images with a DPOF mark.

**Internal temp. high. Allow it to cool.**

- The product has become hot because you have been shooting continuously. Turn the power off and cool the product and wait until the product is ready to shoot again.
You have been recording images for a long time, the product temperature has risen.

The number of images exceeds that for which date management in a database file by the product is possible.

Unable to register to the database file. Import all the images to a computer using PlayMemories Home and recover the memory card.

Image Database File error

There is something wrong in the Image Database File. Select [Setup] → [Recover Image DB].

System Error
Camera Error. Turn power off then on.

Remove the battery pack, and then re-insert it. If the message appears frequently, consult local authorized Sony service facility.

Image Database File error. Recover?

You cannot record and play back an AVCHD movie because the Image Database File is damaged. Recover the Image Database File following the on-screen instructions.

Unable to magnify.
Unable to rotate image.

Images recorded with other products may not be enlarged or rotated.

Cannot create more folders.

A folder in the memory card has the first three digits “999.” You cannot create any more folders on this camera.

Related Topic

Notes on memory card
Format
Recommended pages

- **How to transfer images to smartphone**
  You can transfer images shot with this camera to smartphone. The application PlayMemories Mobile must be installed in advance.

- **Zoom Assist**
  This function helps you compose your shot by zooming out temporarily when you lose track of the subject, so that you can relocate the subject quickly.

- **DSC-HX99: Accessories compatibility information**
  This website provides the accessories compatibility information. (Another window will open.)