SONY

Interchangeable Lens Digital Camera

ILCA-99M2 α99II

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- HDMI Settings: 24p/60p Output (movie) (Only for 1080 60i compatible models)
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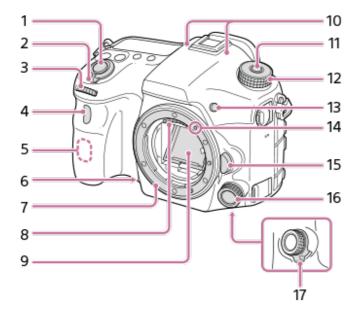
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[1] Names of parts/Icons and indicators | Names of parts

Front side

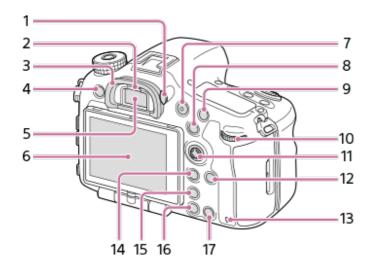


- 1. Shutter button
- 2. ON/OFF (Power) switch
- 3. Front dial
 - You can quickly adjust the settings for each shooting mode.
- 4. Remote sensor/Self-timer lamp
- 5. Wi-Fi antenna (built-in)
- 6. Preview button
- 7. Mount
- 8. Lens contacts*
- 9. Mirror*

- 10. Microphone**
- 11. Mode dial lock release button
- 12. Mode dial
- 13. C2 button (Custom button 2)
- 14. Mounting index
- 15. Lens release button
- 16. Front multi-controller
- 17. Front multi-controller click switch
- * Do not directly touch these parts.
- ** Do not cover this part during movie recording. Doing so may cause noise or lower the volume.

[2] Names of parts/Icons and indicators | Names of parts

Rear side



1. Diopter-adjustment dial

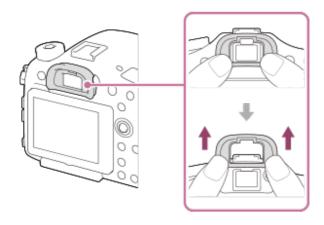
Adjust the diopter-adjustment dial according to your eyesight until the display appears
clearly in the viewfinder. If it is hard to operate the diopter-adjustment dial, remove the
eyepiece cup before operating the dial.



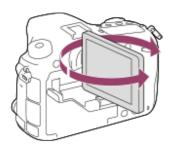
- 2. Eye sensor
- 3. Eyepiece cup

To remove the eyepiece cup

Grasp the eyepiece cup on the left and right sides and lift it up.



- Remove the eyepiece cup when you attach an accessory (sold separately) to the Multi Interface Shoe.
- Remove the eyepiece cup when attaching an angle viewfinder (sold separately). Also, select MENU → 2 (Camera Settings2) → [FINDER/MONITOR] → [Manual], and then switch the viewfinder display and the monitor display by pressing the FINDER/MONITOR button.
- 4. MENU button
- 5. Viewfinder*
- 6. Monitor
 - You can adjust the monitor to an easily viewable angle and shoot from any position.



- 7. MOVIE (Movie) button
- 8. For shooting: AEL button/SLOW SYNC button

For viewing: [Image index] button

- When shooting with a flash, shoot images while pressing and holding the SLOW SYNC button to brightly capture not only the subject but also the background.
- 9. For shooting: AF/MF button

For viewing: (Enlarge) button

- 10. Rear dial
 - You can quickly adjust the settings for each shooting mode.
- 11. Multi-selector/Center button
- 12. DISP (Display) button
- 13. Access lamp
- 14. For shooting: Fn (Function) button

For viewing: (Send to Smartphone) button

You can display the screen for [Send to Smartphone] by pressing this button.

When you attach a vertical grip (sold separately), pressing the $\lnot \lnot$, (Image rotation) button on the vertical grip displays the [Send to Smartphone] screen.

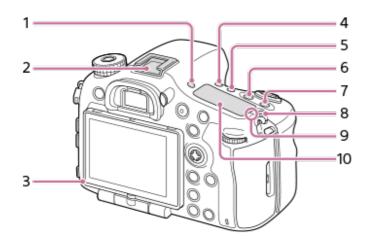
- 15. ju (Smart Telecon.) button
 - Smart Teleconverter magnifies and trims the center of the image, then records it.
- 16. Playback) button
- 17. For shooting: C1 button (Custom button 1)

For viewing: in (Delete) button

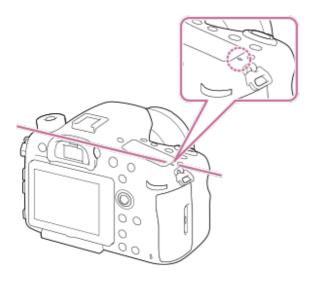
Do not directly touch these parts.

[3] Names of parts/Icons and indicators | Names of parts

Top side



- 1. FINDER/MONITOR button
- 2. Multi Interface Shoe*
 - Some accessories may not go in all the way and protrude backward from the Multi interface shoe. However, when the accessory reaches the front end of the shoe, the connection is completed.
- 3. Light sensor
- 4. 8 / 🗐 (Drive mode) button
- 5. WB (White balance) button
- 6. (Exposure compensation) button
- 7. ISO button
- 8. 🌣 (Display panel illumination) button
- 9. Image sensor position mark
 - The image sensor is the sensor that converts light into an electric signal. The mark shows the location of the image sensor. When you measure the exact distance between the camera and the subject, refer to the position of the horizontal line.



• If the subject is closer than the minimum shooting distance of the lens, the focus cannot be confirmed. Make sure you put enough distance between the subject and the camera.

10. Display panel

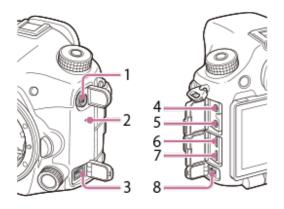
- * For details on compatible accessories for the multi interface shoe, visit the Sony website, or consult your Sony dealer or local authorized Sony service facility.
 - Accessories for the Accessory Shoe can also be used. Operations with other manufactures' accessories are not guaranteed.



Accessory Shoe

[4] Names of parts/Icons and indicators | Names of parts

Sides



- 1. 🕻 (Flash sync) terminal
- 2. Speaker
- 3. REMOTE terminal
 - When connecting the Remote Commander (sold separately) to the camera, insert the

plug of the Remote Commander into the REMOTE terminal, aligning the guide of the plug with the guide of the REMOTE terminal. Make sure that the cord of the Remote Commander faces forward.

4. (Microphone) jack

When an external microphone is connected, the microphone turns off automatically.
 When the external microphone is a plugin-power type, the power of the microphone is supplied by the camera.

5. (Headphones) jack

You can check the sound while recording or playing back movies.

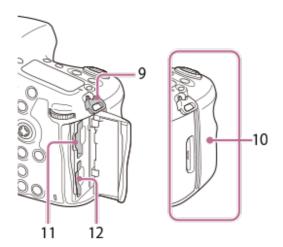
6. HDMI micro jack

7. Multi/Micro USB Terminal*

This terminal supports Micro USB-compatible devices.

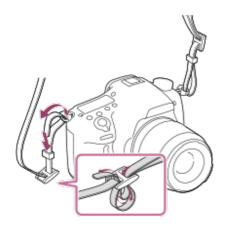
8. DC IN terminal

 Use an AC Adaptor (sold separately) that supports shooting and playback to supply power while shooting or playing back images. When connecting the AC Adaptor (sold separately) to the camera, turn the camera off, then plug the connector of the AC Adaptor into the DC IN terminal on the camera.



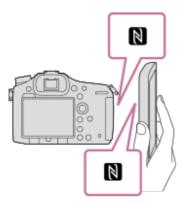
9. Hooks for shoulder strap

Attach both ends of the strap onto the camera.



10. N (N mark)

 This mark indicates the touch point for connecting the camera and an NFC-enabled Smartphone.



 NFC (Near Field Communication) is an international standard of short-range wireless communication technology.

11. SLOT1 (Memory card slot 1)

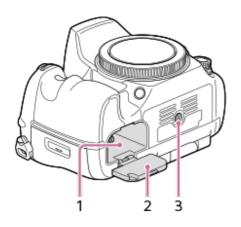
Supports SD cards and Memory Stick PRO Duo

12. SLOT2 (Memory card slot 2)

- Supports SD cards only
- * For details on compatible accessories for the Multi/Micro USB Terminal, visit the Sony website, or consult your Sony dealer or local authorized Sony service facility.

[5] Names of parts/Icons and indicators | Names of parts

Bottom

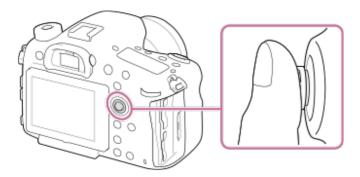


- 1. Battery insertion slot
- 2. Battery cover
- 3. Tripod socket hole

• Use a tripod with a screw less than 5.5 mm (7/32 inches) long. Otherwise, you cannot firmly secure the camera, and damage to the camera may occur.

[6] Names of parts/Icons and indicators | Basic operations

Using the multi-selector



- Put your finger right on top of the multi-selector to manipulate it more precisely.
- You can move the selection frame by pressing the multi-selector up/down/left/right. The selection frame can be moved in eight directions in some situations. The item selected with the multi-selector can be entered by pressing the center of the multi-selector.
- Press the multi-selector left/right while playing back images to display the previous or next image.
- The [Focus Standard] function is assigned to the center of the multi-selector in the default settings.

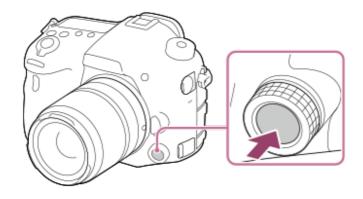
[7] Names of parts/Icons and indicators | Basic operations

Using the front multi-controller

You can change settings using the front multi-controller. The front-multi-controller can be assigned different functions in the still image and movie recording modes.

0

Press the button on the front multi-controller during shooting to display the setting screen.



- Select the desired setting by turning the front multi-controller.
- 3 Press the button on the front multi-controller to enter the selection.

To change the assigned function

You can change the assigned function by pressing and holding the button on the front multicontroller.

The assigned function can also be changed by selecting MENU \rightarrow 2 (Camera Settings2) \rightarrow [Custom Key(Shoot.)] \rightarrow [Front Multi Ctrl.] or [Front Multi Ctrl.].

Functions that can be assigned

Focus Mode

Focus Area

Select Focus Area

Shutter Speed

Aperture

Exposure Comp.

ISO

Metering Mode

White Balance

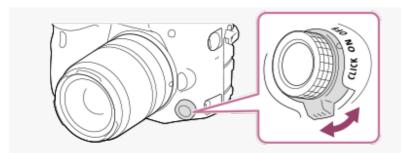
Creative Style

Picture Effect

Audio Rec Level (only in movie mode)

Hint

You can change the clicking pressure of the front multi-controller using the click switch. By setting
the click switch to "OFF," you can change the setting silently during movie recording.

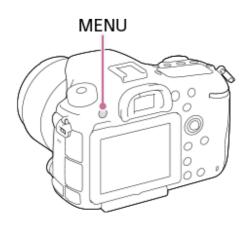


[8] Names of parts/Icons and indicators | Basic operations

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 items.



- Select the desired setting you want to adjust by pressing the multi-selector up/down/left/right, and then press the center of the multi-selector.
 - Select an icon at the top of the screen and press the multi-selector left/right to switch to a different MENU category.



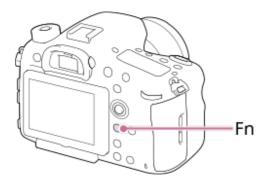
3 Select the desired setting value, and press the center to confirm your selection.

[9] Names of parts/Icons and indicators | Basic operations

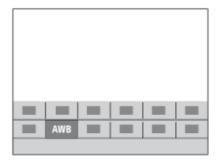
Using the Fn (Function) button

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.

- When using the monitor, press the DISP button repeatedly to display a screen mode other than [For viewfinder], and then press the Fn (Function) button.
 - When using the viewfinder, this procedure is not necessary.

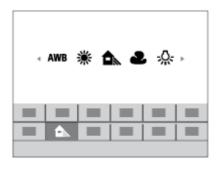


2 Select a function to set by pressing the multi-selector up/down/left/right.



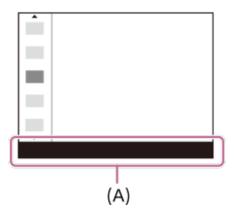


Select the desired setting by turning the front dial, and press the center of the multiselector. Some functions can be fine-tuned using the rear dial.



To adjust settings from the dedicated setting screens

Select the desired function in step 2, then press the center of the multi-selector. The dedicated setting screen for the function will appear. Follow the operating guide (A) to adjust settings.



[10] Names of parts/Icons and indicators | Basic operations

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.

- MENU \rightarrow 2 (Camera Settings2) \rightarrow [DISP Button] \rightarrow [Monitor] \rightarrow [For viewfinder], then select [Enter].
- 2 Press the DISP button to set the screen mode to [For viewfinder].
- 3 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



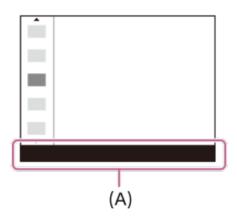
P/A/S/M/Sweep Panorama mode



- 4 Select a function to set by pressing the multi-selector up/down/left/right.
- 5 Select the desired setting by turning the front dial.
 - Some functions can be fine-tuned using the rear dial.

To adjust settings from the dedicated setting screens

Select the desired function in step 4, then press the center of the multi-selector. The dedicated setting screen for the function will appear. Follow the operating guide (A) to adjust settings.

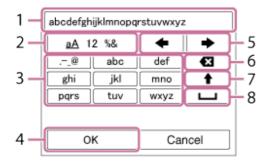


- Items that are gray on the Quick Navi screen are not adjustable.
- When using [Creative Style], some settings can only be controlled from the dedicated screen.

[11] Names of parts/Icons and indicators | Basic operations

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 multi-selector, 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" \rightarrow select " \rightarrow " ((5) Move cursor) and press the key for "abc" twice to display "b" \rightarrow 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. **ப**

Enters a space.

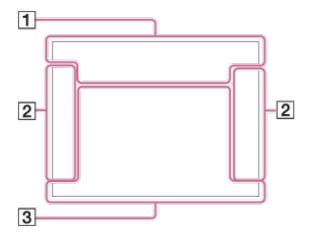
To cancel input, select [Cancel].

[12] Names of parts/Icons and indicators | Icons and indicators

List of icons on the monitor

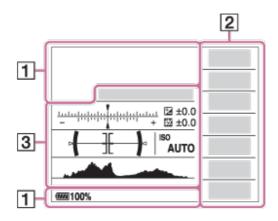
The displayed contents and their positions in the illustrations are just guidelines, and may differ from the actual displays.

Monitor mode

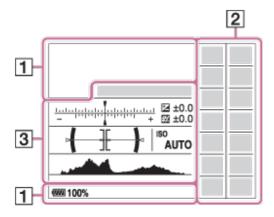


Viewfinder mode

[Intelligent Auto] mode

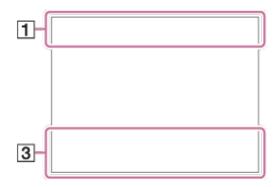


P/A/S/M/Sweep Panorama mode

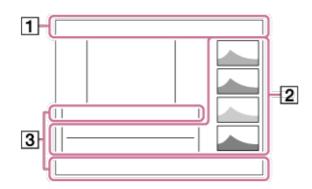


For playback

Basic information display



Histogram display



1. i PP*ASM i III IIP IIIA IIIS IIIM SAOP SAOA SAOS SAOM

Register number

Scene Recognition icons

Memory card/Uploading

100

Remaining number of recordable images

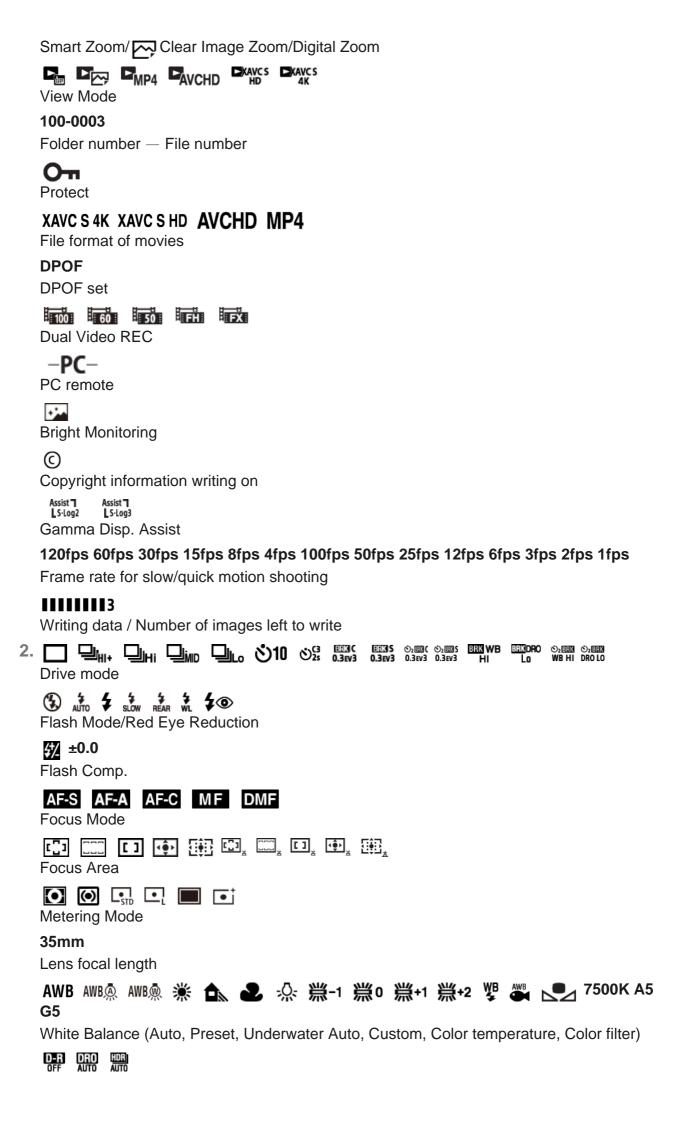
3:2 16:9

Aspect ratio of still images

42M / 36M / 18M / 15M / 11M / 8.9M / 4.5M / 3.8M

Image size of still images
RAW RAW+J RAW +J X.FINE FINE STD
Image quality of still images
120p 60p 60i 30p 24p 100p 50p 50i 25p Frame rate of movies
100 100
Bluetooth connection available/Bluetooth connection unavailable
Connected to smartphone/Not connected to smartphone
Remaining battery
Remaining battery warning
Flash charge in progress
APS-C/Super 35mm
VIEW Setting Effect OFF
NFC active
Airplane Mode
Flicker Flickering detected
9 0FF No audio recording of movies
Wind Noise Reduct.
(場合 (場合 (場合 (場合))) SteadyShot off/on, Camera shake warning
«♥»®mm «♥» № SteadyS. Focal Len. /Camera shake warning
Obtaining location information/Location information cannot be obtained
Overheating warning
Database file full/Database file error
s ⊕ c ⊕ p ⊕

₩IDE STD



D-Range Opt./Auto HDR

Std. Vivid Ntrl Clear Deep Light Port. Land. Sunset Night Autm B/W Sepia +3 +3 +3 +3 Creative Style /Contrast, saturation, and sharpness



Picture Effect



Copyright information exists for image



Face Detection

Anti-Flicker Anti-Flicker
ON OFF

Anti-flicker Shoot.



Select Rec. Media

3. Lock-on AF

Guide display for Center button Lock-on AF

-6--5--4--3--2--1--0--1--2--3--4+ Bracket indicator



Exposure compensation/Metered Manual

STBY

Movie recording standby

REC 1:00:12

Actual movie recording time (hours: minutes: seconds)



Focus indicator

1/250

Shutter speed

F3.5

F-value

ISO400

ISO AUTO

ISO sensitivity



Exposure Setting Guide



AE lock/FEL lock

*.....

Shutter speed indicator

Aperture indicator

Histogram

 \otimes Location information 90°44′55"N 233°44′55"W Latitude/longitude information (][) Digital level gauge CH1 ====== Audio Level Display D-R OFF DRO HDR HDR ! DRO/Auto HDR/Auto HDR image warning Rich Picture Effect error 2016-1-1 10:37AM Date of recording 3/7 File number/Number of images in the view mode GREC GRESTBY **REC Control** Spot metering area

Smart Telecon.

00:00:00:00

Time code (hours: minutes: seconds: frames)

00 00 00 00 User Bit

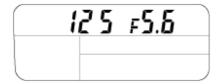
[13] Names of parts/Icons and indicators | Icons and indicators

Indicators on the display panel

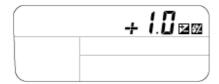
You can set the shutter speed and aperture, exposure compensation, flash compensation, ISO, white balance, drive mode, etc., using the display panel on top of the camera.



Shutter speed/Aperture



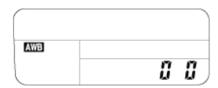
Exposure compensation/Flash compensation



ISO sensitivity



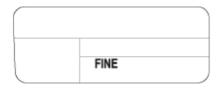
White Balance



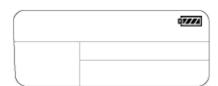
Drive Mode/Remote controller



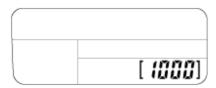
Image quality



Remaining battery



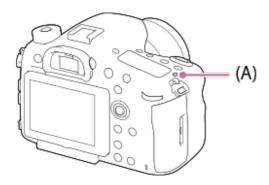
Remaining number of recordable images*



^{*} Even if the number of recordable images is higher than 9,999 images, "9999" will appear on the display panel.

To turn on the display panel backlight

Press the 🔆 (Display panel illumination) button (A) on top of the camera. If you press the button again, the display panel backlight will turn off.



[14] Names of parts/Icons and indicators | Icons and indicators

Switching the screen display (while shooting/during playback)

You can change the display contents on the screen.

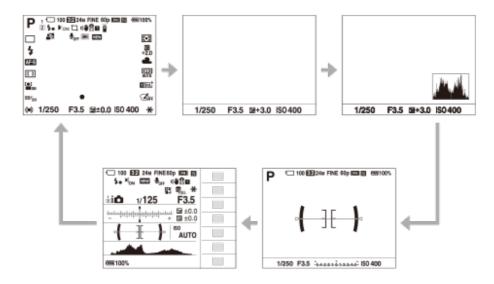


Press the DISP (Display Setting) button.

- 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 recording information 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. \rightarrow No Disp. Info. \rightarrow Histogram \rightarrow Level \rightarrow For viewfinder \rightarrow Display All Info.



During shooting (Viewfinder)

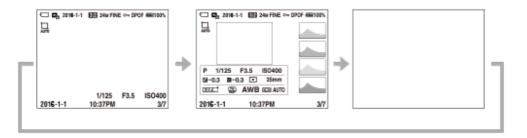
Level \rightarrow No Disp. Info. \rightarrow Histogram \rightarrow Level



During playback (Monitor/Viewfinder)

Display Info. \rightarrow Histogram \rightarrow No Disp. Info. \rightarrow Display Info.

- If the image has flare or black defects, the corresponding section blinks on the histogram display (flare/black defects warning).
- The settings for playback are also applied in [Auto Review].

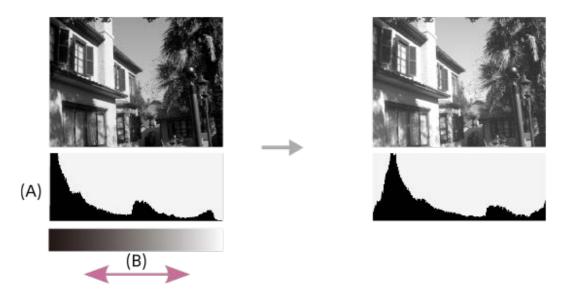


Histogram display

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.

Peaks at the right and left ends of the histogram indicate that the image has flare and black defects, respectively. You cannot correct such defects using a computer after shooting. Perform exposure compensation before shooting as necessary.



(A): Pixel count(B): Contrast

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

- The following are not displayed in the default settings.
 - Graphic Display
 - Display All Info. (when using the viewfinder)

To change the display modes, press MENU \rightarrow \bigcirc 2 (Camera Settings2) \rightarrow [DISP Button] and change the setting.

[15] Names of parts/Icons and indicators | Icons and indicators

DISP Button (Monitor/Finder)

shooting mode.



MENU \rightarrow 2 (Camera Settings2) \rightarrow [DISP Button] \rightarrow [Monitor] or [Finder] \rightarrow desired setting \rightarrow [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.:

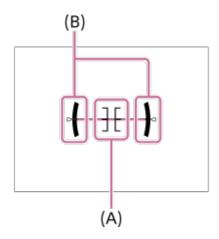
Does not show recording information.

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 both directions, the indicator turns to green.



For viewfinder*:

Displays information suited for shooting with the viewfinder.

* This screen mode is 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.

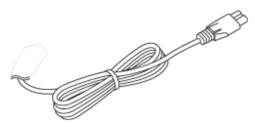
Checking the camera and the supplied items

The number in parentheses indicates the number of pieces.

- Camera (1)
- Battery charger (1)



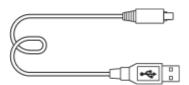
Power cord (mains lead) (1)* (supplied in some countries/regions)



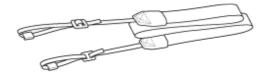
- * Multiple power cords may be supplied with your camera. Use the appropriate one that matches your country/region.
- Rechargeable battery pack NP-FM500H (1)



Micro USB Cable (1)



Shoulder strap (1)



Body cap (1) (Attached to the camera)



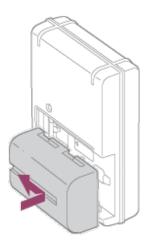
- Shoe cap (1) (Attached to the camera)
- Eyepiece cup (1) (Attached to the camera)
- Instruction Manual (1)
- Wi-Fi Connection/One-touch (NFC) Guide (1)

[17] Preparing the camera | Charging the battery pack

Charging the battery pack using a charger

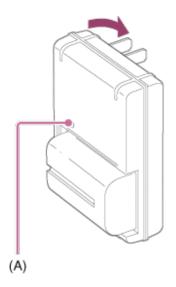
1 Insert the battery pack into the battery charger.

Push the battery pack lightly until it clicks.

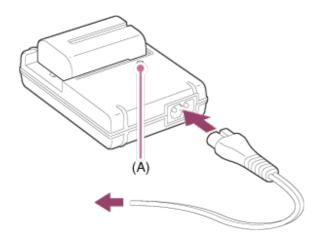


- 2 Connect the battery charger to the wall outlet (wall socket).
 - How to connect the battery charger may differ depending on the country/region.

With the battery charger that can be connected to the wall outlet (wall socket) directly



With the battery charger that requires the power cord to connect to the wall outlet (wall socket)



CHARGE lamp (orange)

Lit: Charging

Off: Charging finished

Flashing: Charging error or charging paused temporarily because the camera is not within the proper temperature range

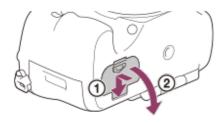
- Charging time (Full charge): The charging time is approximately 175 min.
- The above charging time applies when charging a fully depleted battery pack at a temperature of 25°C (77°F). Charging may take longer depending on conditions of use and circumstances.
- The CHARGE lamp (A) turns off when charging is completed.
- If the CHARGE lamp lights up and then immediately turns off, the battery pack is fully charged.

Note

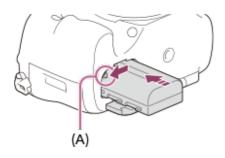
- We recommend charging the battery pack in an ambient temperature of between 10°C and 30°C (50°F and 86°F). You may not be able to efficiently charge the battery pack outside this temperature range.
- Use a nearby wall outlet (wall socket) when using the supplied or recommended AC Adaptor/battery charger. If any malfunction occurs while using this product, 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.
- 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 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.
- Be sure to use only genuine Sony brand battery packs.

Inserting/removing the battery pack

1 Open the battery cover.



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

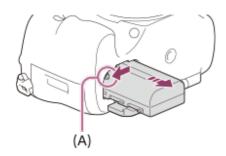


3 Close the cover.



To remove the battery pack

Turn off the camera and press lock lever **(A)**, then remove the battery pack. Be careful not to drop the battery pack.



Battery life and number of recordable images

		Battery life	Number of images
Shooting (still images) Actual shooting (movies)	Screen mode	-	Approx. 490
	Viewfinder mode	-	Approx. 390
	Screen mode	Approx. 85 min.	-
	Viewfinder mode	Approx. 85 min.	-
Continuous shooting (movies)	Screen mode	Approx. 135 min.	-
	Viewfinder mode	Approx. 135 min.	-

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 under the following conditions:
 - Using the battery pack at an ambient temperature of 25°C (77°F).
 - Using a 28-75mm F2.8 SAM lens (sold separately)
 - Using a Sony SDXC memory card of UHS Speed Class 3 ([3]) (sold separately)
 - [Viewfinder Bright.]: [Manual][±0]
 - [Monitor Brightness]: [Manual][±0]
 - [Display Quality]: [High]
- The numbers for "Shooting (still images)" are based on the CIPA standard and shooting under the following conditions:

(CIPA: Camera & Imaging Products Association)

- DISP: [Display All Info.]
- Focus Mode: [Automatic AF]
- One picture is taken every 30 seconds.
- The power is turned on and off once every ten times.
- 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.

[20] Preparing the camera | Charging the battery pack

Notes on the battery pack

Notes on using the battery pack

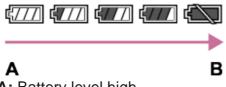
- Be sure to use only battery packs specified for this product.
- The correct remaining battery indicator may not be displayed under some operating or environmental conditions.
- Do not expose the battery pack to water. The battery pack is not water-resistant.
- Do not leave the battery pack in extremely 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 from the charger 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.

Remaining battery indicator

The remaining battery indicator appears on the screen.



A: Battery level highB: 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 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 175 minutes using the battery charger (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 pack 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.

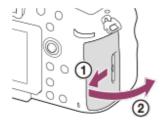
[21] Preparing the camera | Inserting a memory card (sold separately)

Inserting/removing a memory card

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

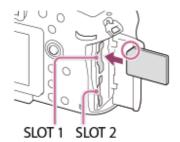
1

Open the memory card cover.



2 Insert the memory card into the slot 1.

When using two memory cards, insert the second one into the slot 2.



With the notched corner facing in the direction illustrated, insert the memory card until
it clicks into place. Insert the memory card correctly. Not doing so may cause a
malfunction.

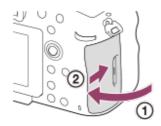
Memory card types that can be inserted into the memory card slots

Slot 1: Memory Stick media/SD card

Slot 2: SD card only*

* You cannot insert a Memory Stick media into the slot 2.

3 Close the cover.

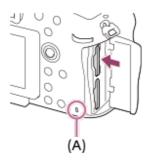


Hint

- 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 record the same image on two memory cards at the same time or to sort recorded images onto
 two memory card slots by the image type (still image/movie), select MENU → ♣ (Setup) →

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.



[22] Preparing the camera | Inserting a memory card (sold separately)

Memory cards that can be used

You can use the following types of memory cards with this camera. The \checkmark mark indicates that these memory cards can be used for shooting still images or movies.

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

For still images	For movies		
	MP4	AVCHD	XAVC S
✓	(Mark2 only)	(Mark2 only)	_
✓	✓	✓	✓ *1
✓	(Mark2 only)	(Mark2 only)	_
✓	✓ *2	✓ *2	_
✓	✓ *2	✓ *2	✓ *3
✓	✓ *2	✓ *2	✓ *3
✓	✓ *2	✓ *2	_
✓	✓ *2	✓ *2	√ *3
	For still images	For still images MP4 ✓ (Mark2 only) ✓ (Mark2 only) ✓ (Mark2 only) ✓ *2 ✓ *2 ✓ *2 ✓ *2 ✓ *2	For still images MP4 AVCHD ✓ (Mark2 only) ✓ (Mark2 only) ✓ (Mark2 only) ✓ ✓*2 ✓ ✓*2 ✓ ✓*2 ✓ ✓*2 ✓ ✓*2 ✓ ✓*2 ✓ ✓*2

- *1 Movies cannot be recorded in 100 Mbps or more.
- *2 SD Speed Class 4 (CLASS (a) or faster, or UHS Speed Class U1 (1) or faster
- *3 SD Speed Class10 (class(c)), or UHS Speed Class U1 (1) or faster When recording in 100 Mbps or more, UHS Speed Class U3 (1) is required.

Note

- Memory Stick media cannot be used in the slot 2.
- When an SDHC 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.
- When recording a movie on memory cards in both the slot 1 and the slot 2 with following camera settings, insert two memory cards with the same file system. XAVC S movies cannot be recorded simultaneously when using a combination of the exFAT file system and FAT32 file system.
 - [File Format] is set to [XAVC S 4K] or [XAVC S HD].
 - [Recording Mode] is set to [Simult. (日)] or [Simult. (四/日)].

Memory card	File system
SDXC memory card	exFAT
Memory Stick PRO Duo (Mark2), Memory Stick HG Duo, SDHC memory card	FAT32

[23] Preparing the camera | Inserting a memory card (sold separately)

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 SDXC memory card cannot be imported to or played on computers or AV devices that are not compatible with exFAT when connected using a micro 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 SDXC 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 press down hard when writing in the memo space on the memory card.
- Do not attach a label on the memory card itself nor on a memory card adaptor.
- If the write-protect switch or delete-protect switch of a memory card is set to the LOCK position, you cannot record or delete images. In this case, set the switch to the record position.
- To use a Memory Stick Micro media or microSD memory card with this product:
 - Be sure to insert the memory card into a dedicated adaptor. If you insert a memory card into the product without a memory card adaptor, you might not be able to remove it from the product.
 - When inserting a memory card into a memory card adaptor, be sure that the memory card is inserted in the correct direction and then insert it as far as it will go. If the card is not inserted properly, it may result in a malfunction.
- About Memory Stick PRO Duo media and Memory Stick PRO-HG Duo media:
 - This Memory Stick is equipped with MagicGate function. MagicGate is copyright protection technology that uses encryption technology. Data recording/playback that requires MagicGate functions cannot be performed with this product.
 - High-speed data transfer using a parallel interface is supported.

Selecting which memory card to record to (Select Rec. Media)

Selects the memory card slot on which to record.

[Slot 1] is the default setting. If you do not intend to change the settings and will only use one memory card, use the slot 1.



Menu item details

Slot 1:

Selects media in the slot 1.

Slot 2:

Selects media in the slot 2.

Hint

 To record the same image on two memory cards at the same time or to sort recorded images onto two memory card slots by the image type (still image/movie), use [Recording Mode].

Note

The slot 1 supports Memory Stick PRO Duo media and SD cards. The slot 2 supports SD cards only.

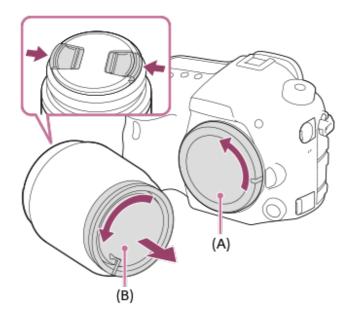
[25] Preparing the camera | Attaching a lens

Attaching/removing a lens

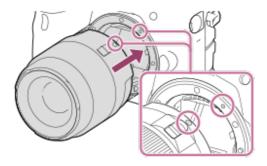
Turn off the camera before attaching or removing the lens.

0

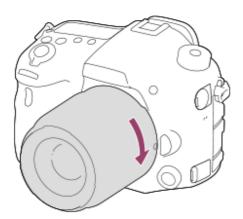
Remove the body cap (A) from the camera and the rear lens cap (B) from the rear of the lens.



- When shooting, remove the front lens cap from the front of the lens.
- Mount the lens by aligning the two orange index marks (mounting indexes) on the lens and camera.



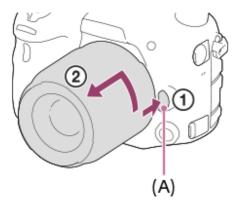
- Hold the camera with the lens mount facing down to prevent dust and debris from entering the camera.
- While pushing the lens lightly toward the camera, turn the lens slowly in the direction of the arrow until it clicks into the locked position.



Removing the lens

Keep pressing the lens release button (A) and turn the lens in the direction of the arrow until it stops.

After removing the lens, attach the body cap to the camera and the lens caps to the front and rear of the lens to prevent dust and debris from entering the camera and lens.



Note

- When attaching/removing the lens, work quickly in a dust-free location.
- Do not press the lens release button when attaching a lens.
- Do not use force when attaching a lens.
- E-mount lenses are not compatible with this camera.
- If you want to shoot full-frame images, use a full-frame size compatible lens.
- When you use a lens with a tripod socket, attach a tripod to the tripod socket of the lens to help balance the weight of the lens.
- When carrying the camera with a lens attached, hold both the camera and the lens firmly.
- Do not hold the part of the lens that is extended for zoom or focus adjustment.

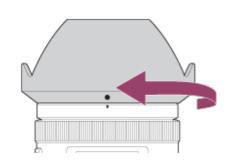
[26] Preparing the camera | Attaching a lens

Attaching the lens hood

We recommend that you use the lens hood to prevent light outside the shooting frame from affecting the image.



Match the shape of the lens hood mounting part and lens head, and turn the lens hood clockwise until it clicks.



Note

- Attach the lens hood properly. Otherwise, the lens hood may not have any effect or may be partially reflected in the image.
- When the lens hood is attached properly, the lens hood index (red line) matches the red index mark on the hood. (There may be no lens hood index on some lenses.)
- Remove the lens hood when using the flash as the lens hood blocks the flash light and may appear as a shadow on the image.
- To store the lens hood after shooting, attach the lens hood to the lens backward.

[27] Preparing the camera | Attaching accessories

Vertical grip

You can attach a vertical grip (sold separately) to this product and record vertically oriented images. For details, refer to the operating instructions for the vertical grip. When a vertical grip is attached to this product, the battery remaining is displayed as 1 .

[28] Preparing the camera

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.



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 multi-selector.
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 by pressing the multi-selector up/down, then press the center
6	Set [Daylight Savings], [Date/Time], and [Date Format] using the up/down/left/right sides, then press the center.

sides, then press the center.

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

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 cancel the date and time setting procedure, press the MENU button.
- 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. This camera does not have a function for inserting the date on images. You can insert the date on images and then save and print them using PlayMemories Home (for Windows only).

[29] Preparing the camera

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(Shoot.)].

- MENU →

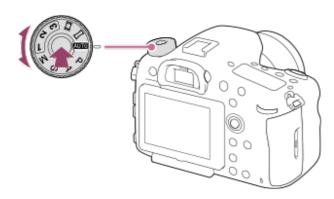
 2 (Camera Settings2) → [Custom Key(Shoot.)] → desired key, then assign the [In-Camera Guide] function to the key.
 - The [In-Camera Guide] function cannot be assigned to some keys.
- Select the MENU or Fn item of which you want to see descriptions, then press the button to which the [In-Camera Guide] function is assigned.

The descriptions of the item are displayed.

[30] Shooting

Shooting still images

Select the desired shooting mode by turning the mode dial.

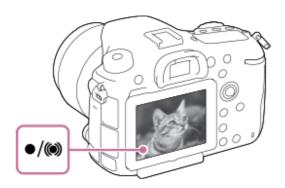


Turn the mode dial while pressing the mode dial lock release button in the center of the mode dial.

- Adjust the monitor angle, and hold the camera. Or look through the viewfinder and hold the camera.
- 3 When a zoom lens is mounted, enlarge images by rotating the zoom ring.
- 4 Press the shutter button halfway down to focus.

When the image is in focus, a beep sounds and the indicator (such as

) 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 \rightarrow 1 (Camera Settings1) \rightarrow [Focus Mode] \rightarrow [Single-shot AF] or [Automatic 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. In [Continuous AF] mode, (ights up and the beep indicating that the focus has been achieved does not sound.

Note

 When the subject is moving, you cannot lock the focus even if [Focus Mode] has been set to [Automatic AF].

[31] Shooting | Focusing

Focus Mode

Selects the focus method to suit the movement of the subject.

The focus mode switching method depends on the attached lens.

- If the lens has a focus mode switch, set it to "AF" or "MF."
 - With an SSM lens or an SAM lens that supports DMF (Direct Manual Focus)*, you can switch the focus mode to any mode including the auto focus and manual focus modes by operating the camera, even when the focus mode switch on the lens is in the "AF" position.
 - * SAL18135 only (as of the day this camera was released)



- When you want to use the auto focus function, set the focus mode switch on the lens to "AF." If the focus mode switch on the lens is set to "MF," the focus mode will be locked to [Manual Focus].

Menu item details

AF-S (Single-shot AF):

The product locks the focus once focusing is complete. Use this when the subject is motionless.

AF-A (Automatic AF):

[Single-shot AF] and [Continuous AF] are switched according to the movement of the subject. When the shutter button is pressed halfway down, the product locks the focus when it determines that the subject is motionless, or continues to focus when the subject is in motion. During continuous shooting, the product automatically shoots with Continuous AF from the second shot.

AF-C (Continuous AF):

The product continues to focus while the shutter button is pressed and held halfway down. Use this when the subject is in motion. In [Continuous AF] mode, there is no beep when the camera focuses.

DMF (DMF):

You can make fine adjustments manually after the focus is locked, 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.

Focus indicator



The subject is in focus and the focus is locked.

(flashing):

The subject is not in focus.

(lit):

The subject is in focus. The focus will be adjusted continuously according to the movements of the subject.

() (lit):

Focusing is in progress.

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
- Continuously repetitive patterns, such as the facades of buildings
- Subjects in the focusing area with different focal distances

Note

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

Hint

 In [Continuous AF] mode, you can lock the focus by pressing and holding the button that has been assigned the [Focus Hold] function.

[32] Shooting | Auto focus

Auto focus mechanism

This camera is equipped with a Hybrid Phase Detection AF system simultaneously driven by a focal plane phase detection AF sensor and a dedicated phase detection AF sensor. Use lenses that support the Hybrid Phase Detection AF system for a wide area, high density, multiple points, and Hybrid Cross AF Points*1, which are difficult to achieve with just a single dedicated phase detection AF sensor.

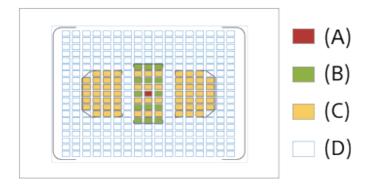
*1 In Hybrid Cross AF points, the focal plane phase detection AF sensor and dedicated phase detection AF sensor work together. These points have a superior capturing ability and can achieve high-accuracy focusing.

Auto focus area in Hybrid Phase Detection AF

The Hybrid Phase Detection AF system is active when a lens that supports the Hybrid Phase Detection AF system is attached and [AF System] is set to [Auto]. The Hybrid Phase Detection AF system allows you to use an auto focus function with a wide area, 399 focus points (maximum), and Hybrid Cross AF. 323 focus points are selectable.

Conceptual diagram

When a lens that supports Hybrid Phase Detection AF and full-frame size is attached



When a dedicated APS-C size lens that supports Hybrid Phase Detection AF is attached



(A): Hybrid Cross AF Points

Focal plane phase detection AF (vertical detection) + dedicated phase detection AF (cross detection*², F2.8-sensitive)

(B): Hybrid Cross AF Points

Focal plane phase detection AF (vertical detection) + dedicated phase detection AF (cross detection*²)

(C): Hybrid Cross AF Points

Focal plane phase detection AF (vertical detection) + dedicated phase detection AF (horizontal detection)

(D): Focal plane phase detection points (vertical detection)

*2 Cross detection focus points achieve high capturing performance by arranging horizontal detection points and vertical detection points in a cross shape in the same focusing area. The focus point at the center is also equipped with a F2.8-sensitive sensor that supports lenses with a minimum F-value of 2.8 or lower.

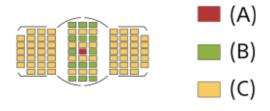
Auto focus area of the dedicated phase detection AF sensor

The dedicated phase detection AF sensor with 79 focus points is used for auto focusing when a lens that does not support the Hybrid Phase Detection AF system is attached, or [AF System] is set to [Ddc Phase AF Only].

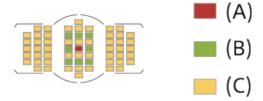
• The number of focus points is limited to 61 in the movie shooting mode.

Conceptual diagram

When 79 focus points are available



When 61 focus points are available



(A): Dedicated phase detection AF sensor (cross detection, F2.8-sensitive)

(B): Dedicated phase detection AF sensor (cross detection)

(C): Dedicated phase detection AF sensor

Hint

 Set [Selectable AF Area] to [Only Cross-Type AF] to limit the auto focusing area to the Hybrid Cross AF Points when the Hybrid Phase Detection AF is active.

Note

- Only some of the 399 focus points in Hybrid Phase Detection AF are used in the following situation:
 - [Selectable AF Area] is set to [Only Cross-Type AF].
 - [Flexible Spot Points] is set to other than [All].
 - A lens that does not support Hybrid Phase Detection AF is attached.
 - A dedicated APS-C size lens is attached.
 - [APS-C/Super 35mm] is set to [On].
 - Digital zoom (Smart Telecon.)
 - In movie shooting mode
 - Continuous shooting with a large aperture value

[33] Shooting | Auto focus

Focus Area

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



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.

Zone:

Select a zone on the monitor on which to focus, and the product will automatically select a focus

area.

[] 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.

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.

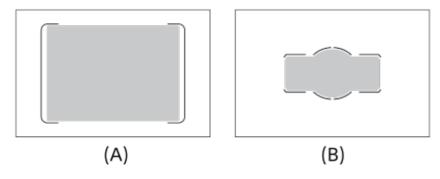
When the shutter button is pressed and held halfway down, the product tracks the subject within the selected autofocus area. This setting is available only when the focus mode is set to [Continuous AF]. Point the cursor at [Lock-on AF] on the [Focus Area] setting screen, and then adjust the desired area to start tracking by pressing the multi-selector left/right. You can also move the tracking start area to the desired point by designating the area as a flexible spot or expand flexible spot.

Available focus areas

When the Hybrid Phase Detection AF system is active, the entire focus area including the focal plane phase detection AF area is available (A). When the Hybrid Phase Detection AF system is not active, dedicated phase detection AF area is available (B).

Conceptual diagram

The shaded area is the available focusing area.



When [Zone] is selected, the focus area is divided into 15 zones in (A), or 9 zones in (B).

To move the focus area

 You can move the focus area in [Flexible Spot], [Expand Flexible Spot] or [Zone] by operating the multi-selector.

Note

- [Focus Area] is locked to [Wide] in the following situations:
 - [Intelligent Auto]
 - Lock-on AF
 - [Eye AF]
- The focus area may not light up during continuous shooting or when the shutter button is pressed all

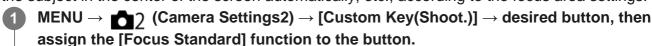
the way down at once.

- When the mode dial is set to [(Movie/S&Q Motion) or during movie shooting, [Lock-on AF] cannot be selected as the [Focus Area].
- When using the following zoom functions, a dotted square frame may appear around the whole screen depending on the zoom scale. The camera will perform auto focusing using the entire screen.
 - Smart Zoom
 - Clear Image Zoom
 - Digital Zoom

[34] Shooting | Auto focus

Focus Standard

If you assign [Focus Standard] to desired custom key, you can recall useful functions focusing the subject in the center of the screen automatically, etc., according to the focus area settings.



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 [Center Lock-on AF] is set to [On]:

By pressing the key, [Center Lock-on AF] is activated. The camera detects the subject positioned in the center of the screen and starts tracking it when you press the center of the multi-selector while [Center Lock-on AF] is activated.

If you press the key while the subject is being tracked, tracking will be canceled.

When [Center Lock-on AF] is set to [Off]:

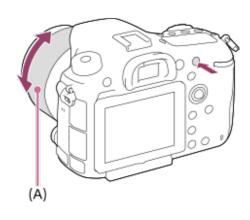
- When [Focus Area] is set to [Zone], [Flexible Spot] or [Expand Flexible Spot], the focusing frame is returned to the center by pressing the key, and the camera focuses on the center point.
- When [Focus Area] is set to [Wide] or [Center], the camera focuses on the center point.

AF/MF control

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



Press the AF/MF button.



During auto focus:

Temporarily switches the focusing mode to manual. Adjust the focus by turning the focus ring **(A)** while holding down the AF/MF button. For SAM lenses other than SAL18135 (as of the day this camera was released), the focusing ring cannot be rotated.

During manual focus:

Temporarily switches the focusing mode to auto while the AF/MF button is held down, and locks the focus.

Hint

• If you select [AF/MF Ctrl Toggle] in [AF/MF Button] under [Custom Key(Shoot.)], the focusing mode remains switched even if you remove your finger from the button.

[36] Shooting | Auto focus

AF w/ shutter (still image)

Selects whether to focus automatically when you press the shutter button halfway down. Select [Off] to adjust the focus and the exposure separately.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [\nearrow AF w/ shutter] \rightarrow desired setting.

Menu item details

On:

The auto focus operates when you press the shutter button halfway down.

Off:

The auto focus does not operate even if you press the shutter button halfway down.

Useful method to micro-adjust the focus

Activating the auto focus function with a button other than the shutter button makes possible more accurate focusing in combination with manual focusing.

- 1. Attach an SSM lens or SAL18135 lens to the camera, and then set the focus mode switch on the lens to "AF."
- 2. Set [AF w/ shutter] to [Off].
- 3. MENU \rightarrow 2 (Camera Settings2) \rightarrow [Custom Key(Shoot.)] \rightarrow assign the [AF On] and [Focus Magnifier] functions to the desired keys.
- 4. Set [Eye-Start AF] to [Off] to avoid auto focusing when you look through the viewfinder.
- 5. Press the key to which the [AF On] function is assigned.
- **6.** Press the key to which the [Focus Magnifier] function is assigned, and then rotate the focus ring for micro-adjustments of the focus.
- 7. Press the shutter button fully down to shoot the image.
- SAM lenses other than SAL18135 lens do not support the DMF (Direct Manual Focus) function (as of the day this camera was released).

[37] Shooting | Auto focus

AF On

You can focus using any button instead of pressing the shutter button halfway down. The settings for [Focus Mode] will be applied.



Press the key to which you have assigned the [AF On] function while auto-focus shooting.

Hint

- Set [AF w/ shutter] to [Off] when you do not want to perform auto focusing using the shutter button.
- Set [MAF w/ shutter] and [MEye-Start AF] to [Off] to focus at a specific shooting distance

[38] Shooting | Auto focus

Eye AF

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

- MENU → 2 (Camera Settings2) → [Custom Key(Shoot.)] → desired key, then assign the [Eye AF] function to the key.
- 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. If the focus
mode is set to [Single-shot AF], the frame will disappear after a period of time.

Note

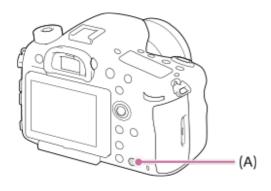
- The camera may not be able to focus on the eyes depending on the circumstances, such as when no
 eyes can be detected within the auto focus area. In such cases, the camera detects a face and
 focuses on the face.
- If the camera cannot detect a person's face, you cannot use [Eye AF].
- Depending on 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.

[39] Shooting | Auto focus

AF Range Control

You can restrict the autofocus range to focus on a subject without interference from objects in the background and foreground. The [AF Range Control] function is assigned to the C1 button (Custom button 1) with the default settings.





- Set maximum shooting distance using the front dial and set the minimum shooting distance using the rear dial.
 - Focus areas of the subject that are within the set AF range area will be displayed in yellow.
- 3 Press the C1 button (Custom button 1) again and decide the shooting distance.
 - The restricted area will remain displayed.
 - Focus areas of the subject that are within the set distance will be displayed in yellow.

To end the AF range control function

Press the C1 button (Custom button 1) again.

Hint

After focusing on the subject you want to shoot, adjust the AF range setting so that the lens focus position ▼ falls within the range.

 Set the AF range to fall inside or outside while watching the yellow indicator displayed in the focus area.

Note

- [AF Range Control] cannot be used in Manual focus mode or when shooting movies.
- If you change the lens, the set AF range will be reset.
- When you are using a lens equipped with a focus range limit function, do not use the camera's [AF Range Control] function at the same time. Use the function on either the lens or the camera.
- If you use a lens that is not equipped with a distance encoder, the shooting distance is not displayed.
- The shooting distance value is an estimate.
- The set value of the AF range, the shooting distance value, and the actual focus point may differ slightly.
- The actual set AF range and the yellow guide of the focus area may not correspond.
- The focus area may not be displayed in yellow when the lens does not attain proper focus.
- When the light is not strong enough or there is not much contrast in the subject, such as with monotone and flat surfaces, the focus area may not be displayed in yellow. In that case, use the outline of the subject as a guide.
- Only lenses with in-lens motors (SSM and SAM lenses*) can be used with Direct Manual Focus.
 - * The only SAM lens compatible with direct manual focus is SAL18135 (as of the day this camera was released).
- When using lenses without in-lens motors (other than SSM and SAM lenses*), the product may start
 the initial operation for infinity when used with the AF/MF control function.
 - * The only SAM lens compatible with AF/MF control is SAL18135 (as of the day this camera was released).

[40] Shooting | Auto focus

AF Rng.Ctrl Assist (still image)

Sets whether to display or not that the subject is within the set distance during the AF range control.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{1} \ \, (\textbf{Camera Settings1}) \rightarrow \ \ \, \textbf{[} \ \ \, \textbf{AF Rng.Ctrl Assist]} \rightarrow \textbf{desired setting.}$

Menu item details

On:

Displays the AF control assist.

Off:

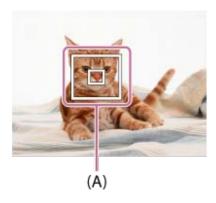
Does not display the AF control assist.

[41] Shooting | Auto focus

Center Lock-on AF

When you press the center of the multi-selector, the camera detects the subject positioned in the center of the screen and continues to track the subject.

- 1 MENU \rightarrow 1 (Camera Settings1) \rightarrow [Center Lock-on AF] \rightarrow [On].
- Align the target frame (A) over the subject and press the center of the multi-selector.
 - Press the center again to stop tracking.



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

Hint

 You can activate [Center Lock-on AF] by pressing the key to which [Focus Standard] is assigned in [Custom Key(Shoot.)] when [Center Lock-on AF] is set to [On]. You can also detect the subject again by pressing the key to which [Focus Standard] is assigned.

- 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 [Smart Telecon.] is being used.
- When shooting in Manual Focus mode.
- When [Record Setting] is set to [120p]/[100p].

[42] Shooting | Auto focus

Eye-Start AF (still image)

Sets whether or not to use autofocus when you look through an Electronic Viewfinder.



 $\textbf{MENU} \rightarrow \text{ } \textcircled{1}(\textbf{Camera Settings1}) \rightarrow \textbf{[} \textcircled{\textbf{Eye-Start AF]}} \rightarrow \textbf{desired setting.}$

Menu item details

On:

Auto focusing starts when you look through the Electronic Viewfinder.

Off:

Auto focusing does not start when you look through the Electronic Viewfinder.

[43] Shooting | Auto focus

AF drive speed (still image)

Selects the focusing speed when using autofocus in the still image mode.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{1} \ \, \textbf{(Camera Settings1)} \rightarrow \ \ \, \textbf{[} \ \ \, \textbf{AF drive speed]} \rightarrow \ \ \, \textbf{desired setting.}$

Menu item details

Fast:

Sets the AF drive speed to fast.

Slow:

Sets the AF drive speed to slow. This setting makes it easier to focus during macro shooting, etc.

[44] Shooting | Auto focus

AF Track Sens (still image)

You can select the AF track sensitivity when the subject goes out of focus in still image mode.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [AF Track Sens] \rightarrow desired setting.

Menu item details

5(Responsive) / 4 / 3(Standard) / 2 / 1(Locked on):

Select [5(Responsive)] to focus responsively on subjects at different distances.

Select [1(Locked on)] to keep the focus on a specific subject when other things are crossing in front of the subject.

[45] Shooting | Auto focus

Priority Set in AF-S

Sets whether to release the shutter even if the subject is not in focus when [Focus Mode] is set to [Single-shot AF], [DMF] or [Automatic AF] and the subject is remaining still.



 $\textbf{MENU} \rightarrow \textbf{ 1(Camera Settings1)} \rightarrow \textbf{[Priority Set in AF-S]} \rightarrow \textbf{desired setting.}$

Menu item details

AF:

Prioritizes focusing. The shutter will not be released until the subject is in focus.

Release:

Prioritizes the shutter's release. The shutter will be released even if the subject is out of focus.

[46] Shooting | Auto focus

Priority Set in AF-C

Sets whether to release the shutter even if the subject is not in focus when the continuous AF is

activated and the subject is in motion.



 $\textbf{MENU} \rightarrow \textbf{ 1}(\textbf{Camera Settings1}) \rightarrow \textbf{[Priority Set in AF-C]} \rightarrow \textbf{desired setting.}$

Menu item details

AF:

Prioritizes focusing. The shutter will not be released until the subject is in focus.

Release:

Prioritizes the shutter's release. The shutter will be released even if the subject is out of focus.

Balanced Emphasis:

Shoots with a balanced emphasis on both focusing and shutter release.

[47] Shooting | Auto focus

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 red AF illuminator lights up to allow the camera to focus easily when a flash (sold separately) compatible with the AF illuminator is attached to the product.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{1}(\textbf{Camera Settings1}) \rightarrow \ \ \, \textbf{[} \ \, \textbf{AF Illuminator]} \rightarrow \textbf{desired setting.}$

Menu item details

Auto:

The AF illuminator lights up automatically in dark surroundings.

Off:

Does not use the AF illuminator.

- You cannot use [AF Illuminator] in the following situations:
 - In movie mode
 - Sweep Panorama
 - When [Focus Mode] is set to [Continuous AF] or [Automatic AF] and the subject is moving (when the focus indicator () lights up).
 - When [Focus Magnifier] is activated.
 - When focusing on a focus area other than that of the dedicated phase detection AF sensor.
- 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.

[48] Shooting | Auto focus

AF Area Auto Clear

Sets whether the focus area should be displayed all the time or should disappear automatically shortly after focus is achieved.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [AF Area Auto Clear] \rightarrow desired setting.

Menu item details

On:

The focus area disappears automatically shortly after focus is achieved.

Off:

The focus area is displayed all the time.

[49] Shooting | Auto focus

Wide AF Area Disp.

You can set whether the focus area should be displayed or not when [Focus Area] is set to [Wide].



 $\textbf{MENU} \rightarrow \ \ \, \textbf{1} \ \, \textbf{(Camera Settings1)} \rightarrow \textbf{[Wide AF Area Disp.]} \rightarrow \textbf{desired setting.}$

Menu item details

On:

Displays the focus area.

Off:

Does not display the focus area.

Although this product can focus using 399 focus points at maximum, you can also limit the available focus points manually.



 $MENU \rightarrow 1$ (Camera Settings1) \rightarrow [Selectable AF Area] \rightarrow desired setting.

Menu item details

Auto:

The number of focus points used for focusing are set automatically depending on the lens or shooting mode. Uses all 399 focus points at maximum.

Only Cross-Type AF:

Limits available 79 focus points at a maximum in the cross-type AF area.

The number of focus points depending on the lens

The number of focus points will be limited when the following lenses are attached.

Lens: SAL75300, SAL1118, SAL55200, SAL1855, SAL18552, SAL55200-2, SAL30M28, SAL55300

The number of focus points: 61 points

Lens: SAL500F80

The number of focus points: One single point at the center [Only Cross-Type AF] cannot be set.

• This information is current as of the day the model was released. Some of the lenses above are not available in some countries or regions.

Hint

- We recommend that you set the camera to [Only Cross-Type AF] in the following situations:
 - When you want to prevent the number of focus points from changing automatically depending on the lens you attach
 - When focusing is difficult at the surrounding points
 - When you want to select a focus area quickly by limiting the available focus points

- If you attach a lens that does not support Hybrid Phase Detection AF, or [AF System] is set to [Ddc Phase AF Only], a focus area that does not perform cross-type detection will also be used even when [Selectable AF Area] is set to [Only Cross-Type AF].
- When the shooting mode is set to (Movie/S&Q Motion), [AF System] is locked to [Ddc Phase AF Only]. The number of focus points is limited to 61.

Flexible Spot Points

When [Focus Area] is set to [Flexible Spot] or [Expand Flexible Spot], and you want to select a focus area quickly, you can limit the available number of focus points.

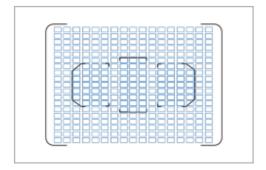


MENU \rightarrow 1 (Camera Settings1) \rightarrow [Flexible Spot Points] \rightarrow desired setting.

Menu item details

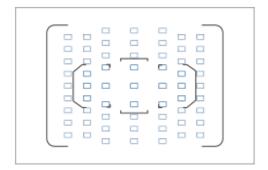
AII:

Selects from 323 focus points at maximum.



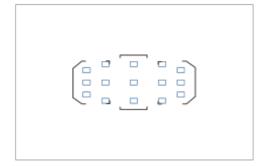
63 Points:

Uses the limited 63 focus points out of 323. Available only when the lens that supports the Hybrid Phase Detection AF is attached, and [AF System] is set to [Auto].



15 Points:

Uses the limited 15 points out of all the points of the dedicated phase detection AF sensor.



[52] Shooting | Auto focus

AF Micro Adj.

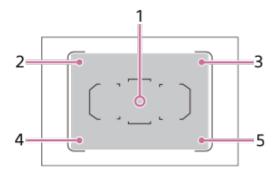
Allows you to adjust and register autofocused positions for each lens.

In general use, you do not need to adjust the autofocused position using this function. Use this function only when adjustments are needed for certain focus areas or focal lengths. Note that the auto focus function may not be performed at a proper position when using this adjustment.

- **1** MENU \rightarrow **1** (Camera Settings1) \rightarrow select [AF Micro Adj.].
- Select [AF Adjustment Set.] \rightarrow [On].
- 3 Adjust the value for the center area.
 - The larger the value you select, the farther the autofocused position will be from the product. The smaller the value you select, the closer the autofocused position will be to the product.
 - To adjust the autofocus position for the dedicated phase detection AF area, set the value for the center area.
 - If the adjustment for the center area is not needed, you can skip this step.
- Adjust the values for the corner areas as necessary.
 - Set the values for the corner areas if the adjustment of the autofocused positions outside of the dedicated phase detection AF are needed.

AF micro adjustment areas

Conceptual diagram



You can adjust the autofocus position for both the wide and telephoto ends of the lens. When

Hybrid Phase Detection AF is active*, you can adjust the autofocus points for the corner areas (2 - 5) as well as the center area (1).

- The adjustment for the center area is applied to both the focal plane phase detection AF sensor and the dedicated phase detection AF sensor.
- The adjustments for the corner areas are applied to the focal plane phase detection AF sensor.
- * When a lens that supports Hybrid Phase Detection AF is attached, and [AF System] is set to [Auto]

Hint

• It is recommended that you adjust the position under actual shooting conditions. Set [Focus Area] to [Flexible Spot] and use a bright subject with high contrast when you adjust.

- For focal lengths between the wide end and the telephoto end, the values interpolated by the values for each end are applied.
- For areas between the adjusted areas, the values interpolated by the values for each area are applied.
- When the focal plane phase detection AF area is narrowed, such as when an APS-C size dedicated lens is attached, the adjustable area is the narrowed AF area only.
- When a prime lens is attached, you cannot enter the adjustment value for the telephoto end. The adjustment value for the wide end is applied.
- You cannot adjust the autofocus position for the corner areas in following situations:
 - [Selectable AF Area] is set to [Only Cross-Type AF]
 - [Flexible Spot Points] is set to [15 Points]
- When you attach a lens for which you have already registered a value, the registered value appears
 on the screen. [±0] appears for lenses for which a value has not yet been registered.
- If [-] is displayed as the value, then a total of 30 lenses have been registered and no new lens can be registered. To register a new lens, attach a lens for which the registration can be erased, and set its value to [±0], or reset the values of all the lenses using [Clear].
- The [AF Micro Adj.] supports Sony, Minolta, or Konica-Minolta lenses. If you perform [AF Micro Adj.] with lenses other than the supported lenses, the registered settings for the supported lenses may be affected. Do not perform [AF Micro Adj.] with an unsupported lens.
- You cannot set [AF Micro Adj.] individually for a Sony, Minolta, and Konica-Minolta lens of the same specification.

Sets whether to use the Hybrid Phase Detection AF system, which uses both the focal plane phase detection AF sensor and the dedicated phase detection AF sensor, or use only the dedicated phase detection AF sensor to perform auto focus.

Menu item details

Auto:

Uses both the focal plane phase detection AF sensor and the dedicated phase detection AF sensor depending on the lens or the shooting mode.

Ddc Phase AF Only:

Always uses only the dedicated phase detection AF sensor.

Note

When the shooting mode is set to [Movie/S&Q Motion), [AF System] is locked to [Ddc Phase AF Only].

[54] Shooting | Manual focus

Manual Focus

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

- 1 Set the focus mode switch on the lens to "MF."
 - With an SSM lens or an SAM lens that supports DMF (Direct Manual Focus)*, you can switch the focus mode to the manual focus mode by operating the camera, even when the focus mode switch on the lens is in the "AF" position.
 - * SAL18135 only (as of the day this camera was released)
- 2 If the lens does not have a focus mode switch, select MENU → 1 (Camera Settings1) → [Focus Mode] → [Manual Focus].
 - If [Focus Mode] has been assigned to the front multi-controller, you can also change the setting by operating the front multi-controller.
- 3 Rotate the focusing ring to achieve sharp focus.



4 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.

[55] Shooting | Manual focus

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.

- Press the shutter button halfway down to focus automatically.
- 3 Keep the shutter button pressed halfway down, and then rotate the focusing ring to achieve a sharper focus.



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

[56] Shooting | Manual focus

Focus Magnifier

You can check the focus by enlarging the image before shooting.

- **1** MENU \rightarrow **1** (Camera Settings1) \rightarrow [Focus Magnifier].
- Press the center of the multi-selector to enlarge the image and select the position you want to enlarge by pressing the multi-selector up/down/left/right.
 - 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.
 - 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.
- 4 Press the shutter button fully down to shoot the image.

Useful operation of the [Focus Magnifier]

By using the AF/MF control function, you can adjust the focus for an enlarged image after auto focus is performed.

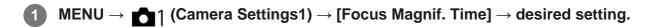
When the focus mode is [Manual Focus], press the AF/MF button and perform auto focus, then use the [Focus Magnifier] function.

- Set the focus mode switch on the lens to "AF."
- We recommend that you assign the [Focus Magnifier] function to a desired button using [Custom Key(Shoot.)].
- AF/MF control function is not available for SAM lenses other than SAL18135. (as of the day this camera was released)

[57] Shooting | Manual focus

Focus Magnif. Time

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



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.

[58] Shooting | Manual focus

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 \rightarrow **1** (Camera Settings1) \rightarrow [\triangleright Initial Focus Mag.] \rightarrow desired setting.

Menu item details

Full-frame shooting

x1.0:

Displays the image with the same magnification as the shooting screen.

x7.8:

Displays a 7.8-times enlarged image.

APS-C/Super 35mm size shooting

x1.0:

Displays the image with the same magnification as the shooting screen.

x5.1:

Displays a 5.1-times enlarged image.

[59] Shooting | Manual focus

Peaking Level

Enhances the outline of in-focus ranges using a specific color in Manual Focus or Direct Manual Focus shooting.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{1}(\textbf{Camera Settings1}) \rightarrow \textbf{[Peaking Level]} \rightarrow \textbf{desired setting}.$

Menu item details

High:

Sets the peaking level to high.

Mid:

Sets the peaking level to middle.

Low:

Sets the peaking level to low.

Off:

Does not use the peaking function.

- Since the product recognizes sharp areas as in focus, the effect of peaking differs, depending on the subject and lens.
- The outline of in-focus ranges is not enhanced when the product is connected using an HDMI cable.

[60] Shooting | Manual focus

Peaking Color

Sets the color used for the peaking function in Manual Focus or Direct Manual Focus shooting.



 $\textbf{MENU} \rightarrow \textbf{ 1(Camera Settings1)} \rightarrow \textbf{[Peaking Color]} \rightarrow \textbf{desired setting.}$

Menu item details

Red:

Enhances outlines in red.

Yellow:

Enhances outlines in yellow.

White:

Enhances outlines in white.

[61] Shooting | Selecting a drive mode (Continuous shooting/Self-timer)

Drive Mode

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



Press the $\mbox{\ensuremath{\bullet}}\mbox{\ensuremath{\bullet}}\mbox{\ensuremath{\bullet}}\mbox{\ensuremath{\bullet}}$ (Drive Mode) button \rightarrow select desired setting.

You can also set the drive mode by selecting MENU → 1 (Camera Settings1) → [Drive Mode].

Menu item details

Single Shooting:

Normal shooting mode.

□ Cont. Shooting:

Shoots images continuously 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.

BRIC Cont. Bracket:

Shoots images while holding the shutter button down, each with different degrees of brightness.

BRKS Single Bracket:

Shoots a specified number of images, one by one, each with a different degree of brightness.

ERKWB 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.

BRK DRO DRO Bracket:

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

[62] Shooting | Selecting a drive mode (Continuous shooting/Self-timer)

Cont. Shooting

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

- - You can also set the continuous shooting by selecting MENU→ 1 (Camera Settings1) → [Drive Mode].
- 2 Select the desired mode by pressing the multi-selector right/left.

Menu item details

□ Continuous Shooting: Hi+:

Images are shot continuously at the maximum speed while you press and hold down the shutter button. The aperture value is locked when the first shot is taken.

□_{IHI} Continuous Shooting: Hi / □_{IMD} Continuous Shooting: Mid/ □_{ILo} Continuous Shooting: Lo:

Subjects are easier to track because the subject is displayed in real-time on the monitor or viewfinder during shooting.

Number of still images recordable with continuous shooting*

(When [Continuous Shooting: Hi] is selected.)

JPEG L-size Extra fine: 65 images

JPEG L-size Fine: 71 images JPEG L-size Standard: 74 images RAW (Compressed RAW): 57 images

RAW & JPEG (Compressed RAW): 56 images

RAW (Uncompressed RAW): 26 images

RAW & JPEG (Uncompressed RAW): 25 images

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

Auto focus in continuous shooting

For the first shot of continuous shooting, all of the focus points are available if the Hybrid Phase Detection AF is active, and the dedicated phase detection AF points are available if the Hybrid Phase Detection AF is not active. Focus points available from the second shot onward are described in the table below.

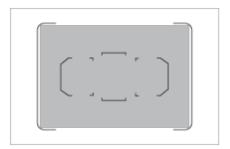
Even if the lens supports the Hybrid Phase Detection AF, the auto focus area is limited to the dedicated phase detection AF area for the first shot in the following situations:

- [AF System] is set to [Ddc Phase AF Only].
- [Selectable AF Area] is set to [Only Cross-Type AF].

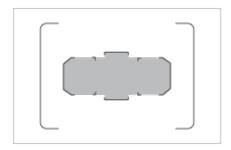
	Hybrid Phase Detection AF compatibility of the lens	Auto focus capability from the second shot onward		
		Minimum F value – F3.5	F4 – F8	F9 or more
Continuous Shooting: Hi+	Compatible	All points	All points (only the focal plane phase detection AF sensor is active)	Focus is locked when the first shot is taken
	Incompatible	Dedicated phase detection AF sensor area (61 points)	Focus is locked when the first shot is taken	Focus is locked when the first shot is taken
Continuous Shooting: Hi / Continuous Shooting: Mid	Compatible	All points	All points	Dedicated phase detection AF sensor area
	Incompatible	Dedicated phase detection AF sensor area	Dedicated phase detection AF sensor area	Dedicated phase detection AF sensor area
Continuous Shooting: Lo	Compatible	All points	All points	All points
	Incompatible	Dedicated phase detection AF	Dedicated phase detection AF sensor	Dedicated phase detection AF

Conceptual diagram

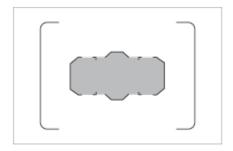
All points



Dedicated phase detection AF sensor area



Dedicated phase detection AF sensor area (61 points)



Hint

- To continuously adjust the focus and exposure during continuous shooting, set as follows:
 - [Focus Mode]: [Continuous AF]
 - [MAEL w/ shutter]: [Off] or [Auto]

Note

- The shooting speed during continuous shooting becomes slower when [RAW File Type] is set to [Uncompressed] in [Continuous Shooting: Hi+] mode.
- The shooting speed during continuous shooting becomes slower when [e-Front Curtain Shut.] is set to [Off] in [Continuous Shooting: Hi], [Continuous Shooting: Mid] or [Continuous Shooting: Lo] mode.
- The subject is not displayed in real-time on the monitor or viewfinder when shooting in [Continuous Shooting: Hi+] mode.
- 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: [Rich-tone Mono.]
- [DRO/Auto HDR] is set to [Auto HDR].

[63] Shooting | Selecting a drive mode (Continuous shooting/Self-timer)

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.

- - You can also set the drive mode by selecting MENU→ 1 (Camera Settings1) → [Drive Mode].
- 2 Select the desired mode by pressing the multi-selector right/left.
- 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

Sets the number of seconds in which the picture is taken after the shutter button is pressed.

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

Hint

- Press the shutter button again or press ♦ / □ (Drive Mode) button to stop the count of the self-timer.
- Press the ♂/☐ (Drive Mode) button and select ☐ (Single Shooting) to cancel the self-timer.
- Set [Audio signals] to [Off] to mute the beep sound during self-timer counting.

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].

[64] Shooting | Selecting a drive mode (Continuous shooting/Self-timer)

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 δ / \square (Drive Mode) button \rightarrow [Self-timer(Cont)].
 - You can also set the drive mode by selecting MENU→ 1 (Camera Settings1) → [Drive Mode].
- Select the desired mode by pressing the multi-selector right/left.
- 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. 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.

```
င္လဲ<sup>G</sup> Self-timer(Cont.): 10 Sec. 3 Img.
ငံ္ပါ^{G} Self-timer(Cont.): 10 Sec. 5 Img.
```

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

ర్రక్త Self-timer(Cont.): 5 Sec. 5 Img.

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

ర్యు Self-timer(Cont.): 2 Sec. 5 Img.

Hint

- Press the shutter button again or press the (Drive Mode) button to stop the count of the self-timer.

[65] Shooting | Selecting a drive mode (Continuous shooting/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 δ / \square (Drive Mode) button \rightarrow [Cont. Bracket].
 - You can also set the drive mode by selecting MENU→ 1 (Camera Settings1) → [Drive Mode].
- Select the desired mode by pressing the multi-selector right/left.
- 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.

- 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 you adjust the exposure, the exposure is shifted based on the compensated value.
- Bracket shooting is unavailable in the following situations:
 - [Intelligent Auto]
 - [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.

[66] Shooting | Selecting a drive mode (Continuous shooting/Self-timer)

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.

If pictures are taken one by one by pressing the shutter button each time, you can adjust the focus or the composition for each shot.

- - You can also set the drive mode by selecting MENU → 1 (Camera Settings1) → [Drive Mode].
- 2 Select the desired mode by pressing the multi-selector right/left.
- 3 Adjust the focus and shoot the image.
 - Press the shutter button for each image.

Menu item details

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

- 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 you adjust the exposure, the exposure is shifted based on the compensated value.

- Bracket shooting is unavailable in the following situations:
 - [Intelligent Auto]
 - [Sweep Panorama]

[67] Shooting | Selecting a drive mode (Continuous shooting/Self-timer)

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.

[68] Shooting | Selecting a drive mode (Continuous shooting/Self-timer)

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.

- - You can also set the drive mode by selecting MENU→ 1 (Camera Settings1) → [Drive Mode].
- Select the desired mode by pressing the multi-selector right/left.
- 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*}).

WWB 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.

[69] Shooting | Selecting a drive mode (Continuous shooting/Self-timer)

DRO Bracket

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

- 1 \(\mathbf{O} / \sum_{\proptote{
 - You can also set the drive mode by selecting MENU→ 1 (Camera Settings1) → [Drive Mode].
- Select the desired mode by pressing the multi-selector right/left.
- Adjust the focus and shoot the image.

Menu item details

BRIDRO 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).

BRO 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.

[70] Shooting | Selecting a drive mode (Continuous shooting/Self-timer)

Bracket Settings

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

- - You can also set the drive mode by selecting MENU → 1 (Camera Settings1) → [Drive Mode].
- **MENU** \rightarrow **MENU** \rightarrow **[Bracket Settings]** \rightarrow **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. $(0 \rightarrow - \rightarrow +/- \rightarrow 0 \rightarrow +)$

[71] Shooting | Selecting still image size/image quality

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 item details

When [Aspect Ratio] is set to [3:2]

L: 42M 7952×5304 pixels

M: 18M 5168×3448 pixels

S: 11M 3984×2656 pixels

When [Aspect Ratio] is set to [16:9]

L: 36M 7952×4472 pixels

M: 15M 5168×2912 pixels

S: 8.9M 3984×2240 pixels

When [APS-C/Super 35mm] is set to [On]

When [Aspect Ratio] is set to [3:2]

L: 18M 5168×3448 pixels

M: 11M 3984×2656 pixels

S: 4.5M 2592×1728 pixels

When [MASpect Ratio] is set to [16:9]

L: 15M 5168×2912 pixels M: 8.9M 3984×2240 pixels S: 3.8M 2592×1456 pixels

Note

When [Quality] is set to [RAW] or [RAW & JPEG], the image size for RAW images corresponds to "L."

[72] Shooting | Selecting still image size/image quality

Aspect Ratio (still image)

1 MENU \rightarrow **1** (Camera Settings1) \rightarrow [\nearrow Aspect Ratio] \rightarrow desired setting.

Menu item details

3:2:

Suitable for standard prints.

16:9:

For viewing on a high-definition TV.

[73] Shooting | Selecting still image size/image quality

Quality (still image)

MENU \rightarrow 1 (Camera Settings1) \rightarrow [\longrightarrow Quality] \rightarrow desired setting.

Menu item details

RAW:

File format: RAW

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

• The image size is fixed to the maximum size. The image size is not displayed on the screen.

RAW & JPEG:

File format: RAW + JPEG

A RAW image and a JPEG image are created at the same time. This is suitable when you need 2 image files, a JPEG for viewing, and a RAW for editing. The JPEG image quality is set to [Fine].

Extra fine:

File format: JPEG

The image is compressed in the JPEG format and recorded using a higher quality than with [Fine].

Fine:

File format: JPEG

The image is compressed in the JPEG format when recorded.

Standard:

File format: JPEG

The image is compressed in the JPEG format when recorded. Since the compression rate of [Standard] is higher than that of [Fine], the file size of [Standard] is smaller than that of [Fine]. This will allow more files to be recorded on one memory card, but the image quality will be lower.

About RAW images

- To open a RAW image file recorded with this camera, the software Image Data Converter is needed. With Image Data Converter, 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.
- You cannot apply [Auto HDR] or [Picture Effect] functions with RAW images.
- RAW images recorded with this camera have a resolution of 14 bits per pixel. However, resolution is limited to 12 bits in the following shooting modes:
 - [Long Exposure NR]
 - [BULB]
 - Continuous shooting
- You can set whether compress or uncompress RAW images using [RAW File Type].

- 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.

[74] Shooting | Selecting still image size/image quality

RAW File Type (still image)

Selects the file type for RAW images.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [\nearrow RAW File Type] \rightarrow desired setting.

Menu item details

Compressed:

Records images in compressed RAW format.

Uncompressed:

Records images in uncompressed RAW format. When [Uncompressed] is selected for [RAW File Type], the file size of the image will be larger than if it were recorded in compressed RAW format.

Note

• When [Uncompressed] is selected for [RAW File Type], the icon on the screen switches to RAW is also displayed while an image shot in uncompressed RAW format is played back.

[75] Shooting | Selecting still image size/image quality

APS-C/Super 35mm

Sets whether to record in APS-C-equivalent size for still images and in Super 35mm-equivalent size for movies. If you select [On] or [Auto], you can use an APS-C size dedicated lens on this product.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [APS-C/Super 35mm] \rightarrow desired setting.

Menu item details

On:

Records in either APS-C-equivalent size or Super 35mm-equivalent size.

Auto:

Automatically sets the capture range depending on the lens.

Off:

Always captures 35mm full-size image sensor pictures.

When you attach an APS-C compatible lens and set [APS-C/Super 35mm] to [Off], shooting may fail.

When you set [APS-C/Super 35mm] to [On], the angle of view will be the same as when shooting with an APS-C size image sensor.

[76] Shooting | Selecting still image size/image quality

Panorama: Size

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

1 MENU \rightarrow **1** (Camera Settings1) \rightarrow [Panorama: Size] \rightarrow 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

[77] Shooting | Selecting still image size/image quality

Panorama: Direction

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

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.

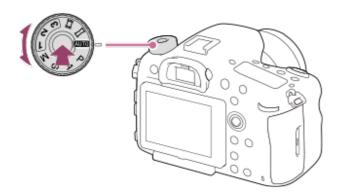
Down:

Pan the camera from the top to the bottom.

[78] Shooting | Selecting a shooting mode

List of mode dial function

You can select the desired shooting mode by turning the mode dial.



 Turn the mode dial while pressing the mode dial lock release button in the center of the mode dial.

Available functions

i (Intelligent Auto):

Allows you to shoot with automatic scene recognition.

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)).

1/2/3 (Memory recall):

Allows you to shoot an image after recalling often-used modes or numeric settings registered in advance.

間 (Movie/S&Q Motion):

Allows you to change the exposure mode for movie recording and slow-motion/quick-motion movie recording.

(Sweep Panorama):

Allows you to shoot a panoramic image by compositing the images.

[79] Shooting | Selecting a shooting mode

Intelligent Auto

The camera shoots with automatic scene recognition.

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

The shooting mode will be set to intelligent Auto).

Point the camera at the subject.

When the camera recognized the scene, the icon for the recognized scene appears on the screen.



3 Adjust the focus and shoot the image.

- 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.

Scene Recognition operates in [Intelligent 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)
- Night Scene using a tripod)

Image processing

[Slow Sync.]/[Daylight Sync.]/[Slow Shutter]

Note

When [Face Detection] is set to [Off], the [Portrait], [Backlight Portrait], [Night Portrait] and [Infant] scenes are not recognized.

[81] Shooting | Selecting a shooting mode

The advantages of automatic shooting

This camera is equipped with [Intelligent Auto] mode.

intelligent Auto):

Allows you to shoot with automatic scene recognition.

 For [Intelligent Auto] mode, most of the functions are set automatically, and you cannot adjust the settings on your own.

[82] Shooting | Selecting a shooting mode

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 front/rear dial to select the aperture value and shutter speed combination with the shutter button pressed halfway down, to adjust exposure.

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

- 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.

[83] Shooting | Selecting a shooting 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 front/rear dial.
 - 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.

Hint

 While you press and hold the preview button, the aperture is stepped down to the set aperture value and you can check the blurriness prior to shooting.

Note

The brightness of the image on the screen may differ from the actual image being shot.

[84] Shooting | Selecting a shooting mode

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 front/rear dial.
 - If proper exposure cannot be obtained after setup, the aperture value on the shooting screen blinks. If this happens, change the shutter speed.
- Adjust the focus and shoot the subject.

The aperture is automatically adjusted to obtain proper exposure.

Hint

- Use a tripod to prevent blurring when you use 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 [Long Exposure NR] is set to [On] and the shutter speed is 1 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.

[85] Shooting | Selecting a shooting mode

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).
- Select the desired aperture value by turning the front dial. Select the desired shutter speed by turning the rear dial.
 - ullet You can change the setting of the front/rear dial using MENU ightarrow



- Settings2) \rightarrow [Dial Setup].
- 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 ISO 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

 You can change the shutter speed and aperture (F-value) combination without changing the set exposure value by rotating the front/rear dial while pressing the AEL button. (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.

[86] Shooting | Selecting a shooting mode

Bulb shooting

You can shoot a trailing image of the movement of a subject with long exposure. Bulb shooting is suitable for shooting trails of light, such as fireworks.



Set the mode dial to M (Manual Exposure).

- 2 Turn the rear dial clockwise until [BULB] is indicated.
- 3 Select the aperture value (F-value) using the front dial.
- Press the shutter button halfway down to focus.
- Press and hold the shutter button for the duration of the shooting.

As long as the shutter button is pressed, the shutter remains open.

Hint

- When shooting fireworks, etc., focus at infinity in manual focus mode. If you use a lens whose infinity point is unclear, adjust the focus on the fireworks in the area you want to focus on in advance.
- In order to perform bulb shooting without causing the image quality to deteriorate, we recommend that you start shooting while the camera is cool.
- Images shot in [BULB] mode tend to be blurry. We recommend that you use a tripod or a remote commander (sold separately) that has a shutter button lock function.

Note

- The longer the exposure time, the more noise will be visible on the image.
- After shooting, noise reduction will be done for the same amount of time that the shutter was open.
 However, you cannot shoot any more while noise reduction is in progress.
- You cannot set the shutter speed to [BULB] in the following situations:
 - [Auto HDR]
 - [Picture Effect] is set to [Rich-tone Mono.].
 - When [Drive Mode] is set to the following:
 - [Cont. Shooting]
 - [Self-timer(Cont)]
 - [Cont. Bracket]

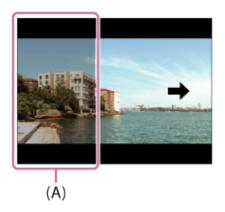
If you use the above functions when the shutter speed is set to [BULB], the shutter speed is temporarily set to 30 seconds.

Sweep Panorama

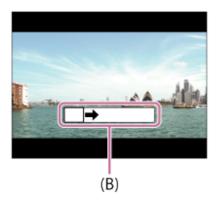
Allows you to create a single panoramic image from multiple images shot while panning the camera.



- 1 Set the mode dial to (Sweep Panorama).
- Point the camera at the subject.
- 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 front/rear dial.
 Available dials vary depending on the settings on MENU → (Camera Settings2)
 → [Dial Ev Comp].



- (A) This part will not be shot.
- 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.



(B) Guidance bar

- 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.
- The images may be blurred in dark scenes.
- 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.
 - The subject is too blurry.
- 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:
 - Face Detection
 - DRO/Auto HDR
 - Picture Effect
 - Picture Profile
 - Include the property of the pro
 - High ISO NR

- Lock-on AF
- Other zoom functions than the optical 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].
 - [Flash Mode] is fixed to [Flash Off].

[88] Shooting | Selecting a shooting mode

Recall (Camera Settings1/Camera Settings2)

Allows you to shoot an image after recalling often-used modes or camera settings registered with [1/ 1/ Memory] in advance.

- 1 Set the mode dial to 1, 2, or 3 (Memory recall).
- Press the center of the multi-selector to confirm.

Hint

- To recall settings registered to the memory card, set the mode dial to 1, 2 or 3, then select the desired number by pressing the left/right side of the multi-selector.
- If you recall settings registered to the memory card, the settings are recalled from the memory card in the slot specified in [Select Rec. Media]. You can confirm the memory card slot by selecting MENU
 → ♣ (Setup) → [Select Rec. Media].
- Settings registered to a memory card using another camera of the same model name can be recalled with this camera.

Note

If you set [1/2] Recall] 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. [89] Shooting | Selecting a shooting mode

Movie/S&Q Motion

You can select the exposure mode for movie shooting or slow-motion/quick-motion shooting. You can change the setting and playback speed for slow-motion/quick-motion shooting with [S&Q Settings].

- 1 Turn the mode dial to | (Movie/S&Q Motion).
- MENU → ↑ (Camera Settings2) → [Movie/S&Q Motion] → desired setting.
- Press the MOVIE (movie) button to start recording.
 - Press the MOVIE (movie) button again to stop recording.

Menu item details

Program Auto / ROP Program Auto:

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

Aperture Priority / SkO Δ Aperture Priority:

Allows you to shoot after adjusting the aperture value manually.

Shutter Priority / Story Shutter Priority:

Allows you to shoot after adjusting the shutter speed manually.

Manual Exposure / San Manual Exposure:

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

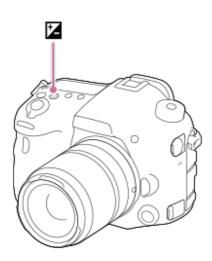
- When you operate the front multi-controller while recording a movie or a slow-motion/quick-motion movie, set the front multi-controller click switch to "OFF." If you operate the front multi-controller while shooting a movie or a slow-motion/quick-motion movie with the front multi-controller click switch set to "ON," the sound of the front multi-controller will be recorded.
- When the shooting mode is set to (Movie/S&Q Motion), [AF System] is fixed to [Ddc Phase AF Only]. The number of focus points is limited to 61.

[90] Shooting | Adjusting the exposure modes/metering modes

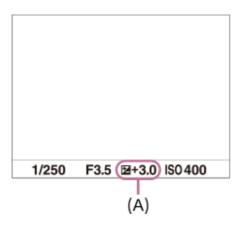
Exposure Comp.

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).

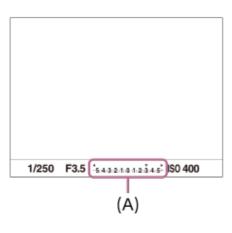
- 1 Press exposure compensation button.



- Select the desired setting by pressing the multi-selector left/right.
 - You can adjust the exposure in a range of -5.0 EV to + 5.0 EV.
 - You can check the exposure value you set on the shooting screen (A).
 Monitor



Viewfinder



Note

- You cannot perform the exposure compensation in the following shooting modes:
 - [Intelligent Auto]
- When using [Manual Exposure], you can perform the exposure compensation only when [ISO] is set to [ISO AUTO].
- Only a value between -3.0 EV and + 3.0 EV with the equivalent image brightness appears on the screen when shooting. If you set an exposure beyond this range, the image brightness on the screen does not show the effect, but it will be reflected in the recorded image.
- You can adjust the exposure in a 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.

[91] Shooting | Adjusting the exposure modes/metering modes

Dial Ev Comp

You can compensate the exposure using the front or rear dial. You can adjust the exposure in a range of -5.0 EV to +5.0 EV.



Menu item details

Off:

Does not enable exposure compensation with the front or rear dial.



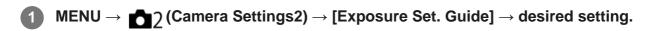
Enables exposure compensation with the front or rear dial.

• When the exposure compensation function is assigned to the front or rear dial, any function that had been assigned to that dial previously is re-assigned to another dial.

[92] Shooting | Adjusting the exposure modes/metering modes

Exposure Set. Guide

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



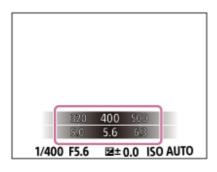
Menu item details

Off:

Does not display the guide.

On:

Displays the guide.



[93] Shooting | Adjusting the exposure modes/metering modes

Exposure step

You can set the setting range for the shutter speed, aperture, and exposure compensation values.

Menu item details

0.3EV/0.5EV

[94] Shooting | Adjusting the exposure modes/metering modes

Metering Mode

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



 $MENU \rightarrow 1$ (Camera Settings1) \rightarrow [Metering Mode] \rightarrow 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]. The position of the metering circle depends the setting for [Spot Metering Point].

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 [Spot] is selected and [Focus Area] is set to either [Flexible Spot] or [Expand Flexible Spot]
 while [Spot Metering Point] is set to [Focus Point Link], the spot metering point can be coordinated
 with the focus area.
- 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.

- [Metering Mode] is locked to [Multi] in the following shooting modes:
 - [Intelligent Auto]

- Other zoom functions than the optical zoom
- In [Highlight] mode, the subject may be dark if a brighter part exists on the screen.

[95] Shooting | Adjusting the exposure modes/metering modes

Spot Metering Point

Sets whether to coordinate the spot metering position with the focus area when [Focus Area] is set to [Flexible Spot] or [Expand Flexible Spot].



 $MENU \rightarrow 1$ (Camera Settings1) \rightarrow [Spot Metering Point] \rightarrow desired setting.

Menu item details

Center:

The spot metering position does not coordinate with the focus area, but always meters brightness at the center.

Focus Point Link:

The spot metering position coordinates with the focus area.

Note

- When [Focus Area] is set to other than [Flexible Spot] or [Expand Flexible Spot], the spot metering position is locked to the center.
- When [Focus Area] is set to [Lock-on AF: Flexible Spot] or [Lock-on AF:Expand Flexible Spot], the spot metering position coordinates to the Lock-on AF start position, but does not coordinate with the tracking of the subject.

[96] Shooting | Adjusting the exposure modes/metering modes

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 Adjust the focus on the spot at which the exposure is adjusted.
- Press the AEL button.



The exposure is locked, and * (AE lock) is displayed.

- 3 Keep pressing the AEL button and focus on the subject again, then shoot the picture.
 - Keep holding the AEL button down while taking a shot if you want to continue shooting with the fixed exposure. Release the button to reset the exposure.

Hint

• If you select the MENU → 12 (Camera Settings2) → [Custom Key(Shoot.)] → [AEL Button] → [AEL toggle], you can lock the exposure without holding down the button.

Note

• [• AEL hold] and [• AEL toggle] are not available when using zoom functions other than optical zoom.

[97] Shooting | Adjusting the exposure modes/metering modes

AEL w/ shutter (still image)

Sets whether to fix the exposure when you press the shutter button halfway down. Select [Off] to adjust the focus and the exposure separately.

Menu item details

Auto:

Fixes the exposure after adjusting the focus automatically when you press the shutter button halfway down when [Focus Mode] is set to [Single-shot AF]. When [Focus Mode] is set to [Automatic AF], and the product determines that the subject is moving, or you shoot burst images, the fixed exposure is cancelled.

On:

Fixes the exposure when you press the shutter button halfway down.

Off:

Does not fix the exposure when you press the shutter button halfway down. Use this mode when you want to adjust focus and exposure separately.

The product keeps adjusting the exposure while shooting in [Cont. Shooting] mode.

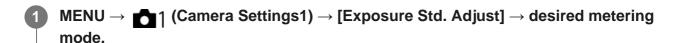
Note

Operation using the AEL button is prioritized over the [AEL w/ shutter] settings.

[98] Shooting | Adjusting the exposure modes/metering modes

Exposure Std. Adjust

Adjusts this camera's standard for the correct exposure value for each metering mode.



- 2 Select the desired value as the metering standard.
 - You can set a value from -1 EV to +1 EV in 1/6 EV increments.

Metering Mode

The set standard value will be applied when you select the corresponding metering mode in MENU → 1 (Camera Settings1) → [Metering Mode].

Multi/ Center/ Spot/ Entire Screen Avg./ Highlight

Note

The exposure compensation will not be affected when [Exposure Std. Adjust] is changed.

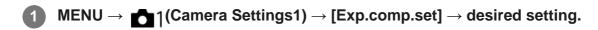
The exposure value will be locked according to the value set for [Spot] during using spot AEL.

- The standard value for M.M (Metered Manual) will be changed according to the value set in [Exposure Std. Adjust].
- The value set in [Exposure Std. Adjust] is recorded in Exif data separately from the exposure compensation value. The amount of exposure standard value will not be added to the exposure compensation value.
- If you set [Exposure Std. Adjust] during bracketing shooting, the number of shots for the bracketing will be reset.

[99] Shooting | Adjusting the exposure modes/metering modes

Exp.comp.set

Sets whether to apply the exposure compensation value to control both flash light and ambient light, or just ambient light.



Menu item details

Ambient&flash:

Applies the exposure compensation value to control both flash light and ambient light.

Ambient only:

Applies the exposure compensation value to control ambient light only.

[100] Shooting | Adjusting the exposure modes/metering modes

Zebra

The zebra pattern will appear over part of an image if the brightness level of that part meets the IRE level that you set. Use this zebra pattern as a guide to adjust the brightness.

1 MENU \rightarrow **2** (Camera Settings2) \rightarrow [Zebra] \rightarrow desired setting.

Menu item details

Off:

Does not display the zebra pattern.

70/75/80/85/90/95/100/100+/Custom1/Custom2:

Adjusts the brightness level.

Hint

- You can register values to check the correct exposure or overexposure as well as the brightness level for [Zebra]. 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.

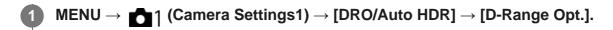
Note

The zebra pattern is not displayed during HDMI connection.

[101] Shooting | Correcting brightness and contrast

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.



Select the desired setting by pressing the multi-selector left/right.

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].

-

- When [Picture Effect] is set to other than [Off]
- When [Picture Profile] is set to other than [Off]
- When [Record Setting] is set to [120p 100M], [100p 100M], [120p 60M] or [100p 60M], [DRO/Auto HDR] will be set to [Off].
- 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.

[102] Shooting | Correcting brightness and contrast

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.



Select the desired setting by pressing the multi-selector left/right.

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.

- This function is not available when the [Quality] is [RAW] or [RAW & JPEG].
- [Auto HDR] is not available in the following shooting modes:
 - [Intelligent Auto]

- [Sweep Panorama]
- [Auto HDR] is not available in the following situations:
 - When [Picture Effect] is set to other than [Off].
 - When [Picture Profile] 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. 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.

[103] Shooting | Selecting the ISO sensitivity

ISO

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



Press the ISO button \rightarrow select desired setting.

- You can also select MENU→ 1 (Camera Settings1) → [ISO].
- You can change the value by 1/3 EV steps by turning the front dial as well as by selecting it using the multi-selector. You can change the value by 1 EV steps by turning the rear dial.

Menu item details

ISO AUTO:

Sets the ISO sensitivity automatically.

ISO 50 - ISO 102400:

Sets the ISO sensitivity manually. Selecting a larger number increases the ISO sensitivity.

- [ISO AUTO] is selected when using the following functions:
 - [Intelligent Auto]
 - [Sweep Panorama]
- The higher the ISO value, the more noise will appear on the images.

- When shooting movies, ISO values between 100 and 25600 are available.
- The available ISO settings will differ depending on whether you are shooting still images, shooting movies, or shooting slow-motion/quick-motion movies.
- 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.

Hint

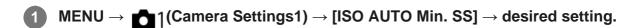
 You can change the range of ISO sensitivity that is set automatically in [ISO AUTO] mode. Select [ISO AUTO] and press the right side of the multi-selector, and set the desired values for [ISO AUTO Maximum] and [ISO AUTO Minimum].

[104] Shooting | Selecting the ISO sensitivity

ISO AUTO Min. SS

If you select [ISO AUTO] when the shooting mode is P (Program Auto) or A (Aperture Priority), you can set the shutter speed at which the ISO sensitivity starts changing.

This function is effective for shooting moving subjects. You can minimize subject blurring while also preventing camera shake.



Menu item details

FASTER (Faster)/FAST (Fast):

The ISO sensitivity will start to change at shutter speeds faster than [Standard], so you can prevent camera shake and subject blurring.

STD (Standard):

The camera automatically sets the shutter speed based on the focal length of the lens.

SLOW (Slow)/SLOWER (Slower):

The ISO sensitivity will start to change at shutter speeds slower than [Standard], so you can shoot images with less noise.

1/8000 — 30":

The ISO sensitivity starts to change at the shutter speed you have set.

Hint

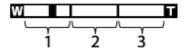
• The difference in shutter speed at which ISO sensitivity starts to change between [Faster], [Fast], [Standard], [Slow], and [Slower] is 1 EV.

- If the exposure is insufficient even when the ISO sensitivity is set to [ISO AUTO Maximum] in [ISO AUTO], in order to shoot with an appropriate exposure, the shutter speed will be slower than the speed set in [ISO AUTO Min. SS].
- In the following situations, the shutter speed may not function as set:
 - When using the flash to shoot bright scenes. (The maximum shutter speed is limited to the flashsyncing speed of 1/250 seconds.)
 - When using the flash to shoot dark scenes with the [Flash Mode] set to [Fill-flash] or [Wireless].
 (The minimum shutter speed is limited to the speed automatically determined by the camera.)

[105] Shooting | Using the zoom

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. Smart Zoom range (_S♠)

Zoom images without causing the original quality to deteriorate by partially cropping an image (only when the image size is [M] or [S]).

2. Clear Image Zoom range (c♠)

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.

3. Digital Zoom range (p♠)

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

- Clear Image Zoom and Digital Zoom cannot be used in conjunction with the smart teleconverter function. The smart teleconverter function is assigned to the smart teleconverter button in the default settings. To use zoom functions other than the optical zoom, make sure that the [1] (Smart Telecon.) function is not assigned to any of the custom keys.
- The default setting for the [Zoom Setting] is [Optical zoom only].
- The default setting for the [Image Size] is [L]. To use the smart zoom, change [Image Size] to [M] or [S].
- Zoom functions other than the optical zoom are not available when shooting in the following situations:

- The shooting mode is set to [Sweep Panorama].
- [Quality] is set to [RAW] or [RAW & JPEG].
- [Record Setting] is set to [120p]/[100p].
- During slow-motion/quick-motion shooting
- You cannot use the Smart Zoom function with movies.
- When you use a zoom function other than the optical zoom, [Metering Mode] is fixed to [Multi].
- When using a zoom function other than the optical zoom, the following functions are not available:
 - Face Detection
 - Lock-on AF
- To use another zoom function than the optical zoom for movies, assign [Zoom] to the desired button using [Custom Key(Shoot.)].

[106] Shooting | Using the zoom

Clear Image Zoom/Digital Zoom (Zoom)

When you use a zoom function other than the optical zoom, you can exceed the zoom range of the optical zoom.

Clear Image Zoom and Digital Zoom cannot be used with the Smart teleconverter at the same time. To use a zoom function other than the optical zoom, do not assign the [1] (Smart Telecon.) function to any custom keys.

- MENU → 2 (Camera Settings2) → [Custom Key(Shoot.)] → assign [Zoom] function to the [5 3 Button (Smart Tele. Button)].
- MENU \rightarrow 2 (Camera Settings2) \rightarrow [Zoom Setting] \rightarrow [On:ClearImage Zoom] or [On:Digital Zoom].
- 3 Press the [□] (Smart Telecon.) button, then select the desired magnification scale by pressing the multi-selector left/right.

Press the center of the multi-selector to exit.

You can also set this function by selecting MENU → 2 (Camera Settings2) → [Zoom].

[107] Shooting | Using the zoom

Zoom Setting

You can select the zoom setting of the product.



MENU \rightarrow (Camera Settings2) \rightarrow [Zoom Setting] \rightarrow desired setting.

Menu item details

Optical zoom only:

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.

[108] Shooting | Using the zoom

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 [3:2]

Zoom Setting	⊠ Image Size	Full-size/APS- C	Zoom scale
Optical zoom only (including smart	L	-	-
	М	Full-frame	Approx. 1.5×
		APS-C	Approx. 1.3x

zoom)			
	S	Full-frame	Approx. 2×
		APS-C	Approx. 2×
On:ClearImage Zoom	L	Full-frame	Approx. 2×
		APS-C	Approx. 2×
	М	Full-frame	Approx. 3.1x
		APS-C	Approx. 2.6x
	S	Full-frame	Approx. 4×
		APS-C	Approx. 4×
On:Digital Zoom	L	Full-frame	Approx. 4×
		APS-C	Approx. 4×
	M	Full-frame	Approx. 6.2x
		APS-C	Approx. 5.2x
	S	Full-frame	Approx. 8×
		APS-C	Approx. 8×

[109] Shooting | White balance

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.



Press the WB (White Balance) button \rightarrow desired setting.

You can also set this function by selecting MENU → 1 (Camera Settings1) → [White Balance].

Menu item details

Flash/ Underwater Auto: 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].

SET 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 multi-selector right.
- 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]
- 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].

[110] Shooting | White balance

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 \rightarrow 1 (Camera Settings1) \rightarrow [Priority Set in AWB] \rightarrow desired setting.

Menu item details

AWB 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 White:

Prioritizes a reproduction of white color when the color temperature of the light source is low.

[111] Shooting | 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.

- Press WB (White Balance) button → [Custom Setup].
- 2 Hold the product so that the white area fully covers the circle located in the center, and then press the center of the multi-selector.

After the shutter sound beeps, the calibrated values (Color Temperature and Color Filter) are displayed.

3 Select a registration number by pressing the multi-selector left/right, 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.

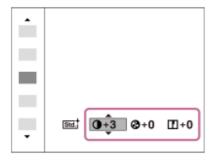
• If you use a flash when capturing a shot, the custom white balance will be registered with the flash light. Shoot images with a flash when recalling a setting registered with the flash.

[112] Shooting | Selecting an effect mode

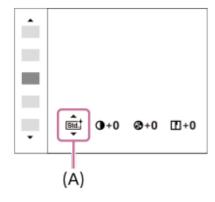
Creative Style

Allows you to set the desired image processing and finely adjust contrast, saturation and sharpness for each image style.

- 2 Select the desired style or [Style Box] by pressing the multi-selector up/down.
- To adjust (Contrast), (Saturation) and (Sharpness), select the desired item using the right/left sides, and then select the value using the up/down sides.



- When selecting [Style Box], move to the right side by pressing the multi-selector right, and then select the desired style.
 - You can call up the same style with slightly different settings.



(A): Displayed only when Style Box is selected

Menu item details

Std.† 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.

Ntri Neutral:

The saturation and sharpness are lowered for shooting images in subdued tones. This is also suitable for capturing image material to be modified with a computer.

Clear Clear:

For shooting images in clear tones with limpid colors in highlight, suitable for capturing radiant light.

Deep:

For shooting images with deep and dense colors, suitable for capturing the solid presence of the subject.

Light Light:

For shooting images with bright and simple colors, suitable for capturing a refreshingly light ambience.

Port. 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.

Night Scene:

The contrast is lowered for reproducing night scenes.

Autumn leaves:

For shooting autumn scenes, vividly highlighting the reds and yellows of changing leaves.

B/w Black & White:

For shooting images in black and white monotone.

_{Sepia}† Sepia:

For shooting images in sepia monotone.

TStd.† Registering preferred settings (Style Box):

Select the six style box (the boxes with numbers on the left side (15td.)) to register preferred settings. Then select the desired settings using the right button.

You can call up the same style with slightly different settings.

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

[Contrast], [Saturation], and [Sharpness] can be adjusted for each image style preset such as [Standard] and [Landscape], and for each [Style Box] to which you can register preferred settings.

Select an item to be set by pressing the multi-selector right/left, then set the value by pressing the multi-selector up/down.

Contrast:

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]
 - [Picture Effect] is set to other than [Off].
 - [Picture Profile] is set to other than [Off].
- When this function is set to [Black & White] or [Sepia], [Saturation] cannot be adjusted.

[113] Shooting | Selecting an effect mode

Picture Effect

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

Menu item details



Disables the [Picture Effect] function.

Toy Camera:

Creates a soft image with shaded corners and reduced sharpness.

(Pop) 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.

(Rtro) 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.

(版) High Contrast Mono.:

Creates a high-contrast image in black and white.

Rich-tone Mono.:

Creates an image in black and white with rich gradation and reproduction of details.

Hint

You can perform detailed settings for some items by pressing the multi-selector left/right.

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.
 - [Rich-tone Mono.]
- In the case of [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, 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]
 - [Sweep Panorama]
- When [Quality] is set to [RAW] or [RAW & JPEG], this function is not available.

[114] Shooting | Selecting an effect mode

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.



 $\textbf{MENU} \rightarrow \textbf{ } \textbf{ } \textbf{ } \textbf{ } \textbf{ (Camera Settings1)} \rightarrow \textbf{ [} \textbf{ } \textbf{ } \textbf{ Color Space]} \rightarrow \textbf{ desired setting.}$

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.

[115] Shooting | Shutter settings

Anti-flicker Shoot. (still image)

Detects flickering/blinking from artificial light sources such as fluorescent lighting and times the shooting of images to moments when flickering will have less of an impact.

This function reduces differences in the exposure and color tone caused by flickering between the upper area and the lower area of an image shot with fast shutter speed and during continuous shooting.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{1} \ \, \textbf{(Camera Settings1)} \rightarrow \ \ \, \textbf{[} \ \ \, \textbf{\sc{Noot.]}} \ \, \textbf{\sc{Anti-flicker Shoot.]}} \rightarrow \ \ \, \textbf{[On]}.$



Press the shutter button halfway down, and then shoot the image.

• The product detects flickering when the shutter button is pressed halfway down.

Menu item details

Off:

Does not reduce influences caused by flickering.

On:

Reduces influences caused by flickering. When the camera detects flickering while the shutter button is pressed halfway down, **Flicker** (flicker icon) will be displayed.

Hint

- Influences caused by flickering may be reduced and **Flicker** (flicker icon) will not be displayed in the following shooting modes:
 - [Intelligent Auto]
- The color tone of the shot result may vary when you shoot the same scene using a different shutter speed. If that happens, we recommend that you shoot in [Shutter Priority] or [Manual Exposure] mode with a fixed shutter speed.
- You can perform anti-flicker shooting by pressing the shutter button halfway down even when in manual focus mode.

- The shutter release lag may increase slightly. In continuous shooting mode, the shooting speed may slow down or the interval between each shot may become unequal.
- The camera detects flickering when the frequency of the light source is 100 Hz or 120 Hz only.
- The camera cannot detect flickering depending on the light source and shooting conditions, such as a dark background.
- Even if the camera detects flickering, the influences caused by flickering may not be reduced enough depending on the light source or the shooting situation. We recommend that you take test shots beforehand.
- [Anti-flicker Shoot.] is not available when shooting in the following situations:
 - While bulb shooting
 - Movie shooting mode
 - When [Priority Set in AF-S] or [Priority Set in AF-C] is set to [Release]/[Balanced Emphasis] and the shutter button is fully pressed without first being pressed halfway down.
 - When shooting an image without pressing the shutter button halfway down in manual focus mode
- The color tone of the shot results may differ depending on the setting of [Anti-flicker Shoot.].

Release w/o Lens

Sets whether or not the shutter can be released when no lens is attached.



MENU \rightarrow (Camera Settings2) \rightarrow [Release w/o Lens] \rightarrow desired setting.

Menu item details

Enable:

Releases the shutter when no lens is attached. Select [Enable] when attaching the product to an astronomical telescope, etc.

Disable:

Does not release the shutter when a lens is not attached.

Note

Correct metering cannot be achieved when you use lenses that do not provide a lens contact, such
as the lens of an astronomical telescope. In such cases, adjust the exposure manually by checking it
on the recorded image.

[117] Shooting | Shutter settings

Release w/o Card

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



 $\textbf{MENU} \rightarrow \textbf{max} \textbf{) (Camera Settings2)} \rightarrow \textbf{[Release w/o Card]} \rightarrow \textbf{desired setting.}$

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.

- 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.

[118] Shooting | Shutter settings

e-Front Curtain Shut.

The electronic front curtain shutter function shortens the time lag between shutter releases.



MENU \rightarrow (Camera Settings2) \rightarrow [e-Front Curtain Shut.] \rightarrow desired setting.

Menu item details

On:

Uses the electronic front curtain shutter function.

Off:

Does not use the electronic front curtain shutter function.

Note

- When you shoot at high shutter speeds with a large diameter lens attached, the ghosting of a blurred area may occur, depending on the subject or shooting conditions. In such cases, set this function to [Off].
- When a lens made by another manufacturer (including a Minolta/Konica-Minolta lens) is used, set this function to [Off]. If you set this function to [On], the correct exposure will not be set or the image brightness will be uneven.
- When you shoot at high shutter speeds, the image brightness may become uneven depending on the shooting environment. In such cases, set [e-Front Curtain Shut.] to [Off].

[119] Shooting | Reducing blur

SteadyShot

Sets whether or not to use the SteadyShot function.



 $\textbf{MENU} \rightarrow \textbf{ } 2 \text{ (Camera Settings2)} \rightarrow \textbf{[SteadyShot]} \rightarrow \textbf{desired setting.}$

Menu item details

On:

Uses [SteadyShot].

Off:

Does not use [SteadyShot].

We recommend that you set [Off] when using a tripod.

[120] Shooting | Reducing blur

SteadyShot Settings

You can shoot with an appropriate SteadyShot setting for the attached lens.

- $\textbf{[SteadyShot Settings]} \rightarrow \textbf{[SteadyShot Adjust.]} \rightarrow \textbf{desired setting.}$

Menu item details

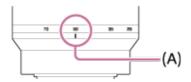
Auto:

Performs the SteadyShot function automatically according to the information obtained from the attached lens.

Manual:

Performs the SteadyShot function according to the focal-length set using [SteadyS. Focal Len.]. (8mm-1000mm)

• Check the focal-length index (A) and set the focal-length.



- The SteadyShot function may not work optimally when the power has just been turned on, right after you point the camera towards a subject, or when the shutter button has been pressed all the way down without stopping halfway.
- When using a tripod, make sure to turn off the SteadyShot function because this can cause any malfunction when shooting.
- [SteadyShot Settings] will be unavailable when MENU→ 12 (Camera Settings2)→[SteadyShot] is set to [Off].
- When the camera cannot obtain focal length information from the lens, the SteadyShot function does not work correctly. Set [SteadyShot Adjust.] to [Manual] and set [SteadyS. Focal Len.] to match the lens you are using. The current set value of the SteadyShot focal length will display to the side of ((♣)).

[121] Shooting | Lens compensation

Lens Comp.: Shading Comp.

Compensates for the shaded corners of the screen, caused by certain lens characteristics.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [Lens Comp.] \rightarrow [Shading Comp.] \rightarrow desired setting.

Menu item details

Auto:

Compensates for darker corners of the screen automatically.

Off:

Does not compensate for darker corners of the screen.

Note

- This function is only available when using an automatic compensation compliant lens.
- The amount of light around the edges may not be corrected, depending on the lens type.

[122] Shooting | Lens compensation

Lens Comp.: Chro. Aber. Comp.

Reduces the color deviation at the corners of the screen, caused by certain lens characteristics.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [Lens Comp.] \rightarrow [Chro. Aber. Comp.] \rightarrow desired setting.

Menu item details

Auto:

Reduces the color deviation automatically.

Off:

Does not compensate for the color deviation.

This function is only available when using an automatic compensation compliant lens.

[123] Shooting | Lens compensation

Lens Comp.: Distortion Comp.

Compensates for the distortion of the screen, caused by certain lens characteristics.



MENU \rightarrow [Camera Settings1) \rightarrow [Lens Comp.] \rightarrow [Distortion Comp.] \rightarrow desired setting.

Menu item details

Auto:

Compensates for distortion of the screen automatically.

Off:

Does not compensate for distortion of the screen.

Note

- This function is only available when using an automatic compensation compliant lens.
- Depending on the attached lens, [Distortion Comp.] is fixed to [Auto], and you cannot select [Off].

[124] Shooting | Noise reduction

Long Exposure NR (still image)

When you set the shutter speed to 1 second(s) or longer (long exposure shooting), noise reduction is turned on for the duration that the shutter is open. With the function turned on, the grainy noise typical of long exposures is reduced.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{1} \ \, \textbf{(Camera Settings1)} \rightarrow \ \ \, \textbf{[} \ \ \, \textbf{Dong Exposure NR]} \rightarrow \ \ \, \textbf{desired setting.}$

Menu item details

On:

Activates noise reduction for the same duration that the shutter is open. When noise reduction is in progress, a message appears and you cannot take another picture. Select this to prioritize

the image quality.

Off:

Does not activate noise reduction. Select this to prioritize the timing of shooting.

Note

- Noise reduction may not be activated even if [Long Exposure NR] is set to [On] in the following situations:
 - The shooting mode is set to [Sweep Panorama].
 - [Drive Mode] is set to [Cont. Shooting] or [Cont. Bracket].
- [Magazine Long Exposure NR] cannot be set to [Off] in the following shooting modes:
 - [Intelligent Auto]
- Depending on the shooting conditions, the camera may not perform noise reduction, even if the shutter speed is 1 second(s) or longer.

[125] Shooting | Noise reduction

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. A message may be displayed during noise reduction processing; you cannot shoot another image until the message disappears.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{1} \ \, (\textbf{Camera Settings1}) \rightarrow \ \ \, \textbf{[} \ \ \, \textbf{MENU} \ \, \textbf{High ISO NR]} \ \, \rightarrow \ \, \textbf{desired setting.}$

Menu item details

Normal:

Activates high ISO noise reduction normally.

Low:

Activates high ISO noise reduction moderately.

Off-

Does not activate high ISO noise reduction. Select this to prioritize the timing of shooting.

- [Migh ISO NR] is not available in the following shooting modes:
 - [Intelligent Auto]
 - [Sweep Panorama]
- When [Quality] is set to [RAW], this function is not available.
- [High ISO NR] does not work for RAW images when the [Quality] is [RAW & JPEG].

[126] Shooting | Face detection

Face Detection

Detects the faces of your subjects and adjusts the focus, exposure, flash settings and performs image processing automatically.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [Face Detection] \rightarrow desired setting.

Menu item details



Does not use the [Face Detection] function.

On (Regist. Faces):

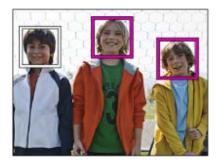
Detects the registered face with higher priority using [Face Registration].

On:

Detects a face without giving higher priority to the registered face.

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. When you press the shutter button halfway down, the frame turns green.
- 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.



- You cannot use the Face Detection function with the following functions:
 - Other zoom functions than the optical zoom
 - [Sweep Panorama]
 - [Picture Effect] is set to [Posterization].
 - When using the [Focus Magnifier] function.
 - [Record Setting] is set to [120p]/[100p].
- 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.

[127] Shooting | Face detection

Face Registration (New Registration)

If you register faces in advance, the product can detect the registered face as a priority when [Face Detection] is set to [On (Regist. Faces)].

- 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.

[128] Shooting | Face detection

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 \rightarrow **1** (Camera Settings1) \rightarrow [Face Registration] \rightarrow [Order Exchanging].
- 2 Select a face to change the order of priority.

[129] Shooting | Face detection

Face Registration (Delete)

Deletes a registered face.



 $\textbf{MENU} \rightarrow \textbf{ } \textbf{1} \text{ (Camera Settings1)} \rightarrow \textbf{[Face Registration]} \rightarrow \textbf{[Delete]}.$

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].

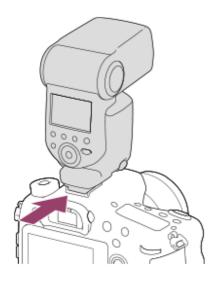
[130] Shooting | Using the flash

Using flash (sold separately)

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

For details on the flash, refer to the instruction manual for the flash.

Attach the flash (sold separately) to the product.



2 Shoot after you have turned on the flash and it is fully charged.

blinking: Charging is in progress

lit up: Charging is finished

• The available flash modes depend on the shooting mode and function.

- The light of the flash may be blocked if the lens hood is attached and the lower part of a recorded image may be shaded. Remove the lens hood.
- When using the flash, stand 1 m or more away from the subject.
- You cannot use the flash when recording movies. (You can use an LED light when using a flash (sold separately) with a LED light.)
- Before attaching/removing an accessory such as a flash to/from the Multi Interface Shoe, turn off the
 product first. When attaching an accessory, make sure that the accessory is fixed securely to the
 product.
- Do not use the Multi Interface Shoe with a commercially available flash that applies voltage of 250 V or more or has the reverse polarity of the camera. Doing so may cause a malfunction.
- You can use a flash of the reverse polarity with the Sync Terminal. Please use a flash with a sync voltage of 400 V or less.
- 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.
- The corners of a recorded image may be shaded, depending on the lens.
- For details on compatible accessories for the Multi Interface Shoe, visit the Sony website, or consult your Sony dealer or local authorized Sony service facility.

[131] Shooting | Using the flash

Red Eye Reduction

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



MENU \rightarrow 1 (Camera Settings1) \rightarrow [Red Eye Reduction] \rightarrow 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.

[132] Shooting | Using the flash

Flash Mode

You can set the flash mode.



 $\textbf{MENU} \rightarrow \text{ $\mod 1$ (Camera Settings1)} \rightarrow \text{[Flash Mode]} \rightarrow \text{desired setting.}$

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.

FRAR 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.

₩ Wireless:

Allows you to shoot by removing the external flash (sold separately) and using it at a distance from the camera.

The shading effect gives the subject a more three-dimensional feel.

Note

- The default setting depends on the shooting mode.
- Some [Flash Mode] settings are not available, depending on the shooting mode.

[133] Shooting | Using the 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.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{1} \ \, (\textbf{Camera Settings1}) \rightarrow \textbf{[Flash Comp.]} \rightarrow \textbf{desired setting.}$

 Selecting higher values (+ side) makes the flash level higher, and lower values (- side) makes the flash level lower.

- [Flash Comp.] does not work when the shooting mode is set to the following modes:
 - [Intelligent Auto]
 - [Sweep Panorama]
- 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.

FEL lock

The flash level is automatically adjusted so that the subject gets the optimum exposure during normal flash shooting. You can also set the flash level in advance.

FEL: Flash Exposure Level

- MENU →
 (Camera Settings2) → [Custom Key(Shoot.)] → desired button, then assign the [FEL Lock toggle] function to the button.
- Center the subject on which FEL is to be locked, and adjust the focus.



- 3 Press the button to which [FEL Lock toggle] is registered, and set the flash amount.
 - A pre-flash flashes.
 - The \$\mathbb{4}_L\ (FEL lock) lights up.
- Adjust the composition and shoot the image.



 When you want to release the FEL lock, press the button to which the [FEL Lock toggle] is registered again.

- HVL-F60M, HVL-F43M and HVL-F32M can be used as clip-ons, off-camera connected by a cable, and for wireless flash shooting (controller/remote).
- HVL-F20M can be used as a clip-on, off-camera connected with a cable, and for wireless flash shooting (controller).

Note

- The FEL lock cannot be set when a flash is not attached.
- If a flash that does not support the FEL lock is attached, an error message is displayed.
- When both AE and FEL lock are fixed, ¼ lights up.

Hint

- By setting [FEL Lock hold], you can hold the setting while the button is pressed down. Also, by setting [FEL Lock/AEL hold] and [FEL Lock/AEL tggle.], you can shoot images with the AE locked in the following situations.
 - When [Flash Mode] is set to [Flash Off] or [Autoflash].
 - When the flash cannot go off.
 - When using an external flash that is set to manual flash mode.

[135] Shooting Using the flash

Flash control

Sets the method for determining the intensity of flash output.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [Flash control] \rightarrow desired setting.

Menu item details

ADI flash:

The camera's flash control uses the focus distance information and brightness value of the subject when the pre-flash is reflected.

This gives precise flash control without hardly being affected by the reflective level of the subject.

Pre-flash TTL:

The camera's flash control uses the brightness value of the subject when the pre-flash is reflected. If this setting is used, the camera's ability to precisely measure the flash light may be affected by reflections from the subject.

ADI: Advanced Distance Integration P-TTL: Pre-flash, Through the lens

Note

- When the distance between the subject and flash is not fixed (such as when shooting with wireless flash using an external flash (sold separately) or in off-camera shooting using a cable, or when using a macro twin flash), or when an external flash (sold separately) is set to bounce, [Flash control] is automatically set to [Pre-flash TTL]. It may be automatically set to [Pre-flash TTL] depending on other shooting conditions as well.
- Set [Flash control] to [Pre-flash TTL] in the following situations because the product cannot get proper flash information using [ADI flash].
 - When a wide panel is attached to the flash HVL-F36AM
 - When shooting using a flash diffuser
 - When using filters that affect the exposure factor (such as ND filters)
 - When using close-up lenses
- ADI flash can be used in combination with a lens distance encoder. To confirm if your lens is
 equipped with a distance encoder, check the main specifications of the operation manual for your
 lens.
- [Flash control] cannot be set in [Sweep Panorama] mode.

[136] Shooting | Using the flash

Wireless flash shooting

There are two ways to use the wireless flash. One way uses a light signal and the other uses a radio signal to communicate with the flash. The flash attached to the camera must be the controller in light signal flash shooting and a Wireless Radio Commander (sold separately) is required for radio signal wireless flash shooting. For details on how to set each method, refer to the instruction manual of the flash or the Wireless Radio Commander.

- Remove the shoe cap from the camera, and then attach the flash or the Wireless Radio Commander.
 - In light signal wireless flash shooting, set the attached flash as the controller.
- **2** MENU \rightarrow 1 (Camera Settings1) \rightarrow [Flash Mode] \rightarrow [Wireless].
- 3 Set up an off-camera flash that is set to wireless mode, or that is attached to the Wireless Radio Receiver (sold separately).
 - Press the AEL button on the camera to perform a test flashing.

Setting of the AEL button

We recommend that you set MENU \rightarrow 2 (Camera Settings2) \rightarrow [Custom Key(Shoot.)] \rightarrow [AEL Button] to [AEL hold] when performing wireless flash shooting.

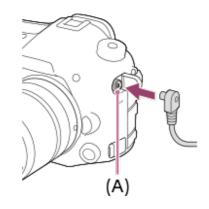
Note

- The off-camera flash may emit light after receiving a light signal from a flash used as the controller of another camera. If this occurs, change the channel of your flash. For details on how to change the channel, refer to the instruction manual for the flash.
- Two flashes (a controller and an off-camera flash) are required for light signal wireless flash shooting.
- HVL-F20M can only be used as the controller.

[137] Shooting | Using the flash

Using a flash with a sync terminal cord

1 Open the cover of 🗲 (flash sync) terminal (A), and connect the cord.



Hint

- If the screen is too dark to check the composition, set [Live View Display] to [Setting Effect OFF] to make it easy to check the composition when shooting with a flash.
- Flashes that have a sync terminal with reversed polarity can be used with this product.

- Set the exposure mode to manual exposure (other than ISO AUTO is recommended for ISO sensitivity), and set the shutter speed to the slower of the following values or slower:
 - 1/200 seconds

The shutter speed recommended by the flash.

- Use flashes with a sync voltage of 400 V or lower.
- The flash power level is set to full power. [Flash Comp.] cannot be set.
- Auto white balance function is not recommended. Use the custom white balance function to achieve a more accurate white balance.
- When a flash is connected to the \$\forall (flash sync) terminal, the flash indicator will not be displayed.

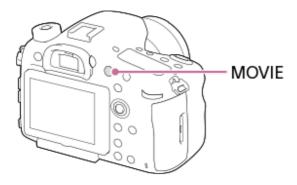
[138] Recording movies

Shooting movies

You can record movies by pressing the MOVIE (Movie) button.



• Since the [MOVIE Button] is set to [Always] in the default setting, movie recording can be started from any shooting mode.



2 Press the MOVIE button again to stop recording.

Hint

- You can assign the start/stop movie recording function to a preferred key. MENU → 2 (Camera Settings2) → [Custom Key(Shoot.)] → set the function 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 focus area 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/S&Q Motion).
- The following settings for still image shooting are applied to the movie shooting:
 - ISO
 - White Balance
 - Creative Style
 - Exposure Comp.
 - Metering Mode
 - Face Detection
 - D-Range Opt.
 - Lens Comp.
 - Picture Effect
- 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].

- The sound of the lens and the product in operation may be recorded during movie recording.
 You can turn the sound off by selecting MENU → 2 (Camera Settings2) → [Audio Recording] → [Off].
- When shooting, the sound of the shoulder strap hooks (triangular hook) could be recorded, depending on the situation used.
- The temperature of the camera tends to rise when shooting movies continuously, and you may feel that the camera is hot. This is not a malfunction. Also, [Internal temp. high. Allow it to cool.] may appear. In such cases, turn the camera off and wait until the camera is ready to shoot again.
- When the [1] icon appears, the temperature of the camera is too high. Turn the camera off 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 restart recording by pressing the MOVIE button again. Recording may stop to protect the product, depending on the temperature of the product or the battery.
- Auto focus function can be used only when the shooting mode is set to [Program Auto]. In that case, the aperture value is locked to F3.5 (when the minimum F-value of the lens is F3.5 or larger, the aperture value is set to the minimum F-value).
- When the mode dial is set to [Movie/S&Q Motion) or when shooting movies, you cannot select [Lock-on AF] for [Focus Area].
- When the shooting mode is [Movie/S&Q Motion), [AF System] is set to [Ddc Phase AF Only]. The number of focus points is limited to 61.
- 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 record smoothly. By changing the exposure mode and adjusting the aperture value and the shutter speed, the motion of the subject can be recorded smoothly.
- In movie shooting mode, the following settings cannot be set in [Picture Effect]. When a movie

recording starts, [Off] will be set temporarily.

- Rich-tone Mono.
- 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, AVCHD movies, and MP4 movies to a computer.

[139] Recording 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, or approx. 50 Mbps

Records movies in crisper quality than AVCHD with larger amounts of data.

AVCHD:

Bit-rate: Approx. 28 Mbps (maximum), 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.

[140] Recording movies

File Format (movie)

Selects the movie file format.

1

 $\textbf{MENU} \rightarrow \textbf{mat} \) \ (\textbf{Camera Settings2}) \rightarrow \textbf{[mat]} \ \textbf{File Format]} \rightarrow \textbf{desired setting.}$

Menu item details

XAVC S 4K:

Records 4K movies in the XAVC S format. This format supports a high bit rate.

Audio: LPCM

- One of the following kinds of memory card is needed to record movies with [File Format] set to [XAVC S 4K]:
 - Memory Stick PRO-HG Duo
 - Movies cannot be recorded in 100 Mbps or more.
 - SDHC / SDXC / microSDHC / microSDXC memory card (SD Speed Class 10, or UHS Speed Class U1 or faster)
 - UHS Speed Class U3 is required to record at 100 Mbps or more.
- [HDMI Info. Display] temporarily switches to [Off] when [File Format] is set to [XAVC S 4K].

XAVC S HD:

Records HD movies in the XAVC S format. This format supports a high bit rate.

Audio: LPCM

- One of the following kinds of memory card is needed to record movies with [File Format] set to [XAVC S HD]:
 - Memory Stick PRO-HG Duo
 - Movies cannot be recorded in 100 Mbps or more.
 - SDHC / SDXC / microSDHC / microSDXC memory card (SD Speed Class10, or UHS Speed Class U1 or faster)
 - UHS Speed Class U3 is required to record at 100 Mbps or more.

AVCHD:

Records HD movies in the AVCHD format. This file format is suitable for high-definition TV. Audio: Dolby Digital

MP4:

Records MP4 (AVC) movies. This format is suitable for playback on smartphones or tablets, web uploads, email attachments, etc.

Audio: AAC

Hint

 You can save images to a computer or copy them to a disc compatible with your playback device using the PlayMemories Home software.

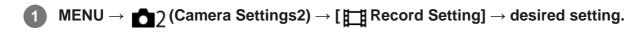
Note

- 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.
- When [File Format] is set to [MP4], the file size of movies is limited to approx. 4 GB. If the movie file size reaches approx. 4 GB during recording, recording will stop automatically.

[141] Recording movies

Record Setting (movie)

Selects the image size, frame rate, and image quality for movie recording. The higher the bitrate, the higher the image quality.



Menu item details

When [File Format] is set to [XAVC S 4K]

Records high-definition movies by converting them into the MP4 file format using the MPEG-4 AVC/H.264 codec.

Frame Rate	Bit-rate		
Frame Nate	60 Mbps	100 Mbps	
30p/25p	30p 60M/25p 60M	30p 100M/25p 100M	
24p	24p 60M*	24p 100M*	

^{*} Only when [NTSC/PAL Selector] is set to NTSC

When [File Format] is set to [XAVC S HD]

Records high-definition movies by converting them into the MP4 file format using the MPEG-4 AVC/H.264 codec.

Frame Rate	Bit-rate		
	50 Mbps	60 Mbps	100 Mbps

120p/100p	_	120p 60M/100p 60M	120p 100M/100p 100M
60p/50p	60p 50M/50p 50M	_	_
30p/25p	30p 50M/25p 50M	_	_
24p	24p 50M*	_	_

^{*} Only when [NTSC/PAL Selector] is set to NTSC

When [File Format] is set to [AVCHD]

60i/50i: Movies are recorded at approximately 60 fields/sec (for 1080 60i-compatible devices) or 50 fields/sec (for 1080 50i-compatible devices), in interlaced mode with Dolby Digital audio and in the AVCHD format.

24p/25p: Movies are recorded at approximately 24 frames/sec (for 1080 60i-compatible devices) or 25 frames/sec (for 1080 50i-compatible devices), in progressive mode with Dolby Digital audio and in the AVCHD format.

60p/50p: Movies are recorded at approximately 60 frames/sec (for 1080 60i-compatible devices) or 50 frames/sec (for 1080 50i-compatible devices), in progressive mode with Dolby Digital audio and in the AVCHD format.

Frame	Bit-rate		
Rate	17 Mbps	24 Mbps	28 Mbps
60i/50i	60i 17M(FH)/50i 17M(FH)	60i 24M(FX)/50i 24M(FX)	_
60p/50p	_	_	60p 28M(PS)/50p 28M(PS)
24p/25p	24p 17M(FH)/25p 17M(FH)	24p 24M(FX)/25p 24M(FX)	_

When [File Format] is set to [MP4]

Movies are recorded in the MPEG-4 format, at approximately 60 frames/sec (for 1080 60i-compatible devices), approximately 50 frames/sec (for 1080 50i-compatible devices), approximately 30 frames/sec (for 1080 60i-compatible devices), or approximately 25 frames/sec (for 1080 50i-compatible devices), in progressive mode with AAC audio and in the MP4 format.

Frame	Bit-rate		
Rate	6 Mbps	16 Mbps	28 Mbps
60p/50p	_	_	1920x1080 60p 28M/1920x1080 50p 28M

30p/25p	1280x720 30p		
	6M/1280x720 25p 6M		

1920x1080 30p 16M/1920x1080 25p 16M

Note

- Movies recorded with the [60p 28M(PS)]/[50p 28M(PS)]/[60i 24M(FX)]/[50i 24M(FX)]/[24p 24M(FX)]/[25p 24M(FX)] as the [Record Setting] are converted by PlayMemories Home in order to create an AVCHD recording disc. You cannot create a disc in the original image quality. This conversion can take a long time. If you want to keep the original image quality, store your movies on a Blu-ray Disc.
- To play back 60p/50p/24p/25p movies on a TV, the TV must be compatible with the 60p/50p/24p/25p format. If the TV is not compatible with the 60p/50p/24p/25p format, 60p/50p/24p/25p movies will be output as 60i/50i movies.
- [120p]/[100p] cannot be selected for the following settings.
 - [Intelligent Auto]

[142] Recording movies

S&Q Settings

You can record a moment that cannot be captured by the naked eye (slow-motion recording), or record a long-term phenomenon into a compressed movie (quick-motion recording). For example, you can record an intense sports scene, the moment when a bird starts to fly, a blooming flower, and a changing view of clouds or a starry sky. Sound will not be recorded.

- 1 Set the mode dial to | (Movie/S&Q Motion).
- Select MENU→ 2 (Camera Settings2)→[Movie/S&Q Motion]→ and select the desired setting of slow-motion/quick-motion (S&Q) (S&Q) Program Auto, S&Q Aperture Priority, S&Q Shutter Priority, or S&Q Manual Exposure).
- 3 Select MENU→ 2 (Camera Settings2)→[S&Q S&Q Settings] and select the desired settings for [S&Q Record Setting] and [S&Q Frame Rate].
- 4 Press the MOVIE (movie) button to start recording.
 - Press the MOVIE button again to stop recording.

Menu item details

S&Q Record Setting:

Selects the frame rate of the movie.

S&Q Frame Rate:

Selects the shooting frame rate.

Playback speed

The playback speed will vary as below depending on the assigned [$\S_{\&0}$ Record Setting] and [$\S_{\&0}$ Frame Rate].

When [NTSC/PAL Selector] is set to NTSC

S&Q Frame Rate	S&Q Record Setting		
Sau i rame ivate	24p	30p	60p
120fps	5 times slower	4 times slower	-
60fps	2.5 times slower	2 times slower	Normal playback speed
30fps	1.25 times slower	Normal playback speed	2 times quick
15fps	1.6 times quick	2 times quick	4 times quick
8fps	3 times quick	3.75 times quick	7.5 times quick
4fps	6 times quick	7.5 times quick	15 times quick
2fps	12 times quick	15 times quick	30 times quick
1fps	24 times quick	30 times quick	60 times quick

When [NTSC/PAL Selector] is set to PAL

S&Q Frame Rate	S&Q Record Setting		
580 Traine Kate	25p	50p	
100fps	4 times slower	-	
50fps	2 times slower	Normal playback speed	
25fps	Normal playback speed	2 times quick	
12fps	2.08 times quick	4.16 times quick	
6fps	4.16 times quick	8.3 times quick	
3fps	8.3 times quick	16.6 times quick	

2fps	12.5 times quick	25 times quick	
1fps	25 times quick	50 times quick	

When [S80 Frame Rate] is set to [120fps]/[100fps], you cannot set [S80 Record Setting] to [60p]/[50p].

Note

- In slow-motion recording, the shutter speed becomes faster and you may not be able to obtain the
 proper exposure. If this happens, decrease the aperture value or adjust the ISO sensitivity to a
 higher value.
- For an estimation of recordable time, refer to "Recordable movie times."
- The bit-rate of a recorded movie varies depending on the settings for [S&O Frame Rate] and [S&O Record Setting].
- The movie will be recorded in XAVC S HD format.
- During slow-motion/quick-motion recording, the following functions are not available.
 - [Dual Video REC]
 - [TC Run] under [TC/UB Settings]
 - [TC Output] under [HDMI Settings]
 - [4K Output Sel.]

[143] Recording movies

Dual Video REC

Allows you to simultaneously record an XAVC S movie and an MP4 movie, or an AVCHD movie and an MP4 movie. You can simultaneously record a movie in different movie formats onto a memory card. (To set the recording mode for 2 memory cards, such as simultaneous recording or sort recording, use [Recording Mode].)



Menu item details

On:

An XAVC S movie and an MP4 movie, or an AVCHD movie and an MP4 movie, are recorded simultaneously.

Off:

The [Dual Video REC] function is not used.

- When [Recording Mode] is set to [Simult. (☐)] or [Simult. (☐)], [Dual Video REC] will temporarily be set to [Off].
- When [Record Setting] for an XAVC S movie is set to [60p]/[50p] or [120p]/[100p], [Record Setting] for an AVCHD movie is set to [60p]/[50p], or [File Format] is set to [MP4], [Dual Video REC] is set to [Off].
- If you select [Date View] in [View Mode] when playing back movies, XAVC S movies and MP4 movies, or AVCHD movies and MP4 movies are displayed side-by-side.

[144] Recording movies

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 \rightarrow (Camera Settings2) \rightarrow [Audio Recording] \rightarrow desired setting.

Menu item details

On:

Records sound (stereo).

Off:

Does not record sound.

[145] Recording movies

Audio Level Display

Sets whether to display the audio level on the screen.



 $\textbf{MENU} \rightarrow \textbf{mat}) \ (\textbf{Camera Settings2}) \rightarrow \textbf{[Audio Level Display]} \rightarrow \textbf{desired setting.}$

Menu item details

On:

Displays the audio level.

Off:

Does not display the audio level.

Note

- The audio level is not displayed in the following situations:
 - When [Audio Recording] is set to [Off].
 - When DISP (Display Setting) is set to [No Disp. Info.].
 - During slow-motion/quick-motion shooting
- The audio level is also displayed while shooting stand-by in movie recording mode.

[146] Recording movies

Audio Rec Level

You can adjust the audio recording level while checking the level meter.



Select the desired level by pressing the multi-selector right/left.

Menu item details

+:

Turns up the audio recording level.

-:

Turns down the audio recording level.

Reset:

Resets the audio recording level to the default setting.

Hint

When you record audio movies with loud volumes, set [Audio Rec Level] to a lower sound level. Doing so enables you to record more realistic audio. When you record audio movies with lower volumes, set [Audio Rec Level] to a greater sound level to make the sound easier to hear.

- Regardless of the [Audio Rec Level] settings, the limiter always operates.
- [Audio Rec Level] is available only when the shooting mode is set to movie mode.
- [Audio Rec Level] is unavailable during slow-motion/quick-motion shooting.
- The [Audio Rec Level] settings are applied for both the internal microphone and the

[147] Recording movies

Audio Out Timing

You can set echo cancellation during audio monitoring and prevent undesirable deviations between video and audio during HDMI output.



 $\textbf{MENU} \rightarrow \textbf{m} \ \textbf{)} \ (\textbf{Camera Settings2}) \rightarrow \textbf{[Audio Out Timing]} \rightarrow \textbf{desired setting.}$

Menu item details

Live:

Outputs audio without delay. Select this setting when audio deviation is a problem during audio monitoring.

Lip Sync:

Outputs audio and video in sync. Select this setting to prevent undesirable deviations between video and audio.

[148] Recording movies

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.



 $\textbf{MENU} \rightarrow \textbf{\raggertauler} 2 \text{ (Camera Settings2)} \rightarrow \textbf{[Wind Noise Reduct.]} \rightarrow \textbf{desired setting.}$

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.

When an external microphone (sold separately) is used, [On] does not function.

[149] Recording movies

Picture Profile

Allows you to change the settings for the color, gradation, etc. For details on "Picture Profile," refer to http://helpguide.sony.net/di/pp/v1/en/index.html.

Customizing the picture profile

You can customize the picture quality by adjusting picture profile items such as [Gamma] and [Detail]. When setting these parameters, connect the camera to a TV or monitor, and adjust them while observing the picture on the screen.

- MENU → ↑ (Camera Settings1) → [Picture Profile] → the profile you want to change.
- 2 Move to the item index screen by pressing the multi-selector right.
- 3 Select the item to change using the up/down sides of the multi-selector.
- Select the desired value by pressing the multi-selector up/down and press in the center.

Using the preset of the picture profile

The default settings [PP1] through [PP9] for movies have been set in advance in the camera based on various shooting conditions.

PP1:

Example setting using [Movie] gamma

PP2:

Example setting using [Still] gamma

PP3:

Example setting of natural color tone using the [ITU709] gamma

PP4:

Example setting of a color tone faithful to the ITU709 standard

PP5:

Example setting using [Cine1] gamma

PP6:

Example setting using [Cine2] gamma

PP7:

Example setting using [S-Log2] gamma

PP8:

Example setting using the [S-Log3] gamma and the [S-Gamut3.Cine] under [Color Mode].

PP9:

Example setting using the [S-Log3] gamma and the [S-Gamut3] under [Color Mode].

Items of the picture profile

Black Level

Sets the black level. (-15 to +15)

Gamma

Selects a gamma curve.

Movie: Standard gamma curve for movies

Still: Standard gamma curve for still images

Cine1: Softens the contrast in dark parts and emphasizes gradation in bright parts to produce a relaxed color movie. (equivalent to HG4609G33)

Cine2: Similar to [Cine1] but optimized for editing with up to 100% video signal. (equivalent to HG4600G30)

Cine3: Intensifies the contrast in light and shade more than [Cine1] and strengthens gradation in black.

Cine4: Strengthens the contrast in dark parts more than [Cine3]. The contrast in dark parts is lower and the contrast in bright parts is higher than for [Movie].

ITU709: Gamma curve that corresponds to ITU709.

ITU709(800%): Gamma curve for confirming scenes on the assumption of shooting using [S-Log2] or [S-Log3].

S-Log2: Gamma curve for [S-Log2]. This setting is based on the assumption that the picture will be processed after shooting.

S-Log3: Gamma curve for [S-Log3] with more similar features to film. This setting is based on the assumption that the picture will be processed after shooting.

Black Gamma

Corrects gamma in low intensity areas.

Range: Selects the correcting range. (Wide / Middle / Narrow)

Level: Sets the correcting level. (-7 (maximum black compression) to +7 (maximum black stretch))

Knee

to [Manual].

Sets knee point and slope for video signal compression to prevent over-exposure by limiting signals in high intensity areas of the subject to the dynamic range of your camera. When selecting [Still], [Cine1], [Cine2], [Cine3], [Cine4], [ITU709(800%)], [S-Log2], [S-Log3] in [Gamma], [Knee] is set to [Off] if [Mode] is set to [Auto]. To use functions in [Knee], set [Mode]

Mode: Selects auto/manual settings.

- Auto: The knee point and slope are set automatically.
- Manual: The knee point and slope are set manually.

Auto Set: Settings when [Auto] is selected for [Mode].

- Max Point: Sets the maximum point of the knee point. (90% to 100%)
- Sensitivity: Sets the sensitivity. (High / Mid / Low)

Manual Set: Settings when [Manual] is selected for [Mode].

- Point: Sets the knee point. (75% to 105%)
- Slope: Sets the knee slope. (-5 (gentle) to +5 (steep))

Color Mode

Sets type and level of colors.

Movie: Suitable colors when [Gamma] is set to [Movie].

Still: Suitable colors when [Gamma] is set to [Still].

Cinema: Suitable colors when [Gamma] is set to [Cine1].

Pro: Similar color tones to the standard image quality of Sony professional cameras (when combined with ITU709 gamma)

ITU709 Matrix: Colors corresponding to ITU709 standard (when combined with ITU709 gamma) Black & White: Sets the saturation to zero for shooting in black and white.

S-Gamut: Setting based on the assumption that the pictures will be processed after shooting. Used when [Gamma] is set to [S-Log2].

S-Gamut3.Cine: Setting based on the assumption that the pictures will be processed after shooting. Used when [Gamma] is set to [S-Log3]. This setting allows you to shoot in a color space that can easily be converted for digital cinema.

S-Gamut3: Setting based on the assumption that the pictures will be processed after shooting. Used when [Gamma] is set to [S-Log3]. This setting allows you to shoot in a wide color space.

Saturation

Sets the color saturation. (-32 to +32)

Color Phase

Sets the color phase. (-7 to +7)

Color Depth

Sets the color depth for each color phase. This function is more effective for chromatic colors and less effective for achromatic colors. The color looks deeper as you increase the setting

value towards the positive side, and lighter as you decrease the value towards the negative side. This function is effective even if you set [Color Mode] to [Black & White].

- [R] -7 (light red) to +7 (deep red)
- [G] -7 (light green) to +7 (deep green)
- [B] -7 (light blue) to +7 (deep blue)
- [C] -7 (light cyan) to +7 (deep cyan)
- [M] -7 (light magenta) to +7 (deep magenta)
- [Y] -7 (light yellow) to +7 (deep yellow)

Detail

Sets items for [Detail].

Level: Sets the [Detail] level. (-7 to +7)

Adjust: The following parameters can be selected manually.

- Mode: Selects auto/manual setting. (Auto (automatic optimization) / Manual (The details are set manually.))
- V/H Balance: Sets the vertical (V) and horizontal (H) balance of DETAIL. (-2 (off to the vertical (V) side) to +2 (off to the horizontal (H) side))
- B/W Balance: Selects the balance of the lower DETAIL (B) and the upper DETAIL (W).
 (Type1 (off to the lower DETAIL (B) side) to Type5 (off to the upper DETAIL (W) side))
- Limit: Sets the limit level of [Detail]. (0 (Low limit level: likely to be limited) to 7 (High limit level: unlikely to be limited))
- Crispning: Sets the crispening level. (0 (shallow crispening level) to 7 (deep crispening level))
- Hi-Light Detail: Sets the [Detail] level in the high intensity areas. (0 to 4)

To copy the settings to another picture profile number

You can copy the settings of the picture profile to another picture profile number.

 $MENU \rightarrow 1$ (Camera Settings1) \rightarrow [Picture Profile] \rightarrow [Copy].

To Reset the picture profile to the default setting

You can reset the picture profile to the default setting. You cannot reset all picture profile settings at once.

 $\mathsf{MENU} \to \bullet 1 \text{ (Camera Settings1)} \to \mathsf{[Picture Profile]} \to \mathsf{[Reset]}.$

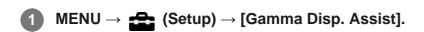
- Since the parameters are shared for movie and still images, adjust the value when you change the shooting mode.
- If you print RAW images with shooting settings, the following settings are not reflected:
 - Black Level
 - Black Gamma
 - Knee
 - Color Depth
- When the [Record Setting] is [120p 100M]/[100p 100M] or [120p 60M]/[100p 60M], [Black Gamma] is fixed at "0" and cannot be adjusted.

- If you change [Gamma], the available ISO value range changes.
- There may be more noise in dark parts depending on the gamma settings. It may improve by setting the lens compensation to [Off].
- When using S-Log2 or S-Log3 gamma, the noise becomes more noticeable compared to when using other gammas. If the noise still is significant even after processing pictures, it may be improved by shooting with a brighter setting. However, the dynamic range becomes narrower accordingly when you shoot with a brighter setting. We recommend checking the picture in advance by test shooting when using S-Log2 or S-Log3.
- Setting [ITU709(800%)], [S-Log2] or [S-Log3] may cause an error in the white balance custom setup.
 In this case, perform custom setup with a gamma other than [ITU709(800%)], [S-Log2], or [S-Log3] first, and then reselect [ITU709(800%)], [S-Log2], or [S-Log3] gamma.
- Setting [ITU709(800%)], [S-Log2] or [S-Log3] disables the [Black Level] setting.
- If you set [Slope] to +5 in [Manual Set], [Knee] is set to [Off].
- S-Gamut, S-Gamut3.Cine, and S-Gamut3 are color spaces exclusive to Sony. However, this
 camera's S-Gamut setting does not support the whole S-Gamut color space; it is a setting to achieve
 a color reproduction equivalent to S-Gamut.

[150] Recording movies

Gamma Disp. Assist

Movies with S-Log gamma are assumed to be processed after shooting in order to make use of the wide dynamic range. They are therefore displayed in low contrast during shooting and may be difficult to monitor, using [Gamma Disp. Assist], contrast equivalent to that of normal gamma can be reproduced. In addition, [Gamma Disp. Assist] can also be applied when playing back movies on the camera's monitor/viewfinder.



2 Select the desired setting by pressing the multi-selector up/down.

Menu item details

Assist 7 Off:

Does not apply [Gamma Disp. Assist].

Assist Auto:

Displays movies with an [S-Log2 \rightarrow 709(800%)] effect when the gamma set in [Picture Profile] is [S-Log2], and with an [S-Log3 \rightarrow 709(800%)] effect when the gamma is set to [S-Log3].

Assist 7 S-Log2 \rightarrow 709(800%):

Displays movies with an S-Log2 gamma reproducing contrast equivalent to ITU709 (800%).

Assist 7 S-Log3 \rightarrow 709(800%):

Displays movies with an S-Log3 gamma reproducing contrast equivalent to ITU709 (800%).

Note

- When [Gamma Disp. Assist] is set to [Auto] during playback, the picture is displayed based on the current gamma setting in [Picture Profile] instead of auto-detecting the gamma value of the movie.
- [Gamma Disp. Assist] is not applied to movies when displayed on a TV or monitor connected to the camera.

[151] Recording movies

Auto Slow Shut. (movie)

Sets whether or not to adjust the shutter speed automatically when recording movies if the subject is dark.



MENU \rightarrow (Camera Settings2) \rightarrow [Auto Slow Shut.] \rightarrow 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 Shut.]. The recorded movie will be darker than when [On] is selected, but you can record movies with smoother motion and less object blur.

- [Auto Slow Shut.] does not function in the following situations:
 - During slow-motion/quick-motion shooting
 - **S** (Shutter Priority)
 - M (Manual Exposure)
 - When [ISO] is set to other than [ISO AUTO]

AF Track Sens (movie)

You can set the AF sensitivity in movie mode.



MENU \rightarrow (Camera Settings2) \rightarrow [AF Track Sens] \rightarrow desired setting.

Menu item details

Responsive:

Sets the AF sensitivity to high. This mode is useful when recording movies in which the subject is moving quickly.

Standard:

Sets the AF sensitivity to normal.

Locked on:

Sets the AF sensitivity to low. You can shoot with a stable focus by ignoring the influence of anything in front of the subject.

[153] Recording movies

TC/UB Settings

The time code (TC) and the user bit (UB) information can be recorded as data attached to movies.



 $\textbf{MENU} \rightarrow \textbf{ £} \textbf{ (Setup)} \rightarrow \textbf{[TC/UB Settings]} \rightarrow \textbf{setting value you want to change.}$

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. $MENU \rightarrow \bigoplus$ (Setup) \rightarrow [TC/UB Settings] \rightarrow [TC Preset].
- 2. Press the multi-selector up/down 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 multi-selector.

How to reset the time code

- 2. Press the fig (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)

- 2. Press the multi-selector up/down 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 multi-selector.

How to reset the user bit

- 2. Press the im (Delete) button to reset the user bit (00 00 00 00).

How to select the recording method for the time code (TC Format*1)

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. $MENU \rightarrow \bigoplus$ (Setup) \rightarrow [TC/UB Settings] \rightarrow [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. $MENU \rightarrow \bigoplus$ (Setup) \rightarrow [TC/UB Settings] \rightarrow [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 is read from the memory card in the slot 1 when [Recording Mode] is set to [Simult. ()] or [Simult. ()]. The time code is read from the memory card to which the movies will be recorded when [Recording Mode] is set to [Standard], [Simult. ()], [Sort(JPEG/RAW)] or [Sort()]. The time code advances in [Rec Run] mode regardless of the [TC Run] setting.

[154] Recording movies

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.

MENU → 2 (Camera Settings2) → [Custom Key(Shoot.)]/[Custom Key(PB)] → assign the [TC/UB Disp. Switch] function to the desired key.

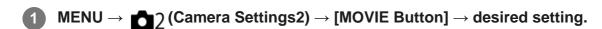
Press the key to which [TC/UB Disp. Switch] is assigned.

Each time you press the key, the monitor display will switch from the movie recording time counter \rightarrow time code (TC) \rightarrow user bit (UB), in that order.

[155] Recording movies

MOVIE Button

Sets whether or not to activate the MOVIE (Movie) button.



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/S&Q Motion] mode.

[156] Recording movies

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/S&Q Motion) 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.)

[157] Recording movies

Marker Settings (movie)

Sets the markers to be displayed while shooting movies.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{ } \ \, \textbf{ } \ \, 2 \, (\textbf{Camera Settings2}) \rightarrow \textbf{ [} \ \ \, \textbf{ } \ \, \ \, \textbf{ } \ \, \ \, \textbf{ } \ \, \ \, \textbf{ } \ \, \ \, \textbf{ } \ \, \textbf{ }$

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.

[158] Recording movies

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 [1] (Movie/S&Q Motion).
- 2 Connect the camera to the desired device via an HDMI cable.

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.

- 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].
- A 4K movie is not output to the connected 4K-compatible device during slow-motion/quick-motion shooting.
- 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 the camera is connected using an HDMI cable with [☐ File Format] is set to [XAVC S 4K], or when [☐ File Format] is set to [XAVC S 4K] and [Dual Video REC] is set to [On], the following functions are not available.
 - [Face Detection]
 - [Lock-on AF] under [Focus Area]
 - [Center Lock-on AF]
 - [Eye AF]

[159] Recording movies

Video Light Mode

Sets the illumination setting for the HVL-LBPC LED light (sold separately).



Menu item details

Power Link:

The video light turns on/off in sync with the ON/OFF operation of this camera.

REC Link:

The video light turns on/off in sync with movie recording start/stop.

REC Link&STBY:

The video light turns on when movie recording starts and dims when not recording (STBY).

Auto:

The video light automatically turns on when it is dark.

[160] Viewing | Viewing images

Playing back still images

Plays back the recorded images.



Press the (Playback) button to switch to the playback mode.

Select the image with the multi-selector.

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.

[161] Viewing | Viewing images

Enlarging an image being played back (Playback zoom)

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 then press the ♠ button.
 - Press the button to adjust the zoom scale.
 - You can also adjust the zoom scale by turning the rear dial. By rotating the front dial, you can switch to the previous or next image while keeping the same 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.
- Select the portion you want to enlarge by pressing the multi-selector up/down/right/left.
- 3 Press the center of the multi-selector 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 →
 [♠ Enlarge Init. Mag.] or [♠ Enlarge Initial Pos.].

Note

You cannot enlarge movies.

[162] Viewing | Viewing images

Rotating recorded images automatically (Display Rotation)

Selects the orientation when playing back recorded images.



 $MENU \rightarrow$ [Display Rotation] \rightarrow desired setting.

Menu item details

Auto:

When you rotate the camera, the displayed image rotates automatically by detecting the orientation of the camera.

Manual:

A portrait image is displayed as a vertical image. If you have set the image orientation using the [Rotate] function, the image will be displayed accordingly.

Off:

Always displays in landscape orientation.

[163] Viewing | Viewing images

Rotating an image (Rotate)

Rotates a recorded still image counter-clockwise.



Press the center of the multi-selector.

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.

[164] Viewing | Viewing images

Enlarge Init. Mag.

Sets the initial magnification scale when playing back enlarged images.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{[} \oplus \textbf{Enlarge Init. Mag.]} \rightarrow \textbf{desired setting.}$

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.

[165] Viewing | Viewing images

Enlarge Initial Pos.

Sets the initial position when enlarging an image in playback.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{[} \bigoplus \textbf{[Playback)} \rightarrow \textbf{[} \bigoplus \textbf{Enlarge Initial Pos.]} \rightarrow \textbf{desired setting.}$

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.

Playing back panoramic images

The product automatically scrolls a panoramic image from end to end.

- 2 Select the panoramic image to be played back using the multi-selector and press the center to start playback.



- To pause playback, press the center again.
- To scroll panoramic images manually, press the up/down/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.

[167] Viewing | Viewing images

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 multi-selector and press the center of the multi-selector to start playback.

Available operations during movie playback

You can perform slow playback and sound volume adjustment, etc. by pressing the multiselector down.

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

Photo Capture

j): Sound volume adjustment

S: 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.

[168] Viewing | Viewing images

Volume Settings

Sets the sound volume for movie playback.



 $\textbf{MENU} \rightarrow \textbf{ (Setup)} \rightarrow \textbf{[Volume Settings]} \rightarrow \textbf{desired setting.}$

Adjusting the volume during playback

Press the multi-selector down 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.
- 3 Play back the movie and pause it.
- 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.

[170] Viewing | Viewing images

Playing back images on the image index screen (Image Index)

You can display multiple images at the same time in playback mode.

- Press the [Image Index] button while the image is being played back.
- Select the image by pressing the multi-selector up/down/right/left.

To change the number of images to be displayed

 $MENU \rightarrow (Playback) \rightarrow [Image Index] \rightarrow desired setting.$



Menu item details

9 Images/25 Images

To return to single-image playback

Select the desired image and press the center of the multi-selector.

To display a desired image quickly

Select the bar on the left of the image index screen using the multi-selector, then press the multi-selector up/down. 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.

[171] Viewing | Viewing images

Switching between still images and movies (View Mode)

Sets the View Mode (image display method).



 $\textbf{MENU} \rightarrow \textbf{[Playback)} \rightarrow \textbf{[View Mode]} \rightarrow \textbf{desired setting}.$

Menu item details

Date View:

Displays the images by date.

Folder View(Still):

Displays only still images.

□_{MP4} Folder View(MP4):

Displays only MP4-format movies.

PAVCHD AVCHD View:

Displays only AVCHD-format movies.

EXAMS XAVC S HD View:

Displays only XAVC S HD-format movies.

■ XAVC S 4K View:

Displays only XAVC S 4K-format movies.

[172] Viewing | Viewing images

Selecting which memory card to play back (Select PB Media)

Selects the memory card slot to be played back.



 $MENU \rightarrow$ [Select PB Media] \rightarrow desired slot.

Menu item details

Slot 1:

Selects the slot 1.

Slot 2:

Selects the slot 2.

Note

- No image is played back when no memory card is inserted in the selected slot. Select a slot into which a memory card has been inserted.
- When you select [Date View] in [View Mode], the camera only plays back images from a memory card selected using [Select PB Media].

[173] Viewing | Viewing images

Copying images from one memory card to another (Copy)

You can copy images from a memory card in a slot that is selected using [Select PB Media] to a memory card in another slot.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{ [Copy]}.$

All of the contents with a date or in a folder currently being played back will be copied to a memory card in another slot.

Hint

Note

- It may take a long time when many images are to be copied. Use a sufficiently charged battery pack.
- XAVC S movies can only be copied to a memory card that supports XAVC S movies. A message will be displayed on the monitor of the camera when images cannot be copied.

[174] Viewing | Viewing images

Playing back images using slideshow (Slide Show)

Automatically plays back images continuously.

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 multi-selector right/left.
- You can activate a slideshow only when [View Mode] is set to [Date View] or [Folder View(Still)].

[175] Viewing | Protecting data

Protecting images (Protect)

Protects recorded images against accidental erasure. The mark is displayed on protected images.

MENU → (Playback) → [Protect] → desired setting.

Menu item details

Multiple Img.:

Applies or cancels the protection of the selected multiple images.

- (1) Select the image to be protected, then press the center of the multi-selector. The \checkmark 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 \rightarrow [OK].

All in this Folder:

Protects all images in the selected folder.

All with this date:

Protects all images in the selected date range.

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 in the selected date range.

Note

The menu items that can be selected differ depending on the [View Mode] setting.

[176] Viewing Designating images for printing (DPOF)

Specify Printing (Specify Printing)

You can specify in advance on the memory card which still images you want to print out later. The **ppp** (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.



Menu item details

Multiple Img.:

Selects images to order printing.

- (1) Select an image and press the center of the multi-selector. The \checkmark mark is displayed in the check box. To cancel the selection, press the center again and delete the \checkmark mark.
- (2) Repeat step (1) to print other images. To select several images in the date range or in the folder, select the check box of the date or the folder.
- (3) MENU \rightarrow [OK].

Cancel All:

Clears all DPOF marks.

Date Imprint:

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 images to be printed cannot be specified.
- Some printers do not support the date print function.

[177] Viewing | Deleting images

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.
- Press the m (Delete) button.
- 3 Select [Delete] using the multi-selector.

Note

The protected images cannot be deleted.

[178] Viewing | Deleting images

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.



Menu item details

Multiple Img.:

Deletes the selected images.

- (1) Select the images to be deleted, then press the center of the multi-selector. The \checkmark mark is displayed in the check box. To cancel the selection, press the center again to remove the \checkmark mark.
- (2) To delete other images, repeat step (1).
- (3) MENU \rightarrow [OK].

All in this Folder:

Deletes all images in the selected folder.

All with this date:

Deletes all images in the selected date range.

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) button \rightarrow select the bar on the left using the multi-selector \rightarrow select the desired folder or date by pressing the multi-selector up/down.

Note

- The protected images cannot be deleted.
- The menu items that can be selected differ depending on the [View Mode] setting.

Delete confirm.

You can set whether [Delete] or [Cancel] is selected as the default setting on the delete confirmation screen.



 $\textbf{MENU} \rightarrow \clubsuit \textbf{(Setup)} \rightarrow \textbf{[Delete confirm.]} \rightarrow \textbf{desired setting.}$

Menu item details

"Delete" first:

[Delete] is selected as the default setting.

"Cancel" first:

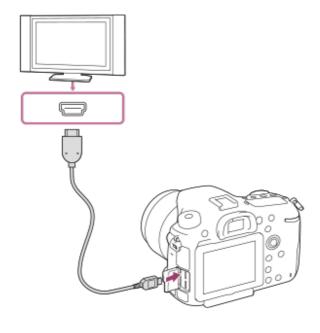
[Cancel] is selected as the default setting.

[180] Viewing | Viewing images on a TV

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).



- 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 by pressing the multi-selector right/left.
 - 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

- This product is compatible with the PhotoTV HD standard. If you connect Sony PhotoTV HDcompatible 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 supplied micro 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.

[181] Customizing the camera | Registering frequently used functions

Memory (Camera Settings1/Camera Settings2)

Allows you to register up to 3 often-used modes or product settings to the product and up to 4 (M1 through M4) to the memory card. You can recall the settings using just the mode dial.

- 1 Set the product to the setting you want to register.
- **2** MENU \rightarrow 1(Camera Settings1) \rightarrow [1/12 Memory] \rightarrow desired number.
- Press the center of the multi-selector 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

To change registered settings

Change the setting to the desired one and re-register the setting to the same mode number.

Note

M1 through M4 can be selected only when a memory card is inserted into the product.

- When registering the settings on a memory card, only a memory card that has been selected using [Select Rec. Media] can be used.
- Program Shift cannot be registered.
- For some functions, the position of the dial and the setting actually used for shooting may not match. If this happens, shoot images by referring to the information displayed on the monitor.

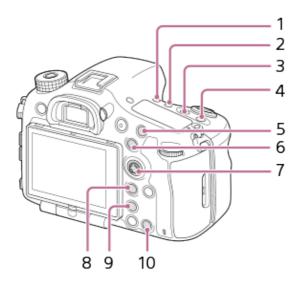
[182] Customizing the camera | Assigning selected functions to the button

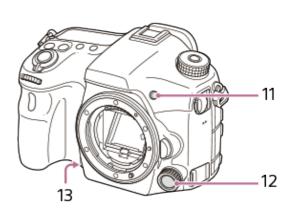
Custom Key(Shoot.)/Custom Key(PB)

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(Shoot.)], you can easily recall [Eye AF] simply by pressing the center of the multi-selector while shooting.

- Select the key to which you want to assign the function on the selection screen.
 - The keys that can be assigned functions are different for [Custom Key(Shoot.)] and [Custom Key(PB)].
 - You can assign the desired functions to the following keys.





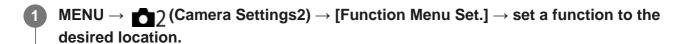
- 1. Drive Mode Button
- 2. WB Button
- 3. Exp. Comp. Button
- 4. ISO Button

- 5. AF/MF Button
- 6. AEL Button
- 7. Center Button
- 8. Fn/ 🔁 Button
- 9. To Button (Smart Tele. Button)
- 10. Custom Button 1
- 11. Custom Button 2
- 12. Front Multi Ctrl./ Front Multi Ctrl.
- 13. Preview Button
- You can also assign a shooting function to the focus hold button on the lens. However, some lenses do not have a focus hold button.
- 3 Select the function to be assigned.
 - The functions that can be assigned differ depending on the keys.

[183] Customizing the camera | Assigning selected functions to the button

Function Menu Set.

You can assign the functions to be called up when you press the Fn (Function) button.



The functions that can be assigned are displayed on the setup item selection screen.

[184] Customizing the camera | Customizing the functions of the dial

Dial Setup

You can switch the functions of the front/rear dial.

1 MENU \rightarrow **6** (Camera Settings2) \rightarrow [Dial Setup] \rightarrow desired setting.

Menu item details



The front dial is used to change the shutter speed and the rear dial to change the aperture value.

≠ F/no. **₹** SS:

The front dial is used to change the aperture value and the rear dial to change the shutter speed.

Note

• The [Dial Setup] function is enabled when the shooting mode is set to "M."

[185] Customizing the camera | Customizing the functions of the dial

Dial Lock

You can set whether the dials will be locked by pressing and holding the Fn (Function) button.



Menu item details

Lock:

Locks the front and rear dials.

Unlock:

The front or rear dials are not locked even if you press and hold the Fn (Function) button.

Hint

• You can release the lock by holding the Fn (Function) button down again.

[186] Customizing the camera | Checking images before/after recording

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.



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.

[187] Customizing the camera | Checking images before/after recording

Aperture Preview

While you press and hold the preview button, the aperture is stepped down to the set aperture value and you can check the blurriness prior to shooting.



• You can assign [Aperture Preview] to the desired key using [Custom Key(Shoot.)].

[188] Customizing the camera | Checking images before/after recording

Shot. Result Preview

While pressing down the key to which [Shot. Result Preview] is assigned, you can check the image preview with the DRO, shutter speed, aperture and ISO sensitivity settings applied. Check the shooting result preview before shooting.

MENU \rightarrow 2 (Camera Settings2) \rightarrow [Custom Key(Shoot.)] \rightarrow set the [Shot. Result Preview] function to the desired key.

Confirm the image by pressing the key to which [Shot. Result Preview] was assigned.

Hint

 The DRO settings, shutter speed, aperture and ISO sensitivity settings you have set are reflected on the image for [Shot. Result Preview], but some effects cannot be previewed depending on the shooting settings. Even in that case, the settings you have selected will be applied to the images you shoot

[189] Customizing the camera | Checking images before/after recording

Live View Display

Sets whether or not to show images altered with effects of the exposure compensation, white balance, [Creative Style], or [Picture Effect] on the screen.

Menu item details

Setting Effect ON:

Displays Live View in conditions close to what your picture will look like as a result of applying all your settings. This setting is useful when you want to shoot pictures while checking the results of the shot on the Live View screen.

Setting Effect OFF:

Displays Live View without the effects of exposure compensation, white balance, [Creative Style], or [Picture Effect]. When this setting is used, you can easily check the image composition.

Live View is always displayed with the appropriate brightness even in [Manual Exposure] mode.

When [Setting Effect OFF] is selected, the VIEW icon is displayed on the Live View screen.

Note

- [Live View Display] cannot be set to [Setting Effect OFF] in the following shooting modes:
 - [Intelligent Auto]
 - [Sweep Panorama]
 - [Movie/S&Q Motion]
- When [Live View Display] is set to [Setting Effect OFF], the brightness of the shot image will not be

the same as that of the displayed Live View.

Hint

• When you use a third-party flash, such as a studio flash, Live View Display may be dark for some shutter speed settings. When [Live View Display] is set to [Setting Effect OFF], Live View Display will be displayed brightly, so that you can easily check the composition.

[190] Customizing the camera | Monitor/viewfinder settings

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 \rightarrow (Camera Settings2) \rightarrow [Grid Line] \rightarrow 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 suitable to determine the quality of the composition when shooting landscape, close-up, or duplicated images.

Diag. + Square Grid:

Place a subject on the diagonal line to express an uplifting and powerful feeling.

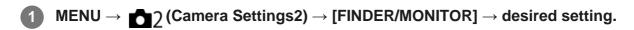
Off:

Does not display the grid line.

[191] Customizing the camera | Monitor/viewfinder settings

FINDER/MONITOR

Sets the method for switching the display between Electronic Viewfinder and the screen.



Menu item details

Auto:

When you look into the Electronic Viewfinder, the eye sensor reacts and the display is switched to the Electronic Viewfinder automatically.

Manual:

The product does not switch between the monitor display and the Electronic Viewfinder display automatically. You can switch the display by pressing the FINDER/MONITOR button.

Hint

• If you want to switch the display mode temporarily when [FINDER/MONITOR] is set to [Auto], press the FINDER/MONITOR button.

[192] Customizing the camera | Monitor/viewfinder settings

Deactivate Monitor

When you press the key to which the [Deactivate Monitor] function has been assigned, the monitor turns black, and the screen display is locked to [No Disp. Info.].

- MENU → 2 (Camera Settings2) → [Custom Key(Shoot.)] → set the [Deactivate Monitor] function to the desired key.
- Press the key to which [Deactivate Monitor] is assigned.
 - To return to the display, press the key to which [Deactivate Monitor] is assigned again.

Note

• Even if you perform [Deactivate Monitor], the backlight of monitor remains on. To turn off the backlight, switch the monitor mode to viewfinder mode using the [FINDER/MONITOR] function.

Adjust the brightness of the screen.



 $MENU \rightarrow \bigoplus (Setup) \rightarrow [Monitor Brightness] \rightarrow desired setting.$

Menu item details

Auto:

Adjusts the brightness automatically.

Manual:

Adjusts the brightness within the range of -2 to +2.

Sunny Weather:

Sets the brightness appropriately for shooting outdoors.

Note

- The [Sunny Weather] setting is too bright for shooting indoors. Set [Monitor Brightness] to [Auto] or [Manual] for indoor shooting.
- Do not cover the light sensor with your hand, etc., when [Monitor Brightness] is set to [Auto].
- 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].
 - ─ When [Sk0 Frame Rate] is set to [120fps]/[100fps] during slow-motion/quick-motion shooting.

[194] Customizing the camera | Monitor/viewfinder settings

Viewfinder Bright.

When using an electronic viewfinder, this product adjusts the brightness of the electronic viewfinder according to the surrounding environment.



 $\textbf{MENU} \rightarrow \begin{tabular}{ll} \textbf{MENU} \rightarrow \begin{tabular}{ll} \textbf{Setup} \end{tabular} \rightarrow \begin{tabular}{ll} \textbf{Implies the property of the prope$

Menu item details

Auto:

Adjusts the brightness automatically.

Manual:

Selects the brightness of the electronic viewfinder from the range -2 to +2.

Note

- The electronic 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].
 - When [S₄0 Frame Rate] is set to [120fps]/[100fps] during slow-motion/quick-motion shooting.

[195] Customizing the camera | Monitor/viewfinder settings

Finder Color Temp.

Adjusts the color temperature of the electronic viewfinder.

1

 $\textbf{MENU} \rightarrow \textbf{ £} \textbf{ (Setup)} \rightarrow \textbf{[Finder Color Temp.]} \rightarrow \textbf{desired setting.}$

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.

[196] Customizing the camera | Monitor/viewfinder settings

Display Quality

You can change the display quality.



 $\textbf{MENU} \rightarrow \textbf{ (Setup)} \rightarrow \textbf{ [Display Quality]} \rightarrow \textbf{ desired setting.}$

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.

[197] Customizing the camera | Monitor/viewfinder settings

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.

- MENU \rightarrow (Camera Settings2) \rightarrow [Custom Key(Shoot.)] \rightarrow assign the [Bright Monitoring] function to the desired key.
- 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], [Live View Display] will automatically switch to [Setting Effect OFF], and 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 mode dial is turned.
 - When the focus mode is set to other than manual focus.
 - 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.

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

 $MENU \rightarrow$ (Setup) \rightarrow [Format] \rightarrow desired memory card slot.

Note

- Formatting permanently erases all data including protected images and registered settings (from M1 to M4).
- 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%.

[199] Customizing the camera | Memory card settings

File Number

Selects how to assign file numbers to recorded still images and MP4 movies.



 $\textbf{MENU} \rightarrow \begin{tabular}{ll} \blacksquare \end{tabular} \textbf{(Setup)} \rightarrow \end{tabular} \rightarrow \end{tabular} \textbf{(Setup)} \rightarrow \end{tabular} \textbf{(Setup)} \rightarrow \end{tabular} \textbf{(Setup)} \rightarrow \end{tabular}$

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.)

Hint

- The setting for [File Number] will be applied to both slot 1 and slot 2.
- Even if you change the setting of the recording destination, the file numbers will be sequential across
 the two memory cards in each slot by setting [File Number] to [Series].

[200] Customizing the camera | Memory card settings

Set File Name

You can specify the first three characters of the file name for images you shoot.

- 2 Select the entry field for the file name to display a keyboard on the screen, and then enter three characters of your choice.
 - The setting for [Set File Name] will be applied to both slot 1 and slot 2.

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.

[201] Customizing the camera | Memory card settings

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.

Recording Mode

You can select the method for recording an image, such as recording the same image simultaneously to two memory cards or recording different types of images to two memory cards. (If you want to record a movie to a memory card in different formats, use [Dual Video REC].)



Menu item details

Standard:

Records an image to a memory card in the memory card slot that you select in [Select Rec. Media].

Simult. ():

Records a still image to both memory cards and records a movie to a memory card in the memory card slot that you select in [Select Rec. Media].

Simult. (世):

Records a still image to a memory card in the memory card slot that you select in [Select Rec. Media], and records a movie to both memory cards.

Simult. (፫፬/世):

Records a still image and a movie to both memory cards.

Sort(JPEG/RAW):

Records an image in JPEG format to a memory card in the memory card slot that you select in [Select Rec. Media], and records an image in RAW format to the other memory card.

Sort(四/間):

Records a still image to a memory card in the memory card slot that you select in [Select Rec. Media], and records a movie to the other memory card.

Note

- When [Recording Mode] is set to [Simult. (□)] or [Simult. (□)], [Dual Video REC] is temporarily set to [Off].
- When [Recording Mode] is set to [Sort(JPEG/RAW)], [Quality] is temporarily set to [RAW & JPEG].

[203] Customizing the camera | Memory card settings

Select REC Folder

folder on the memory card to which images are to be recorded.



 $MENU \rightarrow \bigoplus$ (Setup) \rightarrow [Select REC Folder] \rightarrow desired folder.

Note

- You cannot select the folder when [Folder Name] is set to [Date Form].
- If [Recording Mode] is set to other than [Standard], you may only select the common folder on the both memory cards. If there is no common folder, you can make one using [New Folder].

[204] Customizing the camera | Memory card settings

New Folder

Creates a new folder on the memory card for recording still images and MP4 movies. 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. A folder for still images and a folder for MP4 movies that have the same number are created at the same time.



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.
- If [Recording Mode] is set to other than [Standard], a new folder is created with a folder number one
 greater than the largest folder number currently used on both memory cards inserted in the memory
 card slots.
- If [Recording Mode] is set to other than [Standard] and an image is shot, a new folder may be automatically created.

[205] Customizing the camera | Memory card settings

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 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: 10060405(Folder number: 100, date: 04/05/2016)

Note

You cannot change the [Folder Name] settings for movies.

[206] Customizing the camera | Memory card settings

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 \rightarrow (Setup) \rightarrow [Recover Image DB] \rightarrow desired memory card slot \rightarrow [Enter].

Note

 Use a sufficiently charged battery pack. Low battery power during repairing can cause damage to data.

[207] Customizing the camera | Memory card settings

Upload Settings (Eye-Fi)

Sets whether to use the upload function when using an Eye-Fi card (commercially available). This item appears when an Eye-Fi card is inserted into the product's memory card slot 1.

- Set your Wi-Fi network or destination on the Eye-Fi card.

For details, refer to the manual supplied with the Eye-Fi card.

Insert the Eye-Fi card you have set up into the product, and shoot still images.

Images are transferred to your computer, etc., automatically via the Wi-Fi network.

Menu item details

On:

Enables the upload function.

Off:

Disables the upload function.

Communication status screen display

: Standby. No images are to be sent.

: Upload standby

Connecting:

膏 🛊 : Uploading

🛜 : Error

Note

- Eye-Fi cards are only sold in certain countries/regions.
- For more information on Eye-Fi cards, please contact the manufacturer or vendor directly.
- Eye-Fi cards can be used only in the countries/regions where they were purchased. Use Eye-Fi cards in accordance with the law of the countries/regions where you purchased the card.
- When using the upload function, insert an Eye-Fi card into the product's memory card slot 1. You
 cannot use the upload function when the Eye-Fi card is inserted into the product's memory card slot
 2.
- Eye-Fi cards are equipped with a wireless LAN function. Do not insert an Eye-Fi card into the product in locations in which their use is prohibited, such as on an airplane. When an Eye-Fi card is inserted into the product, set [Upload Settings] to [Off]. When the upload function is set to [Off], the indicator will be displayed on the product.
- Power save mode will not function during uploading.
- If (error) is displayed, remove the memory card and reinsert it, or turn the product off and then on again. If the indicator appears again, the Eye-Fi card may be damaged.
- Wireless LAN communication may be influenced by other communication devices. If the

communication status is poor, move closer to the access point to be connected.

- Third parties may know where you shot the image if you upload the image when [☐ Loc. Info. Link Set.] → [Location Info. Link] is set to [On]. To prevent third parties from obtaining your location information, set [☐ Loc. Info. Link Set.] → [Location Info. Link] to [Off].
- This product does not support Eye-Fi "Endless Memory Mode." Before using an Eye-Fi card, be sure that "Endless Memory Mode" is turned off.
- When you use a new Eye-Fi card for the first time, copy the installation file on the Eye-Fi card to your computer before formatting the Eye-Fi card.
- Update the firmware of an Eye-Fi card to the latest version before using the Eye-Fi card. For details, refer to the manual supplied with the Eye-Fi card.
- For details on files you can upload, refer to the manual supplied with the Eye-Fi card.

[208] Customizing the camera | Camera settings

Audio signals

Selects whether the product produces a sound or not.



MENU \rightarrow (Camera Settings2) \rightarrow [Audio signals] \rightarrow desired setting.

Menu item details

On:

Sounds are produced for example when the focus is achieved by pressing the shutter button halfway down.

Off:

Sounds are not produced.

Note

If [Focus Mode] is set to [Continuous AF], the camera will not beep when it focuses on a subject.

[209] Customizing the camera | Camera settings

Pwr Save Start Time

Sets time intervals to automatically switch to power save mode when you are not performing

operations to prevent wearing down the battery pack. To return to shooting mode, perform an operation such as pressing the shutter button halfway down.



 $MENU \rightarrow \bigoplus$ (Setup) \rightarrow [Pwr Save Start Time] \rightarrow desired setting.

Menu item details

30 Min/5 Min/2 Min/1 Min/10 Sec

Note

- Turn off the product when you do not use it for a long time.
- The power save function is not activated when playing back slideshows, when recording movies, or when connected to a computer or TV.

[210] Customizing the camera | Camera settings

Remote Ctrl

You can operate this product and shoot images using the SHUTTER button, 2SEC button (2 second delay shutter), and START/STOP button (or Movie button (RMT-DSLR2 only)) on the Wireless Remote Commander RMT-DSLR1 (sold separately) and RMT-DSLR2 (sold separately). Refer also to the operating instructions for the Wireless Remote Commander.



 $\textbf{MENU} \rightarrow \clubsuit \textbf{ (Setup)} \rightarrow \textbf{[Remote Ctrl]} \rightarrow \textbf{desired setting.}$

Menu item details

On:

Allows remote commander operation.

Off:

Does not allow remote commander operation.

Note

- The lens or lens hood may block the remote sensor that receive the signals. Use the remote commander in the position from which the signal can reach the product.
- When [Remote Ctrl] is set to [On], the product does not switch to power save mode. Set [Off] after using a remote commander.

NTSC/PAL Selector

Plays back movies recorded with the product on a NTSC/PAL system TV.

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.

[212] Customizing the camera | Camera settings

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 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. [213] Customizing the camera | Camera settings

HDMI Settings: 24p/60p Output (movie) (Only for 1080 60i compatible models)

Set 1080/24p or 1080/60p as the HDMI output format when [Record Setting] is set to [24p 24M(FX)], [24p 17M(FH)] or [24p 50M].

- MENU \rightarrow (Setup) \rightarrow [HDMI Settings] \rightarrow [HDMI Resolution] \rightarrow [1080p] or [2160p/1080p].
- MENU \rightarrow \clubsuit (Setup) \rightarrow [HDMI Settings] \rightarrow [\bigstar 24p/60p Output] \rightarrow 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.
- When [Record Setting] is set to other than [24p 24M(FX)], [24p 17M(FH)], or [24p 50M], this setting is canceled, and HDMI video is output according to the [HDMI Resolution] settings.

[214] Customizing the camera | Camera settings

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).

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.

[215] Customizing the camera | Camera settings

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.



 $\textbf{MENU} \rightarrow \begin{tabular}{ll} \textbf{MENU} \rightarrow \begin{tabular}{ll} \textbf{ME$

Menu item details

On:

Time code is output to other devices.

Off:

Time code is not output to other devices.

Note

• When [T TC Output] is set to [On], the image may not be output properly to the TV or recording device. In such cases, set [T 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 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 [TC Output] is [Off], [REC Control] is set to [Off].

[217] Customizing the camera | Camera settings

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.

MENU → \clubsuit (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.



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].

[218] Customizing the camera | Camera settings

USB Connection

Selects the appropriate USB connection method for each computer or USB device connected to this product.

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 or Windows 8 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 or Windows 8 computers are connected in MTP, and their unique functions are enabled for use.

• The memory card in memory card slot 1 is the connection target.

PC Remote:

Uses "Remote Camera Control" to control this product from the 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].
- If Device Stage* is not displayed with Windows 7 or Windows 8, set [USB Connection] to [Auto].
- * Device Stage is a menu screen used to manage connected devices, such as a camera (Function of Windows 7 or Windows 8).

[219] Customizing the camera | Camera settings

USB LUN Setting

Enhances compatibility by limiting of USB connection functions.



 $\textbf{MENU} \rightarrow \textbf{ £} \textbf{ (Setup)} \rightarrow \textbf{[USB LUN Setting]} \rightarrow \textbf{desired setting.}$

Menu item details

Multi:

Normally, use [Multi].

Single:

Set [USB LUN Setting] to [Single] only if you cannot make a connection.

The memory card in memory card slot 1 is the connection target.

[220] Customizing the camera | Camera settings

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 "Remote Camera Control" to control this product from the computer, including such functions as shooting and storing images on the computer.



MENU \to **(Setup)** \to [PC Remote Settings] \to [Still Img. Save Dest.] \to 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].
- During PC Remote shooting, [Recording Mode] is locked to [Standard] and cannot be changed.
- While you are playing back still images on the camera, you cannot shoot using PC Remote.

[221] Customizing the camera | Camera settings

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 "Remote Camera Control" to control this product from the computer, including such functions as shooting and storing images on the computer.



MENU \rightarrow **(Setup)** \rightarrow [PC Remote Settings] \rightarrow [RAW+J PC Save Img] \rightarrow 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

- [RAW+J PC Save Img] can be set only when [AW Quality] is set to [RAW & JPEG].
- During PC Remote shooting, [Recording Mode] is locked to [Standard] and cannot be changed.

[222] Customizing the camera | Camera settings

Language

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

1 MENU \rightarrow (Setup) \rightarrow [Language] \rightarrow desired language.

[223] Customizing the camera | Camera settings

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.

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.

[224] Customizing the camera | Camera settings

Area Setting

Sets the area where you are using the product.

[225] Customizing the camera | Camera settings

Copyright Info

Writes copyright information onto the still images.



When you select [Set Photographer] or [Set Copyright], a keyboard appears on the screen. Enter your desired name.

Menu item details

Write Copyright Info:

Sets whether to write copyright information. ([On]/[Off])

• If you select [On], an (c) icon will appear on the shooting screen.

Set Photographer:

Sets the photographer name.

Set Copyright:

Sets the copyright holder name.

Disp. Copyright Info:

Displays the current copyright information.

Note

- You can only enter alphanumeric characters and symbols for [Set Photographer] and [Set Copyright].
 You can enter up to 46 letters.
- A (c) icon appears during the playback of images with copyright information.
- In order to prevent unauthorized use of [Copyright Info], be sure to clear the [Set Photographer] and [Set Copyright] columns before lending out or handing over your camera.
- Sony is not liable for problems or damages resulting from use of [Copyright Info].

[226] Customizing the camera | Camera settings

Version

Displays the version of this product's software. Check the version when updates for this product's software are released, etc.

Also displays the version of the lens if a lens compatible with software updates is attached.



 $MENU \rightarrow \bigoplus (Setup) \rightarrow [Version].$

Note

• Updating can be performed only when the battery level is (3 remaining battery bars) or more. The use of a sufficiently charged battery or the AC Adaptor (sold separately) is recommended.

[227] Customizing the camera | Camera settings

Certification Logo (For some models only)

Displays some of the certification logos for this product.



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 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 set this item only when the product is powered by the AC-PW10AM AC Adaptor (sold separately).
- Even if [On] is selected, the product does not start a demonstration if there is no movie file on the memory card.
- When [On] is selected, the product does not switch to power save mode.
- [Demo Mode] always displays movies on the memory card in memory card slot 1.

[229] Customizing the camera | Initializing the camera

Setting Reset

Resets the product to the default settings. Even if you perform [Setting Reset], the recorded images are retained.



 $\textbf{MENU} \rightarrow \textbf{ £} \textbf{ (Setup)} \rightarrow \textbf{[Setting Reset]} \rightarrow \textbf{desired setting.}$

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.
- The value set with [AF Micro Adj.] will not be reset even when [Camera Settings Reset] or [Initialize] is performed.

[230] Using wireless functions | Connecting this product and a Smartphone

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.

[231] Using wireless functions | Connecting this product and a Smartphone

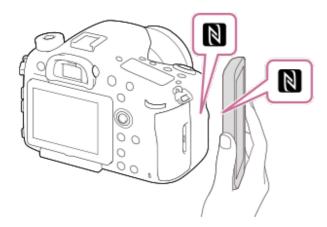
Controlling the camera using an Android smartphone (NFC One-touch remote)

You can connect this product to an NFC-enabled Android smartphone by touching them together and then operate the product using the smartphone.

Set [Ctrl w/ Smartphone] to [On] beforehand by selecting MENU \rightarrow \upbeta (Wireless) \rightarrow [Ctrl w/ Smartphone].

- 1 Activate the NFC function of the smartphone.
- Switch this product to shooting mode.

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 interlocking function is not available.
- 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

[232] Using wireless functions | Connecting this product and a Smartphone

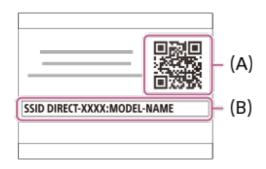
Controlling the camera using an Android smartphone (QR code)

You can control this product using your smartphone by connecting your smartphone to the camera using the QR code.

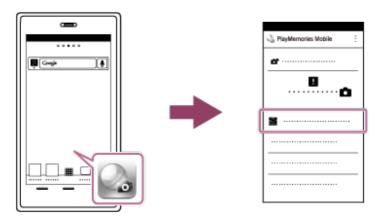
Set [Ctrl w/ Smartphone] to [On] beforehand by selecting MENU \rightarrow \upbeta (Wireless) \rightarrow [Ctrl w/ Smartphone].

MENU \rightarrow **MENU** \rightarrow (Wireless) \rightarrow [Ctrl w/ Smartphone] \rightarrow [\square Connection Info.].

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].



3 Select [OK] on the smartphone screen.

When a message is displayed, select [OK] again.



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 monitor of the smartphone.

Select [OK] on the smartphone screen.

The smartphone is connected to the product.

 You can shoot an image using remote control while checking the composition of the image 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 interlocking function is not available.
- If you cannot connect your device to this product using the [One-touch(NFC)] function or QR code, use the SSID and password.

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.

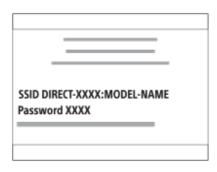
Set [Ctrl w/ Smartphone] to [On] beforehand by selecting MENU \rightarrow \upbeta (Wireless) \rightarrow [Ctrl w/ Smartphone].

MENU \rightarrow (Wireless) \rightarrow [Ctrl w/ Smartphone] \rightarrow [\square Connection Info.].

QR code is displayed on the monitor of this product.

Press the m (Delete) button of this product.

This product's SSID and password are displayed on the monitor of this product.



- Launch PlayMemories Mobile on your smartphone.
- 4 Select the model name of this product (DIRECT-xxxx: xxxx).





Input the password that is displayed on this product.



The smartphone is connected to the product.

 You can shoot an image using remote control while checking the composition of the image 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 interlocking function is not available.

[234] Using wireless functions | Connecting this product and a Smartphone

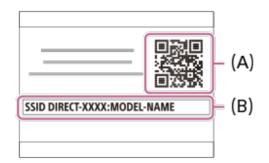
Controlling the camera using an iPhone or iPad (QR code)

You can connect an iPhone or iPad to the camera using the QR code and operate the camera using the iPhone or iPad.

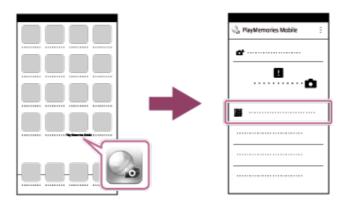
Set [Ctrl w/ Smartphone] to [On] beforehand by selecting MENU \rightarrow \upbeta (Wireless) \rightarrow [Ctrl w/ Smartphone].



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.



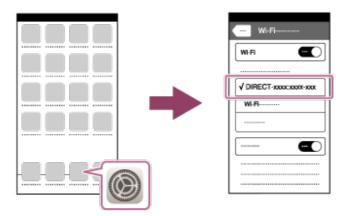
- 4 Read the QR code displayed on the monitor of this product with the iPhone or iPad.
- Install the profile (setting information) by following the instructions shown on the iPhone or iPad screen and select [OK].

The profile will be installed to the iPhone or iPad.

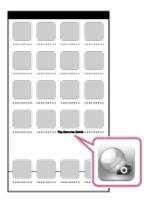


6 Select [Settings] on the "Home" screen \rightarrow [Wi-Fi] \rightarrow this product's SSID.

The iPhone or iPad will connect to the product.



Return to the "Home" screen of the iPhone or iPad and launch PlayMemories Mobile.



 You can shoot an image using remote control while checking the composition of the image on the screen of the 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 interlocking function is not available.
- If you cannot connect your device to this product using the QR code, use the SSID and password.

[235] Using wireless functions | Connecting this product and a Smartphone

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.

MENU \rightarrow **MENU** \rightarrow (Wireless) \rightarrow [Ctrl w/ Smartphone] \rightarrow [\square Connection Info.].

QR code is displayed on the monitor of this product.

2 Press the 前 (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.

Confirm that your iPhone or iPad was connected to the "SSID" shown on this product.



Return to the "Home" screen of the iPhone or iPad and launch PlayMemories Mobile.



 You can shoot an image using remote control while checking the composition of the image on screen of the iPhone or iPad.

Note

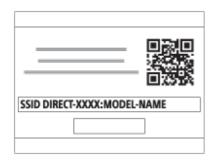
 Radio wave interference may occur as Bluetooth communications and Wi-Fi communications use the same frequency band. If your Wi-Fi connection is unstable, it may be improved by turning off the Bluetooth function of the smartphone. If you do this, the location information interlocking function is not available.

[236] Using wireless functions | Transferring images to a Smartphone

Send to Smartphone

You can transfer still images/movies to a smartphone and view them. The application PlayMemories Mobile must be installed on your smartphone.

- - If you press the → (Send to Smartphone) button in playback mode, the setting screen for [Send to Smartphone] will appear.
- 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 Images on 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 multi-selector, then press MENU \rightarrow [Enter].

Select on Smartphone:

Displays all images recorded on the product's memory card on the smartphone.

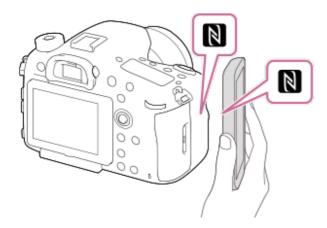
Note

- You can only transfer images that are saved on the camera's memory card.
- You can only transfer images that are saved on the memory card in the memory card slot being played back. To change which memory card slot is being played back, select MENU → [►] (Playback) → [Select PB Media] → the desired slot.
- 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].
- Some images may not be displayed on the smartphone depending on the recording format.
- RAW images are converted to JPEG format when they are sent.
- You cannot send XAVC S or AVCHD format movies.
- When [Airplane Mode] is set to [On], you cannot connect this product and the smartphone. Set [Airplane Mode] to [Off].

[237] Using wireless functions | Transferring images to a Smartphone

Sending images to an Android smartphone (NFC Onetouch Sharing)

- **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 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 → (Wireless) → [Send to Smartphone] to select images. After the connection enabled screen appears, use NFC to connect the product and the smartphone.

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 only transfer images that are saved on the memory card in the memory card slot being played back. To change the memory card slot to be played back, select MENU → ► (Playback) → [Select PB Media] → the desired slot.
- 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.
- 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].
- You cannot send AVCHD format movies.
- You cannot send XAVC S format movies.

[238] Using wireless functions | Transferring images to a computer

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.



Start your computer.



Note

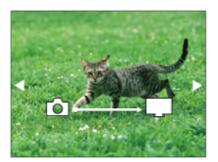
- Depending on the application settings of your computer, the product will turn off after saving the images to your computer.
- You can transfer images from the product to only one computer at a time.
- If you want to transfer images to another computer, connect the product and the computer via a USB connection and follow the instructions in PlayMemories Home.
- When you save images to the Mac computer using Wi-Fi function, use "Wireless Auto Import."

[239] Using wireless functions | Transferring images to a TV

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 \rightarrow **3** (Wireless) \rightarrow [View on TV] \rightarrow desired device to be connected.
- When you want to play back images using slideshow, press the center of the multiselector.



- To display the next/previous image manually, press the multi-selector right/left.
- To change the device to be connected, press the multi-selector down, then select [Device list].

Slideshow settings

You can change the slideshow settings by pressing the multi-selector down.

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).

[240] Using wireless functions | Reading location information from a smartphone

Loc. Info. Link Set.

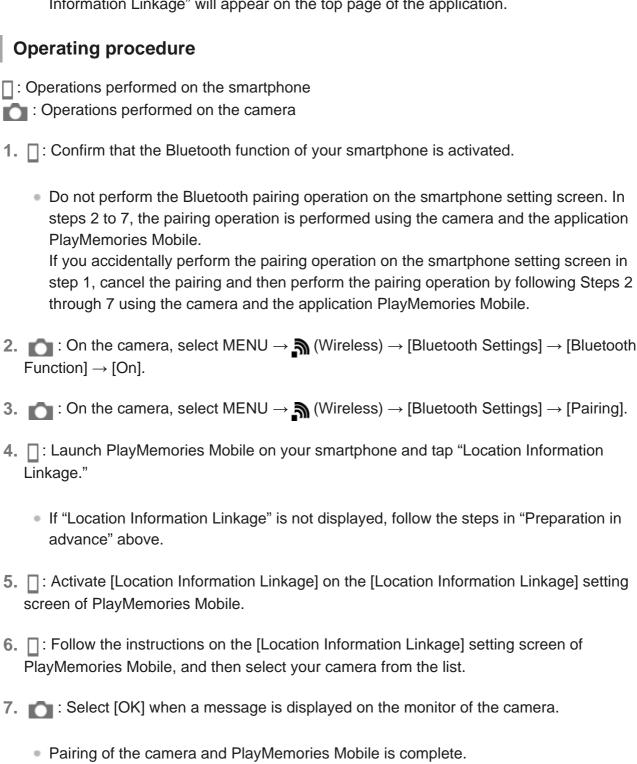
You can use the application PlayMemories Mobile to obtain location information from a smartphone that is connected with your camera using Bluetooth communication. You can record the obtained location information when shooting images.

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.



8. \blacksquare : On the camera, select MENU \rightarrow \blacksquare (Wireless) \rightarrow [\blacksquare Loc. Info. Link Set.] \rightarrow [Location

Info. Link] \rightarrow [On].

• (obtaining location information icon) will be displayed on the monitor of the camera. Location information obtained by your smartphone using GPS, etc., will be recorded when shooting images.

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.
- 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
- As of October 2016. For the latest information, refer to the support site.
- * For the Bluetooth version, refer to the website for your smartphone.

[241] Using wireless functions | Changing the wireless connection settings

Airplane Mode

When you board an airplane, etc., you can temporarily disable all the wireless-related functions including Wi-Fi.



 $\textbf{MENU} \rightarrow \ \ \textbf{\^{A}} \ \ (\textbf{Wireless}) \rightarrow \ \ [\textbf{Airplane Mode}] \rightarrow \ \ \textbf{desired setting}.$

If you set [Airplane Mode] to [On], an airplane mark will be displayed on the screen.

[242] Using wireless functions | Changing the wireless connection settings

Wi-Fi Settings: WPS Push

If your access point has the Wi-Fi Protected Setup (WPS) button, you can register the access point to this product easily by pushing the Wi-Fi Protected Setup (WPS) button.



 $\textbf{MENU} \rightarrow \P \quad \textbf{(Wireless)} \rightarrow \textbf{[Wi-Fi Settings]} \rightarrow \textbf{[WPS Push]}.$



Note

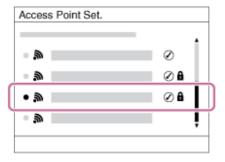
- [WPS Push] works only if the security setting of your access point is set to WPA or WPA2 and your access point supports the Wi-Fi Protected Setup (WPS) button method. If the security setting is set to WEP or your access point does not support the Wi-Fi Protected Setup (WPS) button method, perform [Access 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 enabled depending on the surrounding conditions, such as the type of wall
 material or if there is an obstruction or poor wireless signal between the product and access point. If
 that happens, change the location of the product or move the product closer to the access point.

[243] Using wireless functions | Changing the wireless connection settings

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.

- 2 Select the access point you want to register.

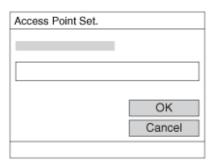


When the desired access point is displayed on the screen: Select the desired access point.

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

3 Input the password, and select [OK].



- 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:

When you set [IP Address Setting] to [Manual], enter the IP address to match your network environment.

Note

To give the registered access point priority, set [Priority Connection] to [On].

Edit Device Name

You can change the device name for the Wi-Fi Direct or Bluetooth connection.

- 2 Select the input box, then input the device name→[OK].

[245] Using wireless functions | Changing the wireless connection settings

Wi-Fi Settings: Disp MAC Address

Displays the MAC address of this product.

[246] Using wireless functions | Changing the wireless connection settings

Wi-Fi Settings: SSID/PW Reset

This product shares the connection information for [Send to Smartphone] and [Connection Info.] with a device that has permission to connect. If you want to change the device that is permitted to connect, reset the connection information.

Note

 If you connect this product to the smartphone after resetting the connection information, you must register the smartphone again.

1

Reset Network Set.

Resets all the network settings to default settings.



1 MENU → **3** (Wireless) → [Reset Network Set.] → [OK].

[248] Using a computer

Recommended computer environment

You can confirm the operating computer environment of the software from the following URL: http://www.sony.net/pcenv/

[249] Using a computer

Software for Mac computers

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

Wireless Auto Import

"Wireless Auto Import" is required if you are using a Mac computer and want to import images to the computer using Wi-Fi function. Download the software from the URL above, and install it on your Mac computer.

For details, see Help for "Wireless Auto Import."

Note

The software that can be used varies depending on the region.

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.
- You can change the playback speed of movies and slow-motion 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.

[251] Using a computer | Importing images for use on a computer

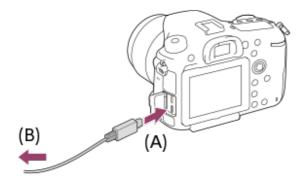
Installing PlayMemories Home

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

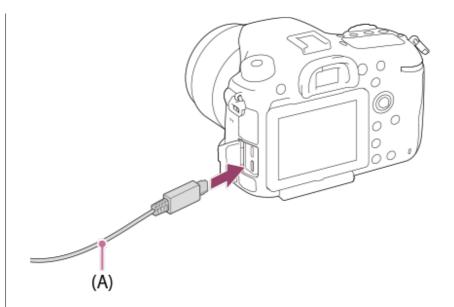
Note

- 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.

[252] Using a computer | Importing images for use on a computer

Connecting the camera to a computer

- Insert a fully charged battery pack into the camera, or connect the camera to a wall outlet (wall socket) using an AC Adaptor (sold separately).
- 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.

[253] Using a computer | Importing images for use on a computer

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] \rightarrow [OK] \rightarrow [DCIM] or [MP_ROOT]. Then copy the desired images to the computer.

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

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 \rightarrow 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.

[254] Using a computer | Importing images for use on a 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.
- 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.

[255] Using a computer | Developing RAW images (Image Data Converter)

Image Data Converter

With Image Data Converter, you can do the following:

- You can print and edit images recorded in RAW format with various corrections, such as tone curve and sharpness.
- You can adjust images with white balance, exposure, and [Creative Style], etc.
- You can save the still images displayed and edited on a computer.
 You can either save the still image as RAW format or save it in the general file format.
- You can display and compare the RAW images and JPEG images recorded by this product.
- You can rank images in five grades.
- You can apply color labels.

[256] Using a computer | Developing RAW images (Image Data Converter)

Installing Image Data Converter



Download and install the software by accessing the following URL.

Windows

http://www.sony.co.jp/imsoft/Win/

Mac

http://www.sonv.co.jp/imsoft/Mac/

Note

Log on as Administrator.

[257] Using a computer | Controlling the camera from a computer (Remote Camera Control)

Remote Camera Control

When using Remote Camera Control, the following operations are available on your computer.

- Changing this product's settings and shooting.
- Recording images directly to the computer.
- Performing interval timer shooting.

Use these functions after selecting MENU \rightarrow **(Setup)** \rightarrow [USB Connection] \rightarrow [PC Remote]. For details on how to use Remote Camera Control, refer to the Help.

[258] Using a computer | Controlling the camera from a computer (Remote Camera Control)

Installing Remote Camera Control

Download and install the software by accessing the following URL:

Windows:

http://www.sony.co.jp/imsoft/Win/

Mac:

http://www.sony.co.jp/imsoft/Mac/

[259] Using a computer | Creating a movie disc

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.



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, MP4 (AVC)

Players: Blu-ray Disc playback devices (Sony Blu-ray Disc players, PlayStation 3, etc.)



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, MP4 (AVC)

Players: AVCHD format playback devices (Sony Blu-ray Disc players, PlayStation 3, 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 3" to use the latest version of the "PlayStation 3" system software.

Note

4K movies cannot be recorded on a disc in 4K image quality.

[260] Using a computer | Creating a movie disc

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 3, 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 or MP4 movie formats, the image quality is converted to 1920×1080 (60i/50i) and 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.
- To create a Blu-ray Disc from movies recorded in the AVCHD movie format with [Record Setting] set to [60p 28M(PS)]/[50p 28M(PS)], you need to use a device that is compliant with AVCHD format Ver. 2.0. The created Blu-ray Disc can be played back only on a device that is compliant with AVCHD format Ver. 2.0.

[261] Using a computer | Creating a movie disc

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 3, 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 or MP4 movie formats, the image quality is converted to 1920×1080 (60i/50i) and 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 [60p 28M(PS)]/[50p 28M(PS)], [60i 24M(FX)]/[50i 24M(FX)] or [24p 24M(FX)]/[25p 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

[262] Using a computer | Creating a movie disc

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

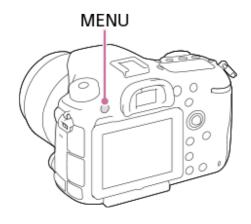
You can also create DVD discs using a Blu-ray recorder, HDD recorder, etc. For details, refer to the device's operating instructions.

[263] List of MENU items

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 items.



- 2 Select the desired setting you want to adjust by pressing the multi-selector up/down/left/right, and then press the center of the multi-selector.
 - Select an icon at the top of the screen and press the multi-selector left/right to switch to a different MENU category.



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

[264] List of MENU items | Camera Settings1

Quality (still image)

1 MENU \rightarrow 1 (Camera Settings1) \rightarrow [\nearrow Quality] \rightarrow desired setting.

Menu item details

RAW:

File format: RAW

Digital processing is not performed on this file format. Select this format to process images on a

computer for professional purposes.

• The image size is fixed to the maximum size. The image size is not displayed on the screen.

RAW & JPEG:

File format: RAW + JPEG

A RAW image and a JPEG image are created at the same time. This is suitable when you need 2 image files, a JPEG for viewing, and a RAW for editing. The JPEG image quality is set to [Fine].

Extra fine:

File format: JPEG

The image is compressed in the JPEG format and recorded using a higher quality than with [Fine].

Fine:

File format: JPEG

The image is compressed in the JPEG format when recorded.

Standard:

File format: JPEG

The image is compressed in the JPEG format when recorded. Since the compression rate of [Standard] is higher than that of [Fine], the file size of [Standard] is smaller than that of [Fine]. This will allow more files to be recorded on one memory card, but the image quality will be lower.

About RAW images

- To open a RAW image file recorded with this camera, the software Image Data Converter is needed. With Image Data Converter, 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.
- You cannot apply [Auto HDR] or [Picture Effect] functions with RAW images.
- RAW images recorded with this camera have a resolution of 14 bits per pixel. However, resolution is limited to 12 bits in the following shooting modes:
 - [

 Long Exposure NR]
 - [BULB]
 - Continuous shooting
- You can set whether compress or uncompress RAW images using [RAW File Type].

- 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.

RAW File Type (still image)

Selects the file type for RAW images.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [RAW File Type] \rightarrow desired setting.

Menu item details

Compressed:

Records images in compressed RAW format.

Uncompressed:

Records images in uncompressed RAW format. When [Uncompressed] is selected for [

RAW File Type], the file size of the image will be larger than if it were recorded in compressed RAW format.

Note

• When [Uncompressed] is selected for [RAW File Type], the icon on the screen switches to RAW is also displayed while an image shot in uncompressed RAW format is played back.

[266] List of MENU items | Camera Settings1

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 item details

When [Aspect Ratio] is set to [3:2]

L: 42M 7952×5304 pixels

M: 18M 5168×3448 pixels

S: 11M 3984×2656 pixels

When [Aspect Ratio] is set to [16:9]

L: 36M 7952×4472 pixels

M: 15M 5168×2912 pixels

S: 8.9M 3984×2240 pixels

When [APS-C/Super 35mm] is set to [On]

When [Aspect Ratio] is set to [3:2]

L: 18M 5168×3448 pixels M: 11M 3984×2656 pixels

S: 4.5M 2592×1728 pixels

When [Aspect Ratio] is set to [16:9]

L: 15M 5168×2912 pixels M: 8.9M 3984×2240 pixels

S: 3.8M 2592×1456 pixels

Note

When [Quality] is set to [RAW] or [RAW & JPEG], the image size for RAW images corresponds to "L."

[267] List of MENU items | Camera Settings1

Aspect Ratio (still image)

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

Menu item details

3:2:

Suitable for standard prints.

16:9:

For viewing on a high-definition TV.

[268] List of MENU items | Camera Settings1

APS-C/Super 35mm

Sets whether to record in APS-C-equivalent size for still images and in Super 35mm-equivalent size for movies. If you select [On] or [Auto], you can use an APS-C size dedicated lens on this product.

Menu item details

On:

Records in either APS-C-equivalent size or Super 35mm-equivalent size.

Auto:

Automatically sets the capture range depending on the lens.

Off:

Always captures 35mm full-size image sensor pictures.

Note

- When you attach an APS-C compatible lens and set [APS-C/Super 35mm] to [Off], shooting may fail.
- When you set [APS-C/Super 35mm] to [On], the angle of view will be the same as when shooting with an APS-C size image sensor.

[269] List of MENU items | Camera Settings1

Panorama: Size

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

1

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

[270] List of MENU items | Camera Settings1

Panorama: Direction

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



MENU \rightarrow 1 (Camera Settings1) \rightarrow [Panorama: Direction] \rightarrow 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.

[271] List of MENU items | Camera Settings1

Long Exposure NR (still image)

When you set the shutter speed to 1 second(s) or longer (long exposure shooting), noise reduction is turned on for the duration that the shutter is open. With the function turned on, the grainy noise typical of long exposures is reduced.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{1} \ \, (\textbf{Camera Settings1}) \rightarrow \ \ \, \textbf{[} \ \ \, \textbf{Dong Exposure NR]} \rightarrow \ \ \, \textbf{desired setting.}$

Menu item details

On:

Activates noise reduction for the same duration that the shutter is open. When noise reduction is in progress, a message appears and you cannot take another picture. Select this to prioritize the image quality.

Off:

Does not activate noise reduction. Select this to prioritize the timing of shooting.

- Noise reduction may not be activated even if [Long Exposure NR] is set to [On] in the following situations:
 - The shooting mode is set to [Sweep Panorama].
 - [Drive Mode] is set to [Cont. Shooting] or [Cont. Bracket].
- [Magazine Long Exposure NR] cannot be set to [Off] in the following shooting modes:
 - [Intelligent Auto]

 Depending on the shooting conditions, the camera may not perform noise reduction, even if the shutter speed is 1 second(s) or longer.

[272] List of MENU items | Camera Settings1

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. A message may be displayed during noise reduction processing; you cannot shoot another image until the message disappears.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [Tigh ISO NR] \rightarrow desired setting.

Menu item details

Normal:

Activates high ISO noise reduction normally.

I ow-

Activates high ISO noise reduction moderately.

Off:

Does not activate high ISO noise reduction. Select this to prioritize the timing of shooting.

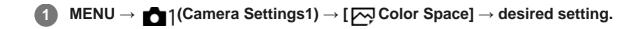
Note

- [Migh ISO NR] is not available in the following shooting modes:
 - [Intelligent Auto]
 - [Sweep Panorama]
- When [Quality] is set to [RAW], this function is not available.
- [High ISO NR] does not work for RAW images when the [Quality] is [RAW & JPEG].

[273] List of MENU items | Camera Settings1

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.



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.

[274] List of MENU items | Camera Settings1

Lens Comp.: Shading Comp.

Compensates for the shaded corners of the screen, caused by certain lens characteristics.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [Lens Comp.] \rightarrow [Shading Comp.] \rightarrow desired setting.

Menu item details

Auto:

Compensates for darker corners of the screen automatically.

Off:

Does not compensate for darker corners of the screen.

- This function is only available when using an automatic compensation compliant lens.
- The amount of light around the edges may not be corrected, depending on the lens type.

Lens Comp.: Chro. Aber. Comp.

Reduces the color deviation at the corners of the screen, caused by certain lens characteristics.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [Lens Comp.] \rightarrow [Chro. Aber. Comp.] \rightarrow desired setting.

Menu item details

Auto:

Reduces the color deviation automatically.

Off:

Does not compensate for the color deviation.

Note

• This function is only available when using an automatic compensation compliant lens.

[276] List of MENU items | Camera Settings1

Lens Comp.: Distortion Comp.

Compensates for the distortion of the screen, caused by certain lens characteristics.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [Lens Comp.] \rightarrow [Distortion Comp.] \rightarrow desired setting.

Menu item details

Auto:

Compensates for distortion of the screen automatically.

Off:

Does not compensate for distortion of the screen.

- This function is only available when using an automatic compensation compliant lens.
- Depending on the attached lens, [Distortion Comp.] is fixed to [Auto], and you cannot select [Off].

[277] List of MENU items | Camera Settings1

Drive Mode

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



You can also set the drive mode by selecting MENU → 1 (Camera Settings1) → [Drive Mode].

Menu	item	detai	ls
Sir	ngle S	hooti	ng:

Normal shooting mode.

□_{II} Cont. Shooting:

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

(3) Self-timer:

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

ტ_C 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.

BRKC Cont. Bracket:

Shoots images while holding the shutter button down, each with different degrees of brightness.

BRKS Single Bracket:

Shoots a specified number of images, one by one, each with a different degree of brightness.

BRKWB 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.

BRKDRO DRO Bracket:

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

[278] List of MENU items | Camera Settings1

Bracket Settings

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

- 1 δ / \square (Drive Mode) button \rightarrow select bracket shooting mode.
 - You can also set the drive mode by selecting MENU → 1 (Camera Settings1) → [Drive Mode].
- MENU \rightarrow 1(Camera Settings1) \rightarrow [Bracket Settings] \rightarrow 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.

$$(0 \rightarrow - \rightarrow +/- \rightarrow 0 \rightarrow +)$$

[279] List of MENU items | Camera Settings1

Recall (Camera Settings1/Camera Settings2)

Allows you to shoot an image after recalling often-used modes or camera settings registered with [1/ 2 Memory] in advance.

- 1 Set the mode dial to 1, 2, or 3 (Memory recall).
- Press the center of the multi-selector to confirm.
 - You can also recall registered modes or settings by selecting MENU → 1 (Camera Settings1) → [1/ 2 Recall].

Hint

To recall settings registered to the memory card, set the mode dial to 1, 2 or 3, then select the desired number by pressing the left/right side of the multi-selector.

- If you recall settings registered to the memory card, the settings are recalled from the memory card in the slot specified in [Select Rec. Media]. You can confirm the memory card slot by selecting MENU → (Setup) → [Select Rec. Media].
- Settings registered to a memory card using another camera of the same model name can be recalled with this camera.

Note

If you set [1/12] Recall] 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.

[280] List of MENU items | Camera Settings1

Memory (Camera Settings1/Camera Settings2)

Allows you to register up to 3 often-used modes or product settings to the product and up to 4 (M1 through M4) to the memory card. 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) → [1/1/1/2 Memory] → desired number.
- 3 Press the center of the multi-selector 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

To change registered settings

Change the setting to the desired one and re-register the setting to the same mode number.

- M1 through M4 can be selected only when a memory card is inserted into the product.
- When registering the settings on a memory card, only a memory card that has been selected using

[Select Rec. Media] can be used.

- Program Shift cannot be registered.
- For some functions, the position of the dial and the setting actually used for shooting may not match. If this happens, shoot images by referring to the information displayed on the monitor.

[281] List of MENU items | Camera Settings1

Focus Mode

Selects the focus method to suit the movement of the subject.

The focus mode switching method depends on the attached lens.



- With an SSM lens or an SAM lens that supports DMF (Direct Manual Focus)*, you can switch the focus mode to any mode including the auto focus and manual focus modes by operating the camera, even when the focus mode switch on the lens is in the "AF" position.
- * SAL18135 only (as of the day this camera was released)

MENU \rightarrow 1 (Camera Settings1) \rightarrow [Focus Mode] \rightarrow desired setting.

- When you want to use the auto focus function, set the focus mode switch on the lens to "AF." If the focus mode switch on the lens is set to "MF," the focus mode will be locked to [Manual Focus].
- If the lens supports the Hybrid Phase Detection AF system, every auto focus mode will use the Hybrid Phase Detection AF system as the focus detection method in the default settings. The focus detection method can be changed by selecting MENU → [AF System].

Menu item details

AF-S (Single-shot AF):

The product locks the focus once focusing is complete. Use this when the subject is motionless.

AF-A (Automatic AF):

[Single-shot AF] and [Continuous AF] are switched according to the movement of the subject. When the shutter button is pressed halfway down, the product locks the focus when it determines that the subject is motionless, or continues to focus when the subject is in motion.

During continuous shooting, the product automatically shoots with Continuous AF from the second shot.

AF-C (Continuous AF):

The product continues to focus while the shutter button is pressed and held halfway down. Use this when the subject is in motion. In [Continuous AF] mode, there is no beep when the camera focuses.

DMF (DMF):

You can make fine adjustments manually after the focus is locked, 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.

Focus indicator



The subject is in focus and the focus is locked.



The subject is not in focus.



The subject is in focus. The focus will be adjusted continuously according to the movements of the subject.



Focusing is in progress.

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
- Continuously repetitive patterns, such as the facades of buildings
- Subjects in the focusing area with different focal distances

Note

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

Hint

 In [Continuous AF] mode, you can lock the focus by pressing and holding the button that has been assigned the [Focus Hold] function. [282] List of MENU items | Camera Settings1

Priority Set in AF-S

Sets whether to release the shutter even if the subject is not in focus when [Focus Mode] is set to [Single-shot AF], [DMF] or [Automatic AF] and the subject is remaining still.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [Priority Set in AF-S] \rightarrow desired setting.

Menu item details

AF:

Prioritizes focusing. The shutter will not be released until the subject is in focus.

Release:

Prioritizes the shutter's release. The shutter will be released even if the subject is out of focus.

[283] List of MENU items | Camera Settings1

Priority Set in AF-C

Sets whether to release the shutter even if the subject is not in focus when the continuous AF is activated and the subject is in motion.



 $MENU \rightarrow 1$ (Camera Settings1) \rightarrow [Priority Set in AF-C] \rightarrow desired setting.

Menu item details

AF:

Prioritizes focusing. The shutter will not be released until the subject is in focus.

Release:

Prioritizes the shutter's release. The shutter will be released even if the subject is out of focus.

Balanced Emphasis:

Shoots with a balanced emphasis on both focusing and shutter release.

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



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

Menu item details

ונים 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.

Zone:

Select a zone on the monitor on which to focus, and the product will automatically select a focus area.

[] 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.

Fire 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.

பூ பூ ஞ் மூ Lock-on AF :

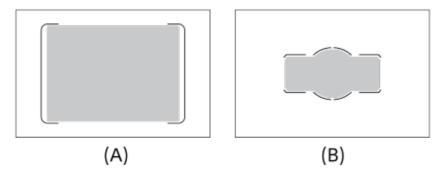
When the shutter button is pressed and held halfway down, the product tracks the subject within the selected autofocus area. This setting is available only when the focus mode is set to [Continuous AF]. Point the cursor at [Lock-on AF] on the [Focus Area] setting screen, and then adjust the desired area to start tracking by pressing the multi-selector left/right. You can also move the tracking start area to the desired point by designating the area as a flexible spot or expand flexible spot.

Available focus areas

When the Hybrid Phase Detection AF system is active, the entire focus area including the focal plane phase detection AF area is available (A). When the Hybrid Phase Detection AF system is not active, dedicated phase detection AF area is available (B).

Conceptual diagram

The shaded area is the available focusing area.



• When [Zone] is selected, the focus area is divided into 15 zones in (A), or 9 zones in (B).

To move the focus area

 You can move the focus area in [Flexible Spot], [Expand Flexible Spot] or [Zone] by operating the multi-selector.

Note

- [Focus Area] is locked to [Wide] in the following situations:
 - [Intelligent Auto]
 - Lock-on AF
 - [Eye AF]
- The focus area may not light up during continuous shooting or when the shutter button is pressed all the way down at once.
- When the mode dial is set to [(Movie/S&Q Motion) or during movie shooting, [Lock-on AF] cannot be selected as the [Focus Area].
- When using the following zoom functions, a dotted square frame may appear around the whole screen depending on the zoom scale. The camera will perform auto focusing using the entire screen.
 - Smart Zoom
 - Clear Image Zoom
 - Digital Zoom

[285] List of MENU items | Camera Settings1

Selectable AF Area

Although this product can focus using 399 focus points at maximum, you can also limit the available focus points manually.

1

 $\textbf{MENU} \rightarrow \ \ \, \textbf{1} \ \, \textbf{(Camera Settings1)} \rightarrow \ \ \, \textbf{[Selectable AF Area]} \rightarrow \ \ \, \textbf{desired setting.}$

Menu item details

Auto:

The number of focus points used for focusing are set automatically depending on the lens or shooting mode. Uses all 399 focus points at maximum.

Only Cross-Type AF:

Limits available 79 focus points at a maximum in the cross-type AF area.

The number of focus points depending on the lens

The number of focus points will be limited when the following lenses are attached.

Lens: SAL75300, SAL1118, SAL55200, SAL1855, SAL18552, SAL55200-2, SAL30M28, SAL55300

The number of focus points: 61 points

Lens: SAL500F80

The number of focus points: One single point at the center [Only Cross-Type AF] cannot be set.

 This information is current as of the day the model was released. Some of the lenses above are not available in some countries or regions.

Hint

- We recommend that you set the camera to [Only Cross-Type AF] in the following situations:
 - When you want to prevent the number of focus points from changing automatically depending on the lens you attach
 - When focusing is difficult at the surrounding points
 - When you want to select a focus area quickly by limiting the available focus points

Note

- If you attach a lens that does not support Hybrid Phase Detection AF, or [AF System] is set to [Ddc Phase AF Only], a focus area that does not perform cross-type detection will also be used even when [Selectable AF Area] is set to [Only Cross-Type AF].
- When the shooting mode is set to (Movie/S&Q Motion), [AF System] is locked to [Ddc Phase AF Only]. The number of focus points is limited to 61.

[286] List of MENU items | Camera Settings1

AF System

Sets whether to use the Hybrid Phase Detection AF system, which uses both the focal plane phase detection AF sensor and the dedicated phase detection AF sensor, or use only the dedicated phase detection AF sensor to perform auto focus.



Menu item details

Auto:

Uses both the focal plane phase detection AF sensor and the dedicated phase detection AF sensor depending on the lens or the shooting mode.

Ddc Phase AF Only:

Always uses only the dedicated phase detection AF sensor.

Note

When the shooting mode is set to 間(Movie/S&Q Motion), [AF System] is locked to [Ddc Phase AF Only].

[287] List of MENU items | Camera Settings1

Flexible Spot Points

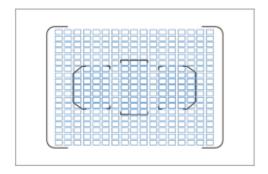
When [Focus Area] is set to [Flexible Spot] or [Expand Flexible Spot], and you want to select a focus area quickly, you can limit the available number of focus points.



Menu item details

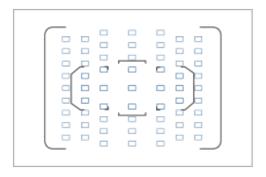
All:

Selects from 323 focus points at maximum.



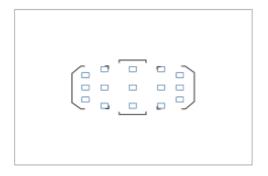
63 Points:

Uses the limited 63 focus points out of 323. Available only when the lens that supports the Hybrid Phase Detection AF is attached, and [AF System] is set to [Auto].



15 Points:

Uses the limited 15 points out of all the points of the dedicated phase detection AF sensor.



[288] List of MENU items | Camera Settings1

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 red AF illuminator lights up to allow the camera to focus easily when a flash (sold separately) compatible with the AF illuminator is attached to the product.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [\nearrow AF Illuminator] \rightarrow desired setting.

Menu item details

Auto:

The AF illuminator lights up automatically in dark surroundings.

Off:

Does not use the AF illuminator.

- You cannot use [AF Illuminator] in the following situations:
 - In movie mode
 - Sweep Panorama
 - When [Focus Mode] is set to [Continuous AF] or [Automatic AF] and the subject is moving (when
 the focus indicator () lights up).
 - When [Focus Magnifier] is activated.

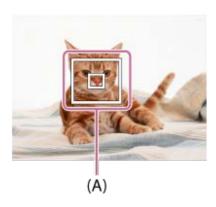
- When focusing on a focus area other than that of the dedicated phase detection AF sensor.
- The AF illuminator emits a very bright light. Although there is no health hazard, do not look directly into the AF illuminator at close range.

[289] List of MENU items | Camera Settings1

Center Lock-on AF

When you press the center of the multi-selector, the camera detects the subject positioned in the center of the screen and continues to track the subject.

- 1 MENU \rightarrow 1 (Camera Settings1) \rightarrow [Center Lock-on AF] \rightarrow [On].
- Align the target frame (A) over the subject and press the center of the multi-selector.
 - Press the center again to stop tracking.



Press the shutter button fully down to shoot the image.

Hint

 You can activate [Center Lock-on AF] by pressing the key to which [Focus Standard] is assigned in [Custom Key(Shoot.)] when [Center Lock-on AF] is set to [On]. You can also detect the subject again by pressing the key to which [Focus Standard] is assigned.

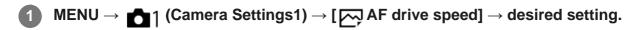
- The [Center Lock-on AF] function may not function very well in the following situations:
 - The subject is moving too quickly.

- 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 [Smart Telecon.] is being used.
 - When shooting in Manual Focus mode.
 - When [Record Setting] is set to [120p]/[100p].

[290] List of MENU items | Camera Settings1

AF drive speed (still image)

Selects the focusing speed when using autofocus in the still image mode.



Menu item details

Fast:

Sets the AF drive speed to fast.

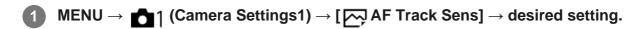
Slow:

Sets the AF drive speed to slow. This setting makes it easier to focus during macro shooting, etc.

[291] List of MENU items | Camera Settings1

AF Track Sens (still image)

You can select the AF track sensitivity when the subject goes out of focus in still image mode.



Menu item details

5(Responsive) / 4 / 3(Standard) / 2 / 1(Locked on):

Select [5(Responsive)] to focus responsively on subjects at different distances.

Select [1(Locked on)] to keep the focus on a specific subject when other things are crossing in front of the subject.

[292] List of MENU items | Camera Settings1

AF w/ shutter (still image)

Selects whether to focus automatically when you press the shutter button halfway down. Select [Off] to adjust the focus and the exposure separately.



MENU \rightarrow 1 (Camera Settings1) \rightarrow [\nearrow AF w/ shutter] \rightarrow desired setting.

Menu item details

On:

The auto focus operates when you press the shutter button halfway down.

Off:

The auto focus does not operate even if you press the shutter button halfway down.

Useful method to micro-adjust the focus

Activating the auto focus function with a button other than the shutter button makes possible more accurate focusing in combination with manual focusing.

- 1. Attach an SSM lens or SAL18135 lens to the camera, and then set the focus mode switch on the lens to "AF."
- 2. Set [AF w/ shutter] to [Off].
- 3. MENU \rightarrow 2 (Camera Settings2) \rightarrow [Custom Key(Shoot.)] \rightarrow assign the [AF On] and [Focus Magnifier] functions to the desired keys.
- 4. Set [Eye-Start AF] to [Off] to avoid auto focusing when you look through the viewfinder.
- **5.** Press the key to which the [AF On] function is assigned.
- **6.** Press the key to which the [Focus Magnifier] function is assigned, and then rotate the focus ring for micro-adjustments of the focus.
- 7. Press the shutter button fully down to shoot the image.
- SAM lenses other than SAL18135 lens do not support the DMF (Direct Manual Focus) function (as of the day this camera was released).

Sets whether or not to use autofocus when you look through an Electronic Viewfinder.

Menu item details

On:

Auto focusing starts when you look through the Electronic Viewfinder.

Off:

Auto focusing does not start when you look through the Electronic Viewfinder.

[294] List of MENU items | Camera Settings1

AF Rng.Ctrl Assist (still image)

Sets whether to display or not that the subject is within the set distance during the AF range control.

1 MENU → \bigcirc 1 (Camera Settings1) → [\bigcirc AF Rng.Ctrl Assist] → desired setting.

Menu item details

On:

Displays the AF control assist.

Off:

Does not display the AF control assist.

[295] List of MENU items | Camera Settings1

AF Area Auto Clear

Sets whether the focus area should be displayed all the time or should disappear automatically shortly after focus is achieved.

1 MENU \rightarrow **1** (Camera Settings1) \rightarrow [AF Area Auto Clear] \rightarrow desired setting.



On:

The focus area disappears automatically shortly after focus is achieved.

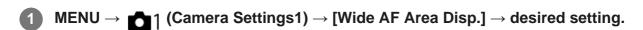
Off:

The focus area is displayed all the time.

[296] List of MENU items | Camera Settings1

Wide AF Area Disp.

You can set whether the focus area should be displayed or not when [Focus Area] is set to [Wide].



Menu item details

On:

Displays the focus area.

Off:

Does not display the focus area.

[297] List of MENU items | Camera Settings1

AF Micro Adj.

Allows you to adjust and register autofocused positions for each lens.

In general use, you do not need to adjust the autofocused position using this function. Use this function only when adjustments are needed for certain focus areas or focal lengths. Note that the auto focus function may not be performed at a proper position when using this adjustment.

- MENU → ↑ 1 (Camera Settings1) → select [AF Micro Adj.].
- Select [AF Adjustment Set.] → [On].



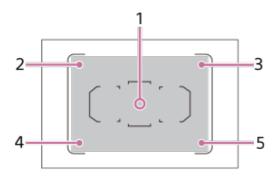
- The larger the value you select, the farther the autofocused position will be from the product. The smaller the value you select, the closer the autofocused position will be to the product.
- To adjust the autofocus position for the dedicated phase detection AF area, set the value for the center area.
- If the adjustment for the center area is not needed, you can skip this step.

Adjust the values for the corner areas as necessary.

 Set the values for the corner areas if the adjustment of the autofocused positions outside of the dedicated phase detection AF are needed.

AF micro adjustment areas

Conceptual diagram



You can adjust the autofocus position for both the wide and telephoto ends of the lens. When Hybrid Phase Detection AF is active*, you can adjust the autofocus points for the corner areas (2 - 5) as well as the center area (1).

- The adjustment for the center area is applied to both the focal plane phase detection AF sensor and the dedicated phase detection AF sensor.
- The adjustments for the corner areas are applied to the focal plane phase detection AF sensor.
- * When a lens that supports Hybrid Phase Detection AF is attached, and [AF System] is set to [Auto]

Hint

• It is recommended that you adjust the position under actual shooting conditions. Set [Focus Area] to [Flexible Spot] and use a bright subject with high contrast when you adjust.

- For focal lengths between the wide end and the telephoto end, the values interpolated by the values for each end are applied.
- For areas between the adjusted areas, the values interpolated by the values for each area are

applied.

- When the focal plane phase detection AF area is narrowed, such as when an APS-C size dedicated lens is attached, the adjustable area is the narrowed AF area only.
- When a prime lens is attached, you cannot enter the adjustment value for the telephoto end. The adjustment value for the wide end is applied.
- You cannot adjust the autofocus position for the corner areas in following situations:
 - [Selectable AF Area] is set to [Only Cross-Type AF]
 - [Flexible Spot Points] is set to [15 Points]
- When you attach a lens for which you have already registered a value, the registered value appears
 on the screen. [±0] appears for lenses for which a value has not yet been registered.
- If [-] is displayed as the value, then a total of 30 lenses have been registered and no new lens can be registered. To register a new lens, attach a lens for which the registration can be erased, and set its value to [±0], or reset the values of all the lenses using [Clear].
- The [AF Micro Adj.] supports Sony, Minolta, or Konica-Minolta lenses. If you perform [AF Micro Adj.] with lenses other than the supported lenses, the registered settings for the supported lenses may be affected. Do not perform [AF Micro Adj.] with an unsupported lens.
- You cannot set [AF Micro Adj.] individually for a Sony, Minolta, and Konica-Minolta lens of the same specification.

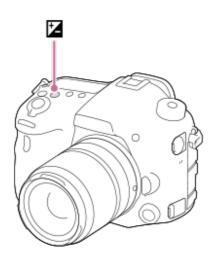
[298] List of MENU items | Camera Settings1

Exposure Comp.

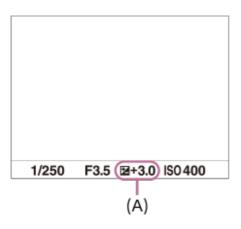
Normally, exposure is set automatically (auto exposure). Based on the exposure value set by auto exposure, you can make the entire image brighter or darker if you adjust [Exposure Comp.] to the plus side or minus side, respectively (exposure compensation).



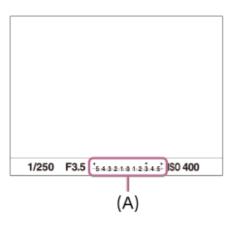
You can also set this function by selecting MENU → 1 (Camera Settings1) → [Exposure Comp.].



- Select the desired setting by pressing the multi-selector left/right.
 - You can adjust the exposure in a range of -5.0 EV to + 5.0 EV.
 - You can check the exposure value you set on the shooting screen (A).
 Monitor



Viewfinder



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

- When using [Manual Exposure], you can perform the exposure compensation only when [ISO] is set to [ISO AUTO].
- Only a value between -3.0 EV and + 3.0 EV with the equivalent image brightness appears on the screen when shooting. If you set an exposure beyond this range, the image brightness on the screen does not show the effect, but it will be reflected in the recorded image.
- You can adjust the exposure in a 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.

[299] List of MENU items | Camera Settings1

ISO

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



- You can also select MENU→ 1 (Camera Settings1) → [ISO].
- You can change the value by 1/3 EV steps by turning the front dial as well as by selecting it using the multi-selector. You can change the value by 1 EV steps by turning the rear dial.

Menu item details

ISO AUTO:

Sets the ISO sensitivity automatically.

ISO 50 - ISO 102400:

Sets the ISO sensitivity manually. Selecting a larger number increases the ISO sensitivity.

- [ISO AUTO] is selected when using the following functions:
 - [Intelligent Auto]
 - [Sweep Panorama]
- The higher the ISO value, the more noise will appear on the images.
- When shooting movies, ISO values between 100 and 25600 are available.
- The available ISO settings will differ depending on whether you are shooting still images, shooting movies, or shooting slow-motion/quick-motion movies.
- 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.

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 multi-selector, and set the desired values for [ISO AUTO Maximum] and [ISO AUTO Minimum].

[300] List of MENU items | Camera Settings1

ISO AUTO Min. SS

If you select [ISO AUTO] when the shooting mode is P (Program Auto) or A (Aperture Priority), you can set the shutter speed at which the ISO sensitivity starts changing.

This function is effective for shooting moving subjects. You can minimize subject blurring while also preventing camera shake.



 $MENU \rightarrow 1$ (Camera Settings1) \rightarrow [ISO AUTO Min. SS] \rightarrow desired setting.

Menu item details

FASTER (Faster)/FAST (Fast):

The ISO sensitivity will start to change at shutter speeds faster than [Standard], so you can prevent camera shake and subject blurring.

STD (Standard):

The camera automatically sets the shutter speed based on the focal length of the lens.

SLOW (Slow)/SLOWER (Slower):

The ISO sensitivity will start to change at shutter speeds slower than [Standard], so you can shoot images with less noise.

1/8000 — 30":

The ISO sensitivity starts to change at the shutter speed you have set.

Hint

• The difference in shutter speed at which ISO sensitivity starts to change between [Faster], [Fast], [Standard], [Slow], and [Slower] is 1 EV.

- If the exposure is insufficient even when the ISO sensitivity is set to [ISO AUTO Maximum] in [ISO AUTO], in order to shoot with an appropriate exposure, the shutter speed will be slower than the speed set in [ISO AUTO Min. SS].
- In the following situations, the shutter speed may not function as set:

- When using the flash to shoot bright scenes. (The maximum shutter speed is limited to the flash-syncing speed of 1/250 seconds.)
- When using the flash to shoot dark scenes with the [Flash Mode] set to [Fill-flash] or [Wireless].
 (The minimum shutter speed is limited to the speed automatically determined by the camera.)

[301] List of MENU items | Camera Settings1

Metering Mode

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



 $MENU \rightarrow 1$ (Camera Settings1) \rightarrow [Metering Mode] \rightarrow 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]. The position of the metering circle depends the setting for [Spot Metering Point].

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 [Spot] is selected and [Focus Area] is set to either [Flexible Spot] or [Expand Flexible Spot]
 while [Spot Metering Point] is set to [Focus Point Link], the spot metering point can be coordinated
 with the focus area.
- 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]
 - Other zoom functions than the optical zoom
- In [Highlight] mode, the subject may be dark if a brighter part exists on the screen.

[302] List of MENU items | Camera Settings1

Spot Metering Point

Sets whether to coordinate the spot metering position with the focus area when [Focus Area] is set to [Flexible Spot] or [Expand Flexible Spot].



 $MENU \rightarrow 1$ (Camera Settings1) \rightarrow [Spot Metering Point] \rightarrow desired setting.

Menu item details

Center:

The spot metering position does not coordinate with the focus area, but always meters brightness at the center.

Focus Point Link:

The spot metering position coordinates with the focus area.

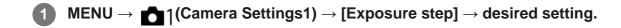
Note

- When [Focus Area] is set to other than [Flexible Spot] or [Expand Flexible Spot], the spot metering
 position is locked to the center.
- When [Focus Area] is set to [Lock-on AF: Flexible Spot] or [Lock-on AF:Expand Flexible Spot], the spot metering position coordinates to the Lock-on AF start position, but does not coordinate with the tracking of the subject.

[303] List of MENU items | Camera Settings1

Exposure step

You can set the setting range for the shutter speed, aperture, and exposure compensation values.



Menu item details

0.3EV/0.5EV

[304] List of MENU items | Camera Settings1

AEL w/ shutter (still image)

Sets whether to fix the exposure when you press the shutter button halfway down. Select [Off] to adjust the focus and the exposure separately.

1 MENU \rightarrow 1 (Camera Settings1) \rightarrow [AEL w/ shutter] \rightarrow desired setting.

Menu item details

Auto:

Fixes the exposure after adjusting the focus automatically when you press the shutter button halfway down when [Focus Mode] is set to [Single-shot AF]. When [Focus Mode] is set to [Automatic AF], and the product determines that the subject is moving, or you shoot burst images, the fixed exposure is cancelled.

On:

Fixes the exposure when you press the shutter button halfway down.

Off:

Does not fix the exposure when you press the shutter button halfway down. Use this mode when you want to adjust focus and exposure separately.

The product keeps adjusting the exposure while shooting in [Cont. Shooting] mode.

Note

• Operation using the AEL button is prioritized over the [MAEL w/ shutter] settings.

[305] List of MENU items | Camera Settings1

Exposure Std. Adjust

Adjusts this camera's standard for the correct exposure value for each metering mode.

- MENU → ↑ (Camera Settings1) → [Exposure Std. Adjust] → desired metering mode.
- 2 Select the desired value as the metering standard.
 - You can set a value from -1 EV to +1 EV in 1/6 EV increments.

Metering Mode

The set standard value will be applied when you select the corresponding metering mode in $MENU \rightarrow 1$ (Camera Settings1) \rightarrow [Metering Mode].

Multi/ Center/ Spot/ Entire Screen Avg./ Highlight

Note

- The exposure compensation will not be affected when [Exposure Std. Adjust] is changed.
- The exposure value will be locked according to the value set for [Spot] during using spot AEL.
- The standard value for M.M (Metered Manual) will be changed according to the value set in [Exposure Std. Adjust].
- The value set in [Exposure Std. Adjust] is recorded in Exif data separately from the exposure compensation value. The amount of exposure standard value will not be added to the exposure compensation value.
- If you set [Exposure Std. Adjust] during bracketing shooting, the number of shots for the bracketing will be reset.

[306] List of MENU items | Camera Settings1

Flash Mode

You can set the flash mode.

MENU \rightarrow 1 (Camera Settings1) \rightarrow [Flash Mode] \rightarrow desired setting.

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.

FAR 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.

★ Wireless:

Allows you to shoot by removing the external flash (sold separately) and using it at a distance from the camera.

The shading effect gives the subject a more three-dimensional feel.

Note

- The default setting depends on the shooting mode.
- Some [Flash Mode] settings are not available, depending on the shooting mode.

[307] List of MENU items | Camera Settings1

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.



$\textbf{MENU} \rightarrow \ \ \, \textbf{1} \ \, \textbf{(Camera Settings1)} \rightarrow \textbf{[Flash Comp.]} \rightarrow \textbf{desired setting.}$

 Selecting higher values (+ side) makes the flash level higher, and lower values (- side) makes the flash level lower.

- [Flash Comp.] does not work when the shooting mode is set to the following modes:
 - [Intelligent Auto]
 - [Sweep Panorama]
- 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

[308] List of MENU items | Camera Settings1

Exp.comp.set

Sets whether to apply the exposure compensation value to control both flash light and ambient light, or just ambient light.



 $MENU \rightarrow 1$ (Camera Settings1) \rightarrow [Exp.comp.set] \rightarrow desired setting.

Menu item details

Ambient&flash:

Applies the exposure compensation value to control both flash light and ambient light.

Ambient only:

Applies the exposure compensation value to control ambient light only.

[309] List of MENU items | Camera Settings1

Flash control

Sets the method for determining the intensity of flash output.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{1} \ \, (\textbf{Camera Settings1}) \rightarrow \textbf{[Flash control]} \rightarrow \textbf{desired setting.}$

Menu item details

ADI flash:

The camera's flash control uses the focus distance information and brightness value of the subject when the pre-flash is reflected.

This gives precise flash control without hardly being affected by the reflective level of the subject.

Pre-flash TTL:

The camera's flash control uses the brightness value of the subject when the pre-flash is reflected. If this setting is used, the camera's ability to precisely measure the flash light may be affected by reflections from the subject.

ADI: Advanced Distance Integration

Note

- When the distance between the subject and flash is not fixed (such as when shooting with wireless flash using an external flash (sold separately) or in off-camera shooting using a cable, or when using a macro twin flash), or when an external flash (sold separately) is set to bounce, [Flash control] is automatically set to [Pre-flash TTL]. It may be automatically set to [Pre-flash TTL] depending on other shooting conditions as well.
- Set [Flash control] to [Pre-flash TTL] in the following situations because the product cannot get proper flash information using [ADI flash].
 - When a wide panel is attached to the flash HVL-F36AM
 - When shooting using a flash diffuser
 - When using filters that affect the exposure factor (such as ND filters)
 - When using close-up lenses
- ADI flash can be used in combination with a lens distance encoder. To confirm if your lens is equipped with a distance encoder, check the main specifications of the operation manual for your lens.
- [Flash control] cannot be set in [Sweep Panorama] mode.

[310] List of MENU items | Camera Settings1

Red Eye Reduction

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



MENU \rightarrow 1 (Camera Settings1) \rightarrow [Red Eye Reduction] \rightarrow 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.



Press the WB (White Balance) button → desired setting.

You can also set this function by selecting MENU → 1 (Camera Settings1) → [White Balance].

Menu item details

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].

SET 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 multi-selector right.
- 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].

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

[312] List of MENU items | Camera Settings1

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 \rightarrow 1 (Camera Settings1) \rightarrow [Priority Set in AWB] \rightarrow desired setting.

Menu item details

AWB Standard:

Shoots with standard auto white balance. The camera automatically adjusts the color tones.

AWBO Ambience:

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

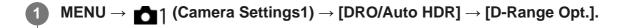
AWBO White:

Prioritizes a reproduction of white color when the color temperature of the light source is low.

[313] List of MENU items | Camera Settings1

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.



Select the desired setting by pressing the multi-selector left/right.

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].
 - When [Picture Effect] is set to other than [Off]
 - When [Picture Profile] is set to other than [Off]
- When [Record Setting] is set to [120p 100M], [100p 100M], [120p 60M] or [100p 60M], [DRO/Auto HDR] will be set to [Off].
- 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.

[314] List of MENU items | Camera Settings1

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.



Select the desired setting by pressing the multi-selector left/right.

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

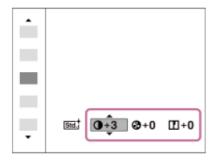
- This function is not available when the [Quality] is [RAW] or [RAW & JPEG].
- [Auto HDR] is not available in the following shooting modes:
 - [Intelligent Auto]
 - [Sweep Panorama]
- [Auto HDR] is not available in the following situations:
 - When [Picture Effect] is set to other than [Off].
 - When [Picture Profile] 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. 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.

[315] List of MENU items | Camera Settings1

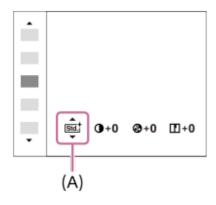
Creative Style

Allows you to set the desired image processing and finely adjust contrast, saturation and sharpness for each image style.

- **1** MENU → **1** (Camera Settings1) → [Creative Style].
- 2 Select the desired style or [Style Box] by pressing the multi-selector up/down.
- To adjust (Contrast), (Saturation) and (Sharpness), select the desired item using the right/left sides, and then select the value using the up/down sides.



- When selecting [Style Box], move to the right side by pressing the multi-selector right, and then select the desired style.
 - You can call up the same style with slightly different settings.



(A): Displayed only when Style Box is selected

Menu item details

Std.† 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.

Ntri Neutral:

The saturation and sharpness are lowered for shooting images in subdued tones. This is also suitable for capturing image material to be modified with a computer.

Clear Clear:

For shooting images in clear tones with limpid colors in highlight, suitable for capturing radiant light.

Deep Deep:

For shooting images with deep and dense colors, suitable for capturing the solid presence of the subject.

Light Light:

For shooting images with bright and simple colors, suitable for capturing a refreshingly light ambience.

Port 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.

Night Scene:

The contrast is lowered for reproducing night scenes.

Autumn leaves:

For shooting autumn scenes, vividly highlighting the reds and yellows of changing leaves.

B/w Black & White:

For shooting images in black and white monotone.

Sepiat Sepia:

For shooting images in sepia monotone.

Registering preferred settings (Style Box):

Select the six style box (the boxes with numbers on the left side (15td.)) to register preferred settings. Then select the desired settings using the right button.

You can call up the same style with slightly different settings.

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

[Contrast], [Saturation], and [Sharpness] can be adjusted for each image style preset such as [Standard] and [Landscape], and for each [Style Box] to which you can register preferred settings.

Select an item to be set by pressing the multi-selector right/left, then set the value by pressing the multi-selector up/down.

Contrast:

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.

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

[316] List of MENU items | Camera Settings1

Picture Effect

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



 $MENU \rightarrow 1$ (Camera Settings1) \rightarrow [Picture Effect] \rightarrow desired setting.

Menu item details



Disables the [Picture Effect] function.

Toy Camera:

Creates a soft image with shaded corners and reduced sharpness.

(Pop) 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.

(Rtro) 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.

Rich-tone Mono.:

Creates an image in black and white with rich gradation and reproduction of details.

Hint

• You can perform detailed settings for some items by pressing the multi-selector left/right.

- 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.

- [Rich-tone Mono.]
- In the case of [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, 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]
 - [Sweep Panorama]
- When [Quality] is set to [RAW] or [RAW & JPEG], this function is not available.

[317] List of MENU items | Camera Settings1

Picture Profile

Allows you to change the settings for the color, gradation, etc. For details on "Picture Profile," refer to http://helpguide.sony.net/di/pp/v1/en/index.html.

Customizing the picture profile

You can customize the picture quality by adjusting picture profile items such as [Gamma] and [Detail]. When setting these parameters, connect the camera to a TV or monitor, and adjust them while observing the picture on the screen.

- MENU → ↑ (Camera Settings1) → [Picture Profile] → the profile you want to change.
- 2 Move to the item index screen by pressing the multi-selector right.
- 3 Select the item to change using the up/down sides of the multi-selector.
- Select the desired value by pressing the multi-selector up/down and press in the center.

Using the preset of the picture profile

The default settings [PP1] through [PP9] for movies have been set in advance in the camera based on various shooting conditions.

 $MENU \rightarrow 1$ (Camera Settings1) \rightarrow [Picture Profile] \rightarrow desired setting.

PP1:

Example setting using [Movie] gamma

PP2:

Example setting using [Still] gamma

PP3:

Example setting of natural color tone using the [ITU709] gamma

PP4:

Example setting of a color tone faithful to the ITU709 standard

PP5:

Example setting using [Cine1] gamma

PP6:

Example setting using [Cine2] gamma

PP7:

Example setting using [S-Log2] gamma

PP8:

Example setting using the [S-Log3] gamma and the [S-Gamut3.Cine] under [Color Mode].

PP9:

Example setting using the [S-Log3] gamma and the [S-Gamut3] under [Color Mode].

Items of the picture profile

Black Level

Sets the black level. (-15 to +15)

Gamma

Selects a gamma curve.

Movie: Standard gamma curve for movies

Still: Standard gamma curve for still images

Cine1: Softens the contrast in dark parts and emphasizes gradation in bright parts to produce a relaxed color movie. (equivalent to HG4609G33)

Cine2: Similar to [Cine1] but optimized for editing with up to 100% video signal. (equivalent to HG4600G30)

Cine3: Intensifies the contrast in light and shade more than [Cine1] and strengthens gradation in black.

Cine4: Strengthens the contrast in dark parts more than [Cine3]. The contrast in dark parts is lower and the contrast in bright parts is higher than for [Movie].

ITU709: Gamma curve that corresponds to ITU709.

ITU709(800%): Gamma curve for confirming scenes on the assumption of shooting using [S-Log2] or [S-Log3].

S-Log2: Gamma curve for [S-Log2]. This setting is based on the assumption that the picture will be processed after shooting.

S-Log3: Gamma curve for [S-Log3] with more similar features to film. This setting is based on the assumption that the picture will be processed after shooting.

Black Gamma

Corrects gamma in low intensity areas.

Range: Selects the correcting range. (Wide / Middle / Narrow)

Level: Sets the correcting level. (-7 (maximum black compression) to +7 (maximum black stretch))

Knee

Sets knee point and slope for video signal compression to prevent over-exposure by limiting signals in high intensity areas of the subject to the dynamic range of your camera. When selecting [Still], [Cine1], [Cine2], [Cine3], [Cine4], [ITU709(800%)], [S-Log2], [S-Log3] in [Gamma], [Knee] is set to [Off] if [Mode] is set to [Auto]. To use functions in [Knee], set [Mode] to [Manual].

Mode: Selects auto/manual settings.

- Auto: The knee point and slope are set automatically.
- Manual: The knee point and slope are set manually.

Auto Set: Settings when [Auto] is selected for [Mode].

- Max Point: Sets the maximum point of the knee point. (90% to 100%)
- Sensitivity: Sets the sensitivity. (High / Mid / Low)

Manual Set: Settings when [Manual] is selected for [Mode].

- Point: Sets the knee point. (75% to 105%)
- Slope: Sets the knee slope. (-5 (gentle) to +5 (steep))

Color Mode

Sets type and level of colors.

Movie: Suitable colors when [Gamma] is set to [Movie].

Still: Suitable colors when [Gamma] is set to [Still].

Cinema: Suitable colors when [Gamma] is set to [Cine1].

Pro: Similar color tones to the standard image quality of Sony professional cameras (when combined with ITU709 gamma)

ITU709 Matrix: Colors corresponding to ITU709 standard (when combined with ITU709 gamma)

Black & White: Sets the saturation to zero for shooting in black and white.

S-Gamut: Setting based on the assumption that the pictures will be processed after shooting. Used when [Gamma] is set to [S-Log2].

S-Gamut3.Cine: Setting based on the assumption that the pictures will be processed after shooting. Used when [Gamma] is set to [S-Log3]. This setting allows you to shoot in a color space that can easily be converted for digital cinema.

S-Gamut3: Setting based on the assumption that the pictures will be processed after shooting.

Used when [Gamma] is set to [S-Log3]. This setting allows you to shoot in a wide color space.

Saturation

Sets the color saturation. (-32 to +32)

Color Phase

Sets the color phase. (-7 to +7)

Color Depth

Sets the color depth for each color phase. This function is more effective for chromatic colors and less effective for achromatic colors. The color looks deeper as you increase the setting value towards the positive side, and lighter as you decrease the value towards the negative side. This function is effective even if you set [Color Mode] to [Black & White].

- [R] -7 (light red) to +7 (deep red)
- [G] -7 (light green) to +7 (deep green)
- [B] -7 (light blue) to +7 (deep blue)
- [C] -7 (light cyan) to +7 (deep cyan)
- [M] -7 (light magenta) to +7 (deep magenta)
- [Y] -7 (light yellow) to +7 (deep yellow)

Detail

Sets items for [Detail].

Level: Sets the [Detail] level. (-7 to +7)

Adjust: The following parameters can be selected manually.

- Mode: Selects auto/manual setting. (Auto (automatic optimization) / Manual (The details are set manually.))
- V/H Balance: Sets the vertical (V) and horizontal (H) balance of DETAIL. (-2 (off to the vertical (V) side) to +2 (off to the horizontal (H) side))
- B/W Balance: Selects the balance of the lower DETAIL (B) and the upper DETAIL (W).
 (Type1 (off to the lower DETAIL (B) side) to Type5 (off to the upper DETAIL (W) side))
- Limit: Sets the limit level of [Detail]. (0 (Low limit level: likely to be limited) to 7 (High limit level: unlikely to be limited))
- Crispning: Sets the crispening level. (0 (shallow crispening level) to 7 (deep crispening level))
- Hi-Light Detail: Sets the [Detail] level in the high intensity areas. (0 to 4)

To copy the settings to another picture profile number

You can copy the settings of the picture profile to another picture profile number.

To Reset the picture profile to the default setting

You can reset the picture profile to the default setting. You cannot reset all picture profile settings at once.

 $\mathsf{MENU} \to \bullet 1 \text{ (Camera Settings1)} \to \mathsf{[Picture Profile]} \to \mathsf{[Reset]}.$

Note

- Since the parameters are shared for movie and still images, adjust the value when you change the shooting mode.
- If you print RAW images with shooting settings, the following settings are not reflected:
 - Black Level
 - Black Gamma
 - Knee
 - Color Depth
- When the [Record Setting] is [120p 100M]/[100p 100M] or [120p 60M]/[100p 60M], [Black Gamma] is fixed at "0" and cannot be adjusted.
- If you change [Gamma], the available ISO value range changes.
- There may be more noise in dark parts depending on the gamma settings. It may improve by setting the lens compensation to [Off].
- When using S-Log2 or S-Log3 gamma, the noise becomes more noticeable compared to when using other gammas. If the noise still is significant even after processing pictures, it may be improved by shooting with a brighter setting. However, the dynamic range becomes narrower accordingly when you shoot with a brighter setting. We recommend checking the picture in advance by test shooting when using S-Log2 or S-Log3.
- Setting [ITU709(800%)], [S-Log2] or [S-Log3] may cause an error in the white balance custom setup.
 In this case, perform custom setup with a gamma other than [ITU709(800%)], [S-Log2], or [S-Log3] first, and then reselect [ITU709(800%)], [S-Log2], or [S-Log3] gamma.
- Setting [ITU709(800%)], [S-Log2] or [S-Log3] disables the [Black Level] setting.
- If you set [Slope] to +5 in [Manual Set], [Knee] is set to [Off].
- S-Gamut, S-Gamut3.Cine, and S-Gamut3 are color spaces exclusive to Sony. However, this
 camera's S-Gamut setting does not support the whole S-Gamut color space; it is a setting to achieve
 a color reproduction equivalent to S-Gamut.

[318] List of MENU items | Camera Settings1

Focus Magnifier

You can check the focus by enlarging the image before shooting.

- MENU → ↑ (Camera Settings1) → [Focus Magnifier].
- Press the center of the multi-selector to enlarge the image and select the position you want to enlarge by pressing the multi-selector up/down/left/right.
 - Each time you press the center, the magnification scale will change.
 - You can set the initial magnification by selecting MENU → 1 (Camera Settings1)

 \rightarrow [Time Initial Focus Mag.].

3 Confirm the focus.

- 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.

Press the shutter button fully down to shoot the image.

Useful operation of the [Focus Magnifier]

By using the AF/MF control function, you can adjust the focus for an enlarged image after auto focus is performed.

When the focus mode is [Manual Focus], press the AF/MF button and perform auto focus, then use the [Focus Magnifier] function.

- Set the focus mode switch on the lens to "AF."
- We recommend that you assign the [Focus Magnifier] function to a desired button using [Custom Key(Shoot.)].
- AF/MF control function is not available for SAM lenses other than SAL18135. (as of the day this camera was released)

[319] List of MENU items | Camera Settings1

Focus Magnif. Time

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

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.

[320] List of MENU items | Camera Settings1

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 \rightarrow 1 (Camera Settings1) \rightarrow [Initial Focus Mag.] \rightarrow desired setting.

Menu item details

Full-frame shooting

x1.0:

Displays the image with the same magnification as the shooting screen.

x7.8:

Displays a 7.8-times enlarged image.

APS-C/Super 35mm size shooting

x1.0:

Displays the image with the same magnification as the shooting screen.

x5.1:

Displays a 5.1-times enlarged image.

[321] List of MENU items | Camera Settings1

Peaking Level

Enhances the outline of in-focus ranges using a specific color in Manual Focus or Direct Manual Focus shooting.



Menu item details

High:

Sets the peaking level to high.

Mid:

Sets the peaking level to middle.

Low:

Sets the peaking level to low.

Off:

Does not use the peaking function.

Note

- Since the product recognizes sharp areas as in focus, the effect of peaking differs, depending on the subject and lens.
- The outline of in-focus ranges is not enhanced when the product is connected using an HDMI cable.

[322] List of MENU items | Camera Settings1

Peaking Color

Sets the color used for the peaking function in Manual Focus or Direct Manual Focus shooting.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{1}(\textbf{Camera Settings1}) \rightarrow \textbf{[Peaking Color]} \rightarrow \textbf{desired setting.}$

Menu item details

Red:

Enhances outlines in red.

Yellow:

Enhances outlines in yellow.

White:

Enhances outlines in white.

[323] List of MENU items | Camera Settings1

Anti-flicker Shoot. (still image)

Detects flickering/blinking from artificial light sources such as fluorescent lighting and times the

shooting of images to moments when flickering will have less of an impact.

This function reduces differences in the exposure and color tone caused by flickering between the upper area and the lower area of an image shot with fast shutter speed and during continuous shooting.

Press the shutter button halfway down, and then shoot the image.

• The product detects flickering when the shutter button is pressed halfway down.

Menu item details

Off:

Does not reduce influences caused by flickering.

On:

Reduces influences caused by flickering. When the camera detects flickering while the shutter button is pressed halfway down, **Flicker** (flicker icon) will be displayed.

Hint

- Influences caused by flickering may be reduced and **Flicker** (flicker icon) will not be displayed in the following shooting modes:
 - [Intelligent Auto]
- The color tone of the shot result may vary when you shoot the same scene using a different shutter speed. If that happens, we recommend that you shoot in [Shutter Priority] or [Manual Exposure] mode with a fixed shutter speed.
- You can perform anti-flicker shooting by pressing the shutter button halfway down even when in manual focus mode.

- The shutter release lag may increase slightly. In continuous shooting mode, the shooting speed may slow down or the interval between each shot may become unequal.
- The camera detects flickering when the frequency of the light source is 100 Hz or 120 Hz only.
- The camera cannot detect flickering depending on the light source and shooting conditions, such as a dark background.
- Even if the camera detects flickering, the influences caused by flickering may not be reduced enough depending on the light source or the shooting situation. We recommend that you take test shots beforehand.
- [Anti-flicker Shoot.] is not available when shooting in the following situations:
 - While bulb shooting
 - Movie shooting mode
 - When [Priority Set in AF-S] or [Priority Set in AF-C] is set to [Release]/[Balanced Emphasis] and the shutter button is fully pressed without first being pressed halfway down.

- When shooting an image without pressing the shutter button halfway down in manual focus mode
- The color tone of the shot results may differ depending on the setting of [Anti-flicker Shoot.].

[324] List of MENU items | Camera Settings1

Face Detection

Detects the faces of your subjects and adjusts the focus, exposure, flash settings and performs image processing automatically.



 $MENU \rightarrow 1$ (Camera Settings1) \rightarrow [Face Detection] \rightarrow desired setting.

Menu item details

Off:

Does not use the [Face Detection] function.

On (Regist. Faces):

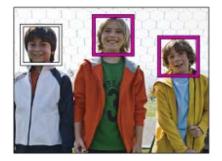
Detects the registered face with higher priority using [Face Registration].

On:

Detects a face without giving higher priority to the registered face.

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. When you press the shutter button halfway down, the frame turns green.
- 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.



- You cannot use the Face Detection function with the following functions:
 - Other zoom functions than the optical zoom
 - [Sweep Panorama]
 - [Picture Effect] is set to [Posterization].

- When using the [Focus Magnifier] function.
- [Record Setting] is set to [120p]/[100p].
- 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.

[325] List of MENU items | Camera Settings1

Face Registration (New Registration)

If you register faces in advance, the product can detect the registered face as a priority when [Face Detection] is set to [On (Regist. Faces)].

- **1** MENU \rightarrow **1** (Camera Settings1) \rightarrow [Face Registration] \rightarrow [New Registration].
- 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.

[326] List of MENU items | Camera Settings1

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.

- Select a face to change the order of priority.
- 3 Select the destination.

[327] List of MENU items | Camera Settings1

Face Registration (Delete)

Deletes a registered face.



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].

[328] List of MENU items | Camera Settings2

Movie/S&Q Motion

You can select the exposure mode for movie shooting or slow-motion/quick-motion shooting. You can change the setting and playback speed for slow-motion/quick-motion shooting with [S&Q Settings].

- 1 Turn the mode dial to [1] (Movie/S&Q Motion).
- **2** MENU \rightarrow **2** (Camera Settings2) \rightarrow [Movie/S&Q Motion] \rightarrow desired setting.



Press the MOVIE (movie) button to start recording.

Press the MOVIE (movie) button again to stop recording.

Menu item details

Program Auto / Stop Program Auto:

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

H Aperture Priority / SaO Δ Aperture Priority:

Allows you to shoot after adjusting the aperture value manually.

Shutter Priority / Stor Shutter Priority:

Allows you to shoot after adjusting the shutter speed manually.

Manual Exposure / SkO Manual Exposure:

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

Note

- When you operate the front multi-controller while recording a movie or a slow-motion/quick-motion movie, set the front multi-controller click switch to "OFF." If you operate the front multi-controller while shooting a movie or a slow-motion/quick-motion movie with the front multi-controller click switch set to "ON," the sound of the front multi-controller will be recorded.
- When the shooting mode is set to (Movie/S&Q Motion), [AF System] is fixed to [Ddc Phase AF Only]. The number of focus points is limited to 61.

[329] List of MENU items | Camera Settings2

File Format (movie)

Selects the movie file format.



 $\textbf{MENU} \rightarrow \textbf{mat}) \text{ (Camera Settings2)} \rightarrow \textbf{[mat]} \text{ File Format]} \rightarrow \textbf{desired setting.}$

Menu item details

XAVC S 4K:

Records 4K movies in the XAVC S format. This format supports a high bit rate.

Audio: LPCM

- One of the following kinds of memory card is needed to record movies with [File Format] set to [XAVC S 4K]:
 - Memory Stick PRO-HG Duo

- Movies cannot be recorded in 100 Mbps or more.
- SDHC / SDXC / microSDHC / microSDXC memory card (SD Speed Class 10, or UHS Speed Class U1 or faster)
 - UHS Speed Class U3 is required to record at 100 Mbps or more.
- [HDMI Info. Display] temporarily switches to [Off] when [File Format] is set to [XAVC S 4K].
- Images will not appear on the monitor of the camera if you record movies while the camera is connected to an HDMI device with [# File Format] set to [XAVC S 4K].

XAVC S HD:

Records HD movies in the XAVC S format. This format supports a high bit rate.

Audio: LPCM

- One of the following kinds of memory card is needed to record movies with [File Format] set to [XAVC S HD]:
 - Memory Stick PRO-HG Duo
 - Movies cannot be recorded in 100 Mbps or more.
 - SDHC / SDXC / microSDHC / microSDXC memory card (SD Speed Class10, or UHS Speed Class U1 or faster)
 - UHS Speed Class U3 is required to record at 100 Mbps or more.

AVCHD:

Records HD movies in the AVCHD format. This file format is suitable for high-definition TV. Audio: Dolby Digital

MP4:

Records MP4 (AVC) movies. This format is suitable for playback on smartphones or tablets, web uploads, email attachments, etc.

Audio: AAC

Hint

 You can save images to a computer or copy them to a disc compatible with your playback device using the PlayMemories Home software.

- 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.
- When [File Format] is set to [MP4], the file size of movies is limited to approx. 4 GB. If the movie file size reaches approx. 4 GB during recording, recording will stop automatically.

Record Setting (movie)

Selects the image size, frame rate, and image quality for movie recording. The higher the bitrate, the higher the image quality.



MENU \rightarrow (Camera Settings2) \rightarrow [Record Setting] \rightarrow desired setting.

Menu item details

When [File Format] is set to [XAVC S 4K]

Records high-definition movies by converting them into the MP4 file format using the MPEG-4 AVC/H.264 codec.

Frame Rate	Bit-rate	
Frame Nate	60 Mbps	100 Mbps
30p/25p	30p 60M/25p 60M	30p 100M/25p 100M
24p	24p 60M*	24p 100M*

^{*} Only when [NTSC/PAL Selector] is set to NTSC

When [File Format] is set to [XAVC S HD]

Records high-definition movies by converting them into the MP4 file format using the MPEG-4 AVC/H.264 codec.

Frame Rate	Bit-rate		
	50 Mbps	60 Mbps	100 Mbps
120p/100p	_	120p 60M/100p 60M	120p 100M/100p 100M
60p/50p	60p 50M/50p 50M	_	_
30p/25p	30p 50M/25p 50M	_	_
24p	24p 50M*	_	_

^{*} Only when [NTSC/PAL Selector] is set to NTSC

When [File Format] is set to [AVCHD]

60i/50i: Movies are recorded at approximately 60 fields/sec (for 1080 60i-compatible devices) or 50 fields/sec (for 1080 50i-compatible devices), in interlaced mode with Dolby Digital audio and

in the AVCHD format.

24p/25p: Movies are recorded at approximately 24 frames/sec (for 1080 60i-compatible devices) or 25 frames/sec (for 1080 50i-compatible devices), in progressive mode with Dolby Digital audio and in the AVCHD format.

60p/50p: Movies are recorded at approximately 60 frames/sec (for 1080 60i-compatible devices) or 50 frames/sec (for 1080 50i-compatible devices), in progressive mode with Dolby Digital audio and in the AVCHD format.

Frame Rate	Bit-rate		
	17 Mbps	24 Mbps	28 Mbps
60i/50i	60i 17M(FH)/50i 17M(FH)	60i 24M(FX)/50i 24M(FX)	_
60p/50p	_	_	60p 28M(PS)/50p 28M(PS)
24p/25p	24p 17M(FH)/25p 17M(FH)	24p 24M(FX)/25p 24M(FX)	_

When [File Format] is set to [MP4]

Movies are recorded in the MPEG-4 format, at approximately 60 frames/sec (for 1080 60i-compatible devices), approximately 50 frames/sec (for 1080 50i-compatible devices), approximately 30 frames/sec (for 1080 60i-compatible devices), or approximately 25 frames/sec (for 1080 50i-compatible devices), in progressive mode with AAC audio and in the MP4 format.

Frame	Bit-rate		
Rate	6 Mbps	16 Mbps	28 Mbps
60p/50p	_	_	1920x1080 60p 28M/1920x1080 50p 28M
30p/25p	1280x720 30p 6M/1280x720 25p 6M	1920x1080 30p 16M/1920x1080 25p 16M	_

- Movies recorded with the [60p 28M(PS)]/[50p 28M(PS)]/[60i 24M(FX)]/[50i 24M(FX)]/[24p 24M(FX)]/[25p 24M(FX)] as the [Record Setting] are converted by PlayMemories Home in order to create an AVCHD recording disc. You cannot create a disc in the original image quality. This conversion can take a long time. If you want to keep the original image quality, store your movies on a Blu-ray Disc.
- To play back 60p/50p/24p/25p movies on a TV, the TV must be compatible with the 60p/50p/24p/25p format. If the TV is not compatible with the 60p/50p/24p/25p format, 60p/50p/24p/25p movies will be output as 60i/50i movies.

- [120p]/[100p] cannot be selected for the following settings.
 - [Intelligent Auto]

[331] List of MENU items | Camera Settings2

S&Q Settings

You can record a moment that cannot be captured by the naked eye (slow-motion recording), or record a long-term phenomenon into a compressed movie (quick-motion recording). For example, you can record an intense sports scene, the moment when a bird starts to fly, a blooming flower, and a changing view of clouds or a starry sky. Sound will not be recorded.

- 1 Set the mode dial to | (Movie/S&Q Motion).
- 2 Select MENU→ 2 (Camera Settings2)→[Movie/S&Q Motion]→ and select the desired setting of slow-motion/quick-motion (S&Q) (S&Q Program Auto, S&Q Aperture Priority, S&Q Shutter Priority, or S&Q Manual Exposure).
- 3 Select MENU→ 2 (Camera Settings2)→[S&Q S&Q Settings] and select the desired settings for [S&Q Record Setting] and [S&Q Frame Rate].
- Press the MOVIE (movie) button to start recording.
 - Press the MOVIE button again to stop recording.

Menu item details

S&Q Record Setting:

Selects the frame rate of the movie.

S&O Frame Rate:

Selects the shooting frame rate.

Playback speed

The playback speed will vary as below depending on the assigned [S&O Record Setting] and [S&O Frame Rate].

When [NTSC/PAL Selector] is set to NTSC

S&Q Frame Rate	S&Q Record Setting		
Sau Frame Rate	24p	30p	60p
120fps	5 times slower	4 times slower	-
60fps	2.5 times slower	2 times slower	Normal playback speed
30fps	1.25 times slower	Normal playback speed	2 times quick
15fps	1.6 times quick	2 times quick	4 times quick
8fps	3 times quick	3.75 times quick	7.5 times quick
4fps	6 times quick	7.5 times quick	15 times quick
2fps	12 times quick	15 times quick	30 times quick
1fps	24 times quick	30 times quick	60 times quick

When [NTSC/PAL Selector] is set to PAL

Coo Frame Pate	S&Q Record Setting	
S&Q Frame Rate	25p	50p
100fps	4 times slower	-
50fps	2 times slower	Normal playback speed
25fps	Normal playback speed	2 times quick
12fps	2.08 times quick	4.16 times quick
6fps	4.16 times quick	8.3 times quick
3fps	8.3 times quick	16.6 times quick
2fps	12.5 times quick	25 times quick
1fps	25 times quick	50 times quick

• When [S&O Frame Rate] is set to [120fps]/[100fps], you cannot set [S&O Record Setting] to [60p]/[50p].

- In slow-motion recording, the shutter speed becomes faster and you may not be able to obtain the
 proper exposure. If this happens, decrease the aperture value or adjust the ISO sensitivity to a
 higher value.
- For an estimation of recordable time, refer to "Recordable movie times."

- The bit-rate of a recorded movie varies depending on the settings for [S&Q Frame Rate] and [S&Q Record Setting].
- The movie will be recorded in XAVC S HD format.
- During slow-motion/quick-motion recording, the following functions are not available.
 - [Dual Video REC]
 - [TC Run] under [TC/UB Settings]
 - [TC Output] under [HDMI Settings]
 - [4K Output Sel.]

[332] List of MENU items | Camera Settings2

Dual Video REC

Allows you to simultaneously record an XAVC S movie and an MP4 movie, or an AVCHD movie and an MP4 movie. You can simultaneously record a movie in different movie formats onto a memory card. (To set the recording mode for 2 memory cards, such as simultaneous recording or sort recording, use [Recording Mode].)



 $MENU \rightarrow 2$ (Camera Settings2) \rightarrow [Dual Video REC] \rightarrow desired setting.

Menu item details

On:

An XAVC S movie and an MP4 movie, or an AVCHD movie and an MP4 movie, are recorded simultaneously.

Off:

The [Dual Video REC] function is not used.

- When [Recording Mode] is set to [Simult. (☐)] or [Simult. (☐)], [Dual Video REC] will temporarily be set to [Off].
- When [Record Setting] for an XAVC S movie is set to [60p]/[50p] or [120p]/[100p], [Record Setting] for an AVCHD movie is set to [60p]/[50p], or [File Format] is set to [MP4], [Dual Video REC] is set to [Off].
- If you select [Date View] in [View Mode] when playing back movies, XAVC S movies and MP4 movies, or AVCHD movies and MP4 movies are displayed side-by-side.

AF Track Sens (movie)

You can set the AF sensitivity in movie mode.



Menu item details

Responsive:

Sets the AF sensitivity to high. This mode is useful when recording movies in which the subject is moving quickly.

Standard:

Sets the AF sensitivity to normal.

Locked on:

Sets the AF sensitivity to low. You can shoot with a stable focus by ignoring the influence of anything in front of the subject.

[334] List of MENU items | Camera Settings2

Auto Slow Shut. (movie)

Sets whether or not to adjust the shutter speed automatically when recording movies if the subject is dark.



MENU $\rightarrow \bigcirc$ (Camera Settings2) \rightarrow [\bigcirc Auto Slow Shut.] \rightarrow 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 Shut.]. The recorded movie will be darker than when [On] is selected, but you can record movies with smoother motion and less object blur.

- [Auto Slow Shut.] does not function in the following situations:
 - During slow-motion/quick-motion shooting
 - IIIs (Shutter Priority)

- − **□** (Manual Exposure)
- When [ISO] is set to other than [ISO AUTO]

[335] List of MENU items | Camera Settings2

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 \rightarrow (Camera Settings2) \rightarrow [Audio Recording] \rightarrow desired setting.

Menu item details

On:

Records sound (stereo).

Off:

Does not record sound.

[336] List of MENU items | Camera Settings2

Audio Rec Level

You can adjust the audio recording level while checking the level meter.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{ } \ \, \ \, \textbf{ } \ \, \ \, \textbf{ } \$

Select the desired level by pressing the multi-selector right/left.

Menu item details

+:

Turns up the audio recording level.

-:

Turns down the audio recording level.

Reset:

Resets the audio recording level to the default setting.

Hint

• When you record audio movies with loud volumes, set [Audio Rec Level] to a lower sound level. Doing so enables you to record more realistic audio. When you record audio movies with lower volumes, set [Audio Rec Level] to a greater sound level to make the sound easier to hear.

Note

- Regardless of the [Audio Rec Level] settings, the limiter always operates.
- [Audio Rec Level] is available only when the shooting mode is set to movie mode.
- [Audio Rec Level] is unavailable during slow-motion/quick-motion shooting.
- The [Audio Rec Level] settings are applied for both the internal microphone and the (microphone) terminal input.

[337] List of MENU items | Camera Settings2

Audio Level Display

Sets whether to display the audio level on the screen.



 $\textbf{MENU} \rightarrow \textbf{ } 2 \text{ (Camera Settings2)} \rightarrow \textbf{ [Audio Level Display]} \rightarrow \textbf{desired setting.}$

Menu item details

On:

Displays the audio level.

Off:

Does not display the audio level.

- The audio level is not displayed in the following situations:
 - When [Audio Recording] is set to [Off].
 - When DISP (Display Setting) is set to [No Disp. Info.].
 - During slow-motion/quick-motion shooting
- The audio level is also displayed while shooting stand-by in movie recording mode.

[338] List of MENU items | Camera Settings2

Audio Out Timing

You can set echo cancellation during audio monitoring and prevent undesirable deviations between video and audio during HDMI output.



 $\textbf{MENU} \rightarrow \textbf{max} \ \textbf{2} \ (\textbf{Camera Settings2}) \rightarrow \textbf{[Audio Out Timing]} \rightarrow \textbf{desired setting.}$

Menu item details

Live:

Outputs audio without delay. Select this setting when audio deviation is a problem during audio monitoring.

Lip Sync:

Outputs audio and video in sync. Select this setting to prevent undesirable deviations between video and audio.

[339] List of MENU items | Camera Settings2

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.



 $\textbf{MENU} \rightarrow \textbf{ 2} \text{ (Camera Settings2)} \rightarrow \textbf{[Wind Noise Reduct.]} \rightarrow \textbf{desired setting.}$

Menu item details

On:

Reduces wind noise.

Off:

Does not reduce wind noise.

- Setting this item to [On] where wind is not blowing sufficiently hard may cause normal sound to be recorded with too low volume.
- When an external microphone (sold separately) is used, [On] does not function.

[340] List of MENU items | Camera Settings2

Marker Display (movie)

Sets whether or not to display markers set using [Marker Settings] on the monitor or the viewfinder while shooting movies.



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/S&Q Motion) 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.)

[341] List of MENU items | Camera Settings2

Marker Settings (movie)

Sets the markers to be displayed while shooting movies.



 $MENU \rightarrow 2 (Camera Settings2) \rightarrow [Marker Settings] \rightarrow desired setting.$

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.

[342] List of MENU items | Camera Settings2

Video Light Mode

Sets the illumination setting for the HVL-LBPC LED light (sold separately).



MENU \rightarrow (Camera Settings2) \rightarrow [Video Light Mode] \rightarrow desired setting.

Menu item details

Power Link:

The video light turns on/off in sync with the ON/OFF operation of this camera.

REC Link:

The video light turns on/off in sync with movie recording start/stop.

REC Link&STBY:

The video light turns on when movie recording starts and dims when not recording (STBY).

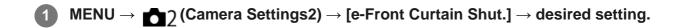
Auto:

The video light automatically turns on when it is dark.

[343] List of MENU items | Camera Settings2

e-Front Curtain Shut.

The electronic front curtain shutter function shortens the time lag between shutter releases.



Menu item details

On:

Uses the electronic front curtain shutter function.

Off:

Does not use the electronic front curtain shutter function.

Note

- When you shoot at high shutter speeds with a large diameter lens attached, the ghosting of a blurred area may occur, depending on the subject or shooting conditions. In such cases, set this function to [Off].
- When a lens made by another manufacturer (including a Minolta/Konica-Minolta lens) is used, set this function to [Off]. If you set this function to [On], the correct exposure will not be set or the image brightness will be uneven.
- When you shoot at high shutter speeds, the image brightness may become uneven depending on the shooting environment. In such cases, set [e-Front Curtain Shut.] to [Off].

[344] List of MENU items | Camera Settings2

Release w/o Lens

Sets whether or not the shutter can be released when no lens is attached.



 $\textbf{MENU} \rightarrow \textbf{m2} \ (\textbf{Camera Settings2}) \rightarrow \textbf{[Release w/o Lens]} \rightarrow \textbf{desired setting.}$

Menu item details

Enable:

Releases the shutter when no lens is attached. Select [Enable] when attaching the product to an astronomical telescope, etc.

Disable:

Does not release the shutter when a lens is not attached.

Note

Correct metering cannot be achieved when you use lenses that do not provide a lens contact, such
as the lens of an astronomical telescope. In such cases, adjust the exposure manually by checking it
on the recorded image.

[345] List of MENU items | Camera Settings2

Release w/o Card

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



MENU \rightarrow (Camera Settings2) \rightarrow [Release w/o Card] \rightarrow 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.

[346] List of MENU items | Camera Settings2

SteadyShot

Sets whether or not to use the SteadyShot function.



Menu item details

On:

Uses [SteadyShot].

Off:

Does not use [SteadyShot].

We recommend that you set [Off] when using a tripod.

I

SteadyShot Settings

You can shoot with an appropriate SteadyShot setting for the attached lens.

- $\textbf{[SteadyShot Settings]} \rightarrow \textbf{[SteadyShot Adjust.]} \rightarrow \textbf{desired setting.}$

Menu item details

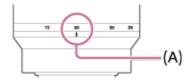
Auto:

Performs the SteadyShot function automatically according to the information obtained from the attached lens.

Manual:

Performs the SteadyShot function according to the focal-length set using [SteadyS. Focal Len.]. (8mm-1000mm)

• Check the focal-length index (A) and set the focal-length.



Note

- The SteadyShot function may not work optimally when the power has just been turned on, right after you point the camera towards a subject, or when the shutter button has been pressed all the way down without stopping halfway.
- When using a tripod, make sure to turn off the SteadyShot function because this can cause any malfunction when shooting.
- [SteadyShot Settings] will be unavailable when MENU→ 2 (Camera Settings2)→[SteadyShot] is set to [Off].
- When the camera cannot obtain focal length information from the lens, the SteadyShot function does not work correctly. Set [SteadyShot Adjust.] to [Manual] and set [SteadyS. Focal Len.] to match the lens you are using. The current set value of the SteadyShot focal length will display to the side of ((♣)).

When you use a zoom function other than the optical zoom, you can exceed the zoom range of the optical zoom.

Clear Image Zoom and Digital Zoom cannot be used with the Smart teleconverter at the same time. To use a zoom function other than the optical zoom, do not assign the [7] (Smart Telecon.) function to any custom keys.

- MENU → 12 (Camera Settings2) → [Custom Key(Shoot.)] → assign [Zoom] function to the [Tag Button (Smart Tele. Button)].
- MENU → 2 (Camera Settings2) → [Zoom Setting] → [On:ClearImage Zoom] or [On:Digital Zoom].
- Press the [(Smart Telecon.) button, then select the desired magnification scale by pressing the multi-selector left/right.

Press the center of the multi-selector to exit.

You can also set this function by selecting MENU → 2 (Camera Settings2) → [Zoom].

[349] List of MENU items | Camera Settings2

Zoom Setting

You can select the zoom setting of the product.

1 MENU \rightarrow **1** (Camera Settings2) \rightarrow [Zoom Setting] \rightarrow desired setting.

Menu item details

Optical zoom only:

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.

[350] List of MENU items | Camera Settings2

DISP Button (Monitor/Finder)

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



 $\textbf{MENU} \to \ \ \, \textbf{DISP Button]} \to \ \ \, \textbf{[Monitor] or [Finder]} \to \ \ \, \textbf{desired setting} \to \ \ \, \textbf{[Enter]}.$

The items marked with \checkmark 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.:

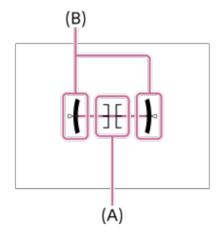
Does not show recording information.

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 both directions, the indicator turns to green.



For viewfinder*:

Displays information suited for shooting with the viewfinder.

* This screen mode is 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.

[351] List of MENU items | Camera Settings2

FINDER/MONITOR

Sets the method for switching the display between Electronic Viewfinder and the screen.



Menu item details

Auto:

When you look into the Electronic Viewfinder, the eye sensor reacts and the display is switched to the Electronic Viewfinder automatically.

Manual:

The product does not switch between the monitor display and the Electronic Viewfinder display automatically. You can switch the display by pressing the FINDER/MONITOR button.

Hint

 If you want to switch the display mode temporarily when [FINDER/MONITOR] is set to [Auto], press the FINDER/MONITOR button.

[352] List of MENU items | Camera Settings2

Zebra

The zebra pattern will appear over part of an image if the brightness level of that part meets the IRE level that you set. Use this zebra pattern as a guide to adjust the brightness.



Menu item details

Off:

Does not display the zebra pattern.

70/75/80/85/90/95/100/100+/Custom1/Custom2:

Adjusts the brightness level.

Hint

- You can register values to check the correct exposure or overexposure as well as the brightness level for [Zebra]. 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 during HDMI connection.

[353] List of MENU items | Camera Settings2

Grid Line

Sets whether the grid line is displayed or not. The grid line will help you to adjust the composition of images.



MENU \rightarrow 2 (Camera Settings2) \rightarrow [Grid Line] \rightarrow 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 suitable to determine the quality of the composition when shooting landscape, close-up, or duplicated images.

Diag. + Square Grid:

Place a subject on the diagonal line to express an uplifting and powerful feeling.

Off:

Does not display the grid line.

[354] List of MENU items | Camera Settings2

Exposure Set. Guide

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



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

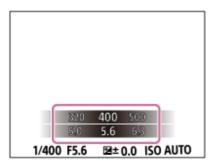
Menu item details

Off:

Does not display the guide.

On:

Displays the guide.



[355] List of MENU items | Camera Settings2

Live View Display

Sets whether or not to show images altered with effects of the exposure compensation, white balance, [Creative Style], or [Picture Effect] on the screen.



 $\textbf{MENU} \rightarrow \textbf{ } 2 \text{ (Camera Settings2)} \rightarrow \textbf{[Live View Display]} \rightarrow \textbf{desired setting.}$

Menu item details

Setting Effect ON:

Displays Live View in conditions close to what your picture will look like as a result of applying all your settings. This setting is useful when you want to shoot pictures while checking the results of the shot on the Live View screen.

Setting Effect OFF:

Displays Live View without the effects of exposure compensation, white balance, [Creative Style], or [Picture Effect]. When this setting is used, you can easily check the image composition.

Live View is always displayed with the appropriate brightness even in [Manual Exposure] mode.

When [Setting Effect OFF] is selected, the VIEW icon is displayed on the Live View screen.

Note

- [Live View Display] cannot be set to [Setting Effect OFF] in the following shooting modes:
 - [Intelligent Auto]
 - [Sweep Panorama]
 - [Movie/S&Q Motion]
- When [Live View Display] is set to [Setting Effect OFF], the brightness of the shot image will not be the same as that of the displayed Live View.

Hint

When you use a third-party flash, such as a studio flash, Live View Display may be dark for some shutter speed settings. When [Live View Display] is set to [Setting Effect OFF], Live View Display will be displayed brightly, so that you can easily check the composition.

[356] List of MENU items | Camera Settings2

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.



 $\textbf{MENU} \rightarrow \textbf{mat} \ \, \textbf{(Camera Settings2)} \rightarrow \textbf{[Auto Review]} \rightarrow \textbf{desired setting.}$

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.

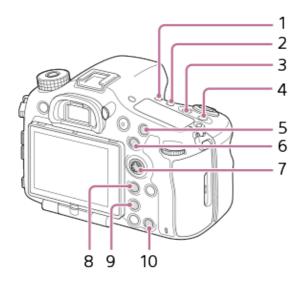
[357] List of MENU items | Camera Settings2

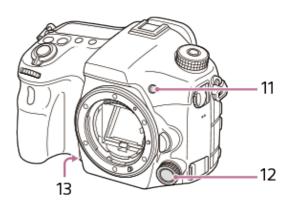
Custom Key(Shoot.)/Custom Key(PB)

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(Shoot.)], you can easily recall [Eye AF] simply by pressing the center of the multi-selector while shooting.

- Select the key to which you want to assign the function on the selection screen.
 - The keys that can be assigned functions are different for [Custom Key(Shoot.)] and [Custom Key(PB)].
 - You can assign the desired functions to the following keys.





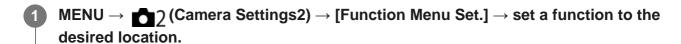
- 1. Drive Mode Button
- 2. WB Button
- 3. Exp. Comp. Button
- 4. ISO Button

- 5. AF/MF Button
- 6. AEL Button
- 7. Center Button
- 8. Fn/ 🔁 Button
- 9. Total Button (Smart Tele. Button)
- 10. Custom Button 1
- 11. Custom Button 2
- 12. Front Multi Ctrl./ Front Multi Ctrl.
- 13. Preview Button
- You can also assign a shooting function to the focus hold button on the lens. However, some lenses do not have a focus hold button.
- Select the function to be assigned.
 - The functions that can be assigned differ depending on the keys.

[358] List of MENU items | Camera Settings2

Function Menu Set.

You can assign the functions to be called up when you press the Fn (Function) button.



The functions that can be assigned are displayed on the setup item selection screen.

[359] List of MENU items | Camera Settings2

Dial Setup

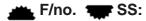
You can switch the functions of the front/rear dial.

1 MENU \rightarrow **2** (Camera Settings2) \rightarrow [Dial Setup] \rightarrow desired setting.

Menu item details



The front dial is used to change the shutter speed and the rear dial to change the aperture value.



The front dial is used to change the aperture value and the rear dial to change the shutter speed.

Note

• The [Dial Setup] function is enabled when the shooting mode is set to "M."

[360] List of MENU items | Camera Settings2

Dial Ev Comp

You can compensate the exposure using the front or rear dial. You can adjust the exposure in a range of -5.0 EV to +5.0 EV.

MENU \rightarrow (Camera Settings2) \rightarrow [Dial Ev Comp] \rightarrow desired setting.



Menu item details

Off:

Does not enable exposure compensation with the front or rear dial.



Enables exposure compensation with the front or rear dial.

Note

• When the exposure compensation function is assigned to the front or rear dial, any function that had been assigned to that dial previously is re-assigned to another dial.

[361] List of MENU items | Camera Settings2

MOVIE Button

Sets whether or not to activate the MOVIE (Movie) button.

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/S&Q Motion] mode.

[362] List of MENU items | Camera Settings2

Dial Lock

You can set whether the dials will be locked by pressing and holding the Fn (Function) button.



Menu item details

Lock:

Locks the front and rear dials.

Unlock:

The front or rear dials are not locked even if you press and hold the Fn (Function) button.

Hint

You can release the lock by holding the Fn (Function) button down again.

[363] List of MENU items | Camera Settings2

Audio signals

Selects whether the product produces a sound or not.

Menu item details

On:

Sounds are produced for example when the focus is achieved by pressing the shutter button halfway down.

Off:

Sounds are not produced.

Note

• If [Focus Mode] is set to [Continuous AF], the camera will not beep when it focuses on a subject.

[364] List of MENU items | Wireless

Send to Smartphone

You can transfer still images/movies to a smartphone and view them. The application PlayMemories Mobile must be installed on your smartphone.

- - If you press the ▲ (Send to Smartphone) button in playback mode, the setting screen for [Send to Smartphone] will appear.
- 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 Images on 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 multi-selector, then press MENU \rightarrow [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 only transfer images that are saved on the memory card in the memory card slot being played back. To change which memory card slot is being played back, select MENU → [►] (Playback) → [Select PB Media] → the desired slot.
- 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].
- Some images may not be displayed on the smartphone depending on the recording format.
- RAW images are converted to JPEG format when they are sent.
- You cannot send XAVC S or AVCHD format movies.
- When [Airplane Mode] is set to [On], you cannot connect this product and the smartphone. Set [Airplane Mode] to [Off].

[365] List of MENU items | Wireless

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.

Note

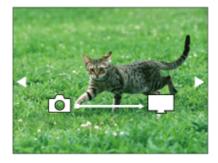
- Depending on the application settings of your computer, the product will turn off after saving the images to your computer.
- You can transfer images from the product to only one computer at a time.
- If you want to transfer images to another computer, connect the product and the computer via a USB connection and follow the instructions in PlayMemories Home.
- When you save images to the Mac computer using Wi-Fi function, use "Wireless Auto Import."

[366] List of MENU items | Wireless

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.

- When you want to play back images using slideshow, press the center of the multiselector.



- To display the next/previous image manually, press the multi-selector right/left.
- To change the device to be connected, press the multi-selector down, then select [Device list].

Slideshow settings

You can change the slideshow settings by pressing the multi-selector down.

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).

[367] List of MENU items | Wireless

Ctrl w/ Smartphone

By connecting the camera to a smartphone using Wi-Fi, you can control the camera and shoot images using the smartphone, and you can transfer images shot with the camera to the smartphone.



 $\textbf{MENU} \rightarrow \P \quad \textbf{(Wireless)} \rightarrow \textbf{[Ctrl w/ Smartphone]} \rightarrow \textbf{desired setting.}$

Ctrl w/ Smartphone:

Sets whether to connect the camera and a smartphone using Wi-Fi. ([On]/[Off])

☐ Connection Info.:

Displays the QR code or SSID used to connect the camera to a smartphone.

[368] List of MENU items | Wireless

Airplane Mode

When you board an airplane, etc., you can temporarily disable all the wireless-related functions including Wi-Fi.



If you set [Airplane Mode] to [On], an airplane mark will be displayed on the screen.

[369] List of MENU items | Wireless

Wi-Fi Settings: WPS Push

If your access point has the Wi-Fi Protected Setup (WPS) button, you can register the access point to this product easily by pushing the Wi-Fi Protected Setup (WPS) button.



 $\textbf{MENU} \rightarrow ~~ \textbf{\^{M}} ~~ (Wireless) \rightarrow [Wi\text{-Fi Settings}] \rightarrow [WPS ~Push].$



Press the WPS button on the access point you want to register.

Note

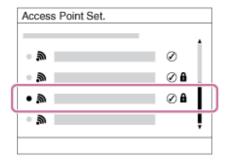
- [WPS Push] works only if the security setting of your access point is set to WPA or WPA2 and your access point supports the Wi-Fi Protected Setup (WPS) button method. If the security setting is set to WEP or your access point does not support the Wi-Fi Protected Setup (WPS) button method, perform [Access 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 enabled depending on the surrounding conditions, such as the type of wall
 material or if there is an obstruction or poor wireless signal between the product and access point. If

[370] List of MENU items | Wireless

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.

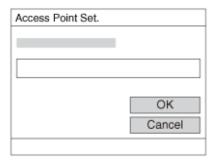
- 2 Select the access point you want to register.



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.
- Input the password, and select [OK].



Access points without the mark do not require a password.



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:

When you set [IP Address Setting] to [Manual], enter the IP address to match your network environment.

Note

To give the registered access point priority, set [Priority Connection] to [On].

[371] List of MENU items | Wireless

Wi-Fi Settings: Disp MAC Address

Displays the MAC address of this product.



 $MENU \rightarrow$ (Wireless) \rightarrow [Wi-Fi Settings] \rightarrow [Disp MAC Address].

This product shares the connection information for [Send to Smartphone] and [Connection Info.] with a device that has permission to connect. If you want to change the device that is permitted to connect, reset the connection information.



 $MENU \rightarrow \P \text{ (Wireless)} \rightarrow \text{[Wi-Fi Settings]} \rightarrow \text{[SSID/PW Reset]} \rightarrow \text{[OK]}.$

Note

 If you connect this product to the smartphone after resetting the connection information, you must register the smartphone again.

[373] List of MENU items | Wireless

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 interlocking function.

If you want to pair the camera and smartphone in order to use the location information interlocking function, refer to "Loc. Info. Link Set.."



 $\textbf{MENU} \rightarrow \P \textbf{MENU} \rightarrow \textbf{[Bluetooth Settings]} \rightarrow \textbf{desired setting.}$

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.

[374] List of MENU items | Wireless

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

advance" above.

screen of PlayMemories Mobile.

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

of the samera.
 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 \rightarrow (Wireless) \rightarrow [Bluetooth Settings] \rightarrow [Bluetooth Function] \rightarrow [On].
3. On the camera, select MENU \rightarrow (Wireless) \rightarrow [Bluetooth Settings] \rightarrow [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

5. : Activate [Location Information Linkage] on the [Location Information Linkage] setting

- **6.** 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.
- 8. On the camera, select MENU \rightarrow (Wireless) \rightarrow [\square Loc. Info. Link Set.] \rightarrow [Location Info. Link] \rightarrow [On].
 - <u>A</u> (obtaining location information icon) will be displayed on the monitor of the camera. Location information obtained by your smartphone using GPS, etc., will be recorded when shooting images.

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.
- 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
- * As of October 2016. For the latest information, refer to the support site.
- * For the Bluetooth version, refer to the website for your smartphone.

[375] List of MENU items | Wireless

Edit Device Name

You can change the device name for the Wi-Fi Direct or Bluetooth connection.

- **1** MENU \rightarrow **3** (Wireless) \rightarrow [Edit Device Name].
- Select the input box, then input the device name→[OK].

Reset Network Set.

Resets all the network settings to default settings.



1 MENU \rightarrow \bigcirc (Wireless) \rightarrow [Reset Network Set.] \rightarrow [OK].

[377] List of MENU items | Playback

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.



Menu item details

Multiple Img.:

Deletes the selected images.

- (1) Select the images to be deleted, then press the center of the multi-selector. The \checkmark 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 \rightarrow [OK].

All in this Folder:

Deletes all images in the selected folder.

All with this date:

Deletes all images in the selected date range.

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] button \rightarrow select the bar on the left using the multi-selector \rightarrow select the desired folder or date by pressing the multi-selector up/down.

Note

The protected images cannot be deleted.

• The menu items that can be selected differ depending on the [View Mode] setting.

[378] List of MENU items | Playback

Switching between still images and movies (View Mode)

Sets the View Mode (image display method).



 $MENU \rightarrow [Playback) \rightarrow [View Mode] \rightarrow desired setting.$

Menu item details

Date View:

Displays the images by date.

Folder View(Still):

Displays only still images.

P_{MP4} Folder View(MP4):

Displays only MP4-format movies.

AVCHD View:

Displays only AVCHD-format movies.

EXAMS XAVC S HD View:

Displays only XAVC S HD-format movies.

Exavcs XAVC S 4K View:

Displays only XAVC S 4K-format movies.

[379] List of MENU items | Playback

Playing back images on the image index screen (Image Index)

You can display multiple images at the same time in playback mode.



Press the [17] (Image Index) button while the image is being played back.



Select the image by pressing the multi-selector up/down/right/left.

To change the number of images to be displayed

Menu item details

9 Images/25 Images

To return to single-image playback

Select the desired image and press the center of the multi-selector.

To display a desired image quickly

Select the bar on the left of the image index screen using the multi-selector, then press the multi-selector up/down. 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.

[380] List of MENU items | Playback

Rotating recorded images automatically (Display Rotation)

Selects the orientation when playing back recorded images.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{[Playback)} \rightarrow \ \ \, \textbf{[Display Rotation]} \rightarrow \ \ \, \textbf{desired setting.}$

Menu item details

Auto:

When you rotate the camera, the displayed image rotates automatically by detecting the orientation of the camera.

Manual:

A portrait image is displayed as a vertical image. If you have set the image orientation using the [Rotate] function, the image will be displayed accordingly.

Off:

Always displays in landscape orientation.

[381] List of MENU items | Playback

Selecting which memory card to play back (Select PB Media)

Selects the memory card slot to be played back.



 $MENU \rightarrow$ [Select PB Media] \rightarrow desired slot.

Menu item details

Slot 1:

Selects the slot 1.

Slot 2:

Selects the slot 2.

Note

- No image is played back when no memory card is inserted in the selected slot. Select a slot into which a memory card has been inserted.
- When you select [Date View] in [View Mode], the camera only plays back images from a memory card selected using [Select PB Media].

[382] List of MENU items | Playback

Copying images from one memory card to another (Copy)

You can copy images from a memory card in a slot that is selected using [Select PB Media] to a memory card in another slot.



All of the contents with a date or in a folder currently being played back will be copied to a memory card in another slot.

Hint

Note

- It may take a long time when many images are to be copied. Use a sufficiently charged battery pack.
- XAVC S movies can only be copied to a memory card that supports XAVC S movies. A message will be displayed on the monitor of the camera when images cannot be copied.

[383] List of MENU items | Playback

Playing back images using slideshow (Slide Show)

Automatically plays back images continuously.

- **1** MENU \rightarrow [Slide Show] \rightarrow 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 guit the slideshow. You cannot pause the slideshow.

Hint

- During playback, you can display the next/previous image by pressing the multi-selector right/left.
- You can activate a slideshow only when [View Mode] is set to [Date View] or [Folder View(Still)].

[384] List of MENU items | Playback

Rotating an image (Rotate)

Rotates a recorded still image counter-clockwise.

Press the center of the multi-selector.

- $\textbf{ Display the image to be rotated, then select MENU} \rightarrow \textbf{ [Rotate]}.$
 - 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.

[385] List of MENU items | Playback

Enlarging an image being played back (Playback zoom)

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 then press the ⊕ button.
 - Press the button to adjust the zoom scale.
 - You can also adjust the zoom scale by turning the rear dial. By rotating the front dial, you can switch to the previous or next image while keeping the same 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.
- Select the portion you want to enlarge by pressing the multi-selector up/down/right/left.

Press the center of the multi-selector to exit the playback zoom.

Hint

- You can also enlarge an image being played back using MENU.
- ullet You can change the initial magnification and initial position of enlarged images by selecting MENU ulletightharpoonup (Playback) ightharpoonup [ightharpoonup Enlarge Initial Pos.].

Note

You cannot enlarge movies.

[386] List of MENU items | Playback

Enlarge Init. Mag.

Sets the initial magnification scale when playing back enlarged images.



 $MENU \rightarrow \blacktriangleright$ (Playback) \rightarrow [\bigoplus Enlarge Init. Mag.] \rightarrow 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.

[387] List of MENU items | Playback

Enlarge Initial Pos.

Sets the initial position when enlarging an image in playback.

 $MENU \rightarrow \blacktriangleright$ (Playback) \rightarrow [\bigoplus Enlarge Initial Pos.] \rightarrow 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.

[388] List of MENU items | Playback

Protecting images (Protect)

Protects recorded images against accidental erasure. The mark is displayed on protected images.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{[Protect]} \rightarrow \textbf{desired setting.}$

Menu item details

Multiple Img.:

Applies or cancels the protection of the selected multiple images.

- (1) Select the image to be protected, then press the center of the multi-selector. 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 \rightarrow [OK].

All in this Folder:

Protects all images in the selected folder.

All with this date:

Protects all images in the selected date range.

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 in the selected date range.

Note

• The menu items that can be selected differ depending on the [View Mode] setting.

Specify Printing (Specify Printing)

You can specify in advance on the memory card which still images you want to print out later. The **ppof** (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.



Menu item details

Multiple Img.:

Selects images to order printing.

- (1) Select an image and press the center of the multi-selector. The \checkmark mark is displayed in the check box. To cancel the selection, press the center again and delete the \checkmark mark.
- (2) Repeat step (1) to print other images. To select several images in the date range or in the folder, select the check box of the date or the folder.
- (3) MENU \rightarrow [OK].

Cancel All:

Clears all DPOF marks.

Date Imprint:

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 images to be printed cannot be specified.
- Some printers do not support the date print function.

[390] List of MENU items | Playback

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 \rightarrow **E** (Playback) \rightarrow select [Photo Capture].
- 3 Play back the movie and pause it.
- 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.

[391] List of MENU items | Setup

Monitor Brightness

Adjust the brightness of the screen.

Menu item details

Auto:

Adjusts the brightness automatically.

Manual:

Adjusts the brightness within the range of -2 to +2.

Sunny Weather:

Sets the brightness appropriately for shooting outdoors.

Note

- The [Sunny Weather] setting is too bright for shooting indoors. Set [Monitor Brightness] to [Auto] or [Manual] for indoor shooting.
- Do not cover the light sensor with your hand, etc., when [Monitor Brightness] is set to [Auto].

- 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].
 - When [SkQ Frame Rate] is set to [120fps]/[100fps] during slow-motion/quick-motion shooting.

[392] List of MENU items | Setup

Viewfinder Bright.

When using an electronic viewfinder, this product adjusts the brightness of the electronic viewfinder according to the surrounding environment.



 $MENU \rightarrow$ (Setup) \rightarrow [Viewfinder Bright.] \rightarrow desired setting.

Menu item details

Auto:

Adjusts the brightness automatically.

Manual:

Selects the brightness of the electronic viewfinder from the range -2 to +2.

Note

- The electronic 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].
 - ─ When [Sx0 Frame Rate] is set to [120fps]/[100fps] during slow-motion/quick-motion shooting.

[393] List of MENU items | Setup

Finder Color Temp.

Adjusts the color temperature of the electronic viewfinder.

1

 $\textbf{MENU} \rightarrow \textbf{ £} \textbf{ (Setup)} \rightarrow \textbf{[Finder Color Temp.]} \rightarrow \textbf{desired setting.}$

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.

[394] List of MENU items | Setup

Gamma Disp. Assist

Movies with S-Log gamma are assumed to be processed after shooting in order to make use of the wide dynamic range. They are therefore displayed in low contrast during shooting and may be difficult to monitor, using [Gamma Disp. Assist], contrast equivalent to that of normal gamma can be reproduced. In addition, [Gamma Disp. Assist] can also be applied when playing back movies on the camera's monitor/viewfinder.

- Select the desired setting by pressing the multi-selector up/down.

Menu item details

Assist 7 Off:

Does not apply [Gamma Disp. Assist].

Assist Auto:

Displays movies with an $[S-Log2\rightarrow709(800\%)]$ effect when the gamma set in [Picture Profile] is [S-Log2], and with an $[S-Log3\rightarrow709(800\%)]$ effect when the gamma is set to [S-Log3].

Assist 7 S-Log2→709(800%):

Displays movies with an S-Log2 gamma reproducing contrast equivalent to ITU709 (800%).

Assist 7 S-Log3 \rightarrow 709(800%):

Displays movies with an S-Log3 gamma reproducing contrast equivalent to ITU709 (800%).

Note

- When [Gamma Disp. Assist] is set to [Auto] during playback, the picture is displayed based on the current gamma setting in [Picture Profile] instead of auto-detecting the gamma value of the movie.
- [Gamma Disp. Assist] is not applied to movies when displayed on a TV or monitor connected to the camera

[395] List of MENU items | Setup

Volume Settings

Sets the sound volume for movie playback.

Adjusting the volume during playback

Press the multi-selector down while playing back movies to display the operation panel, then adjust the volume. You can adjust the volume while listening to the actual sound.

[396] List of MENU items | Setup

Upload Settings (Eye-Fi)

Sets whether to use the upload function when using an Eye-Fi card (commercially available). This item appears when an Eye-Fi card is inserted into the product's memory card slot 1.

- 2 Set your Wi-Fi network or destination on the Eye-Fi card.

For details, refer to the manual supplied with the Eye-Fi card.

Insert the Eye-Fi card you have set up into the product, and shoot still images.

Images are transferred to your computer, etc., automatically via the Wi-Fi network.

Menu item details

On:

Enables the upload function.

Off:

Disables the upload function.

Communication status screen display

Standby. No images are to be sent.

: Upload standby

? (Connecting **?** : Uploading **?** □: Error

Note

- Eye-Fi cards are only sold in certain countries/regions.
- For more information on Eye-Fi cards, please contact the manufacturer or vendor directly.
- Eye-Fi cards can be used only in the countries/regions where they were purchased. Use Eye-Fi
 cards in accordance with the law of the countries/regions where you purchased the card.
- When using the upload function, insert an Eye-Fi card into the product's memory card slot 1. You
 cannot use the upload function when the Eye-Fi card is inserted into the product's memory card slot
 2.
- Eye-Fi cards are equipped with a wireless LAN function. Do not insert an Eye-Fi card into the product in locations in which their use is prohibited, such as on an airplane. When an Eye-Fi card is inserted into the product, set [Upload Settings] to [Off]. When the upload function is set to [Off], the indicator will be displayed on the product.
- Power save mode will not function during uploading.
- If (error) is displayed, remove the memory card and reinsert it, or turn the product off and then on again. If the indicator appears again, the Eye-Fi card may be damaged.
- Wireless LAN communication may be influenced by other communication devices. If the communication status is poor, move closer to the access point to be connected.
- Third parties may know where you shot the image if you upload the image when [☐ Loc. Info. Link Set.] → [Location Info. Link] is set to [On]. To prevent third parties from obtaining your location information, set [☐ Loc. Info. Link Set.] → [Location Info. Link] to [Off].
- This product does not support Eye-Fi "Endless Memory Mode." Before using an Eye-Fi card, be sure that "Endless Memory Mode" is turned off.
- When you use a new Eye-Fi card for the first time, copy the installation file on the Eye-Fi card to your computer before formatting the Eye-Fi card.
- Update the firmware of an Eye-Fi card to the latest version before using the Eye-Fi card. For details, refer to the manual supplied with the Eye-Fi card.
- For details on files you can upload, refer to the manual supplied with the Eye-Fi card.

[397] List of MENU items | Setup

Delete confirm.

You can set whether [Delete] or [Cancel] is selected as the default setting on the delete confirmation screen.



Menu item details

"Delete" first:

[Delete] is selected as the default setting.

"Cancel" first:

[Cancel] is selected as the default setting.

[398] List of MENU items | Setup

Display Quality

You can change the display quality.



 $MENU \rightarrow \bigoplus (Setup) \rightarrow [Display Quality] \rightarrow desired setting.$

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.

[399] List of MENU items | Setup

Pwr Save Start Time

Sets time intervals to automatically switch to power save mode when you are not performing operations to prevent wearing down the battery pack. To return to shooting mode, perform an operation such as pressing the shutter button halfway down.

1 MENU \rightarrow (Setup) \rightarrow [Pwr Save Start Time] \rightarrow desired setting.

Menu item details

30 Min/5 Min/2 Min/1 Min/10 Sec

Note

- Turn off the product when you do not use it for a long time.
- The power save function is not activated when playing back slideshows, when recording movies, or when connected to a computer or TV.

[400] List of MENU items | Setup

NTSC/PAL Selector

Plays back movies recorded with the product on a NTSC/PAL system TV.



 $\mathsf{MENU} \to \textbf{ (Setup)} \to [\mathsf{NTSC/PAL} \ \mathsf{Selector}] \to [\mathsf{Enter}]$

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.

[401] List of MENU items | Setup

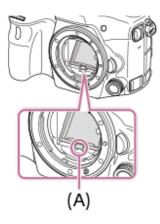
Cleaning Mode

If dust or debris gets inside the camera and adheres to the surface of the image sensor (the part that converts the light to an electric signal), it may appear as dark spots on the image, depending on the shooting environment. If this happens, follow the steps below to clean the image sensor.

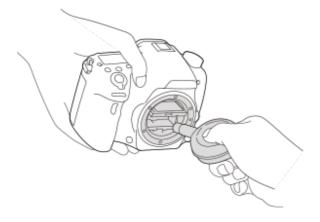
1 Confirm that the battery has been charged sufficiently.

The image sensor vibrates a little to shake off the dust.

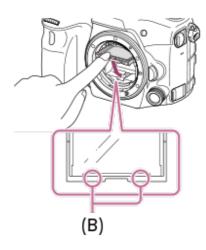
- 3 Turn off the product following the instructions on the screen.
- 4 Detach the lens.
- 5 Push the mirror lock lever (A) and open the mirror.



6 Use the blower to clean the image sensor surface and the surrounding area.



- After you finish cleaning the image sensor, push down the mirror until it clicks.
 - Push down either side (B) of the mirror.



8 Attach the lens.

• When you attach the lens, confirm that the mirror is completely pushed down.

Hint

 For how to check the amount of dust on the image sensor, and for further details on cleaning methods, please refer to the following URL.
 http://support.d-imaging.sony.co.jp/www/support/ilc/sensor/index.php

Note

- Clean the image sensor quickly.
- A blower is not supplied with this product. Use a commercially available blower.
- Cleaning can be performed only when the battery level is (3 remaining battery icons) or more.
- Do not use a spray type blower as it may scatter water droplets inside the camera body.
- Do not put the tip of a blower into the cavity beyond the lens mount area, so that the tip of the blower does not touch the image sensor.
- Hold the camera slightly face downward so that the dust falls out.
- Do not subject the product to any shock during cleaning.
- When cleaning the image sensor with a blower, do not blow too hard. If you blow the sensor too
 hard, the inside of the product may be damaged.
- When you attach the lens after you finish cleaning the image sensor, confirm that the mirror has been completely pushed down. Otherwise, it may damage the lens or lead to a malfunction. Also, if the mirror has not been pushed down completely, the autofocus system will not be able to achieve proper focus.
- You cannot shoot with the mirror open.
- If the dust remains even after you cleaned the product as described, consult the service facility.

[402] List of MENU items | Setup

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].



 $MENU \rightarrow \bigoplus (Setup) \rightarrow [Demo Mode] \rightarrow desired setting.$

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 set this item only when the product is powered by the AC-PW10AM AC Adaptor (sold separately).
- Even if [On] is selected, the product does not start a demonstration if there is no movie file on the memory card.
- When [On] is selected, the product does not switch to power save mode.
- [Demo Mode] always displays movies on the memory card in memory card slot 1.

[403] List of MENU items | Setup

TC/UB Settings

The time code (TC) and the user bit (UB) information can be recorded as data attached to movies.



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)

- Press the multi-selector up/down 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

Set the other digits following the same procedure as in step 2, then press in the center of the multi-selector.

How to reset the time code

- 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)

- Press the multi-selector up/down and select the first two digits.
- Set the other digits following the same procedure as in step 2, then press in the center of the multi-selector.

How to reset the user bit

- 2. Press the (Delete) button to reset the user bit (00 00 00 00).

How to select the recording method for the time code (TC Format*1)

1. MENU \rightarrow (Setup) \rightarrow [TC/UB Settings] \rightarrow [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. $MENU \rightarrow \bigoplus$ (Setup) \rightarrow [TC/UB Settings] \rightarrow [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)

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 is read from the memory card in the slot 1 when [Recording Mode] is set to [Simult. ()] or [Simult. ()]. The time code is read from the memory card to which the movies will be recorded when [Recording Mode] is set to [Standard], [Simult. ()], [Sort(JPEG/RAW)] or [Sort()]. The time code advances in [Rec Run] mode regardless of the [TC Run] setting.

Remote Ctrl

You can operate this product and shoot images using the SHUTTER button, 2SEC button (2 second delay shutter), and START/STOP button (or Movie button (RMT-DSLR2 only)) on the Wireless Remote Commander RMT-DSLR1 (sold separately) and RMT-DSLR2 (sold separately). Refer also to the operating instructions for the Wireless Remote Commander.



Menu item details

On:

Allows remote commander operation.

Off:

Does not allow remote commander operation.

Note

- The lens or lens hood may block the remote sensor that receive the signals. Use the remote commander in the position from which the signal can reach the product.
- When [Remote Ctrl] is set to [On], the product does not switch to power save mode. Set [Off] after using a remote commander.

[405] List of MENU items | Setup

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.



 $\textbf{MENU} \rightarrow \textbf{ £} \textbf{ (Setup)} \rightarrow \textbf{[HDMI Settings]} \rightarrow \textbf{[HDMI Resolution]} \rightarrow \textbf{desired setting.}$

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.

[406] List of MENU items | Setup

HDMI Settings: 24p/60p Output (movie) (Only for 1080 60i compatible models)

Set 1080/24p or 1080/60p as the HDMI output format when [Record Setting] is set to [24p 24M(FX)], [24p 17M(FH)] or [24p 50M].

- MENU \rightarrow (Setup) \rightarrow [HDMI Settings] \rightarrow [HDMI Resolution] \rightarrow [1080p] or [2160p/1080p].
- MENU → (Setup) → [HDMI Settings] → [1 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.
- When [Record Setting] is set to other than [24p 24M(FX)], [24p 17M(FH)], or [24p 50M], this setting is canceled, and HDMI video is output according to the [HDMI Resolution] settings.

[407] List of MENU items | Setup

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

 $\textbf{MENU} \rightarrow \textbf{ (Setup)} \rightarrow \textbf{[HDMI Settings]} \rightarrow \textbf{[HDMI Info. Display]} \rightarrow \textbf{desired setting.}$

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.

[408] List of MENU items | Setup

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.



 $\textbf{MENU} \rightarrow \clubsuit \textbf{ (Setup)} \rightarrow \textbf{[HDMI Settings]} \rightarrow \textbf{[} \biguplus \textbf{TC Output]} \rightarrow \textbf{desired setting.}$

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].

[409] List of MENU items | Setup

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.



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 [TC Output] is [Off], [REC Control] is set to [Off].

[410] List of MENU items | Setup

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.

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.

- 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.

[411] List of MENU items | Setup

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 [1] (Movie/S&Q Motion).
- Connect the camera to the desired device via an HDMI cable.

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].
- A 4K movie is not output to the connected 4K-compatible device during slow-motion/quick-motion shooting.
- 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 the camera is connected using an HDMI cable with [File Format] is set to [XAVC S 4K], or when [File Format] is set to [XAVC S 4K] and [Dual Video REC] is set to [On], the following functions are not available.
 - [Face Detection]
 - [Lock-on AF] under [Focus Area]
 - [Center Lock-on AF]
 - [Eye AF]

[412] List of MENU items | Setup

USB Connection

this product.



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 or Windows 8 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 or Windows 8 computers are connected in MTP, and their unique functions are enabled for use.

The memory card in memory card slot 1 is the connection target.

PC Remote:

Uses "Remote Camera Control" to control this product from the 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].
- If Device Stage* is not displayed with Windows 7 or Windows 8, set [USB Connection] to [Auto].
- * Device Stage is a menu screen used to manage connected devices, such as a camera (Function of Windows 7 or Windows 8).

[413] List of MENU items | Setup

USB LUN Setting

Enhances compatibility by limiting of USB connection functions.



 $\textbf{MENU} \rightarrow \textbf{ desired setting.}$

Menu item details

Multi:

Normally, use [Multi].

Single:

Set [USB LUN Setting] to [Single] only if you cannot make a connection.

• The memory card in memory card slot 1 is the connection target.

[414] List of MENU items | Setup

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 "Remote Camera Control" to control this product from the computer, including such functions as shooting and storing images on the computer.



 $MENU \rightarrow$ (Setup) \rightarrow [PC Remote Settings] \rightarrow [Still Img. Save Dest.] \rightarrow 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].
- During PC Remote shooting, [Recording Mode] is locked to [Standard] and cannot be changed.
- While you are playing back still images on the camera, you cannot shoot using PC Remote.

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 "Remote Camera Control" to control this product from the computer, including such functions as shooting and storing images on the computer.



MENU \rightarrow (Setup) \rightarrow [PC Remote Settings] \rightarrow [RAW+J PC Save Img] \rightarrow 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

- [RAW+J PC Save Img] can be set only when [Quality] is set to [RAW & JPEG].
- During PC Remote shooting, [Recording Mode] is locked to [Standard] and cannot be changed.

[416] List of MENU items | Setup

Language

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



 $\textbf{MENU} \rightarrow \begin{tabular}{ll} \blacksquare \end{tabular} \textbf{(Setup)} \rightarrow \textbf{[A] Language]} \rightarrow \textbf{desired language.} \end{tabular}$

[417] List of MENU items | Setup

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.

 $MENU \rightarrow \bigoplus$ (Setup) \rightarrow [Date/Time Setup] \rightarrow 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.

[418] List of MENU items | Setup

Area Setting

Sets the area where you are using the product.



1 MENU \rightarrow (Setup) \rightarrow [Area Setting] \rightarrow desired area.

[419] List of MENU items | Setup

Copyright Info

Writes copyright information onto the still images.



 $\textbf{MENU} \rightarrow \begin{tabular}{l} \blacksquare \end{tabular} \textbf{(Setup)} \rightarrow \end{tabular} \rightarrow \end{tabular} \textbf{(Setup)} \rightarrow \end{tabular} \textbf{(Solve)} \rightarrow$



When you select [Set Photographer] or [Set Copyright], a keyboard appears on the screen. Enter your desired name.

Menu item details

Write Copyright Info:

Sets whether to write copyright information. ([On]/[Off])

• If you select [On], an (c) icon will appear on the shooting screen.

Set Photographer:

Sets the photographer name.

Set Copyright:

Sets the copyright holder name.

Disp. Copyright Info:

Displays the current copyright information.

Note

- You can only enter alphanumeric characters and symbols for [Set Photographer] and [Set Copyright].
 You can enter up to 46 letters.
- A (c) icon appears during the playback of images with copyright information.
- In order to prevent unauthorized use of [Copyright Info], be sure to clear the [Set Photographer] and [Set Copyright] columns before lending out or handing over your camera.
- Sony is not liable for problems or damages resulting from use of [Copyright Info].

[420] List of MENU items | Setup

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.



Note

- Formatting permanently erases all data including protected images and registered settings (from M1 to M4).
- 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%.

[421] List of MENU items | Setup

File Number

Selects how to assign file numbers to recorded still images and MP4 movies.



 $MENU \rightarrow$ (Setup) \rightarrow [File Number] \rightarrow 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.)

Hint

- The setting for [File Number] will be applied to both slot 1 and slot 2.
- Even if you change the setting of the recording destination, the file numbers will be sequential across the two memory cards in each slot by setting [File Number] to [Series].

[422] List of MENU items | Setup

Set File Name

You can specify the first three characters of the file name for images you shoot.



 $\textbf{MENU} \rightarrow \clubsuit \textbf{ (Setup)} \rightarrow \textbf{[Set File Name]}.$



Select the entry field for the file name to display a keyboard on the screen, and then enter three characters of your choice.

• The setting for [Set File Name] will be applied to both slot 1 and slot 2.

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.

[423] List of MENU items | Setup

Selecting which memory card to record to (Select Rec. Media)

Selects the memory card slot on which to record.

[Slot 1] is the default setting. If you do not intend to change the settings and will only use one memory card, use the slot 1.



 $MENU \rightarrow$ (Setup) \rightarrow [Select Rec. Media] \rightarrow desired setting.

Menu item details

Slot 1:

Selects media in the slot 1.

Slot 2:

Selects media in the slot 2.

Hint

 To record the same image on two memory cards at the same time or to sort recorded images onto two memory card slots by the image type (still image/movie), use [Recording Mode].

Note

The slot 1 supports Memory Stick PRO Duo media and SD cards. The slot 2 supports SD cards only.

[424] List of MENU items | Setup

Recording Mode

You can select the method for recording an image, such as recording the same image simultaneously to two memory cards or recording different types of images to two memory cards. (If you want to record a movie to a memory card in different formats, use [Dual Video REC].)



MENU → (Setup) → [Recording Mode] → desired setting.

Menu item details

Standard:

Records an image to a memory card in the memory card slot that you select in [Select Rec. Media].

Simult. (\bigsize):

Records a still image to both memory cards and records a movie to a memory card in the memory card slot that you select in [Select Rec. Media].

Simult. (間):

Records a still image to a memory card in the memory card slot that you select in [Select Rec. Media], and records a movie to both memory cards.

Records a still image and a movie to both memory cards.

Sort(JPEG/RAW):

Records an image in JPEG format to a memory card in the memory card slot that you select in [Select Rec. Media], and records an image in RAW format to the other memory card.

Sort(灰/間):

Records a still image to a memory card in the memory card slot that you select in [Select Rec. Media], and records a movie to the other memory card.

Note

- When [Recording Mode] is set to [Simult. (☐)] or [Simult. (☐)], [Dual Video REC] is temporarily set to [Off].
- When [Recording Mode] is set to [Sort(JPEG/RAW)], [Quality] is temporarily set to [RAW & JPEG1.

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.



Note

- You cannot select the folder when [Folder Name] is set to [Date Form].
- If [Recording Mode] is set to other than [Standard], you may only select the common folder on the both memory cards. If there is no common folder, you can make one using [New Folder].

[426] List of MENU items | Setup

New Folder

Creates a new folder on the memory card for recording still images and MP4 movies. 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. A folder for still images and a folder for MP4 movies that have the same number are created at the same time.



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.
- If [Recording Mode] is set to other than [Standard], a new folder is created with a folder number one
 greater than the largest folder number currently used on both memory cards inserted in the memory
 card slots.
- If [Recording Mode] is set to other than [Standard] and an image is shot, 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 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: 10060405(Folder number: 100, date: 04/05/2016)

Note

You cannot change the [Folder Name] settings for movies.

[428] List of MENU items | Setup

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 \rightarrow **(Setup)** \rightarrow [Recover Image DB] \rightarrow desired memory card slot \rightarrow [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.



 $MENU \rightarrow$ (Setup) \rightarrow [Display Media Info.] \rightarrow desired memory card slot.

[430] List of MENU items | Setup

Version

Displays the version of this product's software. Check the version when updates for this product's software are released, etc.

Also displays the version of the lens if a lens compatible with software updates is attached.



 $\textbf{MENU} \rightarrow \ \ \, \textbf{\texttt{CSetup)}} \rightarrow \ \ \, \textbf{\texttt{[Version]}}.$

Note

• Updating can be performed only when the battery level is (3 remaining battery bars) or more. The use of a sufficiently charged battery or the AC Adaptor (sold separately) is recommended.

[431] List of MENU items | Setup

Certification Logo (For some models only)

Displays some of the certification logos for this product.



Setting Reset

Resets the product to the default settings. Even if you perform [Setting Reset], the recorded images are retained.



 $MENU \rightarrow \bigoplus$ (Setup) \rightarrow [Setting Reset] \rightarrow 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.
- The value set with [AF Micro Adj.] will not be reset even when [Camera Settings Reset] or [Initialize] is performed.

[433] Precautions/This product

Precautions

Refer also to "Notes on using your camera" in the Instruction Manual (supplied) for this product.

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
- 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.

On storing

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.

Precaution on carrying

Do not carry the camera with the tripod attached. This may cause the tripod socket hole to break.

On operating temperatures

Your product is designed for use under the temperatures between 0°C and 40°C (32 °F and 104 °F). Shooting in extremely cold or hot places that exceed this range is not recommended.

On moisture condensation

- If the 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.

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).

 Playback of images recorded with your product on other equipment and playback of images recorded or edited with other equipment on your product are not guaranteed.

Notes on playing movies on other devices

XAVC S movies can be played back only on XAVC S-supported devices.

On the monitor, viewfinder and lens

- 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 the subject is too close, the image may show any dust or fingerprints on the lens. Wipe the lens with a soft cloth, etc.
- Make sure not to bump the lens or subject it to force.
- Do not carry the camera by the monitor.
- Magnets are attached to the camera body and the back of the monitor. Do not insert any
 magnetically recorded media, such as floppy disks or credit cards between them.

Notes on discarding or transferring this product to others

When discarding or transferring this product to others, make sure to perform the following operation to protect private information.

• Select [Setting Reset] \rightarrow [Initialize] \rightarrow [OK] \rightarrow [OK].

Notes on location information

If you upload and share an image tagged with a location, you may accidentally reveal the information to a third party. To prevent third parties from obtaining your location information, set [Loc. Info. Link Set.] to [Off] before shooting images.

[434] Precautions/This product

On cleaning

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 camera body

Do not touch the parts of the product inside the lens mount, such as a lens signal contact. To clean inside the lens mount, use a commercially available blower* to blow any dust off.

* Do not use a spray-type blower as doing so may cause a malfunction.

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 oil from your hand or hand cream, etc., remain on the monitor, the original coating may become easily removable. Wipe oil or hand cream off as soon as possible.
- 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.

[435] Precautions/This product | Cleaning the image sensor

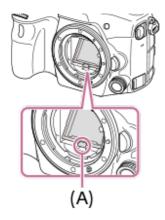
Cleaning Mode

If dust or debris gets inside the camera and adheres to the surface of the image sensor (the part that converts the light to an electric signal), it may appear as dark spots on the image, depending on the shooting environment. If this happens, follow the steps below to clean the image sensor.

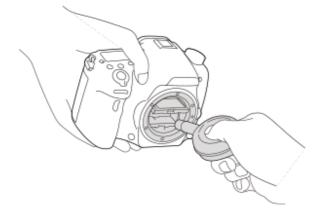
- 1 Confirm that the battery has been charged sufficiently.

The image sensor vibrates a little to shake off the dust.

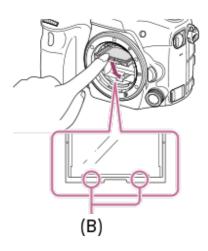
- Turn off the product following the instructions on the screen.
- 4 Detach the lens.
- 5 Push the mirror lock lever (A) and open the mirror.



6 Use the blower to clean the image sensor surface and the surrounding area.



- After you finish cleaning the image sensor, push down the mirror until it clicks.
 - Push down either side (B) of the mirror.



8 Attach the lens.

When you attach the lens, confirm that the mirror is completely pushed down.

Hint

 For how to check the amount of dust on the image sensor, and for further details on cleaning methods, please refer to the following URL.
 http://support.d-imaging.sony.co.jp/www/support/ilc/sensor/index.php

Note

- Clean the image sensor quickly.
- A blower is not supplied with this product. Use a commercially available blower.
- Cleaning can be performed only when the battery level is (3 remaining battery icons) or more.
- Do not use a spray type blower as it may scatter water droplets inside the camera body.
- Do not put the tip of a blower into the cavity beyond the lens mount area, so that the tip of the blower does not touch the image sensor.
- Hold the camera slightly face downward so that the dust falls out.
- Do not subject the product to any shock during cleaning.
- When cleaning the image sensor with a blower, do not blow too hard. If you blow the sensor too
 hard, the inside of the product may be damaged.
- When you attach the lens after you finish cleaning the image sensor, confirm that the mirror has been completely pushed down. Otherwise, it may damage the lens or lead to a malfunction. Also, if the mirror has not been pushed down completely, the autofocus system will not be able to achieve proper focus.
- You cannot shoot with the mirror open.
- If the dust remains even after you cleaned the product as described, consult the service facility.

[436] Precautions/This product

Number of recordable images

When you insert a memory card into the camera and set the ON/OFF (Power) switch to "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.

[Image Size]: [L: 42M] Aspect Ratio]: [3:2]*

(Units: Images)

Quality	8 GB	16 GB	32 GB	64 GB
Standard	770	1550	3100	6200
Fine	520	1000	2100	4200
Extra fine	270	540	1050	2150
RAW & JPEG (Compressed RAW)	130	260	520	1050
RAW (Compressed RAW)	170	350	700	1400
RAW & JPEG (Uncompressed RAW)	75	150	300	600
RAW (Uncompressed RAW)	88	175	355	710

^{*} When [Aspect Ratio] is set to other than [3:2], you can record more images than the numbers shown in the table above. (except when [RAW] is selected)

Note

- Even if the number of recordable images is higher than 9999 images, "9999" will appear.
- When an image shot with another product is played back on this camera, the image may not appear in its actual size.
- The numbers shown are when using a Sony memory card.

[437] Precautions/This product

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], [XAVC S HD], and [AVCHD] are recording times when shooting with [Dual Video REC] set to [Off]. (h (hour), m (minute))

	8 GB	16 GB	32 GB	64 GB
XAVC S 4K 30p 100M/25p 100M	9 m	15 m	35 m	1 h 15 m
XAVC S 4K 30p 60M/25p 60M	15 m	30 m	1 h	2 h 5 m
XAVC S 4K 24p 100M*	9 m	15 m	35 m	1 h 15 m
XAVC S 4K 24p 60M*	15 m	30 m	1 h	2 h 5 m
XAVC S HD 120p 100M/100p 100M	9 m	15 m	35 m	1 h 15 m
XAVC S HD 120p 60M/100p 60M	15 m	30 m	1 h	2 h 5 m
XAVC S HD 60p 50M/50p 50M	15 m	35 m	1 h 15 m	2 h 35 m
XAVC S HD 30p 50M/25p 50M	15 m	35 m	1 h 15 m	2 h 35 m
XAVC S HD 24p 50M*	15 m	35 m	1 h 15 m	2 h 35 m
AVCHD 60i 24M(FX)/50i 24M(FX)	40 m	1 h 25 m	3 h	6 h
AVCHD 60i 17M(FH)/50i 17M(FH)	55 m	2 h	4 h 5 m	8 h 15 m
AVCHD 60p 28M(PS)/50p 28M(PS)	35 m	1 h 15 m	2 h 30 m	5 h 5 m
AVCHD 24p 24M(FX)/25p 24M(FX)	40 m	1 h 25 m	3 h	6 h

AVCHD 24p 17M(FH)/25p 17M(FH)	55 m	2 h	4 h 5 m	8 h 15 m
MP4 1920x1080 60p 28M/1920x1080 50p 28M	35 m	1 h 15 m	2 h 35 m	5 h 20 m
MP4 1920x1080 30p 16M/1920x1080 25p 16M	1 h	2 h	4 h 10 m	8 h 25 m
MP4 1280x720 30p 6M/1280x720 25p 6M	2 h 35 m	5 h 20 m	10 h 55 m	22 h

- * Only when [NTSC/PAL Selector] is set to NTSC.
 - Continuous shooting is possible for approximately 29 minutes (a product specification limit).
 The continuous recordable time may differ in the following situations:
 - When the file format is set to MP4 (28M): Approximately 20 minutes (limited by file size of 4 GB).
 - When shooting slow-motion/quick-motion movies: Recording will automatically stop when the recorded file reaches approximately 29 minutes (the played back movie reaches approximately 29 minutes). (Recording will automatically stop when the recorded file reaches approximately 15 minutes if [SkQ Record Setting] is set to [60p/50p] and [SkQ Frame Rate] is set to [30fps/25fps].)
- The times for slow-motion/quick-motion movies are playback times, not recording times.

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

- It requires a lot of power to perform high quality movie recording or continuous shooting. 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 that can affect the quality of the images or the internal mechanism of the camera.
- The following values are the continuous times 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. 29 minutes

Ambient temperature: 30°C (86°F)

- Continuous recording time for movies (HD): Approx. 29 minutes
- Continuous recording time for movies (4K): Approx. 29 minutes

Ambient temperature: 40°C (104°F)

- Continuous recording time for movies (HD): Approx. 29 minutes
- Continuous recording time for movies (4K): Approx. 29 minutes

HD: XAVC S HD (60p 50M/50p 50M) 4K: XAVC S 4K (Super 35 mm, 60 Mbps)

- 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.
- When [] is indicated, stop recording the movie.
- If the camera stops recording due to the 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, the recording time will be longer.
 - 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.
- When [File Format] is set to [MP4], the file size of movies is limited to approx. 4 GB. If the movie file size reaches approx. 4 GB during recording, recording will stop automatically.

[438] Precautions/This product

Using the AC Adaptor/battery charger abroad

You can use the battery charger and the AC Adaptor (sold separately) 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.

[439] Precautions/This product

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.

[440] Precautions/This product

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- (ii) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO.

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Use the following URL to download it.

http://oss.sonv.net/Products/Linux/

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[441] Precautions/This product

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

List of default setting values

The following are the default setting values.

To reset settings to the default values

Select MENU \rightarrow \clubsuit (Setup) \rightarrow [Setting Reset] \rightarrow [Camera Settings Reset] or [Initialize] \rightarrow [OK].

The type of items that can be reset are limited. See the following tables. If you select [Initialize], all the settings of the camera will be reset to the default values.

1 Camera Settings1

☐ Quality	M	/
Image Size (when [Aspect Ratio] is set to [3:2]) L: 42 Image Size (when [Aspect Ratio] is set to [16:9]) L: 36 Image Size (when [Aspect Ratio] is set to [3:2], and [APS-C/Super 35mm] is set to [On]) Image Size (when [Aspect Ratio] is set to [16:9], and [APS-C/Super 35mm] is set to [On])	M M	
Image Size (when [Aspect Ratio] is set to [16:9]) L: 36 Image Size (when [Aspect Ratio] is set to [3:2], and [APS-C/Super 35mm] is set to [On]) Image Size (when [Aspect Ratio] is set to [16:9], and [APS-C/Super 35mm] is set to [On])	M	/
Image Size (when [Aspect Ratio] is set to [3:2], and [APS-C/Super 35mm] is set to [On]) Image Size (when [Aspect Ratio] is set to [16:9], and [APS-C/Super 35mm] is set to [On])		/
[APS-C/Super 35mm] is set to [On]) L: 10 [APS-C/Super 35mm] is set to [On]) L: 15 [APS-C/Super 35mm] is set to [On])	М	/
[APS-C/Super 35mm] is set to [On])		
Aspect Ratio 3:2	М	/
	~	/
APS-C/Super 35mm Auto	_	
Panorama: Size Stand	dard	/
Panorama: Direction Right		/
Long Exposure NR On	~	/
High ISO NR Norm	nal	/
Color Space sRGI	3	/
Lens Comp. (Shading Comp.)	-	
Lens Comp. (Chro. Aber. Comp.)		

Lens Comp. (Distortion Comp.)	Off	_
Drive Mode	Single Shooting	✓
Bracket Settings (Selftimer during Brkt)	Off	✓
Bracket Settings (Bracket order)	0→-→+	✓
₫1/₫2 Recall		_
₾1/₾2 Memory	_	_
Focus Mode	Automatic AF	✓
Priority Set in AF-S	AF	-
Priority Set in AF-C	Balanced Emphasis	_
Focus Area	Wide	✓
Selectable AF Area	Auto	-
AF System	Auto	_
Flexible Spot Points	All	_
AF Illuminator	Auto	✓
Center Lock-on AF	Off	✓
AF drive speed	Fast	✓
AF Track Sens	3(Standard)	✓
AF w/ shutter	On	_
Eye-Start AF	Off	_
AF Rng.Ctrl Assist	On	_
AF Area Auto Clear	Off	_
Wide AF Area Disp.	Off	_
AF Micro Adj.* (AF Adjustment Set.) * This item is not reset even if you select [Camera Settings Reset] or [Initialize].	Off	_
AF Micro Adj.* (Clear) * This item is not reset even if you select [Camera Settings Reset] or [Initialize].	_	_

AF Micro Adj.* (AF Area: Cent W End / AF Area: Cent T End / AF Area: Up L W End / AF Area: Up L T End / AFArea:LowL W End / AFArea:LowL T End / AF Area:Up R W End / AF Area:LowR T End / AFArea:LowR W End / AFArea:LowR T End) * This item is not reset even if you select [Camera Settings Reset] or [Initialize].	±0	_
Exposure Comp.	±0.0	~
ISO	ISO AUTO	✓
ISO AUTO Min. SS	Standard	✓
Metering Mode	Multi	✓
Spot Metering Point	Center	✓
Exposure step	0.3EV	_
AEL w/ shutter	Auto	_
Exposure Std. Adjust	±0.0	_
Flash Mode	Fill-flash	✓
Flash Comp.	±0.0	✓
Exp.comp.set	Ambient&flash	_
Flash control	ADI flash	✓
Red Eye Reduction	Off	✓
White Balance	Auto	✓
Priority Set in AWB	Standard	✓
DRO/Auto HDR	D-Range Optimizer: Auto	~
Creative Style	Standard	~
Picture Effect	Off	~
Picture Profile	Off	✓
Focus Magnifier	_	~

Focus Magnif. Time	No Limit	_
Initial Focus Mag.	x1.0	_
Peaking Level	Off	_
Peaking Color	White	_
Anti-flicker Shoot.	Off	✓
Face Detection	Off	✓
Face Registration	_	_

2 Camera Settings2

MENU items	Default setting value	Resettable using [Camera Settings Reset]
Movie/S&Q Motion	Program Auto	✓
File Format	XAVC S HD	✓
Record Setting (when [File Format] is set to [XAVC S 4K])	30p 60M/25p 60M	✓
Record Setting (when [File Format] is set to [XAVC S HD])	60p 50M/50p 50M	✓
Record Setting (when [File Format] is set to [AVCHD])	60i 17M(FH)/50i 17M(FH)	✓
Record Setting (when [File Format] is set to [MP4])	1920x1080 30p 16M/1920x1080 25p 16M	✓
S&O S&Q Settings (HFR Record Setting)	30p/25p	✓
S&O S&Q Settings (HFR Frame Rate)	120fps/100fps	✓
Dual Video REC	Off	✓
AF Track Sens	Standard	✓
Auto Slow Shut.	On	✓
Audio Recording	On	✓
Audio Rec Level	26	✓
Audio Level Display	On	_

Audio Out Timing	Live	✓
Wind Noise Reduct.	Off	✓
Marker Display	Off	_
Marker Settings (Center)	Off	_
Marker Settings (Aspect)	Off	_
Marker Settings (Safety Zone)	Off	_
Marker Settings (Guideframe)	Off	_
Video Light Mode	Power Link	_
e-Front Curtain Shut.	On	_
Release w/o Lens	Disable	_
Release w/o Card	Enable	_
SteadyShot	On	✓
SteadyShot Settings (SteadyShot Adjust.)	Auto	✓
SteadyShot Settings (SteadyS. Focal Len.) (when [SteadyShot Adjust.] is set to [Manual])	8mm	✓
Zoom	_	_
Zoom Setting	Optical zoom only	_
DISP Button (Monitor)	For viewfinder	_
DISP Button (Finder)	Level	_
FINDER/MONITOR	Auto	_
Zebra	Off	_
Grid Line	Off	_
Exposure Set. Guide	Off	_
Live View Display	Setting Effect ON	_
Auto Review	2 Sec	_
Custom Key(Shoot.) (Front Multi Ctrl.)	Focus Mode	_
Custom Key(Shoot.) (Front Multi Ctrl.)	Audio Rec Level	_

Custom Key(Shoot.) (Custom Button 1)	AF Range Control	_
Custom Key(Shoot.) (Custom Button 2)	FEL Lock toggle	_
Custom Key(Shoot.) (Preview Button)	Aperture Preview	_
Custom Key(Shoot.) (Center Button)	Focus Standard	_
Custom Key(Shoot.) (AEL Button)	AEL hold	_
Custom Key(Shoot.) (AF/MF Button)	AF/MF Control Hold	_
Custom Key(Shoot.) (Button (Smart Tele.	Smart Telecon.	_
Custom Key(Shoot.) (ISO Button)	ISO	_
Custom Key(Shoot.) (Exp. Comp. Button)	Exposure Comp.	_
Custom Key(Shoot.) (WB Button)	White Balance	_
Custom Key(Shoot.) (Drive Mode Button)	Drive Mode	_
Custom Key(Shoot.) (Focus Hold Button)	Focus Hold	_
Custom Key(PB) (Custom Button 2)	Follow Custom(Sht.)	_
Custom Key(PB) (Preview Button)	Follow Custom(Sht.)	_
Custom Key(PB) (Fn/ ♣ Button)	Send to Smartphone	_
Custom Key(PB) (Button (Smart Tele.	Follow Custom(Sht.)	_
Custom Key(PB) (ISO Button)	Follow Custom(Sht.)	_
Custom Key(PB) (Exp. Comp. Button)	Follow Custom(Sht.)	_
Custom Key(PB) (WB Button)	Follow Custom(Sht.)	_
Custom Key(PB) (Drive Mode Button)	Follow Custom(Sht.)	_
Function Menu Set.	_	_
Dial Setup	F/no. SS	_
Dial Ev Comp	Off	_
MOVIE Button	Always	_
Dial Lock	Off	_
Audio signals	On	_



To reset the items for [Wireless] to the default values, select [Initialize] or [Reset Network Set.]. These items are not reset to the default values even if you select [Camera Settings Reset].

MENU items	Default setting value
Send to Smartphone	_
Send to Computer	_
View on TV	_
Ctrl w/ Smartphone (Ctrl w/ Smartphone)	Off
Ctrl w/ Smartphone (☐ Connection Info.)	_
Airplane Mode	Off
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 (Bluetooth Function)	Off
Bluetooth Settings (Pairing)	_
Bluetooth Settings (Disp Device Address)	_
Loc. Info. Link Set. (Location Info. Link)	Off
Loc. Info. Link Set. (Auto Time Correct.)	On
Loc. Info. Link Set. (Auto Area Adjust.)	On
Edit Device Name	_
Reset Network Set.	_

▶ Playback

To reset the items for [Playback] to the default values, select [Initialize]. These items are not reset to the default values even if you select [Camera Settings Reset].

MENU items	Default setting value
Delete	_
View Mode	Date View

Image Index	9 Images
Display Rotation	Auto
Select PB Media	Slot 1
Сору	_
Slide Show (Repeat)	Off
Slide Show (Interval)	3 Sec
Rotate	_
⊕ Enlarge Image	_
⊕ Enlarge Init. Mag.	Standard. Mag.
⊕ Enlarge Initial Pos.	Focused Position
Protect	_
Specify Printing	_
Photo Capture	_

Setup

To reset the items for [Setup] to the default values, select [Initialize]. These items are not reset to the default values even if you select [Camera Settings Reset].

MENU items	Default setting value
Monitor Brightness	Auto
Viewfinder Bright.	Auto
Finder Color Temp.	±0
Gamma Disp. Assist	Off
Volume Settings	7
Upload Settings	On
Delete confirm.	"Cancel" first
Display Quality	High
Pwr Save Start Time	1 Min

NTSC/PAL Selector	_
Cleaning Mode	_
Demo Mode	Off
TC/UB Settings (TC/UB Disp. Setting)	Counter
TC/UB Settings (TC Preset)	_
TC/UB Settings (UB Preset)	_
TC/UB Settings (TC Format)	DF
TC/UB Settings (TC Run)	Rec Run
TC/UB Settings (TC Make)	Preset
TC/UB Settings (UB Time Rec)	Off
Remote Ctrl	Off
HDMI Settings (HDMI Resolution)	Auto
HDMI Settings (24p/60p Output)	60p
HDMI Settings (HDMI Info. Display)	On
HDMI Settings (TC Output)	Off
HDMI Settings (REC Control)	Off
HDMI Settings (CTRL FOR HDMI)	On
## 4K Output Sel.	Memory Card+HDMI
USB Connection	Auto
USB LUN Setting	Multi
PC Remote Settings (Still Img. Save Dest.)	PC Only
PC Remote Settings (RAW+J PC Save Img)	RAW & JPEG
A Language	_
Date/Time Setup	_
Area Setting	_
Copyright Info (Write Copyright Info)	Off
Copyright Info (Set Photographer)	_

Copyright Info (Set Copyright)	_
Copyright Info (Disp. Copyright Info)	_
Format	_
File Number	Series
Set File Name	DSC
Select Rec. Media	Slot 1
Recording Mode	Standard
Select REC Folder	_
New Folder	_
Folder Name	Standard Form
Recover Image DB* * This is not performed even when you select [Camera Settings Reset] or [Initialize].	_
Display Media Info.	_
Version	_
Certification Logo	_
Setting Reset	_

[443] If you have problems

Troubleshooting

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

- Remove the battery pack, wait for about one minute, re-insert the battery pack, then turn on the power.
- 2 Initialize the settings.



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/

[444] If you have problems

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.

Power insufficient.

 The image sensor cleaning function will not operate because the remaining battery level is low. Recharge the battery pack or use the AC Adaptor (sold separately).

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.

Memory card locked.

 You are using a memory card with a write-protect switch or a delete-protect switch with the switch set to the LOCK position. Set the switch to the record position.

Cannot open the shutter since the memory card is not inserted.

No memory card has been inserted into the memory card slot selected in [Select Rec.

Media].

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.

Cannot recognize lens. Attach it properly.

- The lens is not attached properly, or the lens is not attached. If the message appears when
 a lens is attached, reattach the lens. If the message appears frequently, check whether the
 contacts of the lens and product are clean or not.
- When attaching the product to an astronomical telescope or similar instrument, or using an unsupported lens, set [Release w/o Lens] to [Enable].

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. Stop recording images until the product cools.

Recording is unavailable in this movie format.

Set [File Format] to [MP4].



 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.

Recommended pages

How to transfer images to smartphone

You can transfer images shot with this camera to smartphone.

• How to tag the location information on the images

You can record the location information on the images. The location information can be acquired via a smartphone.

ILCA-99M2 Lens compatibility information
 This website provides the lens compatibility information. (Another window will open.)