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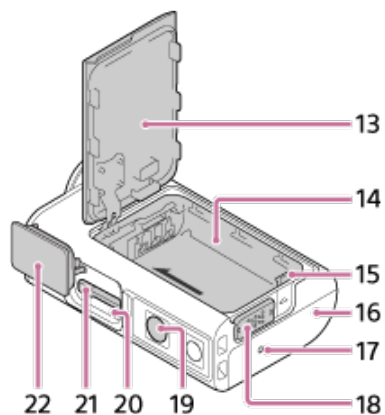
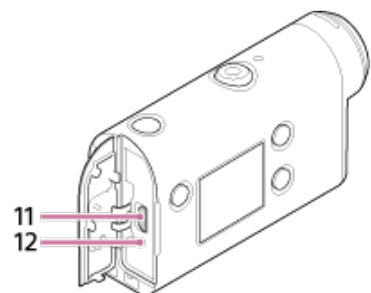
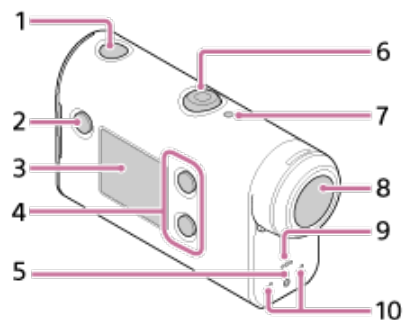
Others


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[1] Read This First

Identifying the parts



1.  (on/standby) button
2. MENU button
3. Display panel
4. UP button/DOWN button
5. REC lamp
6. REC (Movie/still image) button/ENTER (Menu execute) button
7. REC/LIVE lamp
8. Lens
9. Speaker
10. Microphones
11. Multi/Micro USB terminal
12. CHG (Charge) lamp
13. Battery cover
14. Battery housing
15. Battery ejection lever
16. Connector cover (Multi/Micro USB terminal)
17. REC lamp
- 18.
- 19.
- 20.
- 21.
- 22.

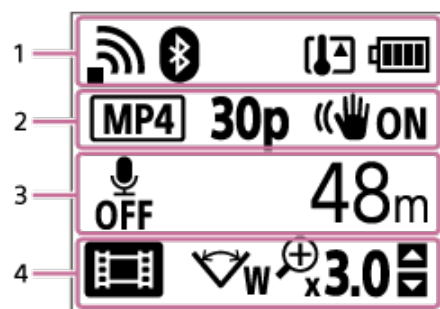
- 18 Lock lever
- 19 Screw hole for tripod*
- 20 Access lamp
- 21 Memory card insertion slot
- 22 Memory card cover

* The length of the corresponding tripod screw should be less than 5.5 mm (7/32 in.).

[2] Read This First

Screen display

The indicators described below are displayed on the camera. This screen display is an example of when shooting movies.



Display icon at 1

- : Wi-Fi connection setting (single connection)
- : Wi-Fi connection setting (multi connection)
- : Bluetooth is connected
- : Temperature of the camera is increased
- : Battery level indicator of camera
- : Airplane mode enabled

Display icon and value at 2








- : Movie format
- **30p** : Frame rate during movie shooting
- : SteadyShot
- **300** : Time-lapse shot number
- : Streaming viewers
- Numbers of streaming viewers
- : Still picture mode
- **10s** : Self-timer

Display items at 3

- **OFF** : Audio recording is set to OFF
- Recordable time, recording time, loop recording time
- Number of recordable still images, time-lapse shot number
- ON AIR: Streaming start
- Warning/Error message

Display icons at 4

- : Movie mode

-  : Photo mode
-  : Time-lapse capture mode
-  : Live streaming mode
-  : Loop recording mode
-  W : Angle setting
-  x3.0 : Zoom ratio
-  : UP button/DOWN button operation guide (zoom switching, shooting mode switching, invalid operation)

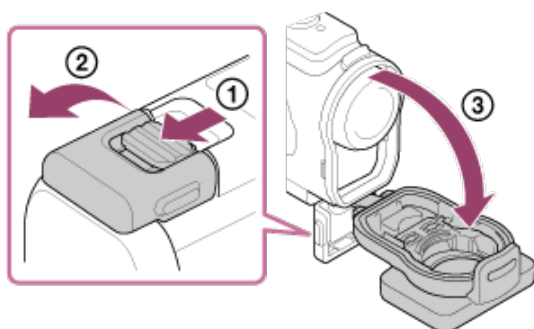
[3] Getting Started

Checking the bundled items

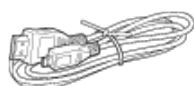
Make sure that you have following bundled items.
The number in parentheses indicates the quantity of that item bundled.

- Camera (1)

The camera is set in the Underwater Housing. Open the cover of the case as illustrated below.



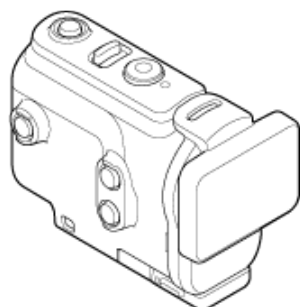
- Micro USB cable (1)



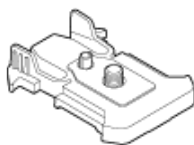
- Rechargeable battery pack (NP-BX1) (1)



- Underwater Housing (1)



- Attachment Buckle (1)

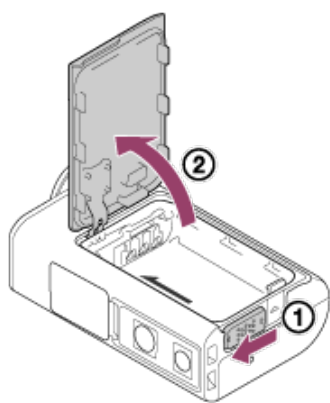


- Startup Guide (1)
- Reference Guide (1)

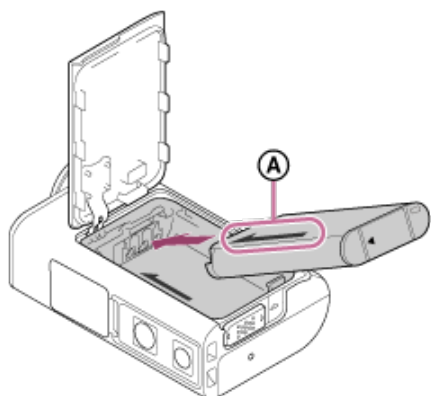
[4] Getting Started

Inserting the battery pack

- 1** Slide down the lock lever to open the battery cover.



- 2** Insert the battery pack.



A : Align the direction of the arrow on the camera and the battery pack.

- 3** Close the battery cover and slide the lock lever up to lock.


- Confirm that the yellow mark on the lock lever is not visible.

To remove the battery pack

Open the cover and slide the battery ejection lever, then remove the battery pack.

To set auto power off function

It is recommended that you set the camera to turn off automatically, in order to decrease the battery consumption.

Press the MENU button, then press the UP button or DOWN button to select the  (camera settings) - **AUTO OFF 60s** (auto power off) - time until the power is turned off, then press the REC/ENTER button.

The default setting is **AUTO OFF 60s** (60 seconds). Change the setting as necessary. For details, see "[Auto power off](#)".

[5] Getting Started

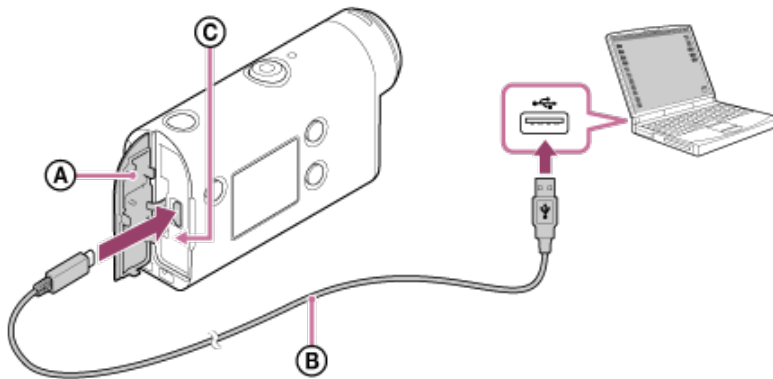
Charging the battery pack

1 Turn off the power of the camera.

- Charging is not possible when the camera is turned on.

2 Open the connector cover, connect the camera to an activated computer with the micro USB cable (supplied).

- The CHG (Charge) lamp lights in amber.



- Ⓐ: Connector cover
- Ⓑ: Micro USB cable
- Ⓒ: CHG (Charge) lamp

3 When charging is finished, disconnect the micro USB cable between the camera and the computer.

- Charging is complete when the CHG (Charge) lamp turns off (full charge).

The time takes for charging

Supplied battery pack (NP-BX1)

- Via a computer: Approx. 265 minutes

* Time required to charge a fully depleted battery pack at a temperature of 25°C (77°F). Charging may take longer under certain circumstances or conditions.

Checking the remaining battery charge

A remaining charge indicator appears on the upper right of the display panel.



The displayed remaining charge indicator may not be correct under certain circumstances.

- It takes about one minute until the correct remaining charge indicator appears.

Note

- You can use only type X battery with this camera.
- Turn off the camera while charging the battery. The charging stops when you turn on the camera while charging.
- Do not apply force to the camera when you connect the camera to a computer. This may cause damage to the camera or the computer.
- When you connect the camera to a notebook computer that is not connected to an AC power source, the battery of the notebook computer may be depleted rapidly. Do not leave the camera connected to the computer for a long time.
- Charging the battery pack or the connection with customized or hand-built computers is not guaranteed. Depending on the type of USB device used, charging may not function properly.
- Operation with all computers is not assured.
- If you do not intend to use the camera for an extended period, charge the camera once every 6 to 12 months or remove the battery pack from the camera to maintain battery performance.
- Rapid charging is possible by using the AC adaptor (sold separately). To connect the AC adaptor, use the micro USB cable (supplied).

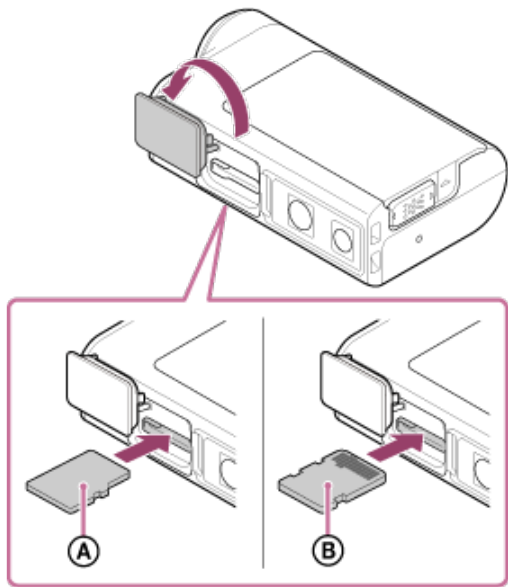
[6] Getting Started | Inserting a memory card

Inserting a memory card

- 1 Open the memory card cover.

- 2 Insert the memory card until it clicks.

- microSD card microSDHC card/microSDXC card: Insert in the direction of **A**.
- Memory Stick Micro (M2) media: Insert in the direction of **B**.



- (A): Printed side
(B): Terminal side

3 Close the memory card cover.

To eject the memory card

Open the cover, then lightly push the memory card once.

Note

- Insert the memory card properly, confirming each side is facing the correct direction.
- Confirm the direction of the memory card. If you forcibly insert the memory card in the wrong direction, the memory card, memory card slot, or image data may be damaged.
- Format the memory card in the camera before use.
- Save important data on the memory card on other media such as a computer, before formatting the memory card.
- Do not insert anything other than the compliant size of memory card into the memory card slot. Otherwise, a malfunction may result.
- When inserting or ejecting the memory card, be careful to prevent the memory card from popping out and dropping.

[7] Getting Started | Inserting a memory card

The memory cards that can be used with the camera

The memory cards that can be used with the camera are listed below.

Memory card	MP4	XAVC S
Memory stick micro (M2)	○ (Mark2 only)	—
microSD memory card	○*1	—
microSDHC memory card	○*1	○*2
microSDXC memory card	○*1	○*2

*1 SD speed class4: **CLASS4** or faster, or UHS speed class1: **U1** or faster.

*2 Memory card that satisfies all the conditions below.

4 GB or more capacity.


SD speed class10: **CLASS10** or faster, or UHS speed class1 : **U1** or faster.

Note


- When you shoot long time with XAVC S or MP4 to the SDHC memory card, the file will be divided into 4 GB files. By using the Action Cam Movie Creator, you can unify the data and treat as 1 file.
- Operation with all memory cards is not assured. For details about memory cards other than cards manufactured by Sony, contact the individual makers.
- Confirm the direction of the memory card. If you forcibly insert the memory card in the wrong direction, the memory card, memory card slot, or image data maybe damaged.
- Format the memory card with the camera before use.
- Confirm that the connector cover and the battery pack/memory card cover are securely closed and any foreign matter is not stuck in the cover before use.

[8] Getting Started

Setting the date and time

Press the  (on/standby) button to turn on the camera for the first time, the setting for area/summer time/date and time will be displayed on the screen. Use the camera after setting the date and time.

1 Press the UP button or DOWN button to select the setting, then press the REC/ENTER button.

- The following items are displayed on the screen in order.
 - **GMT** : Area setting
 -  **OFF** : Daylight Saving Time (Summer Time) setting
 - Year/Month/Day
 - Time setting

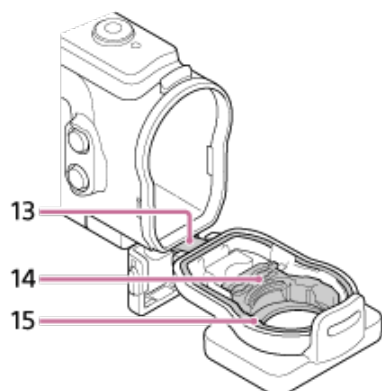
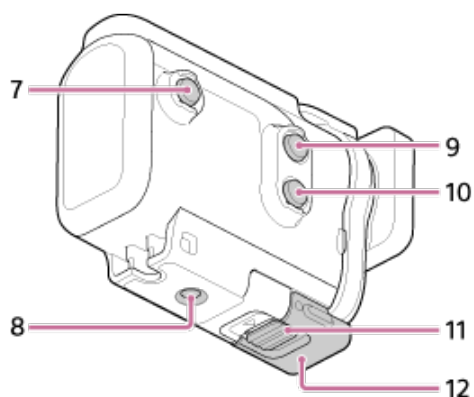
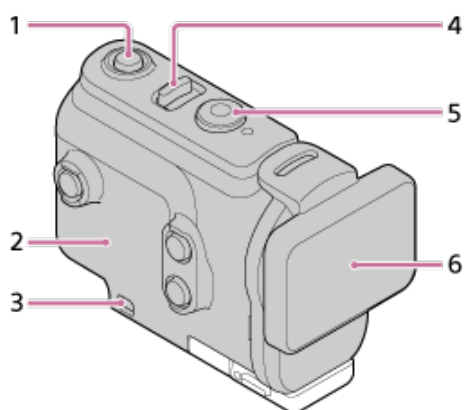
2 When the date and time/area confirmation screen is displayed, press the REC/ENTER button.



Hint

- The area is determined by the time difference in your area and Greenwich Mean Time (GMT). For the time difference, see “List of time differences for world capitals”.
- These settings can be performed on the camera settings. See “Date and time setting”, “Area setting” and “Daytime Saving Time (Summer Time) setting”.

[9] Getting Started | Using the Underwater Housing

Identifying the parts (Underwater Housing)



1.  (on/standby) button
2. Case body
3. Leash attachment hole
4.  (on/standby)/REC HOLD switch
5. REC (movie/still image) button/ENTER (menu execute) button
6. Case cover

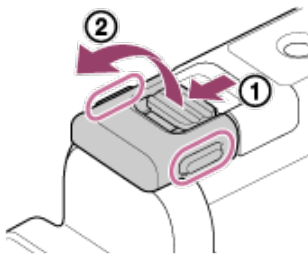
- 7. MENU button
- 8. Tripod screw hole
- 9. UP button
- 10. DOWN button
- 11. Buckle lock
- 12. Buckle
- 13. Lead
- 14. Adaptor
- 15. Waterproof packing

[10] Getting Started | Using the Underwater Housing

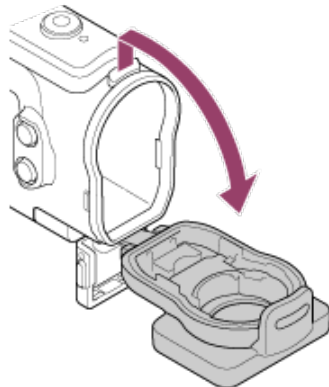
Using the Underwater Housing

By inserting the camera in the Underwater Housing, you can shoot images underwater up to a depth of 60 m (197 feet) for 30 minutes continuously.

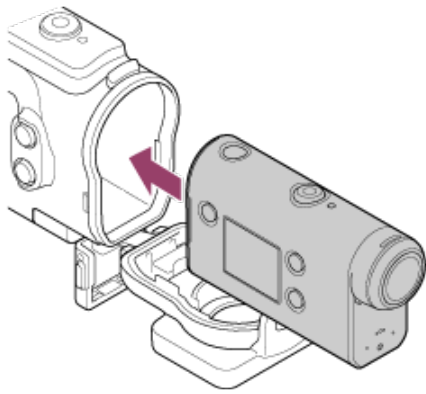
- 1** Slide the buckle lock in the direction of ① and hold it, then hold the circled parts and swing out the buckle in the direction of ②.



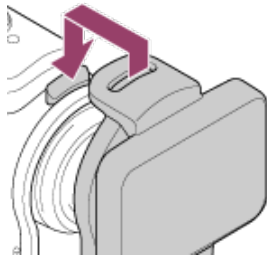
- 2** Open the case cover.



- 3** Insert the camera in the case body.

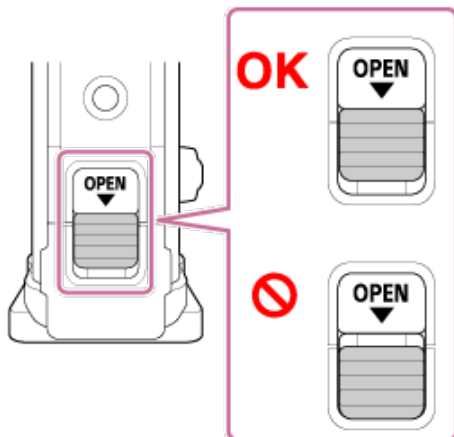
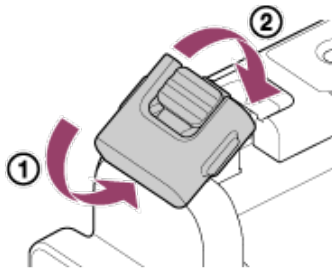


4 Insert the tab of the case body into the slot of the case cover.




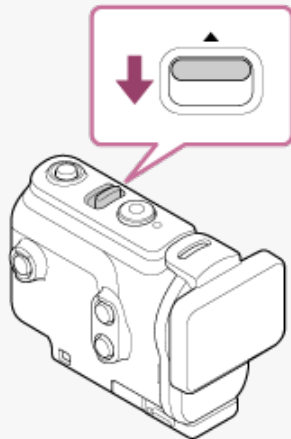
5 Hook the buckle over the tab on the lower part of the case cover ①, then close the buckle in the direction of ②.

- Make sure the buckle and buckle lock are firmly locked. (If you do not lock it securely, water may leak, or the camera may fall out.)



Note

- You cannot operate the  (on/standby) button and REC/ENTER button when the REC HOLD switch is set to the lock position. Release the lock in the direction of the arrow below, before operation.



- You can record audio while the camera is in the Underwater Housing, but the sound level is reduced.
- Thread a suitable cord through the leash attachment hole of the Underwater Housing, then attach the cord to an item you intend to use with the camera.

[11] Getting Started | Using the Underwater Housing

On waterproof performance of the Underwater Housing

- When the camera is inserted in the supplied Underwater Housing, the camera can shoot up to a water depth of 60 m (197 feet) for 30 minutes continuously.
- The waterproof performance is based on the testing standards of our company.
- Do not subject the Underwater Housing to pressurized water, such as from a tap.
- Do not use the Underwater Housing in hot springs.
- Use the Underwater Housing in water that is less than 40°C (104°F).
- Sometimes waterproof performance is lost if the Underwater Housing is subjected to a strong shock such as from being dropped. We recommend the Underwater Housing be inspected at an authorized repair shop (chargeable).
- Waterproof performance in all situations is not guaranteed.

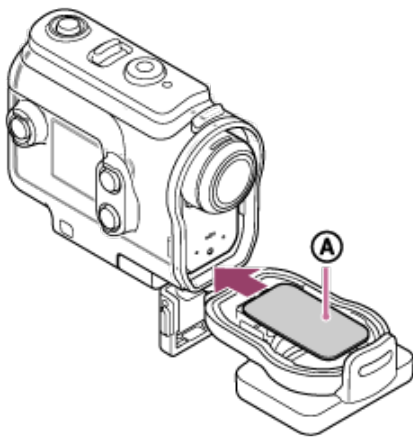
Anti-fog sheet (AKA-AF1 (sold separately))

- Insert the anti-fog sheet indoors with low humidity.
- Insert the anti-fog sheet in the camera a couple of hours before shooting.
- If you do not use the anti-fog sheet, place it in a bag and keep the top sealed.
- By drying the anti-fog sheet sufficiently, you can use it approximately 200 times repeatedly.

Note

- When inserting the anti-fog sheet (AKA-AF1), place the camera into the Underwater Housing, then place the anti-fog sheet in the gap on the bottom of the camera and the Underwater Housing.

If you place the anti-fog sheet before placing the camera, the anti-fog sheet may be sandwiched and make it difficult to take out the camera.



A: Anti-fog sheet

[12] Getting Started | Using the Underwater Housing

Notes on use for the Underwater Housing

- Do not throw the Underwater Housing into the water.
- Avoid using the Underwater Housing under the following situations. In these situations moisture condensation or water leakage may occur and damage the camera.
 - In a very hot or humid place
 - In water hotter than +40°C (104°F)
 - At temperatures lower than -10°C (14°F)
- Do not leave the Underwater Housing under direct sunlight or in a very hot and humid place for a long period of time. If you cannot avoid leaving the Underwater Housing under direct sunlight, be sure to cover the Underwater Housing with a towel or other protection.
- When the camera overheats, it may be automatically turned off or recording may malfunction. To use the camera again, leave it in the cool place for a while to cool down.
- If sun oil is on the Underwater Housing, be sure to wash it off thoroughly using lukewarm water. If the Underwater Housing is left with sun oil on its body, the surface of the Underwater Housing may become discolored or damaged (such as cracks on the surface).

[13] Getting Started | Using the Underwater Housing

Water leakage

In the unlikely event that a malfunction of the Underwater Housing causes damage due to water leakage, Sony does not guarantee against damages to the equipment contained in it (camera, battery pack, etc.) and the recorded contents, nor expenses entailed in the photography.

[14] Getting Started | Using the Underwater Housing

Waterproof packing

The camera uses an waterproof packing to maintain its water resistance. The waterproof packing maintenance is very important. Failure to do waterproof packing maintenance according to the instructions may lead to water leaks and cause the camera to sink.

Inspecting the waterproof packing

- Carefully check that there is any dirt, sand, hair, dust, salt, threads, etc., on the waterproof packing. If found, be sure to wipe off with a soft cloth.
- Lightly run your fingertip around the waterproof packing to check for any invisible dirt.
- Be careful not to leave any cloth fibers on the waterproof packing after wiping it.
- Check the waterproof packing for cracks, skewing, distortion, fine splitting, scratches, embedded sand, etc.
- Inspect the waterproof packing contact surface on the case body in the same way.

[15] Getting Started | Using the Underwater Housing

How to check for water leaks

Before installing the camera, always close the Underwater Housing and immerse it in water to make sure no water leaks in.

When finding a malfunction of Underwater Housing

If a malfunction is found by inspection of the waterproof packing or check for water leaks, stop using the camera immediately and take it to the nearest Sony dealer.

[16] Getting Started | Using the Underwater Housing

Maintenance

-
- After recording in a location with a sea breeze, wash the camera thoroughly in fresh water with the buckle fastened to remove salt and sand, then wipe with a soft dry cloth. It is recommended that you submerge the Underwater Housing in fresh water for about 30 minutes. If it is left with salt on it, metal portions may be damaged or rust may form and cause water leakage.
 - If sun oil is on the Underwater Housing, be sure to wash it off thoroughly using lukewarm water.
 - Wipe the inside of the Underwater Housing with a soft dry cloth. Do not wash it with water.

Be sure to perform the above maintenance each time you use the Underwater Housing. Do not use any type of solvent such as alcohol, benzine or thinner for cleaning, as this might damage the surface finish of the Underwater Housing.

When storing the Underwater Housing

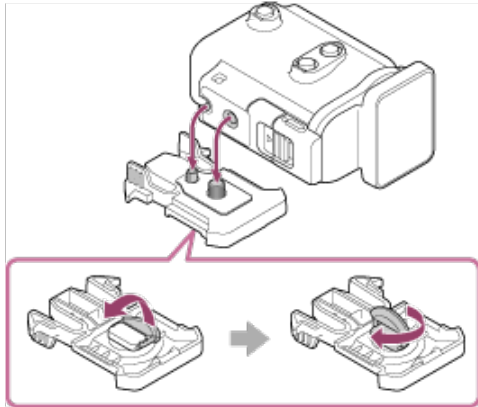
- To prevent deterioration of the waterproof packing, store the Underwater Housing in a cool, well-ventilated location. Do not fasten the buckle.
 - Prevent dust from collecting on the waterproof packing.
 - Avoid storing the Underwater Housing in a cold, very hot or humid place, or together with naphthalene or camphor, as these conditions might damage the Underwater Housing.
-

Using the attachment buckle

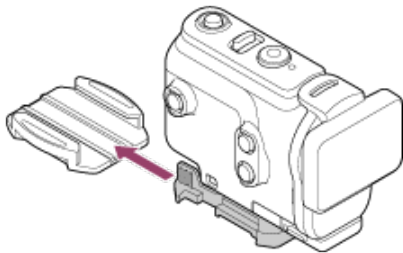
The attachment buckle is used for fixing the camera or Underwater Housing to an optional accessory you intend to use.

The procedure for fixing the attachment buckle to the Underwater Housing is explained here.

- 1** Align the tripod screw hole in the bottom of the Underwater Housing with the tripod screw of the attachment buckle, and fix firmly with the tripod screw.

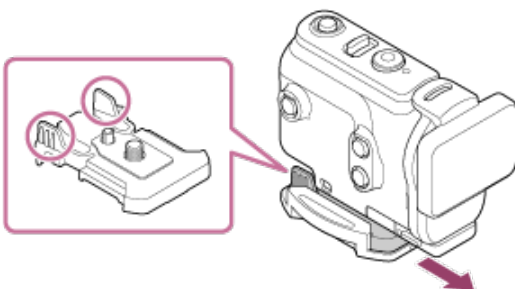


- 2** Attach the attachment buckle to the accessory by sliding it until it clicks into place.



To detach the attachment buckle from the accessory

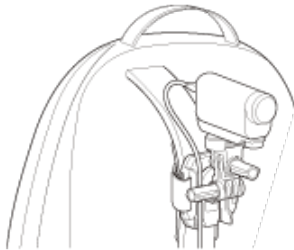
Press and hold the circled parts of the attachment buckle to unlock, then slide it in the opposite direction of step 2.



Example of optional accessory attachment



Universal head mount kit
BLT-UHM1



Backpack Mount
VCT-BPM1

Note

- Thread a suitable leash through the leash attachment hole of the Underwater Housing, then attach the leash to an item you intend to use with the camera.
- Before use, confirm that the screw on the attachment buckle is not loose.

[18] Getting Started | Using accessories

Notes on using the adhesive mount (sold separately)


The adhesive mount is used for fixing the camera to an item you intend to use. The adhesive mount is general term for the attachment buckle, flat adhesive mount, and curved adhesive mount.

- Press firmly on the adhesive portion.
- The adhesive strength is greatest 24 hours after the item has been attached.
- The flat adhesive mount and curved adhesive mount cannot be used again once they are detached from the location surface.
- When detaching, peel off slowly. If peeled off forcibly, the surface on which the mount is fixed might be damaged.
- Before attaching, check the surface of the item to be used. If it is dirty, or dust, moisture or oily substances are attached, adhesive strength may be impaired and the item could detach with slight impact.
- Use the appropriate adhesive mount (flat or curved) for the surface where the camera will be located. If the mount is not suitable for the surface, it may detach by slight impact.
- Before use, confirm that the screw hole on the attachment buckle is not loose, and the flat or curved adhesive mount is securely attached to the surface.


[19] Shooting | Shooting movies and still images

Shooting movies (Movie mode)

Record movies.

1 Press the  (on/standby) button to turn on the power.

2 Press the MENU button.

3 Press the UP button or DOWN button to select * (shooting mode) -  (movie mode), then press the REC/ENTER button.

* The icon of the current selected shooting mode is displayed.

4 Press the REC/ENTER button to start shooting.

To stop shooting

Press the REC/ENTER button during shooting.


Hint

- While the one touch recording is set to ON, if you press the REC/ENTER button when the power is turned off, shooting starts in the previously selected shooting mode.



[20] Shooting | Shooting movies and still images

Shooting still images (Photo mode)

Record still images.

1 Press the  (on/standby) button to turn on the power.

2 Press the MENU button.

3 Press the UP button or DOWN button to select * (shooting mode) -  (photo mode), then press the REC/ENTER button.


* The icon of the current selected shooting mode is displayed.

4 Press the REC/ENTER button to shoot.


[21] Shooting | Shooting movies and still images

Loop recording mode

The loop recording mode keeps recording according to the set time. The camera continuously keeps shooting in the shooting time set by the loop recording time.

1 Press the  (on/standby) button to turn on the power.

2 Press the MENU button.

3 Press the UP button or DOWN button to select * (shooting mode) -  (loop recording mode), then press the REC/ENTER button.

* The icon of the current selected shooting mode is displayed.

4 Press the REC/ENTER button to start shooting.

To stop shooting


Press the REC/ENTER button during shooting.

Hint



- The movies and still images shot before starting loop recording cannot be deleted.
- On the recording media life and the write time
 - If you keep long time recording at a high bit rate in the loop recording mode, the memory card life may be shorter significantly.
If you lower the recording bit rate in long recording, you may minimize bad effects on the memory card life.
 - If you record movies for a long time in the loop recording mode, data fragmentation may occur in the memory card. The camera may take time to write data and automatically stop recording.
Formatting a memory card may improve the recording conditions.
Also, you may minimize bad effects of the data fragmentation by formatting a memory card in advance to increase the free space of memory.
- Loop recording cannot be started if the free space of the media could not secured. In that case, a warning [05-04] appears on the screen.

Time-lapse capture mode

The camera records still images at regular intervals and stops shooting when it reaches the set number.

- 1 Press the  (on/standby) button to turn on the power.


- 2 Press the MENU button.

- 3 Press the UP button or DOWN button to select * (shooting mode) -  (time-lapse capture mode), then press the REC/ENTER button.


* The icon of the current selected shooting mode is displayed.

- 4 Press the REC/ENTER button to start shooting.

To stop shooting

- Shooting stops when the number set in the “Time-lapse shot number” has finished.
- If you select :∞ in the “Time-lapse shot number”, press the REC/ENTER button during shooting.

Hint


- To change the image size, see “Time-lapse capture image size.”
- To change the shooting interval, see “Time-lapse capture interval.”
- To change the shot number, see “Time-lapse shot number.”
- When the time-lapse shot number is set to :∞, the shooting continues until you press REC/ENTER button to stop shooting.
- The still pictures you shot can be downloaded to the computer using “Action Cam Movie Creator” and you can create a time-lapse movie. You can also create a time-lapse movie by downloading the still pictures to a smartphone, etc., using the smartphone/tablet application “Action Cam App”.

Using the zoom

When the digital zoom is set to ON, the camera can zoom up to 3 times for shooting. Regardless the angle setting, you can always enlarge up to 3 times. The image quality will deteriorate due to digital processing.

- The zoom cannot be operated with the camera during movie shooting, loop recording, live streaming, or time-lapse capture.
Operate the zoom from a smartphone connected to the camera or the Live-View Remote.

1 Be sure that  is displayed on the screen and the digital zoom is set to ON.



If  is not displayed, check [Zoom setting].

2 Press the UP button or DOWN button to change the zoom magnification.

- UP button: Telephoto
- DOWN button: Wide angle

A beep will be heard if it is set to ON.

Note

- When the camera is multi connected to the Live-View Remote, pressing the UP button or DOWN button controls the following operations.
 - Operation with the camera
 - When :ON, changes the zoom magnification
 - When :OFF, switches the shooting mode
 - Operation with the Live-View Remote
 - Switches the live view screen of the connected camera
- When zoom is used, the angle of view will be changed.
Before shooting, check the angle of view on PlayMemories Mobile, then start shooting.

[24] Shooting | Shooting movies and still images

Notes on long-time recording






Describes long-time recording.

- When you continue to shoot for a long time, the temperature of the camera rises. If the temperature reaches above a certain level, shooting stops automatically.
Leave the camera for 10 minutes or longer to allow the temperature inside the camera to decrease to a safe level.
 - Under high ambient temperatures, the temperature of the camera rises quickly.
 - When the temperature of the camera rises, the image quality may deteriorate. It is recommended that you wait until the temperature of the camera drops before continuing to shoot.
 - Camera body may get warm with use - this is normal.
-

List of setting items
















The items that can be set differ depending on the shooting mode.




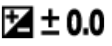





Items you can set in * (shooting mode)

-  : Movie mode
-  : Photo mode
-  : Time-lapse capture mode
-  : Live streaming mode
-  : Loop recording


















* The icon of current selected shooting mode is displayed.

Items you can set in / / / / (shooting settings)

Setting items					
	✓	-	-	-	✓
Image quality setting					
	✓	-	-	-	✓
Movie format					
	-	-	✓	-	-
Time-lapse capture image size					
 5 min	-	-	-	-	✓
Loop recording time					
	-	✓	-	-	-
Still image mode switching					
 8 f 1s	-	✓	-	-	-
Still image shooting interval					
 OFF	-	✓	-	-	-
Self-timer					
 1 s	-	-	✓	-	-
Time-lapse shooting interval					
 300	-	-	✓	-	-
Time-lapse shot number					
 ON	✓	-	-	✓	✓
SteadyShot					

 W	✓	✓	✓	✓	✓
Angle setting					
 OFF	✓	✓	✓	✓	✓
Zoom setting					
 OFF	✓	✓	✓	✓	✓
Flip					
 ± 0.0	✓	✓	✓	✓	✓
AE shift					
 AE-T	-	-	✓	-	-
Time-lapse AE mode					
 SCN	✓	✓	✓	✓	✓
Scene					
AWB	✓	✓	✓	✓	✓
White balance					
 Vivid	✓	-	-	✓	✓
Color mode					
 ON	✓	-	-	✓	✓
Audio recording setting					
 OFF	✓	-	-	✓	✓
Wind noise reduction					

Items you can set in (camera settings)

-  **OFF** : Airplane mode
-  **ON** : Wi-Fi connection setting
-  **OFF** : Wi-Fi Hi power setting *
-  **ON** : Bluetooth setting
-  **ON** : Bluetooth remote controller power setting
-  **FORMAT** : Format
-  **BGM** : Back ground music *
-  **ON** : USB power supply
-  **ON** : Beep
-  **ON** : Beep volume
-  **3** : Lamp setting
-  **OFF** : One touch recording
-  **60s** : Auto power off
-  **NTSC → PAL** : Switching NTSC/PAL
-  **ON** : Date & time setting
-  **GMT** : Area setting
-  **OFF** : Daylight saving time (summer time) setting
- **Ver.** : Version

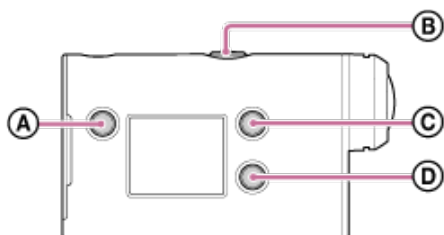
- **RESET** : Resetting the settings

* This setting is only available in some countries and regions.


[26] Changing the Settings | List of setting items


How to set the setting items

You can set items using the following 4 buttons on the camera.



- **A**: MENU button
Displays the menu
- **B**: REC/ENTER button
Executes the menu
- **C**: UP button
Goes to the previous menu
- **D**: DOWN button
Goes to the next menu

1 Press the  (on/standby) button to turn on the power.

To power off, press the  (on/standby) button again.

2 Press the MENU button.

3 Press the UP button or DOWN button to select the icon of the item, then press the REC/ENTER button.





To retry, press , then press the REC/ENTER button.

Image quality setting

You can set the image resolution and frame rate for shooting movies and loop recording. Image qualities that can be set depend on the "movie format" setting.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  /  (shooting settings) - 
(image quality) - setting value, then press the REC/ENTER button.

Hint

- Setting value

The display changes according to NTSC/PAL switching setting.
When NTSC is selected, left side of / is displayed. When PAL is selected, right side of / is displayed.
(Example) 1080 60p PS (NTSC)/1080 50p PS (PAL)

When movie format is set to **MP4** (recording in MP4)

- **1080 60p PS / 1080 50p PS**

Recorded image: Highest resolution (smooth image recorded at 2× frame rate)

Resolution: 1920×1080

Imaging frame rate^{*1}: 60p/50p

Playback frame rate^{*1}: 60p/50p

- **1080 30p HQ / 1080 25p HQ**

Recorded image: Highest resolution

Resolution: 1920×1080

Imaging frame rate^{*1}: 30p/25p

Playback frame rate^{*1}: 30p/25p

- **720 30p STD / 720 25p STD**

Recorded image: High resolution

Resolution: 1280×720

Imaging frame rate^{*1}: 30p/25p

Playback frame rate^{*1}: 30p/25p

- **720 120p HS / 720 100p HS** ^{*2,*4}

Recorded image: High speed recording (smooth image recorded at 4× frame rate) ^{*3}

Resolution: 1280×720

Imaging frame rate^{*1}: 120p/100p

Playback frame rate^{*1}: 120p/100p ^{*5}

When movie format is set to **HD** (recording in XAVC S)

- **1080 60p 50M / 1080 50p 50M**

Recorded image: XAVC S 50 Mbps

Resolution: 1920×1080

Imaging frame rate^{*1}: 60p/50p

^{*1}

Playback frame rate : 60p/50p

- **1080 30p 50M / 1080 25p 50M**

Recorded image: XAVC S 50 Mbps

Resolution: 1920×1080

Imaging frame rate^{*1}: 30p/25p

Playback frame rate^{*1}: 30p/25p

- **1080 24p 50M (only when switching NTSC/PAL is set to NTSC)**

Recorded image: XAVC S 50 Mbps

Resolution: 1920×1080

Imaging frame rate: 24p

Playback frame rate: 24p

*1 Frame rate depends on the NTSC/PAL setting.

*2 SteadyShot is disabled.

*3 Action Cam Movie Creator converts the frame rate to 60p/50p and plays back images at standard speed. It also allows you to specify the smooth slow-motion playback section for editing.

*4 The angle of view is fixed to  W.

*5 Depending on your device and software, images are played back at 60p/50p.

Note

- Continuous movie shooting time is approximately 13 hours.
- When you play images recorded in high speed, the frame rate will be 60p/50p, and playback will be standard speed.

[28] Changing the Settings | Shooting settings

Movie format

Select the movie format for shooting movies or loop recording.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  /  (shooting settings) - **MP4** (movie format) - setting value, then press the REC/ENTER button.

- **HD** : Records a HD (XAVC S) movie.

Select the desired image quality from the image quality setting.



- **MP4** : Records an MP4 movie.



Select this format if you want to transfer to your smartphone or upload to a website.

Time-lapse capture image size

You can set the image size of still images shot during time-lapse capture.

1 Press the MENU button.



2 Press the UP button or DOWN button to select  (time-lapse capture mode setting) -  (time-lapse capture image size) - setting value, then press the REC/ENTER button.






-  (Shoots still images in 4K (3840 x 2160) (image size 8.3 M))
-  (Shoots still images in HD (1920 x 1080) (image size 2.1 M))

Loop recording time

Set the time range (media area) for loop recording. The range can be set after setting the camera to the loop recording mode.

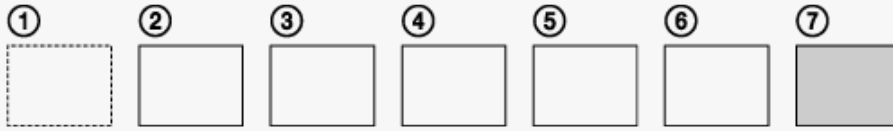
1 Press the MENU button.

2 Press the UP button or DOWN button to select  (loop recording setting) -  5 min (loop recording time) - setting value, then press the REC/ENTER button.

-  :5 min (Sets the loop recording time to 5 minutes. The size of created movie is 1 minute per file.)
-  :20 min (Sets the loop recording time to 20 minutes. The size of created movie is 5 minutes per file.)
-  :60 min (Sets the loop recording time to 60 minutes. The size of created movie is 15 minutes per file.)
-  :120 min (Sets the loop recording time to 120 minutes. The size of created movie is 15 minutes per file.)
-  :∞min (Keeps recording continuously up to the limit of free space of a memory. The size of created movie is 15 minutes per file.)

Hint

- When loop recording time is set to 5 minutes



- The movie files of one minute per file are created in order.
- When the recording time exceeds five minutes, the sixth movie file (6) is created.

Before creating the seventh file (7), the camera deletes the first movie file (1) and keeps recording.

- Estimated shooting time necessary for loop recording (free space of a memory)
 - Addition to the set loop recording time, you need estimated shooting time (free space of a memory) for 2 files.
 - (Example) :20min is set

20 min. + 5 min. + 5 min. = 30 min. or more is needed.

* You can check the estimated shooting time by setting the shooting mode to "Movie mode."
 * Even you have a free space of a memory card according above estimated time, a warning [05-04] may display on the screen due to image quality setting or movie format setting.
 In this case, increase more free space of a memory card or change the image quality setting or movie format setting.

[31] Changing the Settings | Shooting settings

Still image mode switching

You can set the mode for still image recording.

1 Press the MENU button.

2 Press the UP button or DOWN button to select (still image shooting setting) - (still image mode switching) - setting value, then press the REC/ENTER button.

- : Single shooting (Image size 11.9M (angle setting:)/7.0M (angle setting:)

Shoots a single still image.

- : Burst shooting (Image size 11.9M (angle setting:)/7.0M (angle setting:)

Shoots at the interval set in the 8f1s (still image shooting interval)

- : Motion Shot LE (Image size 3.0M)

Generates a still image from the still images continuously shot at the interval set in the 8f1s (still image shooting interval).

To shoot successfully in Motion Shot LE mode

Try the following shooting methods.

- Stabilize the camera to prevent camera shake.
- Use the remote control function with a smartphone or Live-View Remote, or the self-timer function to prevent camera shake for better results.

- Make sure that the moving objects are not too large or too many.
- Shoot in a bright location and avoid changes in brightness.

To shoot successfully in burst shooting mode

Try the following shooting methods.

- Stabilize the camera to prevent camera shake.
- Use the remote control function with a smartphone or Live-View Remote, or the self-timer function to prevent camera shake for better results.

Note

- If automatic generation in Motion Shot LE mode fails, [05-06] is displayed on the display panel. Depending on the display timing of [05-06], the image may not be saved.
- After shooting with Burst Shooting or Motion Shot LE mode, there is a processing time during which the next operation cannot be operated.
- Only one still image can be transferred to the smartphone.



(In burst shooting mode, the last still image can be transferred. In Motion Shot LE mode, the generated image can be transferred.)


[32] Changing the Settings | Shooting settings

Still image shooting interval


You can select the continuous shooting setting for using burst shooting or Motion Shot LE.

1 Press the MENU button.


2 Press the UP button or DOWN button to select  (still image shooting setting) -  8f 1s - setting value, then press the REC/ENTER button.

-  8f 1s (Records a total of 10 still images in 1.25 second at a speed of 8 still images per second)

Suitable for shooting fast-moving objects.

-  5f 2s (Records a total of 10 still images in 2 seconds at a speed of 5 still images per second)

Suitable for action shots of objects.

-  2f 5s (Records a total of 10 still images in 5 seconds at a speed of 2 still images per second)

Suitable for shooting slow-moving objects.

Note

- “8f1s”, “5f2s”, and “2f5s” are estimates of the maximum speed. The maximum speed may not be reached depending on the shooting conditions.




[33] Changing the Settings | Shooting settings

Self-timer


You can use self-timer when shooting still images.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (still image shooting setting) -  OFF (self-timer) - setting item, then press the REC/ENTER button.

-  :OFF (Does not use self-timer)
-  :2s (Sets the self-timer to 2-second)
-  :10s (Sets the self-timer to 10-second)

Note



- You cannot use self-timer when recording movies.
- The self-timer function is enabled until it is cancelled. Set the self-timer to  :OFF after you finish using it.





[34] Changing the Settings | Shooting settings



Time-lapse shooting interval

You can set the interval of the time-lapse shooting.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (time-lapse capture mode setting) -  1s (time-lapse shooting interval) - setting value, then press the REC/ENTER button.

-  :1s (Continues to record still images at about 1-second intervals)
-  :2s (Continues to record still images at about 2-second intervals)
-  :5s (Continues to record still images at about 5-second intervals)
-  :10s (Continues to record still images at about 10-second intervals)

-  :30s (Continues to record still images at about 30-second intervals)
-  :60s (Continues to record still images at about 60-second intervals)

Note

- The first photo is recorded immediately when recording starts, without waiting for the completion of the set interval. The second and subsequent still images are recorded at the set intervals.
- Depending on your shooting condition, the speed may not reach the set speed.





[35] Changing the Settings | Shooting settings

Time-lapse shot number

You can set the number of still images shot during time-lapse capture.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (time-lapse capture mode setting) -  300 (time-lapse shot number) - setting value, then press the REC/ENTER button.

-  :300 (Shoots 300 still images)
-  :600 (Shoots 600 still images)
-  :900 (Shoots 900 still images)
-  :∞ (Continue to shoot still images until you stop shooting)

Hint





- The maximum number of continuous shots is 40,000.



[36] Changing the Settings | Shooting settings

SteadyShot

You can activate the camera-shake reduction when shooting movie.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  /  /  (shooting settings) -  ON (SteadyShot) - setting value, then press the REC/ENTER button.

-  ON (Uses the SteadyShot for shooting)
-  OFF (Does not use SteadyShot function)

Note







- This function is not effective in the following settings.
 - When the image quality setting mode is set to the high speed recording quality (frame rate is more than 120p)
 - In the still image mode
 - In the time-lapse capture mode



[37] Changing the Settings | Shooting settings

Angle setting

You can configure the angle of view of the camera for shooting.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  /  /  /  /  (shooting settings) -  W (angle setting) - setting value, then press the REC/ENTER button.

-  W : Wide (Records with a wide angle of view)
-  N : Narrow (Records with a narrow angle of view)

Note







- The angle of view is fixed to  W when set to high speed shooting.



[38] Changing the Settings | Shooting settings

Zoom setting

You can set whether to use the digital zoom.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  /  /  /  /  (shooting settings) -  OFF (zoom setting) - setting value, then press the REC/ENTER button.







-  ON (Uses the digital zoom function)
-  OFF (Do not use the digital zoom function)



[39] Changing the Settings | Shooting settings

Flip

You can record the image upside down. This function is useful when the camera is attached upside down.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  /  /  /  /  (shooting settings) -  OFF (flip) - setting value, then press the REC/ENTER button.







-  ON (Flips the image vertically and swaps the left and right sound channels)
-  OFF (Does not flip the image)



[40] Changing the Settings | Shooting settings

AE shift

You can adjust the exposure according to your preference.

1 Press the MENU button.


2 Press the UP button or DOWN button to select  /  /  /  /  (shooting settings) -  ±0.0 (AE shift) - setting value, then press the REC/ENTER button.

-  ±0.0 (Does not use the AE shift)
-  +0.3 (Uses the AE shift (Set +0.3EV for example))

Time-lapse AE mode

Set the adjustment method of automatic exposure (AE) during time-lapse capture.

1 Press the MENU button.


2 Press the UP button or DOWN button to select  (time-lapse capture mode setting) - **AE-T** (time-lapse AE mode) - setting value, then press the REC/ENTER button.


- **AE-T** (Adjusts the exposure for each shot. Smoothly follows changes in brightness)
- **AE-L** (Sets a fixed exposure when shooting starts)

Scene


You can select suitable image quality according to the shooting scene.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (shooting settings) - **SCN N** (scene) - setting value, then press the REC/ENTER button.

- **SCN N** (Shoots images in the standard quality)
- **SCN ** (Shoots images in an image quality suitable for underwater shooting)




Note




- If you select **SCN **, you cannot set the white balance.
 - Use the supplied Underwater Housing for underwater shooting.
-

White balance

You can adjust the color balance to the recording environment.


1 Press the MENU button.

2 Press the UP button or DOWN button to select  /  /  /  /  (shooting settings) - **AWB** (white balance) - setting value, then press the REC/ENTER button.

- **AWB** (Adjusts the white balance automatically so that the colors appear natural)
- **WB ** (Adjusts for the color temperature of the light source (from 2500K to 9900K))
- **WB ** (Uses the setting acquired from **SET**)
- ** SET** (Acquires the base white color for shooting under the light source) *

* Place a white reference object under the same lighting conditions as the subject and press the REC/ENTER button.





Note





- If scene is set to **SCN **, you cannot set the white balance.

Color mode



You can change the image color tone for movie shooting/loop recording/Live streaming.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  /  /  (shooting settings) - **Vivid ** (color mode) - setting value, then press the REC/ENTER button.

- ** ** (Records in natural colors)
- ** ** (Records in vivid colors)





Note



- If you shoot with ** **, the image contrast may appear low. This is not a malfunction.

Audio recording setting

You can turn the audio recording setting ON/OFF.

1 Press the MENU button.





2 Press the UP button or DOWN button to select  /  /  (shooting settings) -  **ON** (audio recording) - setting value, then press the REC/ENTER button.



-  **ON** (Records sound when shooting a movie)
-  **OFF** (Does not record sound when shooting a movie)

Wind noise reduction

This function automatically cuts low-range wind noise while recording audio using the built-in microphone.

1 Press the MENU button.



2 Press the UP button or DOWN button to select  /  /  (shooting settings) -  **OFF** (wind noise reduction) - setting value, then press the REC/ENTER button.



-  **ON** (Cuts low-range to reduce wind noise)
-  **OFF** (Does not reduce wind noise)

Airplane mode

When you are in an airplane or other restricted areas, you can set the camera to temporarily disable all functions related to the wireless applications such as Wi-Fi/Bluetooth, etc. If you turn on airplane mode, an airplane mark will be displayed on the display panel.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (camera settings) -  OFF (airplane mode) - setting value, then press the REC/ENTER button.


- :ON (The Wi-Fi/Bluetooth function is disabled. Select this when you are on board an airplane)
- :OFF (The Wi-Fi/Bluetooth function is enabled)





[48] Changing the Settings | Camera settings

Wi-Fi connection setting

You can operate the camera by using compatible devices (Live-View Remote, smartphone, etc.) connected to the camera via Wi-Fi.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (camera settings) -  ON (Wi-Fi connection setting) - setting value, then press the REC/ENTER button.

- :ON (Operates a single camera with the compatible device)
- :OFF (Does not operate a camera with the compatible device)
- :  (Operates multiple cameras with the compatible device)

3 Select a shooting mode ( /  /  / ).

4 Connect the camera to the compatible device via Wi-Fi.

5 Operate the camera with the compatible device.

Note

- Battery consumption is quicker when you operate the camera with the compatible device.
- The camera should only be connected to the devices described in "Using the camera connected to other devices via Wi-Fi" via Wi-Fi, and should not be connected to other Wi-Fi access points. If you choose to connect the camera to other Wi-Fi access points, you do so at your own risk. In such cases, the camera may be subject to unauthorized access, and any communication could be intercepted.

Wi-Fi Hi power setting



When you switch the Wi-Fi power setting, the communication distance between the camera and a Live-View Remote* connected via Wi-Fi can be extended by about two times, so you can operate the camera with the Live-View Remote from a distance.

This setting is only available in some countries and regions.



* When using RM-LVR3.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (camera settings) -  OFF (Wi-Fi Hi power setting) - setting value, then press the REC/ENTER button.

-  ON (High power mode. The communication distance is longer than in standard mode)
-  OFF (Standard mode)


Note





- When set to ON, depending on the physical environment and the distance between the camera and the Live-View Remote, you may not be able to use the Live-View Remote to turn the camera on/off. In such cases, operate the Live-View Remote closer to the camera until  on the screen changes to . Depending on the physical environment and connected device, the communication distance will be changed.
- When the Wi-Fi Hi power setting is set to ON, the battery is consumed faster than when set to OFF.
- The Wi-Fi icon may not be displayed on the screen immediately after switching the Wi-Fi Hi power setting, but the icon of the switched setting will be displayed after a moment.
- This function cannot be used when the Wi-Fi setting is OFF or when airplane mode is ON.

Bluetooth setting

When the camera and corresponding devices have Wi-Fi connections, the camera can communicate with the corresponding devices via Bluetooth. The mutual registration process that allows the devices (the camera and corresponding device) to communicate with each other via Bluetooth is called "pairing." Once pairing is complete, these devices can automatically communicate via Bluetooth when they are connected again.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (camera settings) -  ON (Bluetooth setting) - setting value, then press the REC/ENTER button.

- :ON (Bluetooth communication enabled.  or  is displayed on the screen.)
- :OFF (No Bluetooth communication. Bluetooth icon does not appear on the screen.)



Pairing with the smartphone

Perform the following operations with the camera and a smartphone that is connected via Wi-Fi. For connecting the camera to your smartphone, see “Connecting to your smartphone”.

1. Turn on the Bluetooth setting on the smartphone.
2. Start PlayMemories Mobile application on the smartphone.
3. Use the application to turn on the remote power function of the camera.
4. Use the application to select the camera to be connected.
5. On the application screen that appears, allow pairing for the selected camera.
6. Check the screen to be displayed and the sound prompting the pairing setting permission of the selected camera, then press the REC/ENTER button on the camera.

After pairing is complete, a sound is heard.

Hint

- The default Bluetooth setting for the camera is ON. When the Live-View Remote (RM-LVR3) is connected to Wi-Fi for the first time, Bluetooth pairing with the camera is automatically completed, and the  icon displayed on the camera screen switches to .

Note



- When airplane mode is ON, the Bluetooth icon does not appear on the screen, and Bluetooth communications are disabled, even if the Bluetooth setting is ON.
- The camera can be paired with up to 15 Bluetooth devices. If a 16th device is paired with the camera, the pairing information of the first registered device is deleted.
- When the camera is communicating via Bluetooth, another device cannot be paired.
- When the camera is initialized, the pairing information is also reset. To pair again, the pairing information of the connected compatible device should also be deleted.
- When pairing is performed while shooting with the camera, a sound will not be heard.



[51] Changing the Settings | Camera settings

Bluetooth remote controller power setting

A device that has already been paired with the camera is able to turn the camera on and off.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (camera settings) -  (Bluetooth remote controller power setting) - setting value, then press the REC/ENTER button.

-  (Ability to turn the camera on/off with a corresponding device is enabled.)
-  (Ability to turn the camera on/off with a corresponding device is disabled.)

To enable this function, it is necessary to turn on the above setting and the Bluetooth setting of both the camera and the corresponding device in advance.

For setting and operating the Live-View Remote (RM-LVR3), refer to “Bluetooth remote controller power setting” in the help guide of the Live-View Remote.

http://rd1.sony.net/help/cam/1650/h_zz/

For setting up and operating a smartphone, see below. Also, check the latest information and function information of the PlayMemories Mobile as well.

<http://www.sony.net/pmm/>

Bluetooth remote controller power setting for smartphones

Perform the following operations with the camera and a smartphone that is connected via Wi-Fi. For connecting the camera to your smartphone, see “Connecting to your smartphone”.

1. Turn on the Bluetooth setting on the smartphone.
2. Start PlayMemories Mobile application on the smartphone.
3. Use the application to turn on the remote power function of the camera.
4. Use the application to select the camera to be connected.
5. On the application screen that appears, allow pairing for the selected camera.
6. Check the screen to be displayed and the sound prompting the pairing setting permission of the selected camera, then press the REC/ENTER button on the camera.

After pairing complete a sound is heard and power operation of the camera is enabled.

Operating the power of the camera with a smartphone

To turn the camera on/off, start PlayMemories Mobile and tap [Camera Remote Power ON/OFF].

Hint

- If the camera and Live-View Remote “RM-LVR3” are connected, the power of the camera is turned on when the power of the Live-View Remote is turned on. When the camera has a multi connection with a Live-View Remote “RM-LVR3”, up to five cameras can be turned on simultaneously when the Live-View Remote is turned on.

Note

- This function cannot be used when the airplane mode is ON.
- Even if camera is turned off, the corresponding device will remain on.
- Even if the camera is turned off, battery will consume when this function is turned on. After use, remove the battery from the camera for storage.

Format

Formatting is the process of deleting all images in the memory card, and restoring the memory card to its initial state.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (camera settings) -  (format), then press the REC/ENTER button.

Formatting starts when you select **OK**, then press the REC/ENTER button. The progress bar appears.

Formatting cancels when you select , then press the REC/ENTER button.

The formatting completes when a screen with check mark is displayed. Press the REC/ENTER button to return to the previous MENU.

Note

- Save important images before formatting. The protected data is also initialized.
- Do not perform any of the following operations while formatting.
 - Press a button.
 - Eject the memory card.
 - Connect/disconnect a cable.
 - Insert/remove the battery pack.


[53] Changing the Settings | Camera settings



USB power supply

When connecting the camera to a computer or USB device with the micro USB cable (supplied), the camera receives power from the connected device.

- The USB power supply can be available by selecting ON from the following operation.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (camera settings) -  (USB supply power) - setting value, then press the REC/ENTER button.

-  :ON (Power received when connected by the micro USB cable)
-  :OFF (No power received when connected by the micro USB cable)


Using the camera with an external power supply

The camera is compatible with the following external power supply.

- External power supply of 1.5 A

Receives USB power from the connected device

Note



- If you change the USB power supply setting while the micro USB cable is connected, disconnect the cable, then reconnect.
- If you turn on the camera while charging the battery pack, charging stops and power is supplied to the camera from the device connected via USB.
- You can shoot images using a USB power supply. However, the battery pack is not charged simultaneously.
- When using the camera with an external power supply, check that the icon () indicating that USB power is being supplied is displayed on the screen.
- While USB power is being supplied, the continuous movie shooting time may be shortened due to the camera heating up.
- Even if the AC adaptor is connected to the camera, the battery will not be charged if the camera is turned on.

[54] Changing the Settings | Camera settings

Beep

You can set the audible notification of operations ON/OFF.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (camera settings) -  **ON** (beep) - setting value, then press the REC/ENTER button.



- **♪:ON** (All operation sounds are enabled)
- **♪:LIMIT** (Operation sounds are emitted for the following operations only)
 - Power turned on
 - Recording started
 - Recording stopped
 - Shutter pressed
 - A disabled operation was selected or an error occurred
 - Connection confirmation beep
- **♪:OFF** (All operation sounds are disabled)

Beep volume

You can set the beep volume when operating the camera.

1 Press the MENU button.

2 Press the UP button or DOWN button to set  (camera settings) -  (beep volume) - setting value, then press the REC/ENTER button.

-  (Loud beep volume)
-  (Soft beep volume)

Hint




- When the beep is set to OFF, this function cannot be set.

Lamp setting

To prevent the lamp light from reflecting off of the subject, you can limit the number of REC lamps that turn on when recording.

1 Press the MENU button.

2 Press the UP button or DOWN button to set  (camera settings) -  3 (lamp setting) - setting value, then press the REC/ENTER button.

-  3 (All of the REC lamps light up)
-  1 (Only the REC lamp of connector cover lights up)
-  OFF (The REC lamps do not light up)

Hint



- Change the lamp setting for the camera if objects such as glass may be reflected on the shooting direction.



One touch recording

Press the REC/ENTER button of the camera while the camera is turned off, and the camera will turn on and start recording.

This function is available when the shooting mode is movie, time-lapse capture, loop recording, or live streaming.

1 Press the MENU button.

2 Press the UP button or DOWN button to set  (camera settings) -  OFF (One touch recording) - setting value, then press the REC/ENTER button.

-  :ON (One touch recording enabled)
-  :OFF (One touch recording disabled)

Note




- With One touch recording, the recording will start in the shooting mode that was set immediately before the power was turned off.

Auto power off

You can change the setting of the auto power off function.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (camera settings) -  60s (auto power off) - setting value, then press the REC/ENTER button.

-  : 20s (Turns the power off after about 20 seconds)
-  : 60s (Turns the power off after about 60 seconds)
-  : OFF (Does not turn off automatically)

Note

- Auto power off is not available in the following situations.
 - When recording data to media

When shooting movies, or shooting in time-lapse capture mode

- During movie playback
- When Wi-Fi connection is being established, Wi-Fi remote control is connected, an image is being uploaded to a smartphone, or live streaming
- Supplying power from a connected USB device
- Connecting a mass storage device
- In the following cases, even if you have selected **AUTO OFF : 20s** or **AUTO OFF : 60s** in the auto power off function, the time that elapses before the power turns off will be extended.
 - While adjusting the menus.
 - While playing back still images

[59] Changing the Settings | Camera settings

Switching NTSC/PAL

You can select the NTSC/PAL setting, depending on the TV system of the country or region where you use the camera.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (camera settings) - **NTSC → PAL / PAL → NTSC** (switching NTSC/PAL), then press the REC/ENTER button.

NTSC → PAL (Switches the camera from NTSC to PAL)

PAL → NTSC (Switches the camera from PAL to NTSC)

- When you try to change the current setting, the confirmation screen appears. Go to step 3.

3 Press the UP button or DOWN button to select **OK**, then press the REC/ENTER button.


- When the setting change is completed, the camera restarts automatically.

[60] Changing the Settings | Camera settings

Date & time setting

You can set the year/month/day.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (camera settings) -  (date & time setting), then press the REC/ENTER button.

- The year/month/day setting screen will be displayed.

3 Set the year/month/day.

Press the UP button or DOWN button to set the year, then press the REC/ENTER button. The cursor moves to month so, repeat the same operation to set the month and day.

- The time setting screen appears.

4 Set the time by repeating the same procedure as step 3.

5 Press the REC/ENTER button.

- The time is set and the display returns to the previous menu.

Note



- Select 0:00 for midnight, 12:00 for noon.
- The display order of year/month/day cannot be changed.

[61] Changing the Settings | Camera settings

Area setting

You can adjust the clock on the camera to match the time in your area without stopping the clock. The area is determined by the time difference from Greenwich Mean Time (GMT). See "The list of time differences for world capitals".

1 Press the MENU button.



2 Press the UP button or DOWN button to set  (camera settings) -  GMT (area setting) - time difference, then press the REC/ENTER button.



3 Confirm the time on the displayed screen, then press the REC/ENTER button.

Daylight Saving Time (Summer time) setting

Sets whether to reflect daylight saving time (summer time) in the date and time settings.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (camera settings) -  OFF (daylight saving time (summer time) setting) - setting value, then press the REC/ENTER button.

- :ON (Sets the Daylight Saving Time (summer time))
- :OFF (Does not set the Daylight Saving Time (summer time))

Version

The software version of the camera can be displayed.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (camera settings) - Ver. (version), then press the REC/ENTER button.


Resetting the settings

You can reset the settings to their defaults.

1 Press the MENU button.

2 Press the UP button or DOWN button to select  (camera settings) - **RESET** (resetting the settings), then press the REC/ENTER button.

3 Select **OK**, then press the REC/ENTER button.

- To cancel resetting, select , then press the REC/ENTER button.
- The camera automatically restarts when resetting is complete.

Note

- When you reset the settings, the Bluetooth pairing information will also be reset. To reconnect, delete the pairing information on the connected device before connecting.

[65] Viewing

Viewing using the Live-View Remote

Play back images recorded with the camera using the Live-View Remote.

The procedure below explains how to play back movies using the Live-View Remote "RM-LVR3". The display differs depending on the Live-View Remote you are using.

1 Press the MENU button on the remote control while the camera is in shooting mode.

2 Press the UP button or DOWN button on the remote control to select  (playback using the remote control), then press the REC/ENTER button of the remote control.


3 Select the desired image by pressing the UP button or DOWN button.

4 Press the REC/ENTER button of the remote control to start playback.

Press the REC/ENTER button again to pause playback.

Returning to the shooting mode

To return to shooting mode, perform either operation.

- Press the MENU button on the Live-View Remote to select  (shooting mode), then press the REC/ENTER button of the remote control.
- Press the REC/ENTER button on the camera.

Note

- The camera cannot play back audio.
- The image frame rate displayed on the LCD screen when using the remote control for playback will change according to the Wi-Fi communication status of the camera and remote control. This frame rate is different from the one used when shooting.

Hint

- You can fast-forward by pressing the UP button of the remote control and fast-rewind by pressing the DOWN button.

[66] Viewing

Delete

Unwanted images in the memory card are deleted by using a smartphone installed with PlayMemories Mobile or the Live-View Remote.

Refer to the instruction manual on the website for how to operate PlayMemories Mobile or the Live-View Remote.

Note

- If you want to delete all images in the memory card, format the memory card in the camera.

[67] Create your movie | Highlight Movie Maker

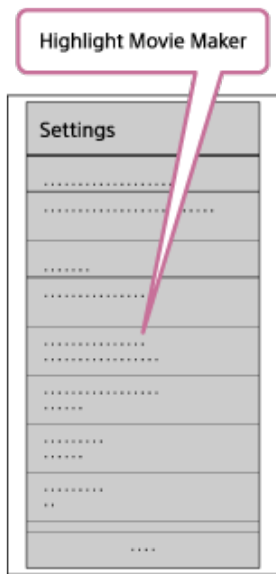
Creating the highlight movie

The camera detects characteristic scenes from the movies shot with the camera and creates the movie composed of them (highlight movie) automatically. You can copy highlight movies with your smartphone. By operating your smartphone, you can start the highlight movie creation and make the creation settings.

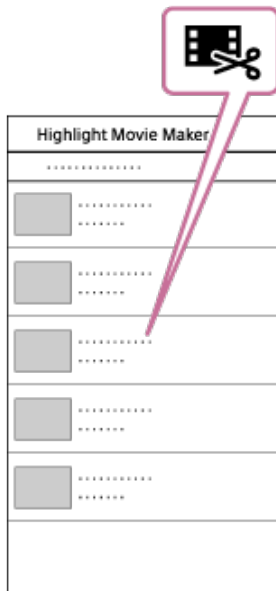
1 Open the PlayMemories Mobile of your smartphone and connect to the camera via Wi-Fi.

Refer to "Connecting to your smartphone" to connect the camera to your smartphone.

2 Select "Highlight Movie Maker" in "In-Camera Application Setting" from the "Settings" of the PlayMemories Mobile.



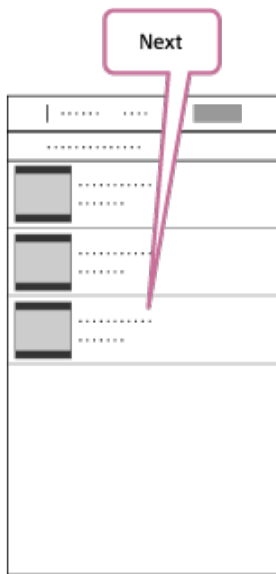
3 Press the  icon to select a content format that you want to add in a highlight movie.



4 Select a movie that you want to add in a highlight movie from the date or the content list, then press the "Next" button.

The highlight movie creation starts.

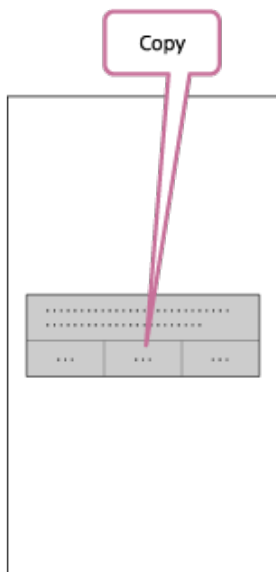
- You cannot select MP4 and XAVC S contents at the same time.
- You can select up to 100 movies by date or file.
- If you disconnect Wi-Fi connection of the camera and your smartphone while creating the highlight movie, the camera continues to create movie.
- Press the REC/ENTER button of the camera to finish creating the highlight movie.



Hint

- Use the "Settings" menu in advance to change the movie length, BGM* and the audio mix.
- * This setting is only available in some countries and regions.

5 After creating the highlight movie, you can "Copy" it to your smartphone.



Hint

- Use the movie player application of a smartphone to play the copied highlight movie.

Note

- Update PlayMemories Mobile to the latest firmware version in advance.
- The created highlight movie's format is MP4.

- The following contents are not compatible with the highlight movie.
 - XAVC S HD 24p
 - High speed recording
- The operation methods and display screens for the application are subject to change without notice by future.
- See more details about "PlayMemories Mobile" from the following website. (<http://www.sony.net/pmm/>)
- Background music preinstalled on this product have officially been contracted between Sony and licensors. Movies containing the said background music are allowed for private use, duplication, distribution, or public transmission only when the said movies are intended for nonprofit purposes and without receiving any kind of consideration from the person to whom the said movies are presented to.

[68] Create your movie | Highlight Movie Maker

Importing the BGM

By default, the camera includes eight songs that you can use as background music while playing back a highlight movie.

When you use the Action Cam Movie Creator connecting the camera with your computer, you can replace the background music of the camera with the music of your computer.

Install the Action Cam Movie Creator to your computer in advance.

1 Press the MENU button.

2 Press the UP button or DOWN button to select the  (camera settings) -  BGM (BGM) - , then press the REC/ENTER button.

3 Connect the camera to the computer with the supplied micro USB cable.




The Music Transfer of Action Cam Movie Creator starts automatically.

4 Use the Music Transfer of Action Cam Movie Creator to replace the BGM.

To preview the BGM

Refer to the following website for how to preview the pre-installed background music in the camera. http://guide.d-imaging.sony.co.jp/mt_bgm/index.html

To delete all BGM

1. Press the MENU button.
2. Press the UP button or DOWN button to select the  (camera settings) -  BGM (BGM) -  **FORMAT** (format), then press the REC/ENTER button.
OK appears when delete finishes.

Hint

- If the camera and the Action Cam Movie Creator cannot be connected, execute the procedure in "To delete all BGM."

Note

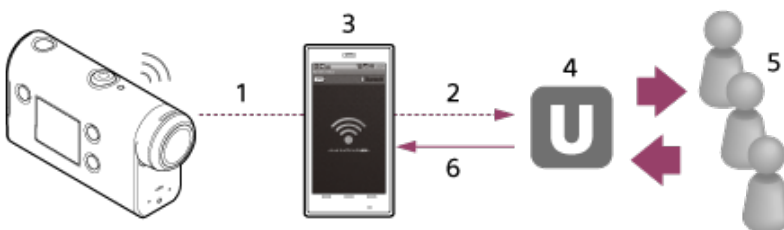
- This setting is only available in some countries and regions.
- Background music preinstalled on this product have officially been contracted between Sony and licensors. Movies containing the said background music are allowed for private use, duplication, distribution, or public transmission only when the said movies are intended for nonprofit purposes and without receiving any kind of consideration from the person to whom the said movies are presented to.

[69] Stream real-time movie to a movie streaming site | Live Streaming with your camera (Real time movie streaming)

Live Streaming

You can deliver movies in real-time via video sharing websites such as Ustream by using a Wi-Fi router or smartphone that can tether the camera. You can also send messages to your registered SNS to announce that you have started Live Streaming of video*.

* Registration to a video streaming site or SNS is required.



1. Wi-Fi
2. 3G/LTE
3. Tethering mode
4. Ustream
5. Viewers
6. Comments from viewers

The following settings must be configured for live streaming.

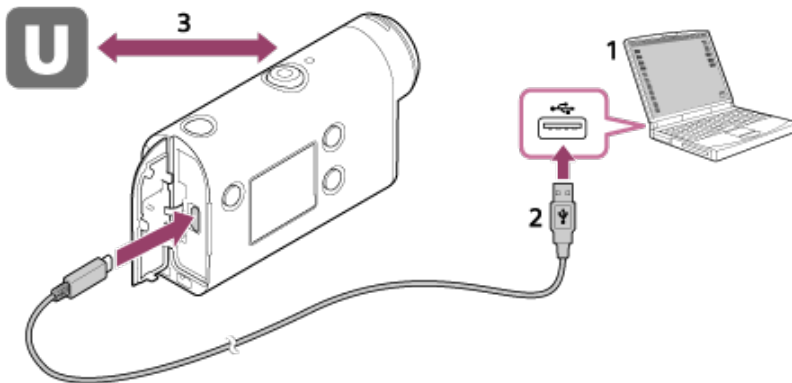
Set the following distribution settings in the live streaming settings of the camera:

- User registration to Ustream
- A smartphone (capable of tethering) or a Wi-Fi network environment

* For more information about smartphone tethering settings or Wi-Fi network settings, refer to the operating instructions supplied with the smartphone or network service. For further details about the network environment, contact your network service provider.

Live Streaming feature is dependent upon the Third Party Internet Provider's service and terms in your region. The feature may not be available due to your region's broadband and internet service restriction.

Preparing for Live Streaming



1. Before you start live streaming, get Ustream account and install the computer-exclusive application, "Action Cam Movie Creator."

Download "Action Cam Movie Creator" from the following website.

<http://www.sony.net/acmc/>

2. Connect the camera to your computer with supplied micro USB cable.
3. Configure the network settings, register an account at a video distribution site and configure the SNS settings on "Camera Settings for Live Streaming" of the Action Cam Movie Creator's camera settings.

You can set on "Camera Settings for Live Streaming."

Refer to the following website for how to operate the Action Cam Movie Creator.

<http://www.sony.net/guide/nst/>

Camera settings for the live streaming

Network settings

You can set the Wi-Fi network to which your camera connects to.

Network SSID, password, security mode

Streaming settings

You can set the streaming method.

Streaming site, channel, image quality and the saving settings of the streaming site

Title and description of streaming video

SNS settings

By configuring this setting, you can post a comment through social network services when starting streaming video.

Connection settings for network services

Comments you post

About Ustream


Ustream is a video sharing site through which you can stream and view videos with the Live Streaming function of the camera. For details of Ustream, see the following site.

<http://www.ustream.tv/>

Note

- Your personal information (information required when logging in to the SNS) is set in the camera.

If you dispose or give away the camera, press the MENU button, then press the UP button or DOWN button to

select  (camera settings) - **RESET** (resetting the settings) - **OK** and delete the settings.

[71] Stream real-time movie to a movie streaming site | Live Streaming with your camera (Real time movie streaming)

Performing Live Streaming

You can start Live Streaming after the preparation is complete. When Live Streaming for the first time, it is recommended that you rehearse streaming in a prepared environment after setting up with a computer in advance.

1 Press the MENU button.

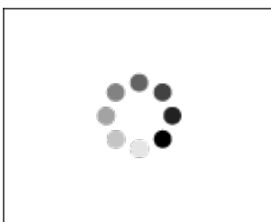
2 Press the UP button or DOWN button to select the * (shooting mode) - **LIVE (live streaming), then press the REC/ENTER button.**

* The icon of the current selected shooting mode is displayed.

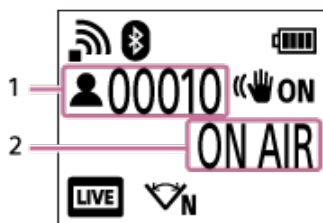
3 Press the REC/ENTER button to start streaming.

The REC lamp of the top of the camera lights up in blue.

Display during Live Streaming



Preparing to connect to the network distribution site



- 1 There is an audience. The number displayed is viewers.
- 2 Starts streaming

Note

- There may be time lag of 10 - 20 seconds between the start of Live Streaming on your camera and video

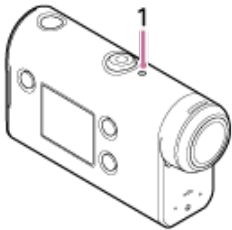
streaming on the video streaming site.

- You can record movies that are being live distributed in the memory card of the camera. When the memory card is already inserted, movies are recorded at the same time as the distribution*.
- When the capacity of the memory card is full, only the movie recording will stop without stopping the distribution. Only movie distributions will be performed when no memory card is inserted.

* Simultaneously recorded movies are processed on MP4/HQ mode.

REC/LIVE lamp indicator during Live Streaming

If you select Live Streaming mode, you can see the streaming status for Live Streaming with the REC/LIVE lamp on the camera.



1: REC/LIVE lamp

- OFF: Before distribution
- Lights up in blue: Distributing
- ⚡ Blinks in blue: Distributing (There is an audience)
- ⚡ Blinks in red: Distribution error

To stop the live distribution

Press the REC/ENTER button again.

[72] Stream real-time movie to a movie streaming site | Live Streaming with your camera (Real time movie streaming)

Restrictions

Notification of the restriction when using live streaming.

Restrictions for Ustream

- There are some restrictions for video streaming on Ustream. For details, see the Ustream site.

Wi-Fi functions during Live Streaming

- You cannot monitor images using a smartphone or the Live-View Remote during Live Streaming.

Network connection

- Use a smartphone capable of tethering or Wi-Fi router for Live Streaming. However, proper operation with all smartphones or Wi-Fi routers is not guaranteed. Public wireless LANs cannot be used as connections for Live Streaming.

Simultaneous Live Streaming with multiple cameras

- You cannot live stream videos simultaneously using the same account on more than one camera.

You need to connect using another account.

Effects due to wireless communication conditions

- When connected using the tethering function of a smartphone or via a Wi-Fi router, images and sounds may be interrupted, or the communication may be cut off due to wireless communication conditions.

Connection for Live Streaming

- The communication time you can use for Live Streaming is limited according to the contract of your smartphone or Wi-Fi router. Confirm it in advance.

Continuous streaming time

- Continuous Live Streaming using the camera is limited to about 13 hours.

Restrictions of network connections

- In some countries or regions, you cannot connect to Live Streaming sites. Use this function in accordance with the laws of that country or region.

[73] Using the camera connected to other devices via Wi-Fi | Connecting to your smartphone

Preparation for connecting to your smartphone

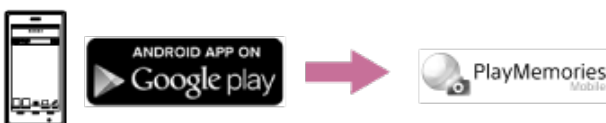
Installing the application on your smartphone

Install the PlayMemories Mobile on your smartphone. Update PlayMemories Mobile to the latest version if you have already installed it on your smartphone.

For the latest information details about the functions of PlayMemories Mobile, refer to the website below.

<http://www.sony.net/pmm/>

Search for PlayMemories Mobile on Google Play, then install it.



Search for PlayMemories Mobile on App Store, then install it.



If the password is lost

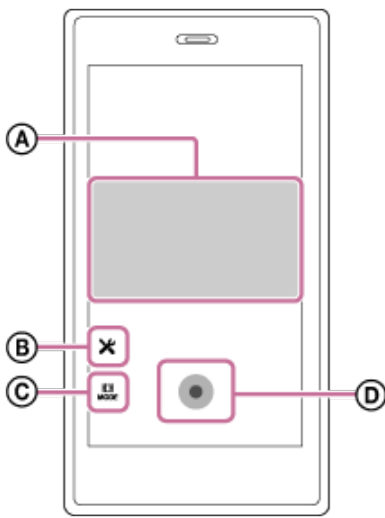
1. Connect the camera to a computer with the micro USB cable (supplied).
2. Turn on the camera.
3. Display [Compute] - [PMHOME] - [INFO] - [WIFI_INF.TXT] on your computer, then check the user ID and password.

Note

- Google play may not be supported depending on country or region. In this case, search for “PlayMemories Mobile” on the internet then install it.
- The Wi-Fi and Bluetooth functions described here are not guaranteed to work with all smartphones and tablets.

[74] Using the camera connected to other devices via Wi-Fi | Connecting to your smartphone

Sample smartphone screen display



Ⓐ: Features of the Wi-Fi remote control function

- To check the field of view before and while recording
- To monitor images while recording

Ⓑ: Various settings

Ⓒ: Shooting mode settings

- 🎬 [Movie]
- 📷 [Photo]
- 🕒 [Time-lapse capture]
- 🔄 [Loop recording]

Ⓓ: Start/stop recording




Note

- When airplane mode is set to ON, the Wi-Fi and Bluetooth functions are not available.
- Depending on local electrical interference or the smartphone's capabilities, the live view images may not be displayed smoothly.

Connecting a smartphone to Wi-Fi via QR Code (Android device)

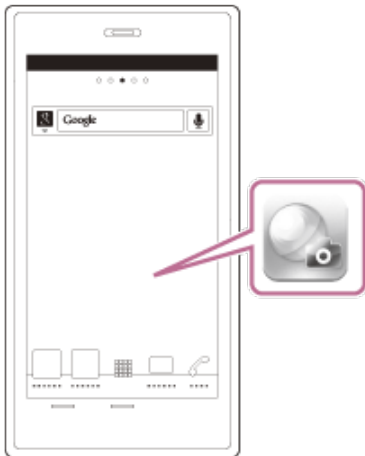
Perform preparation for connecting to your smartphone before connecting.

1 Press the MENU button on the camera.

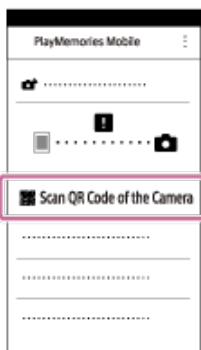
2 Press the UP button or DOWN button to select  (camera settings) -  (Wi-Fi connection setting) - , then press the REC/ENTER button.

3 Select the shooting mode ( /  /  / ).

4 Start PlayMemories Mobile on the smartphone.



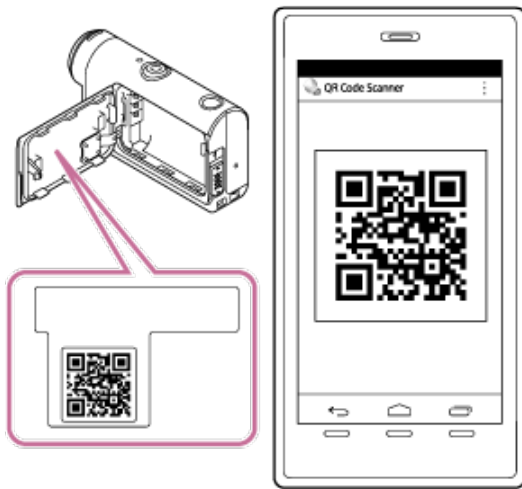
5 Select [Scan QR Code of the Camera] on the PlayMemories Mobile.



6 Select [OK] (Select [OK] again when a message is displayed.)



7 Scan the QR Code that is printed on a sticker attached to the rear of the camera's battery cover.






8 When [Connect with the camera?] is displayed on the smartphone, select [OK].

Note

- When airplane mode is set to ON, the Wi-Fi function is not available.
- Depending on local electrical interference or the smartphone's capabilities, the live view images may not be displayed smoothly.
- When operating multiple cameras with a connected device, you cannot connect a smartphone to Wi-Fi via QR Code.

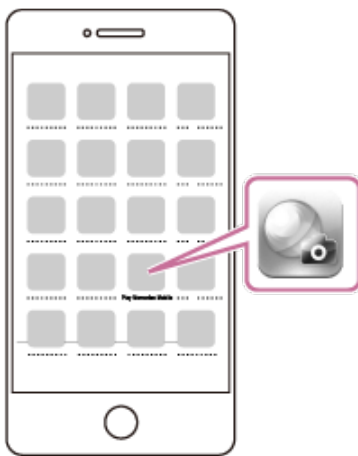
Perform preparation for connecting to your smartphone before connecting.

1 Press the MENU button on the camera.

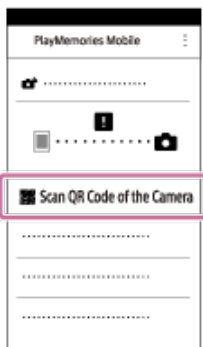
2 Press the UP button or DOWN button to select  (camera settings) -  ON (Wi-Fi connection setting) -  :ON , then press the REC/ENTER button.

3 Select the shooting mode ( /  /  / ).

4 Start PlayMemories Mobile on the smartphone.



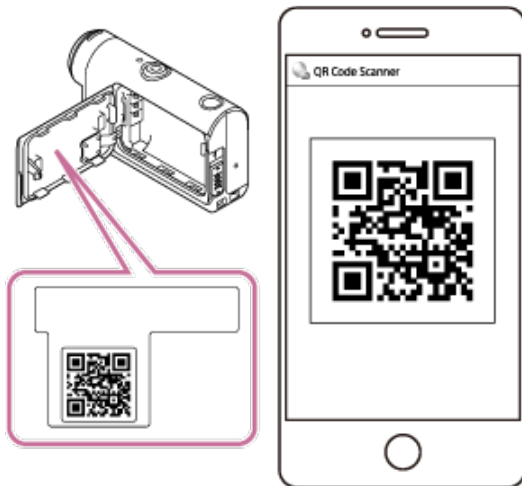
5 Select [Scan QR Code of the Camera] on the PlayMemories Mobile.



6 Select [OK] (Select [OK] again when a message is displayed.)



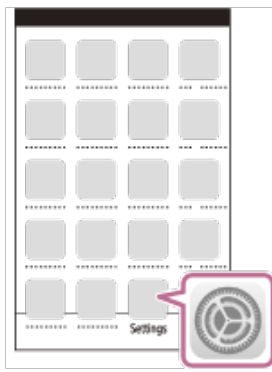
7 Scan the QR Code that is printed on a sticker attached to the rear of the camera's battery cover.



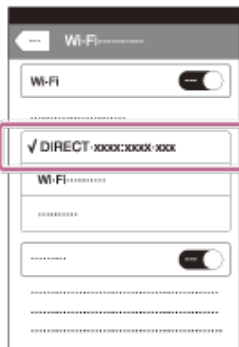
8 According to the instruction on the screen, complete the installation of profile (setting information).



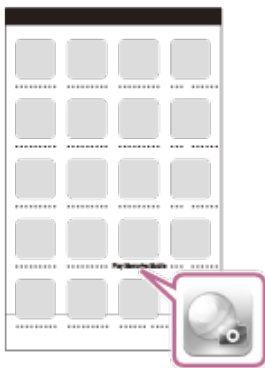
9 On the Home screen, select the [Settings] - [Wi-Fi].



10 Select the SSID that is printed on a sticker attached to the rear of the camera's battery cover.



11 Return to the Home screen, then start PlayMemories Mobile.






Note

- When airplane mode is set to ON, the Wi-Fi function is not available.
- Depending on local electrical interference or the smartphone's capabilities, the live view images may not be displayed smoothly.
- When operating multiple cameras with a connected device, you cannot set the Wi-Fi on a smartphone via QR Code.

Connecting to a smartphone using ID/password (Android device)

Perform preparation for connecting to your smartphone before connecting.

1 Press the MENU button on the camera.

2 Press the UP button or DOWN button to select  (camera settings) -  ON (Wi-Fi connection setting) - , then press the REC/ENTER button.

3 Select the shooting mode ( /  /  / .

4 Start PlayMemories Mobile on the smartphone.



5 Select the SSID that is printed on a sticker attached to the rear of the camera's battery cover.



6 Enter the password printed on the sticker attached to the rear of the camera's battery cover (only for the first time).










Note

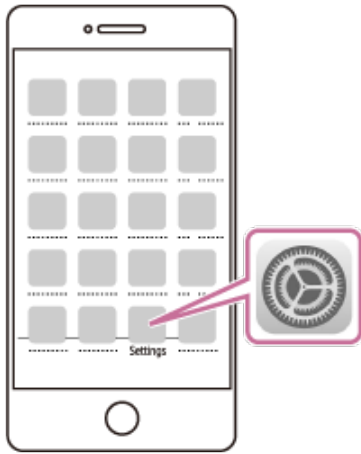
- When airplane mode is set to ON, the Wi-Fi function is not available.
- Depending on local electrical interference or the smartphone's capabilities, the live view images may not be displayed smoothly.

[78] Using the camera connected to other devices via Wi-Fi | Connecting to your smartphone

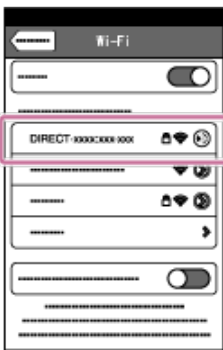
Connecting to a smartphone using ID/password (iPhone/iPad)

Perform preparation for connecting to your smartphone before connecting.

- 1 Press the MENU button on the camera.
- 2 Press the UP button or DOWN button to select  (camera settings) -  ON (Wi-Fi connection setting) -  :ON , then press the REC/ENTER button.
- 3 Select the shooting mode ( /  /  / ).
- 4 In the Home screen on the smartphone, select [Settings] – [Wi-Fi].



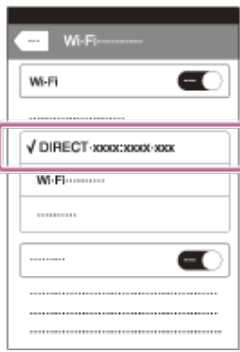
- 5** Select the SSID that is printed on a sticker attached to the rear of the camera's battery cover.



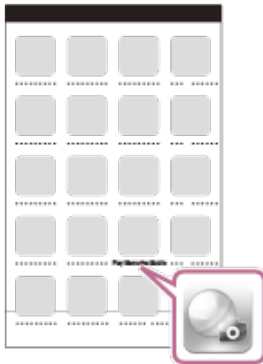
- 6** Enter the password printed on the sticker attached to the rear of the camera's battery cover (only for the first time).



- 7** Confirm that the SSID that is printed on a sticker attached to the rear of the camera's battery cover is connected.



8 Return to the Home screen, then start PlayMemories Mobile.



Note

- When airplane mode is set to ON, the Wi-Fi function is not available.
- Depending on local electrical interference or the smartphone's capabilities, the live view images may not be displayed smoothly.

[79] Using the camera connected to other devices via Wi-Fi | Connecting to the Live-View Remote

Connecting a single camera to Live-View Remote (Single connection)




This section explains how to connect to Live-View Remote "RM-LVR3". If you are using other Live-View Remote, see Help Guide of the relevant remote control.

1 Turn on the Live-View Remote.

For details, refer to "Connecting the remote control to a single camera via Wi-Fi" in the Help Guide of the Live-View Remote (RM-LVR3).
http://rd1.sony.net/help/cam/1650/h_zz/

Set the connection mode of the camera.

2

Press the MENU button, then press the UP button or DOWN button to select  (camera settings) -  (Wi-Fi connection setting) - , then press the REC/ENTER button.

3

Select the SSID that is printed on the sticker attached to the rear of the camera's battery cover with the Live-View Remote.

The connection beep sounds, then   is displayed on the display panel.

4

Press the UP button or DOWN button to select **OK**, then press the REC/ENTER button.

Note

- When beep is set to OFF, the connection beep does not sound.
- If the connection does not complete, congestion of the radio wave might be the cause. Retry the connection by changing the place.

[80] Using the camera connected to other devices via Wi-Fi | Connecting to the Live-View Remote Connecting multiple cameras to Live-View Remote (Multi connection)

This section explains how to connect to Live-View Remote "RM-LVR3". If you are using other Live-View Remote, see Help Guide of the relevant remote control.

1




Turn on the Live-View Remote.



For details, refer to "Connecting the remote control to multiple cameras via Wi-Fi" in the Help Guide of the Live-View Remote (RM-LVR3).
http://rd1.sony.net/help/cam/1650/h_zz/



2

Set the camera.

- When you connect the camera to Live-View Remote for the first time





Press the MENU button, then press the UP button or DOWN button to select  (camera settings) -  (Wi-Fi connection setting) -  (multi connection) - **NEW**, then press the REC/ENTER button.

When the connection beep sounds and   is displayed on the display panel, register the camera using the Live-View Remote.

  appears on the display panel of the camera when connecting finishes. Press the

REC/ENTER button.

- When you connect the camera to Live-View Remote since second time

Press the MENU button, then press the UP button or DOWN button to select  (camera settings) -  (Wi-Fi connection setting) -  (multi connection) - , then press the REC/ENTER button.

3 If you will continue to connect multiple cameras, repeat from step 2.

Note

- When beep is set to OFF, the connection beep does not sound.

[81] Using the camera connected to other devices via Wi-Fi | Connecting to Handycam

Connecting a single camera to Handycam (Single connection)

You can operate the camera using a Handycam that supports the multi camera control function.




1 Turn on the Handycam.

For details, refer to “Connecting this product to one camera with Multi Camera Control (Single Connection)” in the Help Guide of the Handycam.

Example: Help Guide of FDR-AX40/AX53/AX55/AXP55

http://rd1.sony.net/help/cam/1630/h_zz/

2 Set the connection mode of the camera.

Press the MENU button, then press the UP button or DOWN button to select  (camera settings) -  (Wi-Fi connection setting) - , then press the REC/ENTER button.

3 Select the SSID that is printed on the sticker attached to the rear of the camera's battery cover with the Handycam.

The connection beep sounds, then  is displayed on the display panel.

4 Press the REC/ENTER button.

Note

- When beep is set to OFF, the connection beep does not sound.

[82] Using the camera connected to other devices via Wi-Fi | Connecting to Handycam

Connecting multiple cameras to Handycam (Multi connection)




You can operate the camera using a Handycam that supports the multi camera control function.

1 Turn on the Handycam.



For details, refer to “Connecting this product to more than one camera with Multi Camera Control (Multi Connection)” in the Help Guide of the Handycam.
Example: Help Guide of FDR-AX40/AX53/AX55/AXP55
http://rd1.sony.net/help/cam/1630/h_zz/

2 Set the connection mode of the camera.






- When you connect the camera to Handycam for the first time

Press the MENU button, then press the UP button or DOWN button to select  (camera settings) -  ON (Wi-Fi connection setting) -  (multi connection) - **NEW**, then press the REC/ENTER button.

When the connection beep sounds and   is displayed on the display panel of the camera, register the camera using the Handycam.

  appears on the display panel of the camera when connecting finishes.

- When you connect the camera to Handycam since second time

Press the MENU button, then press the UP button or DOWN button to select  (camera settings) -  ON (Wi-Fi connection setting) -  (multi connection) -  , then press the REC/ENTER button.

3 If you will continue to connect multiple cameras, repeat from step 2.

Note

- When beep is set to OFF, the connection beep does not sound.

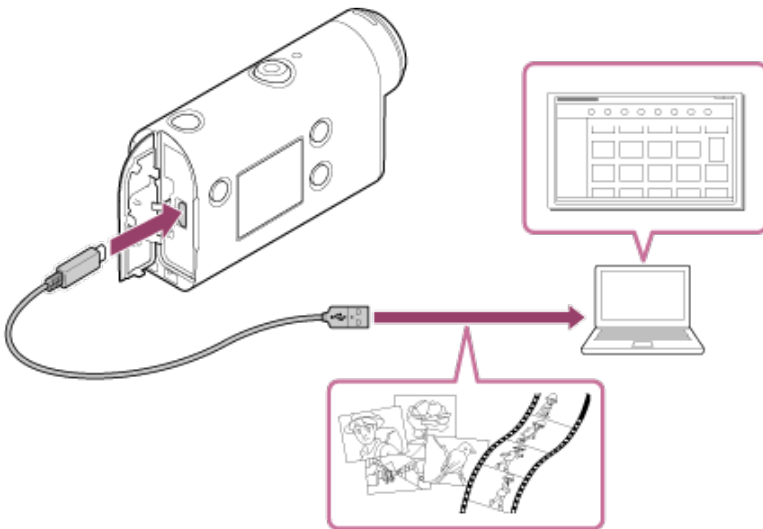
Useful functions of Action Cam Movie Creator

Action Cam Movie Creator™ allows you to import movies to your computer and edit images, to use them in various ways.

Visit the following URL to install the software.

<http://www.sony.net/acmc/>

Action Cam Movie Creator, which can import movies and edit movies and PlayMemories Home, which can playback, will be installed simultaneously.



Useful functions of Action Cam Movie Creator

- Editing movies and still images, displaying them with tracking information and movement speed.

Useful functions of PlayMemories Home

- Playing back movies and still images

Note

- When you import movies to your computer, use Action Cam Movie Creator.
- Use the micro USB cable (supplied) when connecting the camera to your computer.

Installing Action Cam Movie Creator on your computer

Install Action Cam Movie Creator on your computer. Follow the steps below.

1 Turn on the computer.

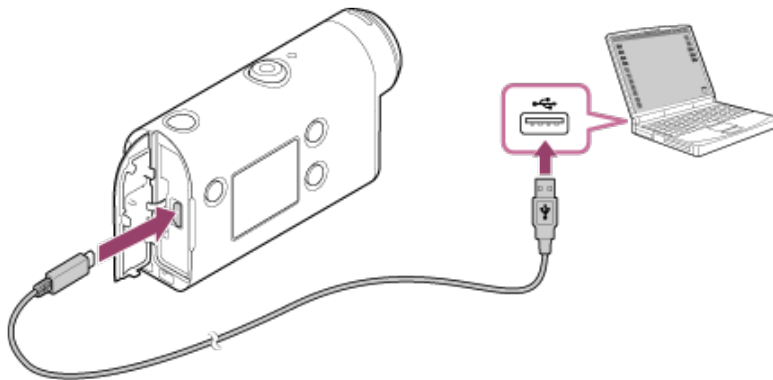
- Log on as an Administrator.
- Close all applications running on the computer before installing the software.

2 Visit the following URL with the Internet browser of the computer and install Action Cam Movie Creator.




- <http://www.sony.net/acmc/>
- When installation is complete, Action Cam Movie Creator starts up.

3 Connect the camera to the computer with the supplied micro USB cable.

- New function may be added to Action Cam Movie Creator. Even if Action Cam Movie Creator is already installed on your computer, connect the camera to your computer.



Note

- Do not disconnect the micro USB cable (supplied) from the camera while the computer screen indicates that the camera is being operated or accessed. Doing so may cause data corruption.
- To disconnect the computer from the camera, click  on the task tray then click  (Icon to remove). If you are using Windows Vista, click  on the task tray.

[85] Editing images imported to your smartphone/tablet | Using the Action Cam App

Useful functions of Action Cam App

With Action Cam App for smartphone/tablet, you can capture the movie taken with your smartphone, and you can edit the movie with a simple operation.

You can also add effects such as multi-view and variable speed playback, you can also create a time-lapse movie.



For the latest information details about the functions of Action Cam App, see the website below.
<http://www.sony.net/acap/>

[86] Editing images imported to your smartphone/tablet | Using the Action Cam App

Installing Action Cam App

Install Action Cam App compatible to your smartphone/tablet.
For latest information and function information on Action Cam App, see the following website.
<http://www.sony.net/acap/>

Search for Action Cam App on Google play, then install it.



Google play may not be supported depending on country or region.

Search for Action Cam App on App Store, then install it.



[87] Information | Recordable time

Estimated duration of recording and playback for supplied battery pack

Recording time

Approximate time available when you use a fully charged battery pack.

- Image quality: HQ

Continuous recording time: 165 minutes (195 minutes)

Typical recording time: 110 minutes (130 minutes)

The recording time measured when using one fully charged battery pack

The recording time may be shorter, depending on the recording conditions.
() indicates the recording time when the Wi-Fi remote control function is set to OFF.
The recording time may be longer when you set the Wi-Fi setting to OFF.

Playing time

Approximate time available when you use a fully charged battery pack.

- Image quality is HQ: 210 minutes

[88] Information | Recordable time

Estimated recording time of movies

XAVC S HD

Bit rate	Memory card	Average recording time
50 Mbps	64 GB	155 minutes
	128 GB	310 minutes

MP4

Image quality	Memory card	Average recording time
PS	8 GB	35 minutes
	16 GB	75 minutes
	32 GB	155 minutes
	64 GB	320 minutes
	128 GB	640 minutes
HQ	8 GB	60 minutes
	16 GB	120 minutes
	32 GB	250 minutes
	64 GB	505 minutes
	128 GB	1015 minutes
STD	8 GB	155 minutes
	16 GB	320 minutes
	32 GB	655 minutes
	64 GB	1320 minutes

	128 GB	2650 minutes
HS120/HS100*	8 GB	35 minutes
	16 GB	75 minutes
	32 GB	155 minutes
	64 GB	320 minutes
	128 GB	640 minutes

* A frame rate will be changed according to NTSC/PAL switching.

- When using a Sony memory card.

Note

- The recordable time may vary depending on the recording conditions, subjects, and the image quality setting.
- Continuous movie shooting time is approximately 13 hours.

[89] Information | Recordable time

Estimated number of recordable still images

Number of pixels: 8.3M (Time-lapse capture) (16:9)

When using 8GB memory card: 2500 images
 When using 16GB memory card: 5000 images
 When using 32GB memory card: 10000 images
 When using 64GB memory card: 20000 images
 When using 128GB memory card: 40000 images

Number of pixels: 11.9M (Still images)

When using 8GB memory card: 1250 images
 When using 16GB memory card: 2500 images
 When using 32GB memory card: 5100 images
 When using 64GB memory card: 10000 images
 When using 128GB memory card: 20000 images

[90] Information | Battery pack

On charging the battery pack

- Charge the battery pack before using the camera for the first time.
- We recommend charging the battery pack in an ambient temperature of between 10°C to 30°C (50°F to 86°F) until the CHG (Charge) lamp turns off. The battery pack may not be effectively charged in temperatures outside this range.

- The CHG (Charge) lamp may blink during charging in the following situation:
Battery pack is not attached correctly.
Battery pack is damaged.
When the battery pack temperature is high or low.

[91] Information | Battery pack

Effective use of the battery pack

- Battery pack performance decreases in low temperature surroundings (less than 10°C (50°F)). So in cold places, the operational time of the battery pack is shorter. We recommend the following to ensure longer battery pack use: Put the battery pack in a pocket close to your body to warm it up, and insert it in the camera immediately before you start shooting.
- The battery pack will run out quickly if you use the playback, fast-forward, and fast-rewind frequently.
- Turn off the camera every time you do not operate the camera. Battery pack is wearing out when the shooting is in standby.
- We recommend having spare battery packs handy for two times or three times the expected shooting time, and making trial shots before taking the actual shots.
- You may not be able to turn on the camera or the battery pack may not be effectively charged if the terminal section of the battery pack is dirty. In this case, wipe any dust with a soft cloth lightly to clean the battery pack.
- Do not expose the battery pack to water. The battery pack is not water-resistant.
- Even the power is turned off, battery will be consumed. Remove the battery before storing.

[92] Information | Battery pack

About the remaining battery charge

If the battery pack runs out so fast although the remaining charge indicator is high, fully charge the battery pack again. Remaining charge indicator will be displayed correctly. Note that it may not be displayed correctly in the following situations:

- Using the camera for a long time in high temperature
- Leaving the camera with fully charged battery pack
- Using a heavily used battery pack

[93] Information | Battery pack

How to store the battery pack

- To maintain the battery pack's function, fully charge the battery pack and then fully discharge it on the camera at least once a year while storing. Remove the battery pack from the camera and store it in a cool, dry place.
- To prevent staining the terminal, short-circuiting, etc., be sure to use a plastic bag to keep away from metal materials when carrying or storing.

[94] Information | Battery pack




On battery pack life

- The battery pack life is limited. Battery capacity decreases over time and through repeated use. If decreased usage time between charges becomes significant, it is probably time to replace it with a new one.
- The battery pack life varies according to how the battery pack is stored or used.

[95] Information | Battery pack

To reduce the battery consumption

If the setting of the camera is as follows, you can reduce the consumption of the battery at the time of use from the initial setting of the state about 30%.

- Wi-Fi setting : :OFF
- Movie format: 
- Image quality setting: **720 30p STD / 720 25p STD**
- Lamp setting: :OFF

Turn off the power of camera frequently while in shooting standby mode. This enables further reduction of battery consumption of the camera.

[96] Information | Using the camera abroad

Countries and regions where NTSC TV is used

Barbados, Bermuda, Bolivia, Canada, Chile, Columbia, Costa Rica, Cuba, Dominica, Ecuador, El Salvador, Guam, Guatemala, Guyana, Haiti, Honduras, Japan, Mexico, Micronesia, Myanmar, Nicaragua, Panama, Peru, Philippines, Puerto Rico, Republic of Korea, Saint Lucia, Samoa, Suriname, Taiwan, Trinidad and Tobago, United States of America, Venezuela etc.

[97] Information | Using the camera abroad

Countries and regions where PAL TV is used

Australia, Austria, Argentina, Belgium, Bulgaria, Brazil, China, Croatia, Czech Republic, Denmark, Finland, France, French Guiana, Germany, Greece, Hong Kong, Hungary, Indonesia, Iran, Iraq, Italy, Kuwait, Malaysia, Monaco, Netherlands, New Zealand, Norway, Paraguay, Poland, Portugal, Romania,

Russia, Singapore, Slovakia, Spain, Sweden, Switzerland, Thailand, Turkey, Ukraine, United Kingdom, Uruguay, Vietnam etc.

[98] Information | Using the camera abroad

The list of time differences for world capitals

Time differences with the standard times of world cities (as of 2016).

City	Time difference
Lisbon	GMT
London	
Berlin	+01:00
Paris	
Helsinki	+02:00
Cairo	
Istanbul	
Moscow	+03:00
Nairobi	
Tehran	+03:30
Abu Dhabi	+04:00
Baku	
Kabul	+04:30
Karachi	+05:00
Islamabad	
Kolkata	+05:30
New Delhi	
Almaty	+06:00
Dhaka	
Yangon	+06:30
Bangkok	+07:00
Jakarta	
Hong Kong	+08:00
Siingapore	
Beijing	

Tokyo	+09:00
Seoul	
Adelaide	+09:30
Darwin	
Melbourne	+10:00
Sydney	
New Caledonia	+11:00
Fiji	+12:00
Wellington	
Midway	-11:00
Hawaii	-10:00
Alaska	-09:00
San Francisco	-08:00
Tijuana	
Denver	-07:00
Arizona	
Chicago	-06:00
Mexico City	
New York	-05:00
Bogota	
Santiago	-04:00
St.John's	-03:30
Brasilia	-03:00
Montevideo	
Fernando de Noronha	-02:00
Azores	-01:00
Cape Verde Is.	

[99] Information | Precautions

Do not use/store the camera in the following places

- In an extremely hot, cold or humid place

In places such as in a car parked under the sun, the camera body may become deformed and this

may cause a malfunction.

- Under direct sunlight or near a heater are not suitable places for storage.

The camera body may become discolored or deformed, and this may cause a malfunction.

- In a location subject to strong vibration
- Near strong magnetic fields
- In sandy or dusty places

Be careful not to let sand or dust get into the camera. This may cause the camera to malfunction, and in some cases may be irreparable.

[100] Information | Precautions

On carrying

Do not sit down in a chair or other place with the camera in the back pocket of your trousers or skirt, as this may cause malfunction or damage the camera.

[101] Information | Precautions

Care and storage of the lens

- Wipe the surface of the lens clean with a soft cloth in the following instances:
 - When there are fingerprints on the lens surface.
 - In hot or humid locations
 - When the lens is exposed to salty air such as at the seaside.
- Store in a well-ventilated location subject to little dirt or dust.
- To prevent mold, periodically clean the lens as described above.

[102] Information | Precautions

On cleaning

Clean the camera surface with a soft cloth slightly moistened with water, then wipe the surface with a dry cloth. Do not use any of the following as they may damage the finish or the casing.

- Chemical products such as thinner, benzene, alcohol, disposable cloths, insect repellent, sunscreen or insecticide, etc.
 - Do not touch the camera with any of the above on your hand.
 - Do not leave the camera in contact with rubber or vinyl for a long time.
-

On operating temperatures

The camera is designed for use in temperatures between -10°C and $+40^{\circ}\text{C}$ (14°F and 104°F). Shooting in extremely cold or hot places that exceed this range is not recommended.

On moisture condensation

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

If moisture condensation occurs

Turn off the camera and wait about 1 hour for the moisture to evaporate.

Note on moisture condensation

Moisture may condense when you bring the camera from a cold place into a warm place (or vice versa) or when you use the camera in a humid place as shown below.

- When you bring the camera from a ski slope into a warm place.
- When you bring the camera from an air conditioned car or room into a hot place outside.
- When you use the camera after a squall or a shower.
- When you use the camera in a hot and humid place.

How to avoid moisture condensation

When you bring the camera from a cold place into a warm place, put the camera in a plastic bag and seal it tightly. Remove the bag when the air temperature inside the plastic bag has reached the ambient temperature (after about 1 hour).

Notes on optional accessories

Genuine Sony accessories may not be available in some countries/regions.

Note on disposal/transfer of the memory card

Even if you delete data in the memory card or format the memory card on the camera or a computer, you may not delete data from the memory card completely. When you give the memory card to somebody, it is recommended that you delete data completely using data deletion software on a computer. Also, when you dispose of the memory card, it is recommended that you destroy the actual body of the memory card.

[107] Information

Specifications

[System]



Video signal

- HDTV
- NTSC color, EIA standards
- PAL color, CCIR standards

Image device:

- 1/2.3 type (7.77 mm) Exmor R CMOS sensor
- Pixel Gross: Approx. 16.8 megapixels
- Effective picture resolution (movie): Approx. 11.1 megapixels (16:9) (SteadyShot is set to OFF)
- Effective picture resolution (still): Approx. 11.1 megapixels (16:9)
- Still image max effective: Approx. 11.9 megapixels (16:9)
- Time-lapse photo recording mode: Approx. 2.07 megapixels (16:9) HD (1920 × 1080), Approx. 8.29 megapixels (16:9) 4K (3840 × 2160)

Lens:

- ZEISS Tessar Lens
- Aperture: F2.8
- Focal distance: $f = 2.8$ mm
- Focal length (35mm equivalent) (Movie mode): $f = 18.4$ mm (angle setting: "  wide"), $f = 21.8$ mm (angle setting: "  narrow")

Camera

- Exposure control: Automatic exposure
- Minimum illumination: 6 lx (lux)
- Image stabilization: Electronic SteadyShot image stabilization
- Minimum shooting distance: Approx. 30 cm (11 7/8 in.)

File format:

- Movies: MP4: MPEG-4 AVC/H.264, XAVC S: MPEG-4 AVC/H.264
- Audio: MPEG-4 AAC-LC 2ch (When recording MP4 movies), LPCM 2ch (When recording XAVC S movies)
- Still images: JPEG (DCF Ver. 2.0 Exif Ver. 2.3, MPF Baseline) compliant

Recording media:

- When recording MP4 movies:
Memory Stick Micro (Mark2) media
microSD/SDHC/SDXC card (Class4 or faster)
- When recording XAVC S (50 Mbps): microSDHC/SDXC card (Class10 or faster)

[Input and Output connectors]

- Multi/Micro USB Terminal* : micro-B/USB2.0 Hi-Speed
(Supports Micro USB compatible devices.)

* USB connection is only for output. (For customers in some countries/regions)

[Power]

Power requirements:

- Rechargeable battery pack: 3.6 V (NP-BX1 (supplied))
- Multi/Micro USB Terminal: 5.0 V

Charging method:

- USB charging: DC 5.0 V, 500 mA/800 mA

Charging time:

- Via a computer

NP-BX1 (supplied): Approx. 4 h 25 min.

Power supply method:

- USB power supply (1.5 A or more is recommended)

Power consumption:

- Approx. 1.6 W (when the image quality is "MP4 HQ 1920 × 1080 30p")

Battery:

- Rechargeable battery pack: NP-BX1 (supplied)

Maximum output voltage: DC 4.2 V

Output voltage: DC 3.6 V

Maximum charge voltage: DC 4.2 V

Maximum charge current: 1.89 A

Capacity: 4.5 Wh (1240 mAh)

Type: Li-ion

[General]

- Waterproof performance: Depth of water 60 m (197 feet), 30 minutes continuously (In use with the Underwater Housing (MPK-UWH1))
- Operating temperature: -10°C to +40°C (14°F to 104°F)
- Storage temperature: -20°C to +60°C (-4°F to +140°F)
- Dimensions: Approx. 24.2 mm × 47.0 mm × 83.0 mm (31/32 in. × 1 7/8 in. × 3 3/8 in) (W/H/D, including protrusions and excluding the supplied Underwater Housing)
- Mass: Approx. 58 g (2.0 oz) (camera only)
- Mass (when shooting): Approx. 83 g (2.9 oz) (including NP-BX1 (supplied), excluding the supplied Underwater Housing)
- Microphone: Stereo
- Speaker: Monaural

[Wireless LAN]

- Corresponding standard: IEEE 802.11b/g/n
- Frequency: 2.4 GHz
- Supported security protocols: WPA-PSK/WPA2-PSK
- Configuration method: WPS (Wi-Fi Protected Setup)
- Access method: Infrastructure Mode

[Bluetooth communication]

- Bluetooth standards Ver. 4.1 (Bluetooth® Smart device)
- Use frequency band: 2.4 GHz

Accessories

Underwater Housing (MPK-UWH1)

- Dimensions: Approx. 46.1 mm × 69.2 mm × 89.1 mm (1 7/8 in. × 2 3/4 in. × 3 5/8 in.) (W/H/D, including protrusions)
- Mass: Approx. 81 g (2.8 oz) (excluding adaptor), Approx. 82 g (2.9 oz) (including adaptor)
- Pressure-resistance: Shooting underwater at a depth of 60 m (197 feet) for 30 continuous minutes is possible.*

* When the camera is inserted.


Attachment Buckle:

- Dimensions: Approx. 47.0 mm × 14.0 mm × 58.5 mm (1 7/8 in. × 9/16 in. × 2 3/8 in.) (W/H/D, including protrusions)
- Mass: Approx. 15 g (0.5 oz)

Design and specifications are subject to change without notice.

[108] Information

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[109] Information | Notes on License

On GNU GPL/LGPL applied software

The software that is eligible for the following GNU General Public License (hereinafter referred to as "GPL") or GNU Lesser General Public License (hereinafter referred to as "LGPL") are included in the camera.

This informs you that you have a right to have access to, modify, and redistribute source code for these software programs under the conditions of the supplied GPL/LGPL.

Source code is provided on the web. Use the following URL to download it.

<http://oss.sony.net/Products/Linux>

We would prefer you do not contact us about the contents of source code.















Copies of the licenses (in English) are stored in the internal memory of your camera.

Establish a USB cable connection between the camera and a computer, and read the files in the "LICENSE" folder in "PMHOME."

List of Default Setting

The default setting of every setting item is as follows.

- Image quality setting
Movie format is MP4: **1080 30p HQ / 1080 25p HQ**
Movie format is HD: **1080 60p 50M / 1080 50p 50M**
- Movie format: **MP4**
- Time-lapse capture image size: **HD**
- Loop recording time: **:5 min**
- Still image mode switching:
- Still image shooting interval: **:8f 1s**
- Self-timer: **:OFF**
- Time-lapse shooting interval: **:1 s**
- Time-lapse shot number: **:300**
- SteadyShot: **:ON**
- Angle setting: **W**
- Zoom setting: **:OFF**
- Flip: **:OFF**
- AE shift: **:± 0.0**
- Time-lapse AE mode: **AE-T**
- Scene: **SCN N**
- White balance: **AWB**
- Color mode: **Vivid**
- Audio recording setting: **:ON**

- Wind noise reduction: :OFF
- Airplane mode: :OFF
- Wi-Fi connection setting: :ON
- Wi-Fi Hi power setting: :OFF
- Bluetooth setting: :ON
- Bluetooth remote controller power setting: ....
- USB power supply: :ON
- Beep: :ON
- Beep volume: 
- Lamp setting: :3
- One touch recording: :OFF
- Auto power off: :60s
- Switching NTSC/PAL: NTSC (depending on the regions)
- Daylight saving time (summer time) setting: :OFF

[111] Troubleshooting

Troubleshooting

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

- 1 Check the items of troubleshooting and inspect the camera.
- 2 Turn the power off the camera and then on again one minute later.
- 3 Consult your Sony dealer or local authorized Sony service facility by phone.

[112] Troubleshooting | Battery pack and power

Cannot turn on the camera.

- Attach a charged battery pack.
- Make sure that the battery pack is inserted correctly.

[113] Troubleshooting | Battery pack and power

The power turns off suddenly.

- Depending on the camera and battery temperature, the power may turn off automatically to protect the camera. In this case, a message is displayed on the display panel before the power turns off.
- If you do not operate the camera for a certain period of time while the power is on, the camera turns off automatically to prevent wearing down the battery pack. Turn the camera on again.
- If you have selected **AUTO OFF : OFF** in the auto power off function, the power does not turn off automatically.

[114] Troubleshooting | Battery pack and power

Battery life is short.

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

[115] Troubleshooting | Battery pack and power

Cannot charge the camera.

- Turn off the camera and make the USB connection.
- Disconnect the micro USB cable (supplied), and then reconnect it.
- Use the micro USB cable (supplied).
- Charge the battery pack in an ambient temperature of 10°C to 30°C (50°F to 86°F).
- Turn on the computer and connect the camera.
- Release the computer from sleep or hibernation status.
- Connect the camera directly to a computer using the micro USB cable (supplied).
- Connect the camera to a computer with the operating system that is supported by the camera.

[116] Troubleshooting | Battery pack and power

The remaining charge indicator is incorrect.

- This phenomenon occurs when you use the camera in an extremely hot or cold location.
- A discrepancy arose between the remaining charge indicator and the actual remaining battery charge. Fully discharge the battery pack once, then charge it to correct the indication.
- Fully charge the battery pack again. If the problem persists, the battery pack is worn out. Replace the battery pack with a new one.

[117] Troubleshooting | Memory card

Operations using the memory card cannot be performed.

- If you use a memory card formatted on a computer, format it again on the camera.
-

[118] Troubleshooting | Shooting images

Cannot record images.

- Check the free capacity of the memory card.
-

[119] Troubleshooting | Shooting images

Cannot insert dates on images.

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

[120] Troubleshooting | Viewing images

Cannot playback images.

- The folder/file name of the camera has been changed by connecting to your computer.
-

[121] Troubleshooting | Computers

Your computer does not recognize the camera.

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

[122] Troubleshooting | Computers

Cannot import images.

- Connect the camera and your computer correctly making a USB connection.

[123] Troubleshooting | Computers

Action Cam Movie Creator cannot be installed.

- Check the computer environment or installation procedure required to install Action Cam Movie Creator.

[124] Troubleshooting | Computers

Action Cam Movie Creator does not work correctly.

- Quit Action Cam Movie Creator and restart your computer.

[125] Troubleshooting | Computers

Cannot play back images on your computer.

- Consult the computer or software manufacturer.

[126] Troubleshooting | Wi-Fi

It takes too much time to transfer an image.

- Microwave ovens or other Bluetooth-enabled devices use the 2.4 GHz wavelength and could hinder the communication. If such devices are in the vicinity, move the camera away from those devices or shut those devices down.
-

The lens gets fogged.

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

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

- This is normal.

The date or time is incorrect.

- Set the date and time again.

Warning indicators and error messages

Battery indicator (Remaining battery is low)

- When the battery level is low,  is displayed. Charge the battery pack immediately.

03-06

- Multi connection has failed.

05-04

- The remaining capacity of the memory card is insufficient for loop recording.

05-05

- The battery necessary for shooting is not inserted.
- Insert the charged battery.

05-06

- Failed in to synthesize the motion shot LE.

05-07

- Failed to shoot images.

06-01

- Failed to format the recording media.

06-02

- The memory card does not support XAVC S 100 Mbps movie recording.
- Use an microSDHC/SDXC memory card of Class10 or faster when shooting in XAVC S format.

06-05

- Failed to recover the memory card.

06-06

- The memory card is not inserted properly
- The memory card is damaged.

06-09

- There is no memory card inserted.

07-02

- Failed to play.
- There is an abnormality in the recording media.

07-07

- Failed to create highlight movie

08-01

- Set the necessary settings for Ustream using "Camera Settings for Live Streaming" of the Action Cam Movie Creator's camera settings.

08-02

- Log in to Ustream again and confirm the settings using "Camera Settings for Live Streaming" of the Action Cam Movie Creator's camera settings.

08-03

- The channel set by "Camera Settings for Live Streaming" of the Action Cam Movie Creator's camera settings is incorrect.
- This message also displays if other media starts streaming on the same channel while streaming from the camera is performed.
- Set the channel again.

08-04

- The total time of saved video on Ustream has reached the limit. Stop streaming video.

08-05

- The saving settings of video cannot be saved to Ustream because an error has occurred on the network.
- Some other network error has occurred.
- Confirm the setting of the access point or the security of the access point using "Camera Settings for Live Streaming" of the Action Cam Movie Creator's camera settings.

08-06

- Access point has been found but is not connected. Check the password of the access point and

connect again.

08-07

- Access point cannot be found. Confirm the setting of the access point using “Camera Settings for Live Streaming” of the Action Cam Movie Creator’s camera settings.

08-08

- Set the date and time again on your camera.

08-09

- An unknown error has occurred on Ustream, when using the Live Streaming function. Wait a moment and then try confirming the connection again.

10-02

- Turn the power off and then on again.

10-03

- The battery pack is delivering current exceeding the maximum discharge current.
- A different battery pack is detected when the camera is powered on.
- Battery pack deterioration is detected.
- Battery charge is insufficient for operation.

10-04

- Unable to record images because the camera temperature has risen.

NO IMAGE

- The memory card does not contain playable images.



- Recovering the memory card.



- There is no remaining battery charge.



- The camera temperature has risen. The power may turn off automatically, or you may be unable to record images.

Leave the camera in a cool location until the temperature goes down.

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



- Remaining capacity of the memory card is insufficient for recording.



- The maximum number of files that can be recorded has been reached.



- There is no memory card inserted.



- The memory card is not inserted properly.
- The memory card is damaged.

Twitter

- Twitter post error has occurred.
- Check the network or log in to Twitter again.

Facebook

- Facebook post error has occurred.
- Check the network or log in to Facebook again.