

Digital Still Camera

Instruction Manual



"Help Guide" (Web manual)

Refer to "Help Guide" for in-depth instructions on the many functions of the camera.

http://rd1.sony.net/help/dsc/1720/h_zz/

Cyber-shot

Check out the Help Guide!



The “Help Guide” is an on-line manual that you can read on your computer or smartphone. Refer to it for details on menu items, advanced usage, and the latest information on the camera.



Scan
here

http://rd1.sony.net/help/dsc/1720/h_zz/

DSC-RX10M4 Help Guide



Instruction Manual (this book)



This manual introduces some basic functions.

For the quick start guide, see “Startup guide” (page 15). The “Startup guide” introduces the initial procedures from when you open the package until you release the shutter for the first shot.

In-Camera Guide



The [In-Camera Guide] shows explanations of the menu items on the monitor of the camera.

You can quickly pull up information during shooting. To use the [In-Camera Guide] function, some settings must be made beforehand. For details, search “In-Camera Guide” in the Help Guide.

Notes on using your camera

Along with this section, also see “Precautions” in the Help Guide (page 2).

Screen language

You can select the language displayed on the screen using the menu (page 27).

Notes on handling the product

- This camera is designed to be dust- and moisture-resistant, but is not waterproof or dust-proof.
- If water, dust or sand get into the open flash unit, it may cause a malfunction.
- Remove any dirt from the surface of the flash. Dirt on the surface of the flash may emit smoke or burn due to heat generated by the emission of light. If there is dirt/dust, clean it off with a soft cloth.
- Do not cover the flash with your fingers.
- When using the power zoom lens, be careful not to get your fingers or any other objects caught in the lens.
- Take care that your finger is not in the way when pushing the flash down.
- Always attach the lens front cap when you are not using the camera.
- Do not leave the lens or the viewfinder exposed to a strong light source such as sunlight. Because of the lens's condensing function, doing so may cause smoke, fire, or a malfunction inside the camera body or the lens. If you have to leave the camera exposed to a light source such as sunlight, attach the lens cap to the lens.
- When you shoot with backlighting, keep the sun sufficiently far away from the angle of view. Otherwise, the sunlight may enter the focus inside the camera and cause smoke or fire. Even if the sun is slightly away from the angle of view, it may still cause smoke or fire.
- Do not directly expose the lens to beams such as laser beams. That may damage the image sensor and cause the camera to malfunction.
- Do not leave the camera, the supplied accessories, or memory cards within the reach of infants. They may be accidentally swallowed. If this occurs, consult a doctor immediately.

Notes on the monitor and electronic viewfinder

- The monitor and electronic viewfinder are manufactured using extremely high-precision technology, and over 99.99% of the pixels are operational for effective use. However, there may be some small black dots and/or bright dots (white, red, blue or green in color) that constantly appear on the monitor and electronic viewfinder. These are imperfections due to the manufacturing process and do not affect the recorded images in any way.
- The image may be slightly distorted near the corners of the viewfinder. This is not a malfunction. When you want to see the full composition with all its details, you can also use the monitor.
- If you pan the camera while looking into the viewfinder or move your eyes around, the image in the viewfinder may be distorted or the color of the image may change. This is a characteristic of the lens or display device and is not a malfunction. When you shoot an image, we recommend that you look at the center area of the viewfinder.
- When shooting with the viewfinder, you may experience symptoms such as eyestrain, fatigue, travel sickness, or nausea. We recommend that you take a break at regular intervals when you are shooting with the viewfinder. In case you may feel uncomfortable, refrain from using the viewfinder until your condition recovers, and consult your doctor as necessary.

Notes on continuous shooting

During continuous shooting, the monitor or viewfinder may flash between the shooting screen and a black screen. If you keep watching the screen in this situation, you may experience uncomfortable symptoms such as feeling of unwellness. If you experience uncomfortable symptoms, stop using the camera, and consult your doctor as necessary.

Notes on recording for long periods of time or recording 4K movies

- Depending on the camera and battery temperature, you may be unable to record movies or the power may turn off automatically to protect the camera. A message will be displayed on the screen before the power turns off or you can no longer record movies. In this case, leave the power off and wait until the camera and battery temperature goes down. If you turn on the power without letting the camera and battery cool enough, the power may turn off again or you may be unable to record movies.
- 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.
- Under high ambient temperatures, the temperature of the camera rises quickly.
- Camera body and battery may get warm with use – this is normal.

Notes on recording/playback

- Before you start recording, make a trial recording to make sure that the camera is working correctly.
- The recorded image may be different from the image you monitored before recording.
- Do not use the camera in areas where strong radio waves or radiation are being emitted. Recording and playback may not function correctly.
- Playback of images recorded with your product on other equipment and playback of images recorded or edited with other equipment on your product are not guaranteed.
- Sony can provide no guarantees in the event of failure to record or loss or damage of recorded images or audio data due to a malfunction of the camera or recording media, etc. We recommend backing up important data.
- Once you format the memory card, all the data recorded on the memory card will be deleted and cannot be restored. Before formatting, copy the data to a computer or other device.

Notes on the Multi Interface Shoe

- When attaching or detaching accessories such as an external flash to the Multi Interface Shoe, first turn the power to OFF. When attaching the accessory, confirm that it is firmly fastened to the camera.

- Do not use the Multi Interface Shoe with a commercially available flash that applies voltages of 250 V or more or has the opposite polarity of the camera. It may cause a malfunction.

Sony accessories

Use only genuine Sony brand accessories, otherwise it may cause a malfunction. Sony brand accessories may not come to market for some countries or regions.

On the data specifications described in this manual

The data on performance and specifications are defined under the following conditions, except as described in this manual: at an ordinary ambient temperature of 25°C (77°F), and using a battery pack that has been fully charged until the charge lamp has turned off.

Warning on copyright

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

Notes on location information

If you upload and share an image tagged with a location, you may accidentally reveal the information to a third party. To prevent third parties from obtaining your location information, set [□ Loc. Info. Link Set.] to [Off] before shooting images.

Notes on discarding or transferring this product to others

When discarding or transferring this product to others, make sure to perform the following operation to protect private information.

- Select [Setting Reset] → [Initialize].

Notes on discarding or transferring a memory card to others

Executing [Format] or [Delete] on the camera or a computer may not completely delete the data on the memory card. When transferring a memory card to others, we recommend that you delete the data completely using data deletion software. When discarding a memory card, we recommend that you physically destroy it.

Notes on wireless LAN

If your camera is lost or stolen, Sony bears no responsibility for the loss or damage caused by illegal access or use of the registered access point on the camera.

Notes on security when using wireless LAN products

- Always make sure that you are using a secure wireless LAN to avoid hacking, access by malicious third parties, or other vulnerabilities.
- It is important that you set the security settings when using a wireless LAN.
- If a security problem arises because no security precautions are in place or due to any inevitable circumstances when using a wireless LAN, Sony bears no responsibility for the loss or damage.

How to turn off wireless network functions (Wi-Fi, etc.) temporarily

When you board an airplane, etc., you can turn off all wireless network functions temporarily using [Airplane Mode].

For Customers in the U.S.A.

If you have any questions about this product, you may call:

Sony Customer Information Center
1-800-222-SONY (7669).

The number below is for the FCC related matters only.

Regulatory Information

Declaration of Conformity

Trade Name: SONY

Model No.: WW173777

Responsible Party: Sony Electronics Inc.

Address: 16535 Via Esprillo, San Diego, CA 92127 U.S.A.

Telephone No.: 858-942-2230

This device complies with Part15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Checking the camera and the supplied items

The number in parentheses indicates the number of pieces.

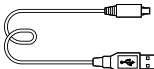
- Camera (1)
- Power cord (mains lead) (1)
(supplied in some countries/
regions)



- Rechargeable battery pack
NP-FW50 (1)

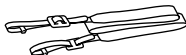


- Micro USB cable (1)



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

- Shoulder strap (1)



- Lens cap (1)

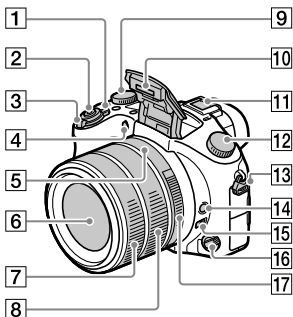


- Lens hood (1)



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

Identifying parts



- 1 ON/OFF (Power) switch
- 2 Shutter button
- 3 For shooting: W/T (Zoom) lever
For viewing:  (Index) lever/
Playback zoom lever
- 4 Self-timer lamp/AF illuminator
- 5 Aperture index
- 6 Lens
- 7 Front lens ring
- 8 Rear lens ring
- 9 Exposure compensation dial
- 10 Flash
 - Press the  (Flash pop-up) button to use the flash. The flash does not pop up automatically.
 - When not using the flash, press it back into the camera body.

11 Multi Interface Shoe

- Some accessories may not go in all the way and protrude backward from the Multi interface shoe. However, when the accessory reaches the front end of the shoe, the connection is completed.
- For details on compatible accessories for the multi interface shoe, visit the Sony website, or consult your Sony dealer or local authorized Sony service facility. Accessories for the Accessory Shoe can also be used. Operations with other manufactures' accessories are not guaranteed.

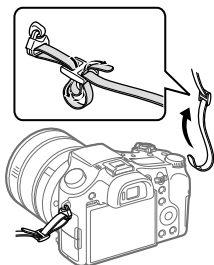
ni Multi
Interface Shoe

Accessory Shoe

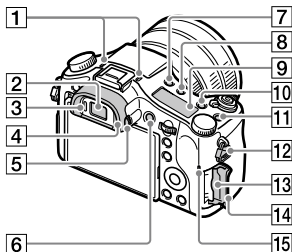
12 Mode dial

AUTO (Auto Mode)/
P (Program Auto)/
A (Aperture Priority)/
S (Shutter Priority)/
M (Manual Exposure)/
MR (Memory recall)/
 (Movie)/
HFR (High Frame Rate)/
 (Sweep Panorama)/
SCN (Scene Selection)

- 13 Hook for shoulder strap**
Attach both ends of the strap onto the camera.

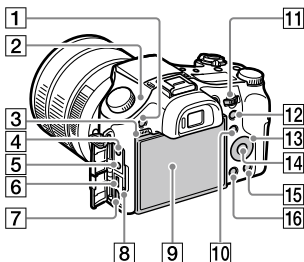


- 14 Focus hold button**
15 Focus range limiter switch
16 Focus mode dial
17 Aperture ring



- 1 Microphone**
Do not cover this part during movie recording. Doing so may cause noise or lower the volume.
- 2 Viewfinder**

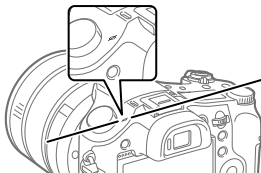
- 3 Eye sensor**
4 Eyepiece cup
5 Diopter-adjustment dial
6 MOVIE (Movie) button
7 ⚡ (Flash pop-up) button
8 ☀ (Display panel illumination) button
9 Display panel
10 C2 button (Custom button 2)
11 C1 button (Custom button 1)
12 Hook for shoulder strap
13 Memory card slot
14 Memory card cover
15 Access lamp



- 1 MENU button**

2 **Image sensor position mark**

The image sensor is the sensor that converts light into an electric signal. The  mark shows the location of the image sensor. When you measure the exact distance between the camera and the subject, refer to the position of the horizontal line.



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

3 **Speaker**

4 **(Microphone) jack**

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

5 **(Headphones) jack**

6 **Multi/Micro USB Terminal**

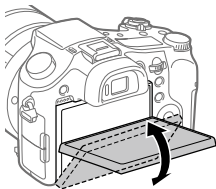
- This terminal supports Micro USB-compatible devices.
- For details on compatible accessories for the Multi/Micro USB Terminal, visit the Sony website, or consult your Sony dealer or local authorized Sony service facility.

7 **HDMI micro jack**

8 **Charge lamp**

9 **Monitor (For touch operation: Touch panel/Touch pad)**

You can adjust the monitor to an easily viewable angle and shoot from any position.



You may not be able to adjust the monitor angle depending on the type of a tripod you use. In such a case, release the tripod screw once to adjust the monitor angle.

- 10** For shooting: Fn (Function) button

For viewing:

-  (Send to Smartphone) button

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

- 11** Control dial

You can quickly adjust the settings for each shooting mode.

- 12** For shooting: AEL button

For viewing:  (Playback zoom) button

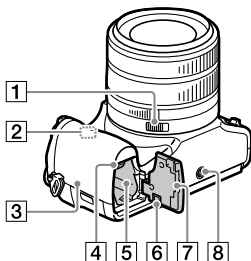
- 13** Control wheel

- 14** Center button

- 15** For shooting: C3 button (Custom button 3)

For viewing:  (Delete) button

- 16**  (Playback) button



- 1** Aperture click switch

- 2** Wi-Fi/Bluetooth antenna (built-in)

- 3**  (N mark)

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



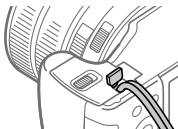
- NFC (Near Field Communication) is an international standard of the short-range wireless communication technology.

- 4** Battery lock lever

- 5** Battery insertion slot

- 6** Connection plate cover

Use this when using an AC-PW20 AC Adaptor (sold separately). Insert the connection plate into the battery compartment, and then pass the cord through the connection plate cover as shown below.



Make sure that the cord is not pinched when you close the cover.

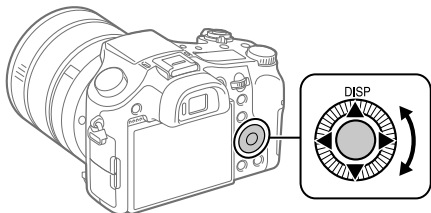
7 Battery cover

8 Tripod socket hole

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

Basic operations

Using the control wheel

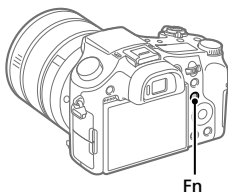


- You can select setting items by turning or pressing the top/bottom/left/right side of the control wheel. Your selection is determined when you press the center of the control wheel.
- The DISP (Display Setting) is assigned to the top side of the control wheel. In addition, you can assign selected functions to the left/right/bottom side and the center of the control wheel, and to the rotation of the control wheel.
- During playback, you can display the next/previous image by pressing the right/left side of the control wheel or by turning the control wheel.

Using the Fn (Function) button

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

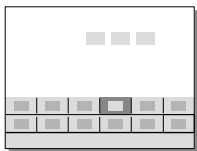
- 1 Press the DISP button on the control wheel repeatedly to display a screen mode other than [For viewfinder], and then press the Fn (Function) button.**



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

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

- Some functions can be fine-tuned using the control dial.



To adjust settings from the dedicated setting screens

Select the desired function in step 2, then press the center of the control wheel. The dedicated setting screen for the function will appear. Follow the operating guide to adjust settings.



Operation guide

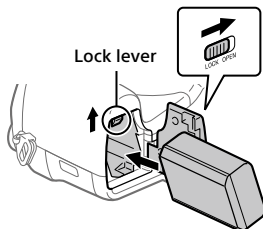
Startup guide

Step 1: Inserting the battery pack/memory card (sold separately) into the camera

For details on memory cards that can be used with this camera, refer to page 30.

1 Open the battery cover, and insert the battery pack into the camera.

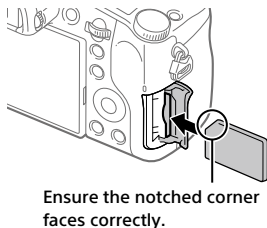
- Make sure that the battery pack is facing in the correct direction and insert it while pressing the battery lock lever.



2 Close the battery cover.

3 Open the memory card cover, and insert the memory card (sold separately) into the camera.

- With the notched corner facing in the direction illustrated, insert the memory card until it clicks into place.



4 Close the memory card cover.

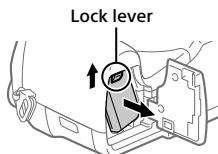
■ To format the memory card

When you use a memory card with this camera for the first time, it is recommended that you format the card using the camera in order to stabilize the performance of the memory card.

- Formatting erases all data on the memory card, including protected images and registered settings (M1 to M4). Once erased, this data cannot be restored. Save valuable data to a computer, etc. before formatting.
- To perform formatting, select MENU →  (Setup) → [Format].

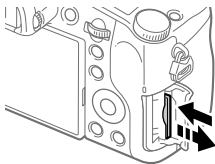
■ To remove the battery pack

Make sure that the access lamp (page 9) is not lit, and turn off the camera. Then, slide the lock lever and remove the battery pack. Be careful not to drop the battery pack.



■ To remove the memory card

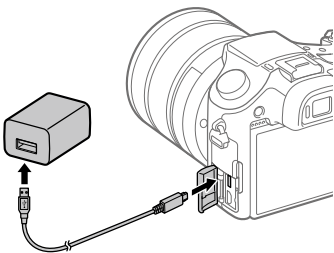
Make sure that the access lamp (page 9) is not lit, and then push in the memory card once to remove it.



Step 2: Charging the battery pack while it is inserted in the camera

1 Turn the power off.

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



Charge lamp on the camera (orange)

Lit: Charging

Off: Charging finished

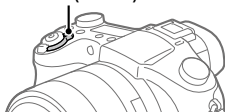
Flashing: Charging error or charging paused temporarily because the camera is not within the proper temperature range

- Charging time (full charge): approximately 150 min (when charging a fully depleted battery pack at a temperature of 25°C (77°F))
 - When you use a completely new battery pack or a battery pack that has not been used for a long time, the charge lamp may flash quickly when the battery is charged. If this happens, remove the battery pack or disconnect the USB cable from the camera and then re-insert it to recharge.
 - Be sure to use only genuine Sony brand battery packs, micro USB cables (supplied) and AC Adaptors (supplied).
-

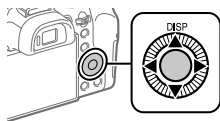
Step 3: Setting the language and the clock

- 1 Set the ON/OFF (Power) switch to "ON" to turn on the camera.

ON/OFF (Power) switch



- 2 Select the desired language and then press the center of the control wheel.



- 3 Make sure that [Enter] is selected on the screen and then press the center.

- 4 Select the desired geographic location and then press the center.

- 5 Select [Date/Time] using the top/bottom of the control wheel or by turning the control wheel, and then press the center.

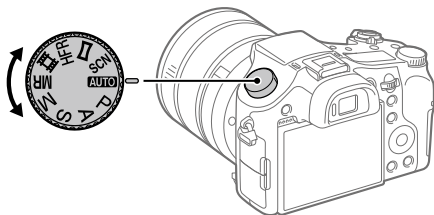
- 6 Select the desired item by pressing the top/bottom/left/right side of the control wheel, and then press the center.

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

Hint

- To reset the date and time setting, use MENU (page 27).

Step 4: Shooting images in auto mode



- 1 Turn the mode dial to set to **AUTO**.**
- 2 Look into the viewfinder or the monitor and hold the camera.**
- 3 Use the W/T (zoom) lever to adjust the magnification of the image.**
- 4 Press the shutter button halfway down to focus.**
 - When the image is in focus, an indicator (such as ●) will light up.
- 5 Press the shutter button all the way down.**

To shoot movies

Press the MOVIE button to start/stop recording.

To play back images

Press the  (Playback) button to play back images. You can select the desired image using the control wheel.

To delete displayed image

Press the  (Delete) button while an image is displayed to delete it. Select [Delete] using the control wheel on the confirmation screen, and then press the center of the control wheel to delete the image.

■ To shoot images in various shooting modes

Set the mode dial to the desired mode depending on the subject or the functions you want to use.

Learning more about the camera

Instructions for all the functions of this camera are provided in the “Help Guide” (web manual).

Refer to page 2 for how to access the Help Guide.

Using the Wi-Fi / One-touch (NFC) / Bluetooth functions

You can perform the following operations using the camera's Wi-Fi, NFC One-touch, and Bluetooth functions.

- Saving images to a computer
- Transferring images from the camera to a smartphone
- Using a smartphone as a remote control for the camera
- Viewing still images on a TV
- Recording location information from a smartphone to images

For details, refer to the "Help Guide" (page 2) or to the attached document "Wi-Fi Connection/One-touch (NFC) Guide."

Installing PlayMemories Mobile

PlayMemories Mobile is required to connect the camera and a smartphone. If PlayMemories Mobile is already installed on your smartphone, be sure to update it to the latest version. For details on PlayMemories Mobile, refer to the support page (<http://www.sony.net/pmm/>).



Note

- To use the camera's NFC One-touch function, an NFC-enabled Android smartphone or tablet is required.
- The Wi-Fi functions introduced in this manual are not guaranteed to operate on all smartphones or tablets.
- The Wi-Fi functions of this camera are not available when connected to a public wireless LAN.
- Depending on future version upgrades, the operational procedures or screen displays are subject to change without notice.

Recording location information to captured images

By using PlayMemories Mobile, you can obtain location information from a connected smartphone (via Bluetooth communication) and record it to captured images.

For details on the operating procedure, refer to the "Help Guide" (page 2) or the following support page.



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

Introduction to computer software

We offer the following computer software to enhance your enjoyment of photos/movies. Access one of the following URLs using your Internet browser and then download the software by following the onscreen instructions.

If one of these software is already installed on your computer, update it to the latest version before use.

Windows:

<http://www.sony.co.jp/imsoft/Win/>

Mac:

<http://www.sony.co.jp/imsoft/Mac/>

You can check the recommended operating environment for the software from the following URL:

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

PlayMemories Home

PlayMemories Home allows you to import still images and movies to your computer and view or use them.

You need to install PlayMemories Home to import XAVC S movies or AVCHD movies to your computer.

You can access the download website directly from the following URL:

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

- When you connect the camera to your computer, new functions may be added to PlayMemories Home. Connecting the camera to your computer is therefore recommended even if PlayMemories Home has already been installed on the computer.

Image Data Converter

You can develop and edit RAW images using various adjustment functions like tone curve and sharpness.

Remote Camera Control

With Remote Camera Control, you can change the camera settings or release the shutter from a computer connected via a USB cable.

To use Remote Camera Control, first select MENU →  (Setup) → [USB Connection] → [PC Remote], then connect the camera to a computer via a USB cable.

List of MENU items

For details on each MENU items, refer to the Help Guide.

1 (Camera Settings1)

Red tab

Quality/Image Size

-  Quality
-  Image Size
-  Aspect Ratio
- Panorama: Size
- Panorama: Direction
-  Long Exposure NR
-  High ISO NR
-  Color Space

Shoot Mode/Drive

- Auto Mode
- Scene Selection
- Drive Mode
- Bracket Settings
-  1/ 2 Recall
-  1/ 2 Memory
- Reg Cust Shoot Set

AF

- Focus Area
-  Swt. V/H AF Area
-  AF Illuminator
- Center Lock-on AF
-  AF w/ shutter
-  Pre-AF
-  AF Area Regist.

-  Del. Reg. AF Area
- AF Area Auto Clear
- Disp. cont. AF area
- Phase Detect. Area

Exposure

- Exposure Comp.
- Reset EV Comp.
- ISO
- ISO AUTO Min. SS
- Metering Mode
- Spot Metering Point
-  AEL w/ shutter
- Exposure Std. Adjust

Flash

- Flash Mode
- Flash Comp.
- Exp.comp.set
- Red Eye Reduction

Color/WB/Img. Processing

- White Balance
- Priority Set in AWB
- DRO/Auto HDR
- Creative Style
- Picture Effect
- Picture Profile
-  Soft Skin Effect

Focus Assist

Focus Magnifier
Focus Magnif. Time
 Initial Focus Mag.
 MF Assist
Peaking Level
Peaking Color
Focus Ring Rotate

Face Detection/Shoot Assist

Smile/Face Detect.
Face Registration
 Auto Obj. Framing

2 (Camera Settings2) Purple tab

Movie

 Exposure Mode
 HFR Exposure Mode
 File Format
 Record Setting
 HFR Settings
Quality (Dual Rec)
Img. Size (Dual Rec)
Auto Dual Rec
 Proxy Recording
 AF drive speed
 AF Track Sens
 Auto Slow Shut.
Audio Recording
Audio Rec Level
Audio Level Display
Audio Out Timing
Wind Noise Reduct.

 SteadyShot
 Marker Display
 Marker Settings
Video Light Mode
Movie w/ shutter

Shutter/SteadyShot

 Shutter Type
Release w/o Card
 SteadyShot

Zoom

Rng. of Zoom Assist
Zoom Setting
Zoom Speed
Zoom Ring Rotate
Zoom Func. on Ring

Display/Auto Review

DISP Button
FINDER/MONITOR
Zebra
Grid Line
Exposure Set. Guide
Live View Display
Auto Review

Custom Operation

Custom Key(Shoot.)
Custom Key(PB)
Function Menu Set.
Lens Ring Setup
MOVIE Button
Dial/Wheel Lock
Audio signals
 Write Date



(Network)

Green tab

Snd to Smrtphn Func
Send to Computer
View on TV
Ctrl w/ Smartphone
Airplane Mode
Wi-Fi Settings
Bluetooth Settings
 Loc. Info. Link Set.
Edit Device Name
Reset Network Set.



(Playback)

Blue tab

Delete
View Mode
Image Index
Disp Cont Shoot Grp
Display Rotation
Slide Show
Rotate
 Enlarge Image
 Enlarge Init. Mag.
 Enlarge Initial Pos.
Protect
Motion Interval ADJ
Specify Printing
Photo Capture



(Setup)

Yellow tab

Monitor Brightness
Viewfinder Bright.
Finder Color Temp.
Gamma Disp. Assist
Volume Settings
Tile Menu
Mode Dial Guide
Delete confirm.
Display Quality
Pwr Save Start Time
NTSC/PAL Selector*
Touch Operation
Touch Pad Settings
Demo Mode
TC/UB Settings
HDMI Settings
 4K Output Sel.
USB Connection
USB LUN Setting
USB Power Supply
PC Remote Settings
 Language
Date/Time Setup
Area Setting
Copyright Info
Format
File Number
Set File Name
Select REC Folder
New Folder
Folder Name
Recover Image DB
Display Media Info.

Version

Setting Reset

- * If you change this item, you will need to format the memory card for compatibility with the PAL or NTSC system. Also, note that it may not be possible to play back movies recorded for the NTSC system on PAL system TVs.

★ (My Menu)

Gray tab

Add Item

Sort Item

Delete Item

Delete Page

Delete All

Specifications

Battery life and number of recordable images

		Battery life	Number of images
Shooting (still images)	Screen mode	—	Approx. 400
	Viewfinder mode	—	Approx. 370
Actual shooting (movies)	Screen mode	Approx. 75 min.	—
	Viewfinder mode	Approx. 75 min.	—
Continuous shooting (movies)	Screen mode	Approx. 135 min.	—
	Viewfinder mode	Approx. 135 min.	—

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

Memory cards that can be used

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

SD memory cards

Recording format		Supported memory card
Still image		SD/SDHC/SDXC card
AVCHD		SD/SDHC/SDXC card (Class 4 or faster, or U1 or faster)
XAVC S	4K 60 Mbps* HD 50 Mbps or lower* HD 60 Mbps	SDHC/SDXC card (Class 10, or U1 or faster)
	4K 100 Mbps* HD 100 Mbps	SDHC/SDXC card (U3)
	High Frame Rate*	SDHC/SDXC card (Class 10, or U1 or faster)

* Including when recording proxy movies at the same time

Memory Stick media

Recording format		Supported memory card
Still image		Memory Stick PRO Duo/ Memory Stick PRO-HG Duo
AVCHD		Memory Stick PRO Duo (Mark 2)/ Memory Stick PRO-HG Duo
XAVC S	4K 60 Mbps* HD 50 Mbps or lower* HD 60 Mbps	Memory Stick PRO-HG Duo
	4K 100 Mbps* HD 100 Mbps	—
	High Frame Rate*	Memory Stick PRO-HG Duo

* Including when recording proxy movies at the same time

Note

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

Number of recordable images

When you insert a memory card into the camera and set the ON/OFF (Power) switch to “ON,” the number of images that can be recorded (should you continue to shoot using the current settings) is displayed on the screen.

Note

- When “0” (the number of recordable images) flashes in orange, the memory card is full. Replace the memory card with another one, or delete images from the current memory card.
- When “NO CARD” flashes in orange, it means no memory card has been inserted. Insert a memory card.

The number of images that can be recorded on a memory card

The table below shows the approximate number of images that can be recorded on a memory card formatted with this camera. The values are defined using Sony standard memory cards for testing. The values may vary depending on the shooting conditions and the type of memory card used.

[ Image Size]: [L: 20M]

[ Aspect Ratio]: [3:2]*

(Units: Images)

Quality	8 GB	32 GB	64 GB	256 GB
Standard	1150	4800	9600	37500
Fine	690	2800	5500	22000
Extra fine	510	2050	4150	16000
RAW & JPEG	235	950	1900	7500
RAW	355	1400	2850	11000

- * When [ Aspect Ratio] is set to other than [3:2], you can record more images than the numbers shown in the table above (except when [RAW] is selected).

Note

- Even if the number of recordable images is higher than 9999 images, “9999” will appear.

- When an image shot with another product is played back on this camera, the image may not appear in its actual size.
- The numbers shown are when using a Sony memory card.

Recordable movie times

The table below shows the approximate total recording times using a memory card formatted with this camera. The values may vary depending on the shooting conditions and the type of memory card used. The recording times for when [ File Format] is set to [XAVC S 4K] and [XAVC S HD] are recording times when shooting with [Px Proxy Recording] set to [Off].

(h (hour), m (minute))

File Format	Record Setting	8 GB	32 GB	64 GB	256 GB
XAVC S 4K	30p 100M/25p 100M	9 m	35 m	1 h 15 m	5 h 15 m
	30p 60M/25p 60M	10 m	1 h	2 h 5 m	8 h 35 m
	24p 100M*/ -	9 m	35 m	1 h 15 m	5 h 15 m
	24p 60M*/ -	10 m	1 h	2 h 5 m	8 h 35 m
XAVC S HD	120p 100M/100p 100M	9 m	35 m	1 h 15 m	5 h 15 m
	120p 60M/100p 60M	10 m	1 h	2 h 5 m	8 h 35 m
	60p 50M/50p 50M	15 m	1 h 15 m	2 h 35 m	10 h 25 m
	60p 25M/50p 25M	30 m	2 h 25 m	5 h	20 h 10 m
	30p 50M/25p 50M	15 m	1 h 15 m	2 h 35 m	10 h 25 m
	30p 16M/25p 16M	50 m	3 h 50 m	7 h 45 m	31 h 30 m
	24p 50M*/ -	15 m	1 h 15 m	2 h 35 m	10 h 25 m
AVCHD	60i 24M (FX)/ 50i 24M (FX)	40 m	2 h 55 m	6 h	24 h 15 m
	60i 17M (FH)/ 50i 17M (FH)	55 m	4 h 5 m	8 h 15 m	33 h 15 m

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

- Continuous movie shooting is possible for a maximum of approximately 29 minutes at a time with the camera's default settings and an ambient temperature of approximately 25°C (77°F) (product specification limit).

Note

- The recordable time of movies varies because the camera is equipped with VBR (Variable Bit-Rate), which automatically adjusts image quality depending on the shooting scene. When you record a fast-moving subject, the image is clearer but the recordable time is shorter because more memory is required for recording. The recordable time also varies depending on the shooting conditions, the subject or the image quality/size settings.
- The times shown are recordable times using a Sony memory card.

Notes on continuous movie recording

- High-quality movie recording and high-speed continuous shooting require large amounts of power. Therefore, if you continue to shoot, the temperature inside the camera will rise, especially that of the image sensor. In such cases, the camera will turn off automatically because the surface of the camera is heated to a high temperature or the high temperature affects the quality of the images or the internal mechanism of the camera.
- The duration of time available for movie recording varies with the temperature, file format/record setting for movies, Wi-Fi network environment, or condition of the camera before you start recording. If you frequently recompose or shoot images after the power is turned on, the temperature inside the camera will rise and the recording time available will be shorter.
- If the  icon appears, the temperature of the camera has risen.
- If the camera stops movie recording due to a high temperature, leave it for some time with the power turned off. Start recording after the temperature inside the camera drops fully.
- If you observe the following points, you will be able to record movies for longer periods of time.
 - Keep the camera out of direct sunlight.
 - Turn the camera off when it is not being used.
- When [ File Format] is set to [AVCHD], the file size of movies is limited to approx. 2 GB. If the movie file size reaches approx. 2 GB during recording, a new movie file will be created automatically.

Specifications

Camera

[System]

Image device: 13.2 mm × 8.8 mm
(1.0 type) CMOS sensor

Effective pixel number of camera:
Approx. 20.1 Megapixels

Total pixel number of camera:
Approx. 21.0 Megapixels

Lens: ZEISS Vario-Sonnar T* 25×
zoom lens
f = 8.8 mm – 220 mm (24 mm –
600 mm (35 mm film equivalent))
F2.4 (W) – F4 (T)

While shooting movies (HD 16:9):
26 mm – 630 mm^{*1}

While shooting movies (4K 16:9):
28 mm – 680 mm^{*1}

^{*1} When [SteadyShot] is set to
[Standard]

SteadyShot: Optical

File format (Still images):
JPEG (DCF Ver. 2.0, Exif Ver. 2.31,
MPF Baseline) compliant, RAW
(Sony ARW 2.3 Format), DPOF
compatible

File format (Movies):
XAVC S format (XAVC S format
compliant):
Video: MPEG-4 AVC/H.264
Audio: LPCM 2ch (48 kHz 16 bit)
AVCHD format (AVCHD format
Ver. 2.0 compatible):
Video: MPEG-4 AVC/H.264
Audio: Dolby Digital
2ch, equipped with
Dolby Digital Stereo Creator
• Manufactured under license
from Dolby Laboratories.

Recording media:

Memory Stick PRO Duo media,
Memory Stick Micro media, SD
cards, microSD memory cards

Flash: Flash range (ISO sensitivity
(Recommended Exposure Index)
set to Auto):
Approx. 1.0 m to 10.8 m (3.28 ft.
to 35.43 ft.) (W)/
Approx. 1.0 m to 6.5 m (3.28 ft. to
21.33 ft.) (T)

[Input/Output connectors]

HDMI connector: HDMI micro jack

Multi/Micro USB Terminal*:
USB communication

USB communication:
Hi-Speed USB (USB 2.0)

Microphone jack:
Ø 3.5 mm Stereo mini jack

Headphones jack:
Ø 3.5 mm Stereo mini jack

* Supports Micro USB compatible
device.

[Viewfinder]

Type: Electronic viewfinder (Organic
Electro-Luminescence)

Total number of dots:
2 359 296 dots

Frame coverage: 100%

Magnification: Approx. 0.70 ×
(35 mm-format equivalent) with
50 mm lens at infinity, -1 m⁻¹

Eye point (CIPA compliant):
Approx. 23 mm from the
eyepiece, approx. 21.5 mm from
the eyepiece frame at -1 m⁻¹

Dioptr adjustment:
-4.0 m⁻¹ to +3.0 m⁻¹

[Monitor]

LCD monitor:

7.5 cm (3.0 type) TFT drive, touch panel

Total number of dots:

1 440 000 dots

[General]

Model No. WW173777

Rated input:

7.2 V , 2.4 W

Power consumption:

Approx. 2.2 W (during shooting with the monitor)

Approx. 2.4 W (during shooting with the viewfinder)

Operating temperature: 0 to 40 °C
(32 to 104 °F)

Storage temperature: -20 to 55 °C (-4 to 131 °F)

Dimensions (W × H × D) (Approx.):

132.5 × 94.0 × 145.0 mm

132.5 × 94.0 × 127.4 mm (from front of lens to monitor)

5 1/4 × 3 3/4 × 5 3/4 in.

5 1/4 × 3 3/4 × 5 1/8 in. (from front of lens to monitor)

Mass (CIPA compliant) (Approx.):

1 095 g (2 lb 6.7 oz) (including battery pack, SD card)

Microphone: Stereo

Speaker: Monaural

Exif Print: Compatible

PRINT Image Matching III: Compatible

[Wireless LAN]

Supported standard:

IEEE 802.11 b/g/n

Frequency: 2.4 GHz

Supported security protocols:

WEP/WPA-PSK/WPA2-PSK

Configuration method:

Wi-Fi Protected Setup™ (WPS) / manual

Access method: Infrastructure Mode

NFC: NFC Forum Type 3 Tag compliant

[Bluetooth communications]

Bluetooth standard Ver. 4.1

Frequency band: 2.4 GHz

AC Adaptor AC-UUD12/UUE12

Rated input: 100–240 V ,
50/60 Hz, 0.2 A

Rated output: 5 V , 1.5 A

Rechargeable Battery Pack NP-FW50

Rated voltage: 7.2 V 

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