VARICAM
LT

4K PROFESSIONAL

Operating Guide

Version 5.5

* The photograph is an example of a system.

Panasonic

expressP2　　P2HD　　SDXC

AVC ULTRA　　AVC INTRA　　AVC LongG

How to read this document

■ **Illustrations**

● Illustrations may differ from the actual product.

■ **Conventions used in this manual**

● Words and phrases in [ ] brackets indicate details and content displayed in the viewfinder or control panel.

● Words and phrases in < > brackets indicate design text used on this camera, such as button names.

■ **Reference pages**

● Reference pages in this document are indicated by (page 00).

■ **Terminology**

● SD memory card, SDHC memory card, and SDXC memory card are referred to as "SD memory card".

● A memory card with the "P2" logo such as AJ-P2E060FG memory card (optional) is referred to as a "P2 memory card".

● A memory card with the "expressP2" logo such as AU-XP0256AG memory card (optional) is referred to as a "expressP2 memory card".

● P2 memory card and expressP2 memory card are referred to only as "P2 card" unless distinguished otherwise.

● Video that is created during a single recording operation is referred to as a "clip".

■ **Combining the products**

● This document describes with assumption to use in the following combination of products.

  - Camera: AU-V35LT1G

  - Electronic HD color view finder: AU-VCVF10G

  - Shoulder mount module: AU-VSHL2G

  - Grip module: AU-VGRP1G

  - PL lens mount module: AU-VMPL1G

Contents

Chapter 1   Overview

Before using the camera, read this chapter.

Before using the camera

■ **Before using the camera, always check if the built-in battery is not consumed, and then set the date/time.**

The internal clock of the camera is reset when the built-in battery has been consumed. This may result in the metadata of the clip not recorded correctly, and it may not display correctly in the thumbnail screen.

Check if the built-in battery is not consumed before using. (page 33)

Also, set the correct date/time. (page 34)

■ **Cautions when throwing memory cards away or transferring them to others**

Formatting memory cards or deleting data using the functions of the camera or a computer will merely change the file management information: it will not completely erase the data on the cards. When throwing these cards away or transferring them to others, either physically destroy them or use a data deletion program for computers (commercially available) to completely erase the data. Users are responsible for managing the data stored in their memory cards.

■ **Control panel and viewfinder**

● If the same image or letters are allowed to be displayed on the control panel for a long time, the image may be burned into the screen. It will return to normal after leaving the camera recorder turned off for several hours.

● Condensation sometimes forms on the LCD of the control panel in locations subject to extreme temperature differences. If this happens, wipe with a soft, dry cloth.

● If the camera recorder is very cold, the control panel will be slightly darker than normal immediately after the power is turned on. It will return to its regular brightness when the temperature inside increases.

● Since the viewfinder uses organic EL, if the same image or letters are allowed to be displayed for a long time, the image may be burned into the screen. There is no problem with the recorded images.

  Switch the screen by turning off the screen or by using the eye sensor, etc.

● The control panel and viewfinder monitor (organic EL) are highly-precisely managed so that at least 99.99% of the dots are effective pixels and 0.01% or less are invalid pixels and always lit. This is not a malfunction and it has no effect whatsoever on the recorded images.

■ **Do not point the eye piece of the lens and viewfinder at the sun.**

Doing so might damage the components inside.

■ **GPS**

GPS (Global Position System) satellite is managed by the United States Department of State and its precision is sometimes intentionally changed.

Position it in a location where there is a good view of the sky and there is no influence of obstacles such as roofs and trees, etc.

Depending upon the surrounding environment and the time, it may take a long time to position and errors may be larger.

■ **Caution regarding laser beams**

The image sensor may be damaged if the image sensor is exposed to the laser beam.

Take sufficient care to prevent laser beams from striking the lens when shooting in an environment where laser devices are used.

■ **Note the following points.**

● If you prepare to record important images, always shoot some advance test footage to verify that both pictures and sound are being recorded normally.

● Should video or audio recording fail due to a malfunction of the camera or the P2 cards used, we will not assume liability for such failure.

● Set up or check the calendar and time zone before recording. (page 34) These settings have an effect on the management and playback order of the recorded contents.

■ **Software information about this product**

1 This product includes software licensed under GNU General Public License (GPL) and GNU Lesser General Public License (LGPL), and customers are hereby notified that they have rights to obtain, re-engineer, and redistribute the source code of these software.

2 This product includes software licensed under MIT-License.

3 This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/).

4 This product includes software licensed under OpenBSD License.

5 This product includes PHP, freely available from <http://www.php.net/>.

6 This software is based in part on the work of the Independent JPEG Group.

7 This product includes software licensed under MOZILLA PUBLIC LICENSE.

For details on these descriptions (originally provided in English) and how to obtain the source code, visit the following website:

http://pro-av.panasonic.net/

We do not accept inquiries about the details of the source code obtained by the customer.

■ **Precautions when installing USB drivers**

For the latest information on the driver, visit the following website:

http://pro-av.panasonic.net/

● Install the required driver into your computer from the website.

● For installation procedure of the driver, refer to the installation manual on the website.

Accessories/options

Camera

- Mount cap (already attached to the camera module)
- Control panel
- Control panel mounting part
- Glass for IR recording
- Control panel mounting part clamping screw (4 pcs.)

Electronic HD color view finder (optional: AU-VCVF10G)

- Slider unit
- Slider unit mounting screw (2 pcs.)
- BNC cable
- DC cable
- Eye cup (already attached to the electronic HD color view finder)
- Eye piece filter (already attached to the electronic HD color view finder)

Shoulder mount module (optional: AU-VSHL2G)

- Slide rail (already attached to the shoulder mount module)

Grip module (optional: AU-VGRP1G)

- Grip arm (already attached to the grip module)

PL lens mount module (optional: AU-VMPL1G)

- Mounting screw (2 pcs.) (already attached to the PL lens mount module)
- Mount cap (already attached to the PL lens mount module)

📝 *NOTE*

・ After unpacking the product, dispose of the packing material properly.

Use of the camera on a system

Use the following recommended parts.

Basic system devices

The following are required devices for shooting.

Product name	Model No.	Remark
Camera	AU-V35LT1G	—
Shoulder mount module	AU-VSHL2G	"Mounting the shoulder mount module" (page 22)
Electronic HD color view finder	AU-VCVF10G	"Mounting the electronic HD color view finder" (page 21)
Grip module	AU-VGRP1G	"Mounting the grip module" (page 23)
PL lens mount module	AU-VMPL1G	"Replacing the lens mount" (page 30)
Lens (EF mount)*1	CANON/ZEISS/SIGMA	"Mounting the lens" (page 29)
Lens (35 mm, PL mount)	ZEISS/COOKE/CANON/FUJINON, etc.	"Mounting the lens" (page 31)
Stereo microphone kit	AJ-MC900G	"When using a stereo microphone" (page 100)
Battery	DIONIC HD*2 HYTRON140*2	"Mounting and setting battery" (page 26)
expressP2 memory card	AU-XP0256AG/AU-XP0256BG/AU-XP0512BG	"Memory card" (page 77)
SD memory card*3 P2 memory card*3	Visit the support desk at the website*3	"Memory card" (page 77)

*1 Refer to the support desk at the following website for the latest information regarding the lens that can be used.
http://pro-av.panasonic.net/
*2 A battery holder is provided as standard on the camera.
*3 Refer to our support desk at the following website for the latest information not included in this document.
http://pro-av.panasonic.net/

Expansion system devices

You can also use the following devices in addition to the basic system devices.

Product name	Model No.	Remark
LCD monitor	BT-LH2170G, BT-LH910G, etc.	—
Memory card drive	AU-XPD1*	—
External DC power supply	—	"Using the external DC power supply" (page 27)
Wireless module	AJ-WM30/AJ-WM50	"For wireless module AJ-WM30/AJ-WM50" (page 182)
Remote operation panel	AK-HRP200G	"Connecting the remote operation panel (AK-HRP200G)" (page 191)

* Replacement of hardware (free of charge) may be necessary when using the expressP2 memory card B series. For details of usage, refer to the support desk at the following website:
http://pro-av.panasonic.net/

Accessories

Product name	Model No.	Remark
Tripod adaptor	SHAN-TM700	"Attaching a tripod" (page 24)
Soft carrying case	AJ-SC900	—
Rain cover	SHAN-RC700	"Rain cover" (page 25)
Microphone holder	AJ-MH800G	"When using a stereo microphone" (page 100)

Chapter 2 Description of Parts

This chapter describes the names, functions, and operations of parts on the camera.

Camera

Left side
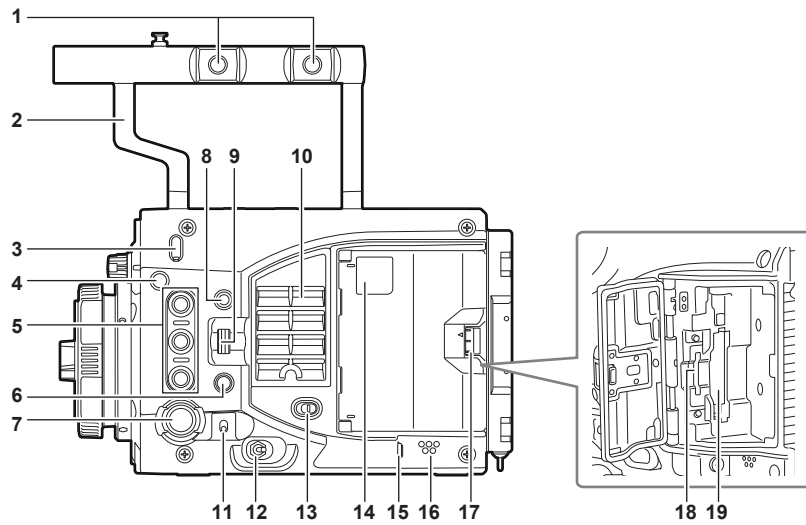
1 **Accessory mounting holes**

   For attaching accessories.
   ● Mounting hole size
     - 3/8-16 UNC

2 **Handle**

3 **Lens flange back adjustment hole**

   Used when adjusting the lens flange back.

4 **Focus hook/focus mark <φ>**

   Indicates the image surface plane of the image sensor.

5 **USER buttons (<USER 1>/<PLAY>, <USER 2>/<INFO>, <USER 3>/<EXIT>)**

   User-selected functions can be assigned to each button. Pressing a button performs the assigned function.
   This will have the same operation as the <PLAY>/<INFO>/<EXIT> buttons with orange text when the system check screen or the menu screen is displayed. In such case, this will not operate as USER buttons.

6 **<SYSTEM CHK> button**

   Displays the system check screen in the <VF SDI> terminal output.

7 **<REC> button**

   Press this button to start recording. Press this button again to stop recording. The button lights up in red during recording.

8 **<MENU> button**

   Displays the setting menu in the <VF SDI> terminal output and the control panel screen.

9 **<IRIS/SEL> dial button**

   Controls the iris of the EF lens.
   This will function as the menu selection dial when the menu is displayed by pressing the <MENU> button on the camera.
   Volume level can be adjusted with this dial button by assigning [DIRECT VOL CTRL] to the USER button and calling the direct volume control function.

10 **Fan inlet**

   Fan inlet for dissipating heat. Do not block this when the camera is in use.

11 **<TOGGLE/WB> switch**

   [WB]/[EI]/[SHUTTER] can be assigned.
   [WB] is assigned as the factory setting.
   The automatic white balance is operated when pressed and held upwards while [WB] is assigned.

12 **Power switch**

   Used to switch the power to on <I> or to standby <⏻>.
   The camera is not completely disconnected from the main power even when the power switch is set to the <⏻> position.

13 **<LOCK> switch**

   Disables the operation of the buttons and switches at the left side of the camera.
   Sets the button and switch to disable the operation in [MENU] → [SYSTEM SETTINGS] → [SIDE LOCK].
   Keep this in the <🔒> position to prevent incorrect operation when moving the camera, etc.

14 **Card access LED**

   Displays the access status of recording and playback of the card inserted in the main slot and the sub slot.
   Top: Main slot
   Bottom: Sub slot
   The access status of the file operation is also displayed for the sub slot.

15 **<PHONES> terminal**

   Connecting terminal of headphones for audio monitor. (Stereo mini jack)

16 Speaker

EE audio can be monitored during recording while playback audio can be monitored during playback.

The alarm is output in sync with flashing/lighting of the warning indicator.

Audio from the speaker automatically is turned off when headphones are connected to the <PHONES> terminal.

17 Card slot cover open/close lever

Opens the card slot cover.

18 Sub slot

Slot for SD memory cards (optional).

19 Main slot

Slot for P2 card.

Right side
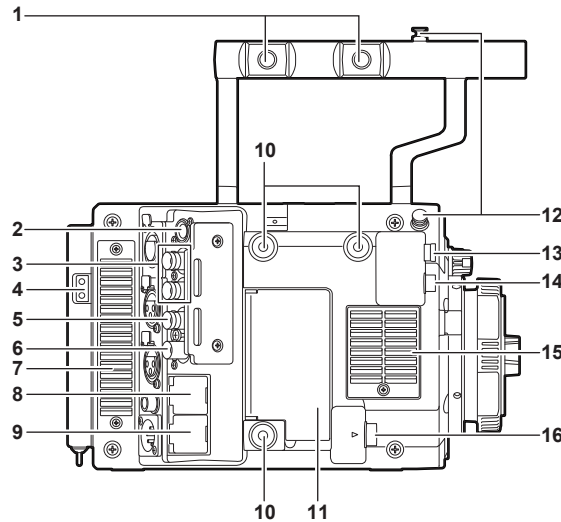
1 Accessory mounting holes

For attaching accessories.

● Mounting hole size

  - 3/8-16 UNC

2 <CONTROL PANEL> terminal

A terminal to connect the control panel.

3 <SDI OUT 1>/<SDI OUT 2> terminal

Output terminals of 3G/HD SDI for video monitor.

For the cable to connect to this terminal, prepare a double-shielded cable equivalent to 5C-FB.

4 Power supply output terminal for lighting

Power supply terminal when light is connected.

5 <GENLOCK IN> terminal

Inputs reference signals when setting the genlock on the camera unit or when externally locking the time code. The input signal is 3G/HD-SDI.

For the cable to connect to this terminal, prepare a double-shielded cable equivalent to 5C-FB.

6 <TC IN/OUT> terminal

Connects to the time code input terminal of the external device when locking the time code of the external device to the time code on the camera.

Inputs the standard time code when locking with the time code of the external device.

For the cable to connect to this terminal, prepare a double-shielded cable equivalent to 5C-FB.

7 Fan outlet

Fan outlet for dissipating heat. Do not block this when the camera is in use.

8 <LAN> terminal

For connecting a LAN (100BASE-TX) cable.

Use the shielded cross cable for the cable to connect to this terminal.

9 <USB DEVICE> terminal

USB device terminal for connecting a USB 2.0 cable.

For the cable to connect to this terminal, prepare a double-shielded cable.

10 Accessory mounting holes

For attaching accessories.

● Mounting hole size

  - 1/4-20 UNC (screw length 5.5 mm or shorter)

11 <USB HOST> terminal (inside the cover, 5.0 V 0.5 A max)

For mounting the wireless module AJ-WM30/AJ-WM50 (optional).

For the cable to connect to this terminal, prepare a double-shielded cable.

12 Focus hook

Indicates the image surface plane of the image sensor. Use this mark as a reference to measure the exact distance from the subject.

13 <VF SDI> terminal

An output terminal of 3G/HD SDI for connecting the viewfinder.

Use the BNC cable supplied with the viewfinder or the double-shielded cable equivalent to 5C-FB when connecting a cable to this terminal.

14 <DC OUT> terminal (page 32)

An output terminal to supply viewfinder power supply DC 12 V. Maximum of 1.0 A current can be provided.

Use the DC cable supplied with the viewfinder when connecting a cable to this terminal.

15 Fan inlet

Fan inlet for dissipating heat. Do not block this when the camera is in use.

16 <LENS/GRIP> terminal

Terminal for connecting a lens cable. For details, refer to the Operating Instructions for the lens.

Cable for the grip module AU-VGRP1G (optional) can also be connected.

Front
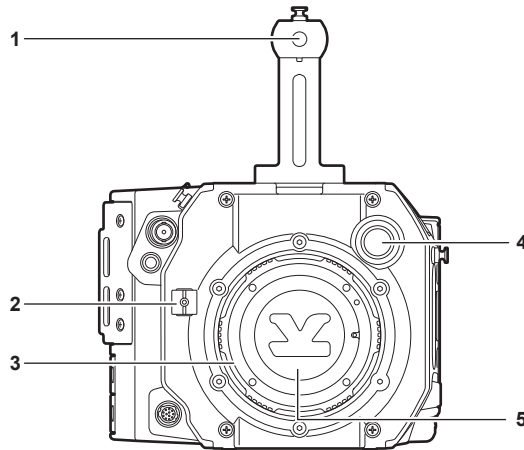
1 Accessory mounting holes

For attaching accessories.

- Mounting hole size
  - 3/8-16 UNC (screw length 5.5 mm or shorter)

2 Lens cable clamp

A clamp for securing the lens cable.

3 EF lens mount

EF lens is mounted.

4 <FILTER> dial

<1><CLEAR>: Does not use the ND filter.

<2><0.6ND>: Reduces the amount of light entering the image sensor to 1/4.

<3><1.2ND>: Reduces the amount of light entering the image sensor to 1/16.

<4><1.8ND>: Reduces the amount of light entering the image sensor to 1/64.

5 Mount cap

Attach the cap when the lens is not mounted.

Rear
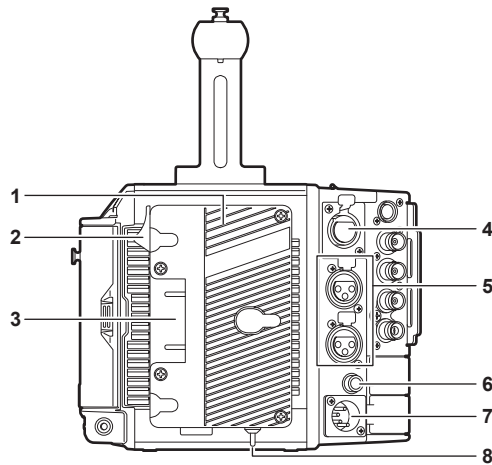
1 Battery holder

For mounting Anton/Bauer batteries.

2 Battery release lever

Pull this battery release lever down to release the battery.

3 Battery contact terminals
Contact terminals for the battery.

4 <INPUT 1/2> terminal
Terminal for connecting a microphone.

5 <INPUT 3>/<INPUT 4> terminal
Connect the audio equipment or the microphone.

6 <DC OUT/RS> terminal
Terminal for DC 12 V output and REC trigger input. The DC output provides a maximum current of 1.0 A.

7 <DC IN> terminal
Input terminal for connecting an external DC power supply.

8 <LIGHT CONTROL> switch
Control switch when light is connected to the light output terminal.

Top
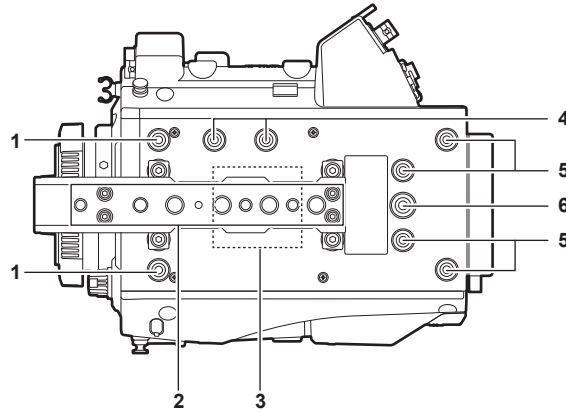
1 Viewfinder mounting holes
For attaching the viewfinder.

2 Accessory mounting holes
For attaching accessories.
- Mounting hole size
  - 1/4-20 UNC
  - 3/8-16 UNC

3 GPS module position
This part has a built-in GPS module. Do not hold the handle or block with an obstruction when GPS is in use.

4 Microphone holder mounting position

5 Mounting hole for control panel mounting part

6 Accessory mounting holes
For attaching accessories.
- Mounting hole size
  - 1/4-20 UNC (screw length 5.5 mm or shorter)

Bottom
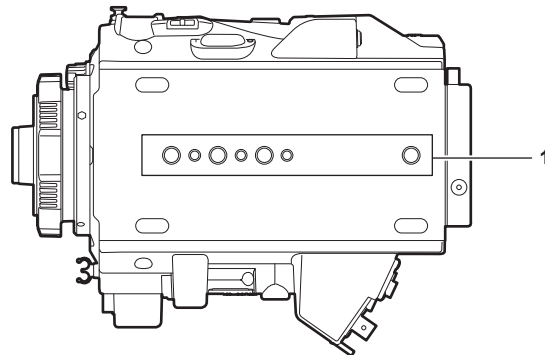
1 Shoulder mount module/tripod mounting holes
For attaching the shoulder mount module or a tripod.
- Mounting hole size
  - 1/4-20 UNC (screw length 5.5 mm or shorter)
  - 3/8-16 UNC (screw length 5.5 mm or shorter)

– 13 –

Electronic HD color view finder

Left side
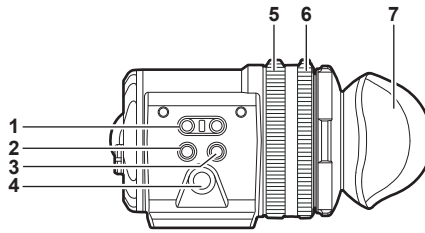
1 **<EVF USER 1>/<EVF USER 2> buttons**
User-selected functions can be assigned to each button. Pressing a button performs the assigned function. Functions are set on the viewfinder menu.

2 **<CAM MENU> button**
Displays the camera menu screen.

3 **<EVF MENU> button**
Displays the viewfinder menu screen.

4 **Jog dial**
Operation dial.
Used for setting, moving, and selecting in menus.

5 **Zoom ring**
Ring which enlarges/reduces the size of the viewfinder display screen.
This is used to enlarge the display when adjusting the focus. When the display is enlarged, some parts of the video may be hidden.

6 **Visibility adjustment ring**
Ring which adjusts the visibility. Turn this ring while pressing and holding the upper button.

7 **Eye cup**

Front
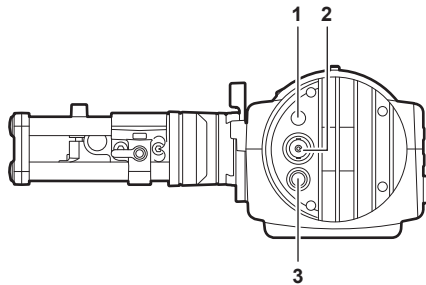
1 **Tally LED**
Lights up in red during recording. This can be disabled in the viewfinder menu.

2 **Video signal input terminal**
An input terminal for 3G/HD-SDI video signal input.
Use the supplied BNC cable or the 5C-FB equivalent double-shielded cable for the cable to connect to this terminal.

3 **<DC IN 12V> terminal**
An input terminal for power supply input.
Connect to the electronic HD color view finder power supply terminal on the camera.
Use the supplied DC cable when connecting a cable to this terminal.

Using the external DC power supply

To use it by itself, connect the <DC IN 12V> terminal of the camera to the external DC power supply.

■ **External DC power supply**
Connect after making sure that the output voltage of the external DC power supply is compatible with the rated voltage of the camera.
When the power of the camera is turned on, inrush current is generated. Insufficient power supply when turning on the power may cause a malfunction. Use of the external DC power supply that can secure power more than twice the total power consumption of the camera is recommended.

● Make sure of the pin alignment of the DC output terminal of the external DC power supply and the camera <DC IN 12V> terminal, and connect the polarity correctly.
Connecting the GND terminal to +12 V power supply by mistake may cause fire or malfunction.

DC IN		
	1	GND
	2	Data communication (from the viewfinder to the camera body)
	3	Data communication (from the camera body to the viewfinder)
	4	+12 V
	Cable connector HR10A-7R-4SC (73) (Hirose Electric Co.)	
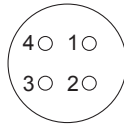
Rear
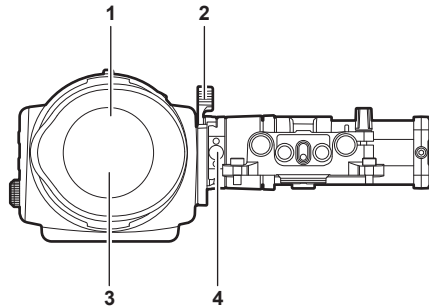
1 Eye sensor

Screen is displayed on the viewfinder when an eye is brought close.

The eye sensor may not work properly depending on the shape of glasses in use, how you hold the camera, or the strong light hitting around the eye piece.

2 Lock lever

Secures the viewfinder in place.

3 Eye piece filter

Protective filter against dust, water, and moisture. Use the camera with this attached.

4 Stopper

Used when removing the viewfinder from the slider unit.

Top
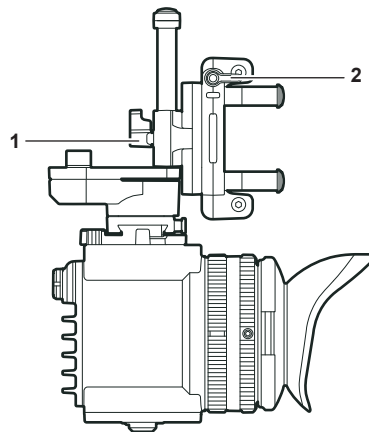
1 Lock lever (left/right position)

Adjusts the position of the viewfinder (left/right).

2 Lock lever (front/back position)

Adjusts the position of the viewfinder (front/back).

Shoulder mount module

Left side
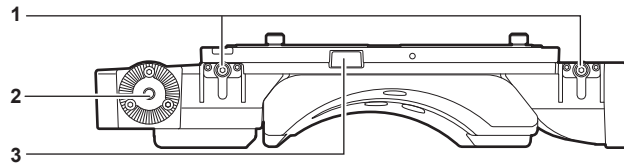
1 Support rod lock knob
Secures the rod in place.

2 Accessory attachment (rosette)
For attaching accessories.
● Mounting screw size
  - M6 (screw length 9 mm or shorter)

3 Stopper
Pressed when removing the slide rail from the shoulder mount module.

Right side
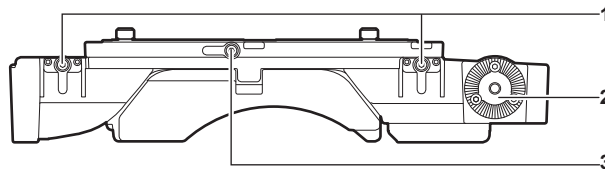
1 Support rod lock knob
Secures the rod in place.

2 Accessory attachment (rosette)
Attaches an accessory such as the dedicated grip module.
● Mounting screw size
  - M6 (screw length 9 mm or shorter)

3 Slide rail lock knob
Secures the slide rail in place.

Front
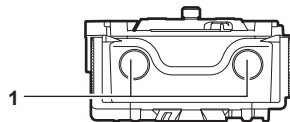
1 Support rod mounting holes
Holes for connecting a rod with a diameter of 15 mm.

Rear
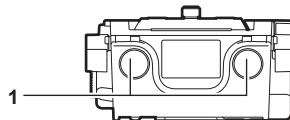
1 Support rod mounting holes
Holes for connecting a rod with a diameter of 15 mm.

Top
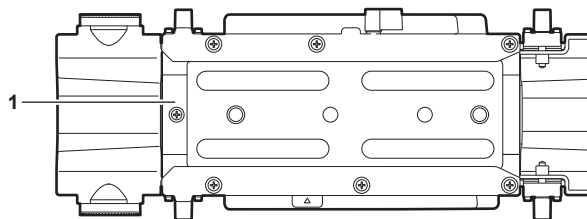
1 Slide rail
Attaches to the camera.

Grip module

Left side
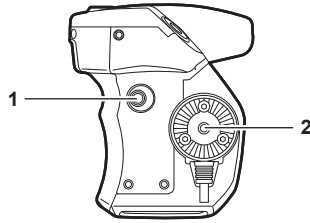
1   <USER GRIP2> button
The function that user has selected can be assigned. Pressing a button performs the assigned function.

2   Arm mounting section
For attaching an arm.

Top
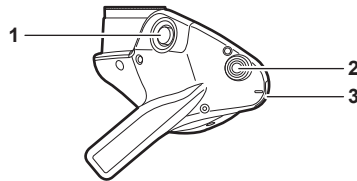
1   <REC> button
Press this button to start recording. Press this button again to stop recording.

2   <USER GRIP1> button
The function that user has selected can be assigned. Pressing a button performs the assigned function.

3   <IRIS> dial
Controls the iris of the EF lens.
Sets the rotational direction of the dial and the control of the iris with the menu.
Volume level can be adjusted with this dial by assigning [DIRECT VOL CTRL] to the USER button and calling the direct volume control function.

Left side (grip arm)
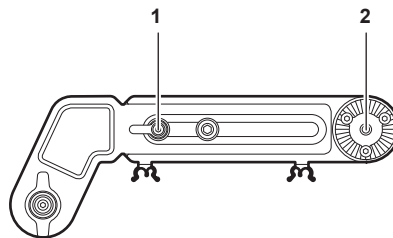
1   Arm fixing knob
Fixes after adjusting the length of the arm.

2   Shoulder mount module mounting section
For attaching a shoulder mount module.

Right side (grip arm)
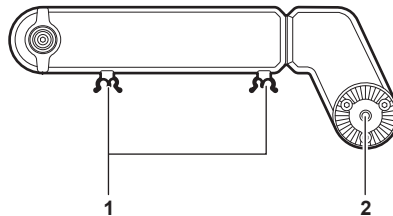
1   Cable clamp
A clamp for fixing the cable.

2   Grip module mounting section
For attaching a grip module.

PL lens mount module

Left side
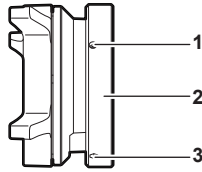
1 Mounting screw
The screw to fix the PL lens mount module to the camera.

2 Mount fixing ring
Fixes the PL lens mount module to the camera.

3 Tightening hole
The mount fixing ring can be tightened using an Allen wrench.

Right side
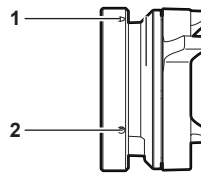
1 Tightening hole
The mount fixing ring can be tightened using an Allen wrench.

2 Mounting screw
The screw to fix the PL lens mount module to the camera.

Front
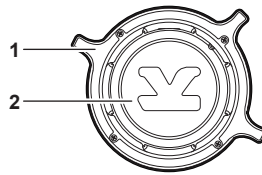
1 Lens fixing ring
Fixes the lens by turning the ring after mounting the lens to the lens mount.

2 Mount cap
Attaches the cap when the lens is not mounted.

Rear
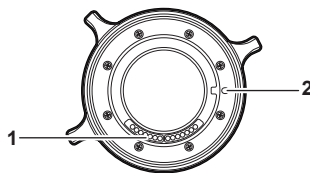
1 Contact
Align with the connector of the camera.

2 Positioning hole
Align with the positioning pin on the camera.

Chapter 3   Preparation

Attach the module following the procedure in this chapter before using. The mounting of accessories is also described in this chapter.

Mounting the module

Mounting the control panel

The control panel is used by connecting the control panel cable to the <CONTROL PANEL> terminal at the rear of the camera.

Normal operation may not be possible when the control panel is mounted or removed while the power is turned on.

Set the power switch to <⏻> when mounting or removing the control panel.

It can be mounted to the rear of the camera using the supplied dedicated mounting part.

Fig. 1

Fig. 2

<CONTROL PANEL> terminal
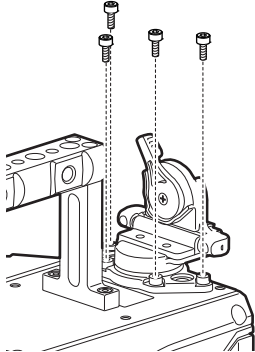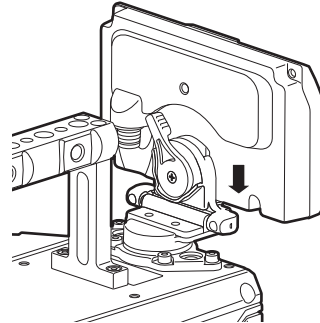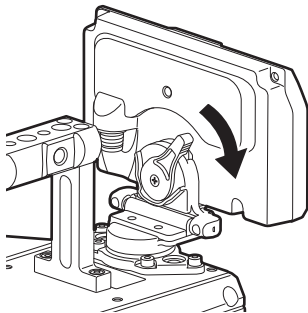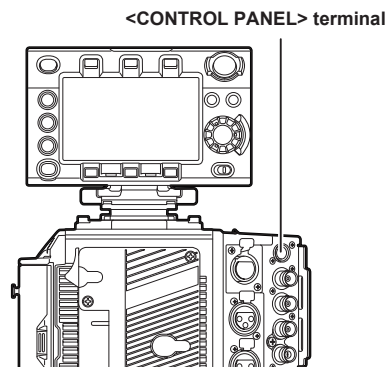
Fig. 3

Fig. 4

1 Mount the control panel mounting part using the four supplied screws. (Fig. 1)

2 Mount the control panel onto the control panel mounting part. (Fig. 2)

3 Push down the lock lever to the right to lock. (Fig. 3)

4 Connect the cable of the control panel to the <CONTROL PANEL> terminal. (Fig. 4)

Panning operation/tilting operation

The angle or the tilt of the control panel can be adjusted.
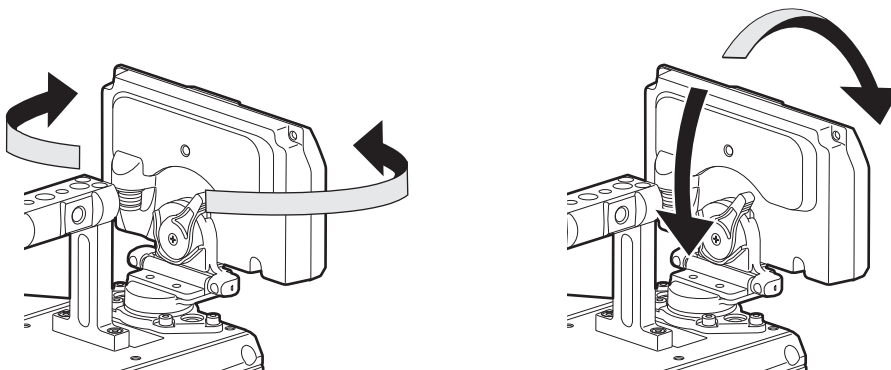
📓 *NOTE*

· Use the cable clamp to prevent the cable from getting snagged.

Mounting the electronic HD color view finder
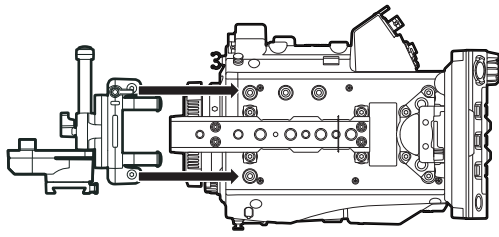
Fig. 1
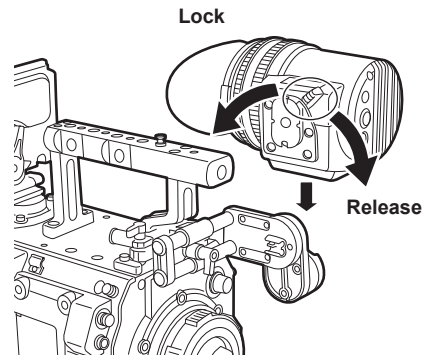
Lock

Release

Fig. 2

1 **Attach the slider unit to the viewfinder mounting holes on top of the camera using the two supplied screws. (Fig. 1)**

2 **Slide the viewfinder plate from above into the slider unit. (Fig. 2)**

Release the viewfinder lock lever by pushing it forward.

3 **Push down the lock lever backwards to lock.**

4 **Connect the BNC cable supplied with the viewfinder to the video signal input terminal of the viewfinder and the <VF SDI> terminal of the camera.**

5 **Connect the DC cable supplied with the viewfinder to the power supply input terminal of the viewfinder and the <DC OUT> terminal of the camera.**

Disassembling

b

a
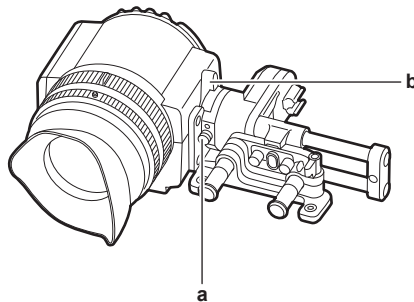
a: **Stopper**

b: **Lock lever**

1 **Remove the connecting cable.**

2 **Push down the lock lever towards the front to release the lock.**

3 **Lift the viewfinder while pulling the stopper.**

4 **Remove the slider unit clamping screw.**

Mounting the shoulder mount module

Slide rail lock knob

Lock   **Release**

Fig. 1

Stopper
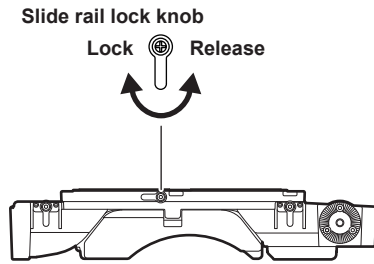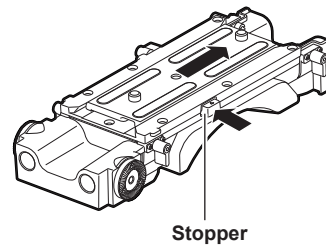
Fig. 2
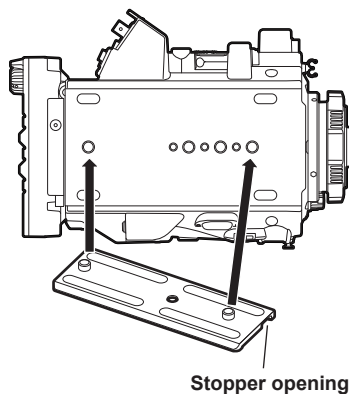
Disassembling ⬅➡ **Mounting**

Stopper opening

Fig. 3
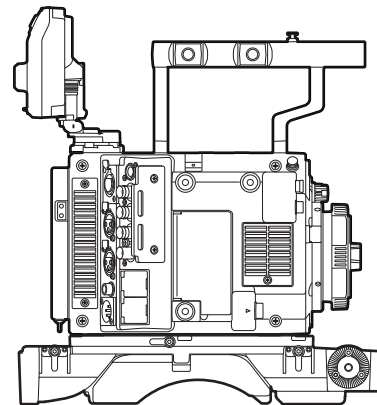
Fig. 4

1 **Release the fixing by turning the slide rail lock knob anticlockwise. (Fig. 1)**

The angle of the slide rail lock knob can be changed by turning while pulling forward.

2 **Remove the slide rail from the shoulder mount module while pressing the stopper to the direction indicated by the arrow. (Fig. 2)**

3 **Orient the stopper opening of the slide rail toward the front of the camera, and securely mount to the bottom of the camera with the supplied two screws on the screw holes indicated in the figure. (Fig. 3)**

4 **Slide the camera forward along the groove in the shoulder mount module from the rear until it clicks. (Fig. 4)**

Before mounting, confirm that the slide rail lock knob is released.

5 **Adjusting the slide position of the camera considering its weight balance, and lock by turning the slide rail lock knob clockwise. (Fig. 1)**

Confirm that the camera is securely locked. The camera may fall causing a malfunction or injury when the camera is off balance or the screws are not locked securely.

Disassembling

1 **Release the fixing by turning the slide rail lock knob anticlockwise. (Fig. 1)**

The angle of the slide rail lock knob can be changed by turning while pulling forward.

2 **Remove the camera from the shoulder mount module by sliding the camera toward rear while pressing the stopper to the direction indicated by the arrow (Fig. 2). (Fig. 4)**

If the shoulder mount is mounted on a tripod, lock the pan lock lever and the tilt lock lever of the tripod. It may lose balance and fall, causing a malfunction or injury.

3 **Loosen the two screws and remove the slide rail from the bottom of the camera. (Fig. 3)**

Mounting the grip module

Grip arm
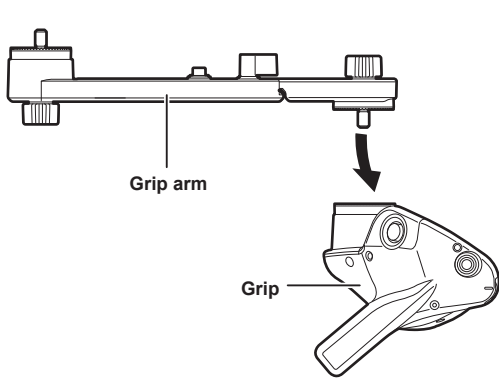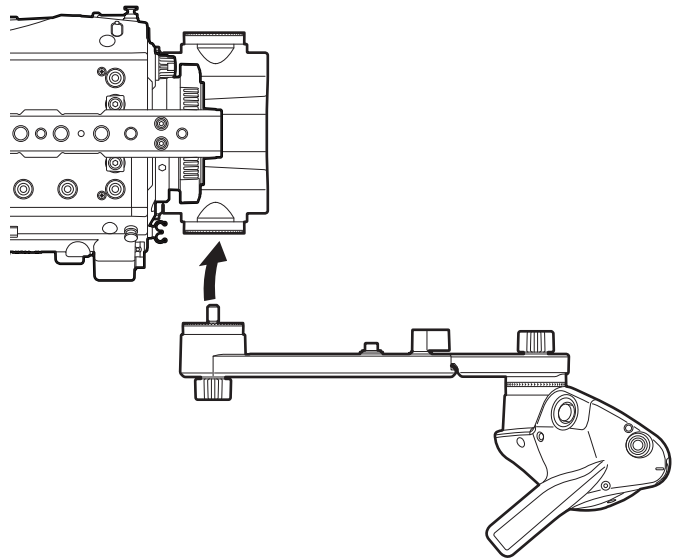
Grip
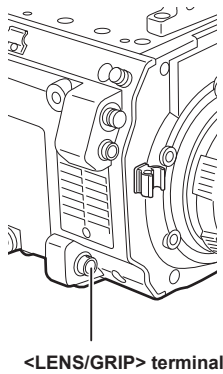
Fig. 1
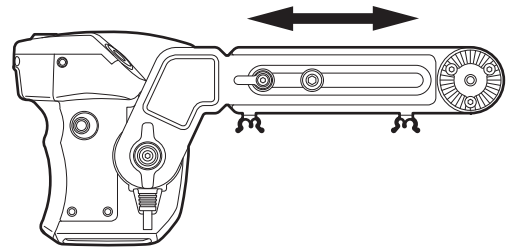
Fig. 2

<LENS/GRIP> terminal

Fig. 3

Fig. 4

1 **Attach the grip arm to the grip. (Fig. 1)**

2 **Attach the grip arm to the accessory attachment (rosette) on the shoulder mount module. (Fig. 2)**

3 **Connect the cable to the <LENS/GRIP> terminal. (Fig. 3)**

4 **Adjust the length of the grip arm. (Fig. 4)**

Adjust the angle of the grip as necessary.

Attaching and removing accessories

Eye cup/eye piece filter

The eye cup and eye piece filter can be removed. Always use the camera with these attached.

b   a
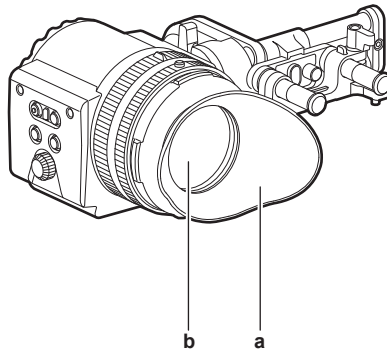
a: Eye cup

b: Eye piece filter

Attaching a tripod

When mounting the camera on a tripod, use the optional tripod adaptor (SHAN-TM700).

Tripod adaptor

Pan head
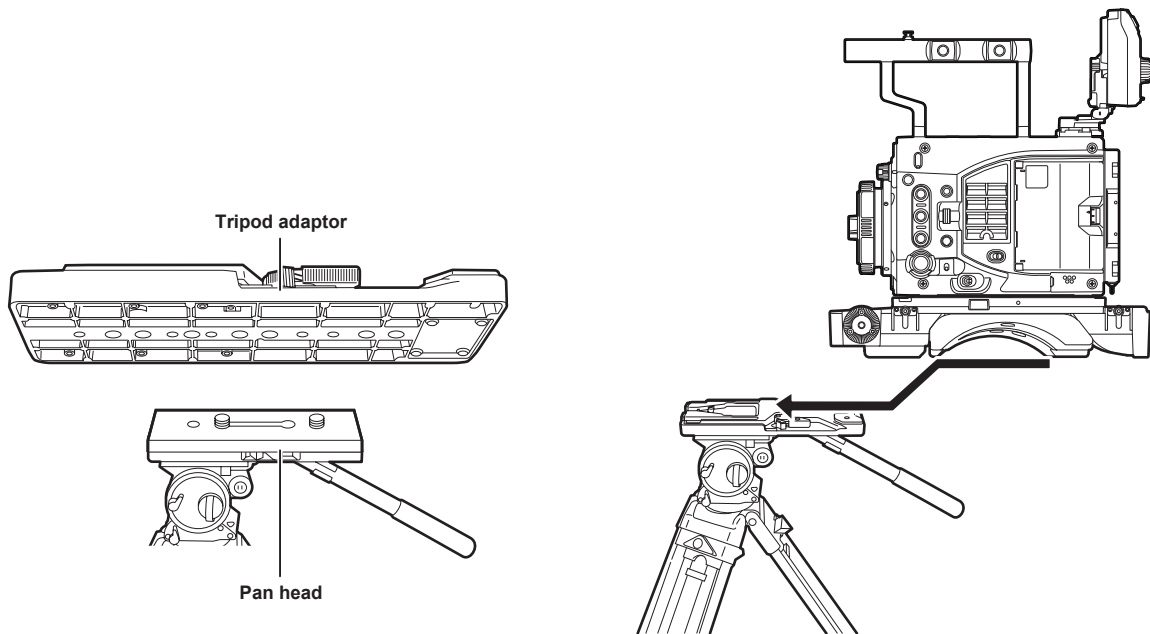
Fig. 1

Fig. 2

1 **Mount the tripod adaptor on the tripod. (Fig. 1)**

2 **Mount the camera on the tripod adaptor. (Fig. 2)**

   Slide the camera forward along the grooves until you hear a click.

NOTE

・ Select an appropriate hole in the adaptor, taking into account the center of gravity of the camera and tripod adaptor combined.
   Also, make sure that the diameter of the selected hole matches the diameter of the pan head screw.

Removing the camera from the tripod adaptor

While holding the red lever down, move the black lever in the direction of the arrow, and slide the camera backward to remove it.
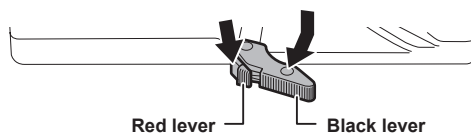
Red lever ⎯   ⎯ Black lever

📝 *NOTE*

・ If the tripod adaptor pin does not return to its original position after the camera has been removed, hold the red lever down and move the black lever in the direction of the arrow again, in order to return the pin to its original position.
The camera cannot be mounted if the pin remains in the center. Be careful.

Rain cover

A rain cover SHAN-RC700 (optional) can be attached.

Power supply

A battery or an external DC power supply can be used as the power supply.

Using batteries

Connection of the following batteries to the camera has been verified.

■ Anton/Bauer batteries

HYTRON140
DIONIC HC/DIONIC HCX/DIONIC HD

■ IDX batteries

ENDURA HL9

📝 *NOTE*

· Other battery can be supported by changing [- BATTERY SELECT] in [MENU] → [SYSTEM SETTINGS] → [POWER MANAGEMENT]. It is recommended to use the battery that is verified to be connected with the camera.
· Before you use a battery, charge it with a battery charger. (For details on charging, refer to each operating instructions.)

Mounting and setting battery

Using Anton/Bauer batteries

Release lever

Anton/Bauer batteries
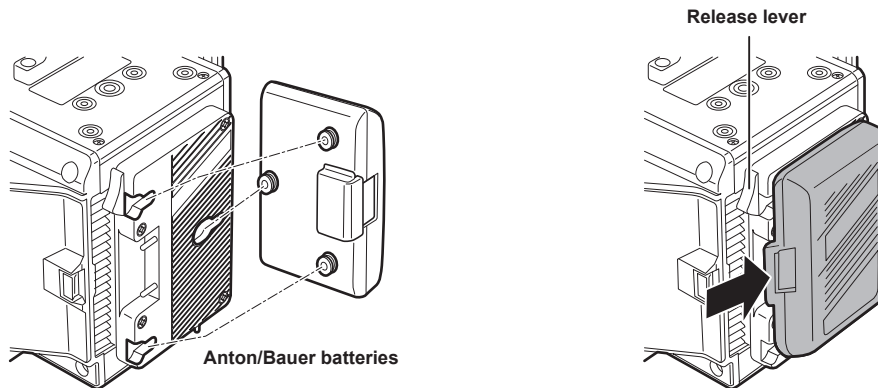
1 **Mount the Anton/Bauer battery.**

2 **Insert the battery terminal and slide in the direction of the arrow.**

3 **Set the battery type.**

Select the type of the battery in [MENU] → [SYSTEM SETTINGS] → [POWER MANAGEMENT] → [- BATTERY SELECT].
For details, refer to "Setting menu basic operations" (page 132).

📝 *NOTE*

· To remove the battery, keep the release lever of the battery holder completely down, slide the battery in the opposite direction when you mounted it.

Using V-mount type batteries

Mount the V-mount type battery plate. As shown in the illustration, insert and slide in the direction of the arrow.

Release lever
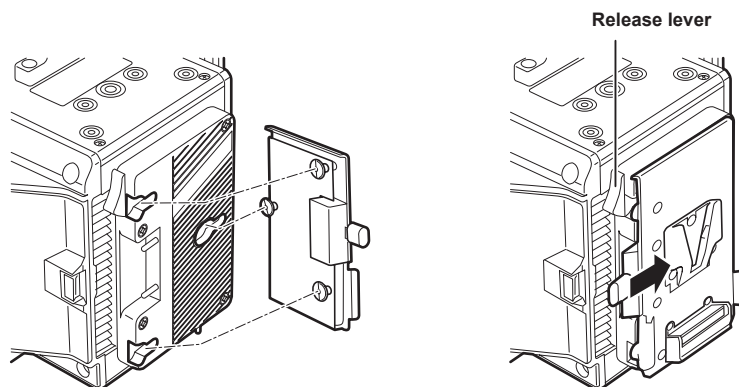
1 **Mount the V-mount type battery plate.**

2 **Slide in the direction of the arrow.**

3 **Set the battery type.**

● Set the type of the battery in [MENU] → [SYSTEM SETTINGS] → [POWER MANAGEMENT] → [- BATTERY SELECT].

📝 *NOTE*

・ Contact your dealer for information about the V-mount type battery plate.
・ When the V-mount type battery plate is used, % (percent) is not displayed even if batteries with a battery level indicator function are used.
・ When removing the plate, remove by sliding the release lever.
・ When using a battery that is not included in [- BATTERY SELECT], set [other], then set [- FULL VOLT], [- NEAR END VOLT], or [- END VOLT] according to the characteristics of the battery.

Using the external DC power supply

<DC IN> terminal

External DC power supply

DC cable
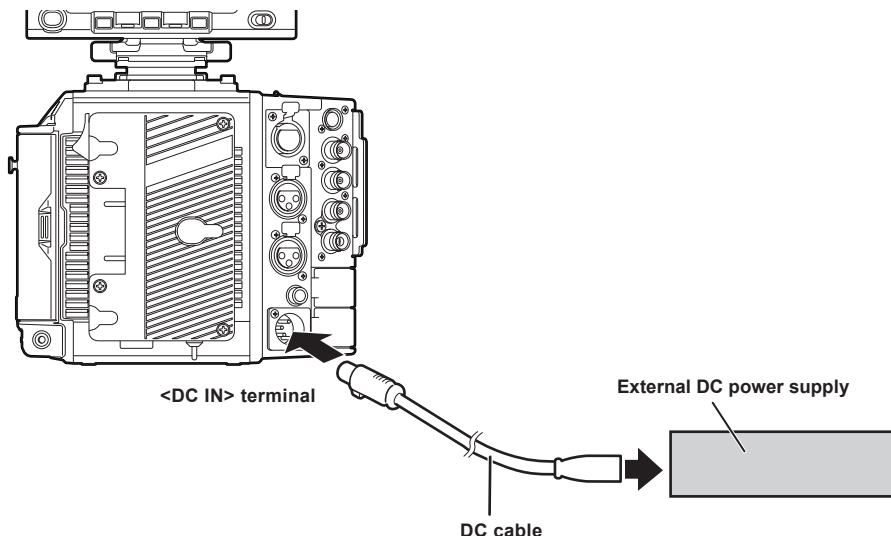
1 Connect the external DC power supply to the <DC IN> terminal of the camera.

2 Turn on the power switch of the external DC power supply (if the external DC power supply has a power switch).

3 Turn the power switch of the camera to <I>.

■ **External DC power supply**

Connect after making sure that the output voltage of the external DC power supply is compatible with the rated voltage of the camera.
Select an output amperage for the external DC power supply with a margin above the total amperage of the connected devices.
The total amperage of connected devices can be calculated with the following formula.
Total power consumption ÷ Voltage
When the power of the camera is turned on, inrush current is generated. Insufficient power supply when turning on the power may cause a malfunction. We recommend that you use an external DC power supply that can assure double the capacity of the total power consumption of the camera and connected devices that are turned on by interlock when the power of the camera is turned on (such as lenses). For the DC cable, use a dual-core shielded wire of AWG16 (nominal cross section area 1.309 mm²) or thicker.

● Make sure of the pin alignment of the DC output terminal of the external DC power supply and the camera <DC IN> terminal, and connect the polarity correctly.
If the +12 V power supply is mistakenly connected to the GND terminal, it may cause fire or malfunction.
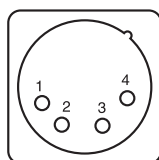
	DC IN	
	1	GND
	2	NC
	3	NC
	4	+12 V
	Panasonic parts No.:K1AA104H0037 Manufacturer Parts No.: HA16RA-4P(77) (Hirose Electric Co.)	

📝 *NOTE*

・ When both the battery and the external DC power supply are connected, the power supply from the external DC power supply has priority. The battery may be removed while using the external DC power supply.
・ When using the external DC power supply, always turn on the power switch of the external DC power supply before setting the power switch of the camera to <I>. If the operations are performed in reverse, the camera may malfunction because the external DC power supply output voltage rises too slowly.
・ When switching the power supply from an external DC power supply to the battery, carefully remove the DC cable from the <DC IN> terminal. Removing the cable quickly may temporarily stop the camera's operation.
・ When power is supplied from the <DC IN> terminal, the light circuit does not function. The light circuit can be used only when power is supplied from the Anton/Bauer battery plate.
・ When connecting a battery to the <DC IN> terminal, set [MENU] → [SYSTEM SETTINGS] → [POWER MANAGEMENT] → [DC IN SOURCE] to [BATTERY], then set [- FULL VOLT], [- NEAR END VOLT], or [- END VOLT] to match the characteristics of the battery. However, in this the case, the percent (%) display will not be available for batteries with a battery level indicator function.

Switching between external DC power supply and battery power supply

Status for both the battery power supply and the external DC power supply are monitored within the camera. Status of each power supply can be confirmed in the control panel and the indicator. (page 87)

The external DC power supply is prioritized. It will automatically switch to the battery power supply when both the battery power supply and the external DC power supply are connected and the indicator on the side of the external DC power supply goes under the remaining charge level near end is displayed.

Once it is switched, the voltage display will display slightly higher voltage value due to less load on the external DC power supply.

It will be as follows when the external DC power supply is connected when only the battery power supply is in use.

● It will continue to use the battery power supply when the indicator on the side of the external DC power supply is displaying the remaining charge level near end.

● It will switch to the external DC power supply when the indicator on the side of the external DC power supply is displayed with the power supply voltage.

Mounting and adjusting the lens

EF lens

Mounting the lens

Lens fixing ring

Mount cap

Fig. 1

Marks
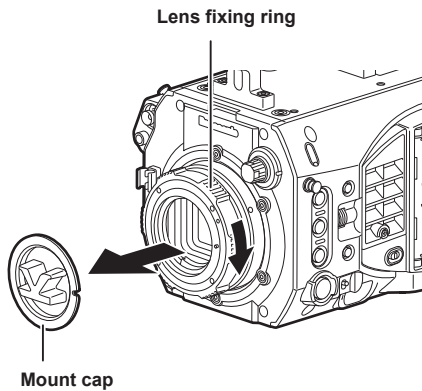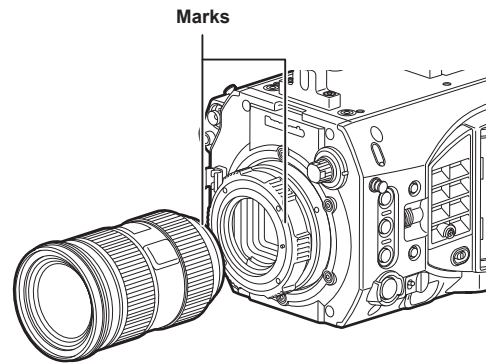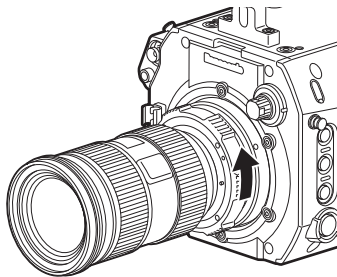
Fig. 2

Fig. 3

1 Turn the lens fixing ring and remove the mount cap. (Fig. 1)

2 Align the mark (red circle) on the lens mount with the mark (red circle) on the lens, and mount the lens. (Fig. 2)

3 Turn the lens fixing ring to securely fix the lens. (Fig. 3)

4 Set [MENU] → [CAMERA SETTINGS] → [LENS SETTING] → [LENS CONNECT TYPE] to [EF].

📝 *NOTE*

・ For handling the lens, refer to the lens operating instructions.
・ When the lens is removed, install the mount cap to protect the device.

PL lens

The PL lens can be used by replacing the lens mount.

Replacing the lens mount

EF mount

**Tightening hole
(Hexagon hole)**

Mount fixing ring

**Mounting
screw**

**Mounting
screw**

**Mounting screw
(Round hole, 2 locations)**

**Mounting
screw**

**Mounting
screw**

**Hexagon hole
(4 mm, 2 locations)**

**Tightening hole
(Hexagon hole)**

Mount fixing ring

Fig. 1

PL lens mount module

Positioning hole

Positioning pin

Contact

Connector
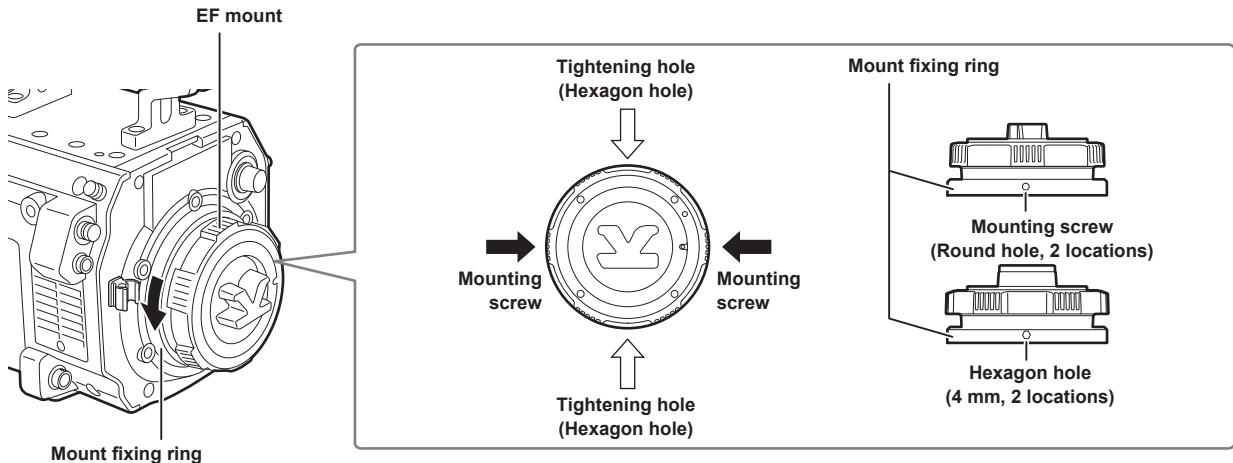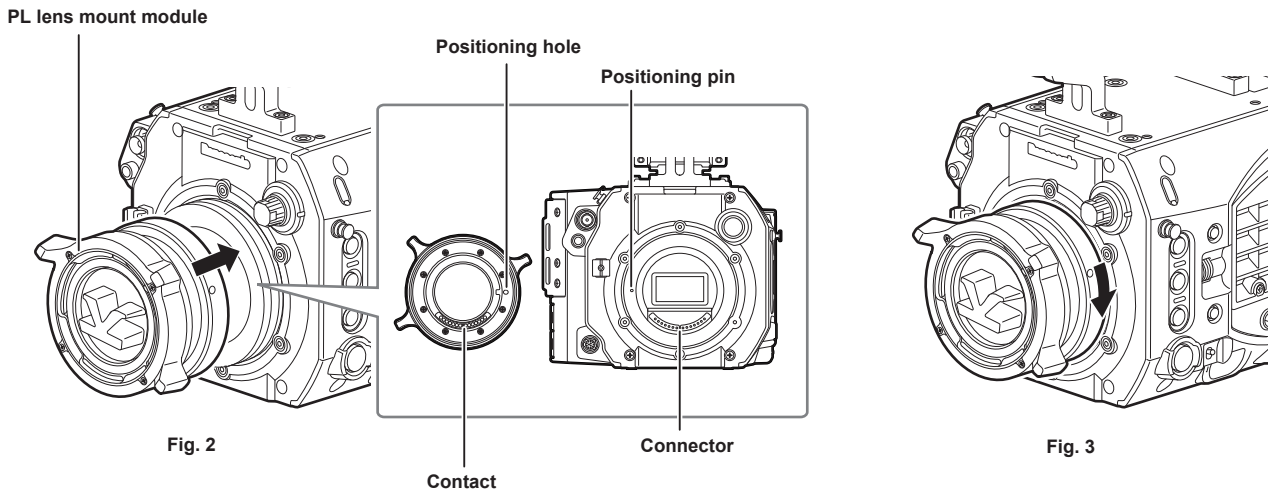
Fig. 2

Fig. 3

1 **Loosen the two mounting screws on the mount fixing ring. (Fig. 1)**

- Use the 1.5 mm Allen wrench.
- The position of the mounting screw may not match with the illustration depending on the fixing condition of the mount.

2 **Turn the mount fixing ring to remove the EF mount. (Fig. 1)**

- If the fixing ring is stiff and does not turn, insert an Allen wrench into the hexagon hole on the fixing ring and turn the fixing ring.

3 **Attach the PL lens mount module. (Fig. 2)**

- Align the positioning pin and the positioning hole. Also align the connector on the camera with the contact on the mount.

4 **Turn the mount fixing ring to fix. (Fig. 3)**

5 **Fix the two mounting screws. (Fig. 1)**

Mounting the lens

Lens fixing ring

Mount cap

Fig. 1

Fig. 2

Fig. 3

Cable clamp

<LENS/GRIP> terminal
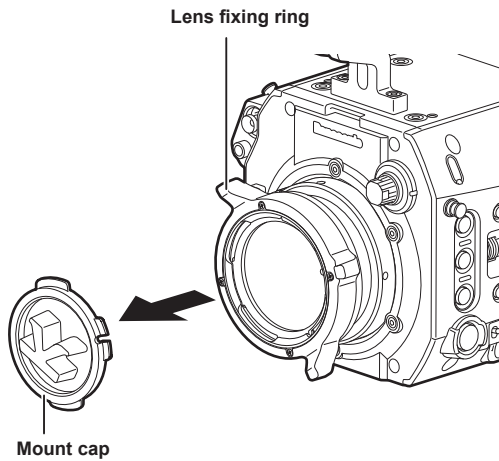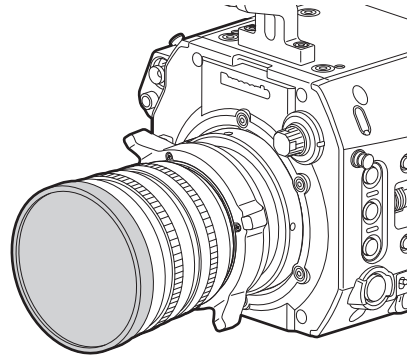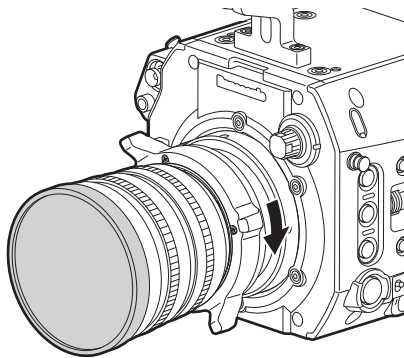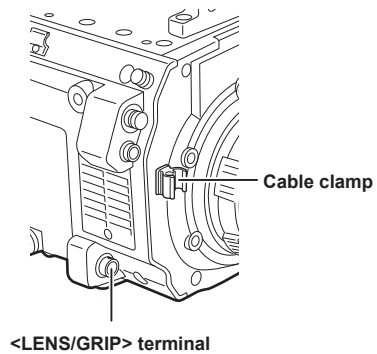
Fig. 4

1 Turn the lens fixing ring and remove the mount cap. (Fig. 1)

2 Align the convex portion at the upper right of the lens mount with the concave portion at the lens mount to mount the lens. (Fig. 2)

3 Turn the lens fixing ring to securely fix the lens. (Fig. 3)

4 If a cable is attached to the lens, secure the cable through the cable clamp and connect it to the <LENS/GRIP> terminal. (Fig. 4)

5 Set [MENU] → [CAMERA SETTINGS] → [LENS SETTING] → [LENS CONNECT TYPE] to match the lens to use.

NOTE

・ For handling the lens, refer to the lens operating instructions.
・ When the lens is removed, install the mount cap to protect the device.

Lens flange back adjustment

This camera is equipped with the lens flange back (distance from the lens mounting surface to the image formation surface) adjustment function. This is adjusted precisely at the factory.

Execute the adjustment of the lens flange back if the focus point is shifted when the lens is changed or the mount adapter is changed.

Lens flange back adjustment can be performed by turning the screw in Lens flange back adjustment hole (page 10). The lens flange back length will become longer when turned clockwise. The lens flange back length will become shorter when turned counterclockwise. Turn slowly since accurate adjustment is required.

To adjust the lens flange back, execute in an environment with appropriate measurement equipment.

NOTE

・ The camera will not operate properly when the screw in the lens flange back adjustment hole is turned excessively. Stop turning when the amount of lens flange back stops changing. Guideline for the limit is 12 turns clockwise and 12 turns counterclockwise.
・ The factory setting will be changed at the point the screw in the lens flange back adjustment hole is turned. Please note when performing the adjustment.
・ Contact your dealer for information about the adjustment method.

Connecting to the DC output terminal

Connecting the <DC OUT/RS> terminal to the external recording start/stop switch

The <DC OUT/RS> terminal can supply 1.0 A current.

Recording start/stop can be controlled by connecting an external switch to this terminal.

An LED connected to this terminal can also be used as a tally lamp. This is useful for shooting video when fixing the camera on a crane.

(Connection example)

<DC OUT/RS> terminal

Cable connector
HR10A-7R-4SC (73)
Hirose Electric Co.

LED
Resistance
Recording start/stop
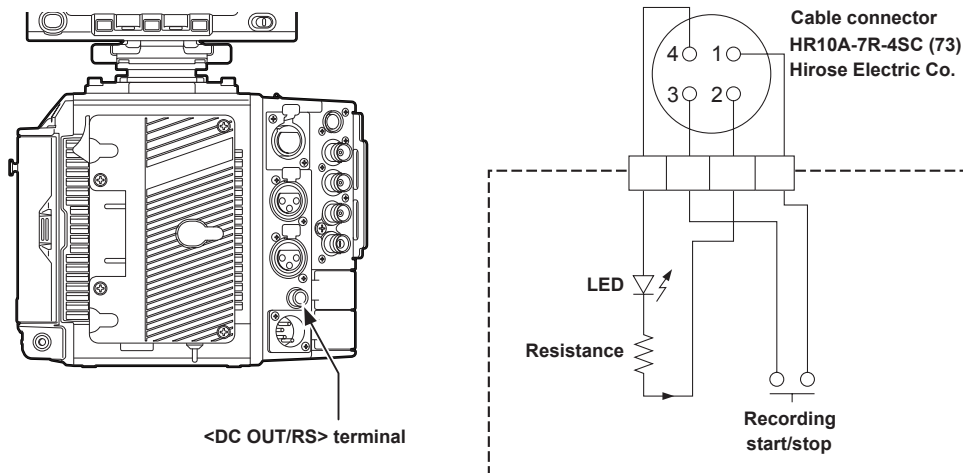
1 GND

2 TALLY OUT

Open collector output on the camera side

Tally lamp on	Low impedance
Tally lamp off	High impedance

3 Recording start/stop switch

This is connected in parallel to the <REC> button on the camera or the VTR button on the lens.

4 +12 V

NOTE

· Make sure that polarity is correct before connecting an external device. Otherwise, it may result in a malfunction.

Connecting to the <DC OUT> terminal

The <DC OUT> terminal can supply 1.0 A current.

This terminal can be used for the following purpose.

● Standard DC power supply output

● Power supply output and data communication to the electronic HD color view finder AU-VCVF10G
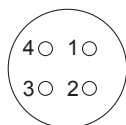
Cable connector
HR10A-7R-4SC (73)
Hirose Electric Co.

1 GND

2 Data communication (from the electronic HD color view finder to the camera)

3 Data communication (from the camera to the electronic HD color view finder)

4 +12 V

NOTE

· Make sure that polarity is correct before connecting an external device. Otherwise, it may result in a malfunction.

Charging the built-in battery

The date/time set in the camera is maintained by the built-in battery.

The built-in battery may be consumed when the power of the camera is not turned on for approximately a half year.

The built-in battery is exhausted when [BACKUP BATT EMPTY] is displayed in the viewfinder for approximately five seconds when the power switch is set to <I>.

Charge the built-in battery with the following procedure.

1 **Confirm that the power switch is set to <⏻>.**

2 **Connect the batteries or the external DC power supply to the camera.**

For details on the connection of batteries or external DC power supply, refer to "Power supply" (page 26).

3 **Leave the camera for approx. four hours.**

The built-in battery will be charged.

Make sure the settings for the date and time and time code after the built-in battery has been charged. Open the [DIAGNOSTICS] screen from the INFO screen, and then set the date and time of the internal clock when the [INTERNAL CLOCK HAS RESET PLEASE SET TO CORRECT TIME] is displayed in the warning display field.

4 **Set the power switch to <I>, and confirm that [BACKUP BATT EMPTY] is not displayed in the viewfinder.**

Replacement of the built-in battery is necessary when [BACKUP BATT EMPTY] is displayed even after the built-in battery has been charged. Consult your dealer.

Setting the date/time of the internal clock

The date/time and time zone are recorded as metadata in the content (clip) while shooting. The date/time metadata will affect the playback order by the thumbnail.

Always check and set the date/time and time zone before using the camera for the first time.

Do not change the setting of the date/time and time zone while shooting.

1 **Press the <MENU> button.**

● The [MENU] screen is displayed on the control panel.

2 **Select [MENU] → [SYSTEM SETTINGS] → [CLOCK] → [TIME ZONE] to set the time difference from Greenwich Mean Time.**

3 **Select [MENU] → [SYSTEM SETTINGS] → [CLOCK] → [CLOCK SETTING] to set the year, month, day, and time.**

The year setting upper limit is 2037. For details on the settings menu, refer to "Setting menu basic operations" (page 132).

NOTE

・ You can correct the date and time of the internal clock from GPS by enabling the GPS function.
・ The accuracy of the clock is approximately ±30 seconds per month. Check and reset the time when accurate time is required.
・ Note that if the time is received using the built-in GPS, the time of the internal clock (local date and time) is maintained accurately based on the time received (Greenwich mean time) and the time zone.
  Check the settings of the time zone again if the settings for the time zone is not correct, such as the wrong local date and time are displayed as the time of the internal clock (it is not necessary to reset the internal clock).

■ **Time zone table**

Time difference	Region	Time difference	Region
00:00	Greenwich	+01:00	Central Europe
−00:30		+01:30	
−01:00	Azores	+02:00	Eastern Europe
−01:30		+02:30	
−02:00	Mid-Atlantic	+03:00	Moscow
−02:30		+03:30	Tehran
−03:00	Buenos Aires	+04:00	Abu Dhabi
−03:30	Newfoundland	+04:30	Kabul
−04:00	Halifax	+05:00	Islamabad
−04:30	Caracas	+05:30	Mumbai
−05:00	New York	+06:00	Dakar
−05:30		+06:30	Yangon
−06:00	Chicago	+07:00	Bangkok
−06:30		+07:30	
−07:00	Denver	+08:00	Beijing
−07:30		+08:30	
−08:00	Los Angeles	+09:00	Tokyo
−08:30		+09:30	Darwin
−09:00	Alaska	+10:00	Guam
−09:30	Marquesas Islands	+10:30	Lord Howe Island
−10:00	Hawaii	+11:00	Solomon Islands
−10:30		+11:30	
−11:00	Midway Islands	+12:00	New Zealand
−11:30		+12:45	Chatham Islands
−12:00	Kwajalein Atoll	+13:00	Phoenix Islands
+00:30			

Inspections before shooting

Before shooting, perform the following inspections to ensure that the system operates properly.

1 **Confirm that the assembled modules and the handles are fixed securely.**

2 **Insert expressP2 memory card in the main slot, and Class10 or higher SDXC/SDHC memory card in the sub slot, and close the slot cover.**

3 **Set the power switch to <I>, and confirm the following items.**
- [BACKUP BATT EMPTY] is not displayed on the viewfinder screen.
- The remaining battery level is adequate in the status display on the control panel.
- The remaining space on the media is adequate in the status display on the control panel.

4 **Press the <REC> button and check the following.**
- The main slot card access LED flashes in orange.
- The <REC> button lights up in red.
- No system warning is displayed with the status display on the control panel.

5 **Press the <REC> button again.**

Confirm that the main slot card access LED lights up in orange and the <REC> button does not light in red.

6 **Press the <PLAY> button to switch to the PLAY screen, and play back the clip you just recorded.**

Confirm that the clip plays back properly on the control panel or viewfinder.

Chapter 4 Video Recording and Color Grading

This chapter describes the video combinations that can be recorded and the color grading (in-camera color grading) that can be performed using the camera.

Dual-recording

The camera has two built-in recorders.

Main slot

Sub slot
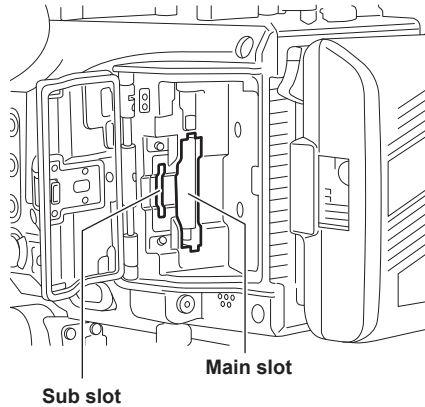
■ Main recorder

Card slot	P2 card slot (main slot)
Compatible memory cards	expressP2 memory card P2 memory card (with some restrictions)

- The P2 memory card cannot be used with the 4K format, ProRes format, [AVC-Intra2K 444] format, [AVC-Intra444] format, or when the variable frame rate function is enabled.
  However, if [MAIN PIXEL] is set to [1920×1080] and [MAIN CODEC] is set to [AVC-Intra100], the F series P2 memory card can be used even if the variable frame rate function is enabled.
- P2 memory cards of 2 GB cannot be used.
- R, A, and E series P2 memory cards cannot be used for 1080/59.94p and 1080/50p.
  However, they can be used when [MAIN CODEC] is set to [AVC-LongG25].

■ Sub recorder

Card slot	SD memory card slot (sub slot)
Compatible memory cards	SD memory card (Proxy data cannot be recorded on a SD memory card under Class10. The SD memory card under Class10 can be used with the file operation.) microP2 memory card (64 GB) (proxy data cannot be recorded on a 32 GB card).

- Proxy data can be recorded with the sub recorder.
- Sub recorder has two types of operation modes. Set the mode using [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [VFR PROXY REC].
  - [NORMAL+Audio]: Records in the frame of system frequency. Audio signal is also recorded.
  - [VFR up to 60p (50p)]: Records in a variable frame rate by synchronizing to the [VFR] setting of the main recorder. Audio signal is not recorded when [VFR] is set to [ON].
  - [NORMAL+Audio] cannot be selected when [PROXY SLOT] is [MAIN & SUB] or [MAIN].
  - [VFR up to 60p (50p)] cannot be selected when [MAIN PIXEL] is set to [2048×1080 CROP] or [1920×1080 CROP].
  - [NORMAL+Audio] cannot be selected when [MAIN CODEC] is set to [AVC-Intra100] and [VFR] is set to [ON].
- The proxy data cannot be recorded in the following case.
  - When [MAIN PIXEL] is set to [1920×1080 CROP], [MAIN CODEC] is set to [AVC-Intra100], and [VFR] is set to [ON]
- The proxy data cannot be recorded in the SDHC memory card in the following cases.
  - When [MAIN CODEC] is set to ProRes format
  - When [VFR] is set to [ON] and [VFR PROXY REC] is set to [NORMAL+Audio]
- Recording using only the sub recorder is not possible.
- The sub slots also have the following files operation functions.
  - Setup file
  - Scene file
  - 3D LUT file
  - CDL file
  - Firmware
  - Metadata file
- In the following case, it cannot record even with the P2 card inserted.
  - When the SD memory card is not inserted with [PROXY CODEC] of the sub recorder set to [AVC-Proxy G6]

File name style

The file name style for recorded clips can be set in [MENU] → [REC SETTINGS] → [FILE NAME STYLE].

[CINE]

Start recording   **Stop recording**

Example: [AVC-Intra4K 422]

[MAIN CODEC]   CLIP1:A001C002_160401_I40B

The file name is the same

Example: [AVC-Proxy G6]

[PROXY CODEC]   CLIP1:A001C002_160401_I40B
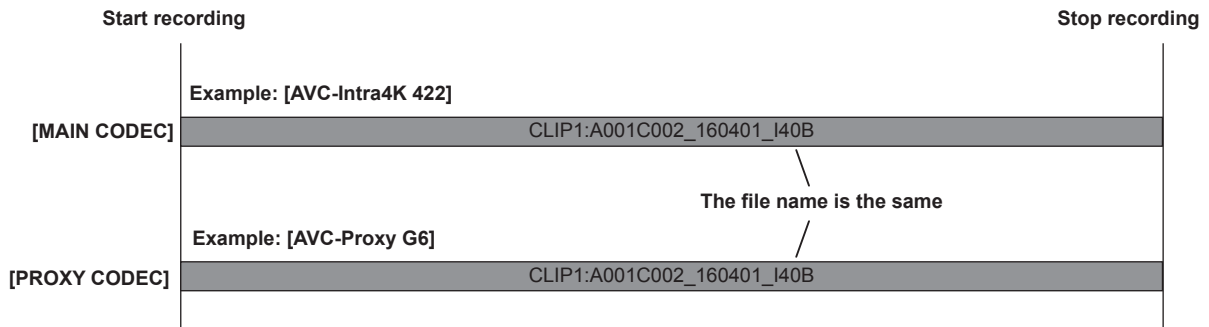
A 001C001_ yymmdd _ hhhh.mxf
(A 001C001_ yymmdd _ hhhh.mov)

1   2   3   4   5

Fig. 1

1   **CAM INDEX**

2   **REEL number**

3   **Clip number**

4   **Date**

5   **Hashtag to generate from the serial number of the recording module**

Fig. 2

Fig. 3

When the file name style is set to [CINE], the file name for recorded clips is composed of CAM INDEX, the REEL number, and the clip number. (Fig. 1)

F to indicate CAM INDEX, the REEL number, and the clip number to include in the file name is displayed to the left of the REEL number and clip number icons of the HOME screen. (Fig. 2)

[USER CLIP NAME] is set to [TYPE3] and cannot be changed.

In the following case, the same operation as when set to [P2] is performed regardless of the settings of [FILE NAME STYLE].

● When the P2 memory card or the SDHC memory card is included as recording media

The file name style set in [CINE] is only supported for expressP2 memory cards and SDXC memory cards. Insert memory cards that are supported into the main slot and sub slot.

It will be as follows when the memory card cannot operate as set in [CINE] for some reason.

● ◆ is displayed on the HOME screen.

M to indicate the recording of only metadata is displayed on the left side of the REEL number and clip number icons. (Fig. 3)

● One of the following is displayed for the [CINE STYLE DISABLED!] warning indicator when the [DIAGNOSTICS] screen is opened from the INFO screen.

- [expressP2 REQUIRED]: Insert an expressP2 memory card in the main slot.

- [SDXC CARD REQUIRED]: Insert an SDXC memory card in the sub slot.

It will be as follows when the name of the recording file already has a file with the same name on the recording media.

● The clip number of the file name may overlap on the sub slot when a clip recorded simultaneously on the sub slot is not deleted even if the clip on the main slot is deleted.

The file name that should be applied is recorded to the metadata even when it is recorded using a file name style set to [P2]. The file name style of the [CINE] setting can be changed and read into a personal computer when the rename copy function of specialized software P2 Viewer Plus is used.

[P2]

Start recording   **Stop recording**

Example: [AVC-Intra4K 422]

[MAIN CODEC]

| CLIP1: 451QM200 | CLIP2: 451QM201 |

4GB

Example: [AVC-Proxy G6] (The recording media is SDHC)

[PROXY CODEC]

| CLIP1: 451QM200 | CLIP2: 451QM201 |

The video of the junction point and the file name are the same.
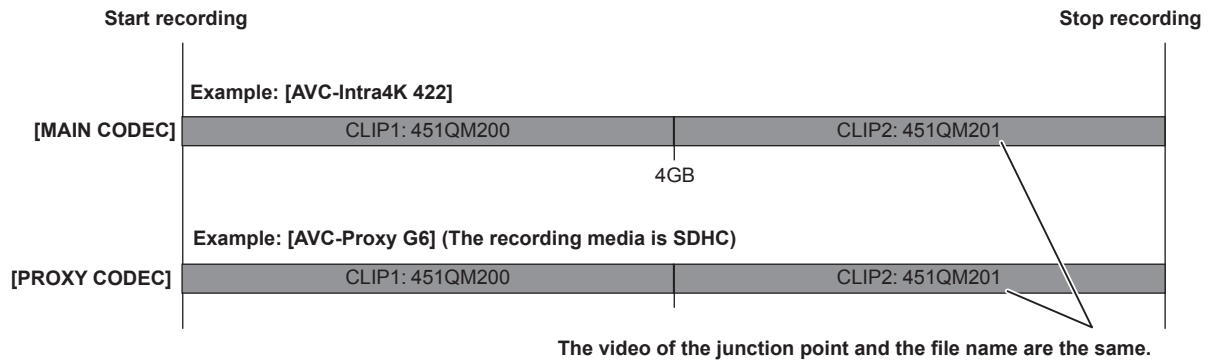
Fig. 1

Fig. 2

When the file name style is set to [P2], the file name for recorded clips is composed of the unique P2 format.

If the file is divided by 4 GB due to the conditions of the recording format or recording media, a different file name can be given to each file. These files can be handled as one clip with the P2 device or specialized software P2 Viewer Plus because the division information is included in the files. (Fig. 1)

The left side of the REEL number and clip number icon of the HOME screen is blank when [USER CLIP NAME] is set to [TYPE3]. (Fig. 2)

Selecting the resolution, codec, and video format for recording

You can select the recording resolution, recording codec, and recording frame rate.

- [FREQUENCY]: System frequency
- [SDI RAW]: RAW output format
- [MAIN PIXEL]: Resolution
- [MAIN CODEC]: Recording format
- VFR: Variable frame rate function (variable frame rate range)
- [VFR PROXY REC]: Sub recorder operation (when the variable frame rate is in operation)
- [HIGH SPEED]: High speed

Recording format

- OP-1b format: [AVC-Intra4K-LT]/[AVC-Intra4K 422]/[AVC-Intra2K-LT]/[AVC-Intra2K 444]/[AVC-Intra2K 422]/[AVC-Intra444]/[AVC-Intra422]/ [AVC-Intra-LT]/[AVC-LongG50]/[AVC-LongG25]/[ProRes 4444 XQ]/[ProRes 4444]/[ProRes 422 HQ]/[ProRes 422]/[ProRes 422 LT]
- OP-Atom format: [AVC-Intra100]

The recording will stop in six hours for the following cases:

- When [MAIN CODEC] is set to ProRes format
- When [FILE NAME STYLE] is set to [CINE] and [CINE] is enabled
- When [VFR] is set to [ON] and [VFR PROXY REC] is set to [NORMAL+Audio]

📝 **NOTE**

・ [2048×1080 CROP]/[1920×1080 CROP] is a mode where the center section is cut out from all the pixels of the image sensor (4096×2160).

When [FREQUENCY] is set to [23.98p]

When [SDI RAW] is set to [OFF]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[4096×2160]	[AVC-Intra4K 422]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps
	[AVC-Intra4K-LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps
[3840×2160]	[AVC-Intra4K 422]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps
	[AVC-Intra4K-LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps
[2048×1080]	[AVC-Intra2K 444]	—	([NORMAL+Audio]*2: 23.98fps) *3
	[AVC-Intra2K 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps
	[ProRes 4444 XQ]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps
	[ProRes 4444]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps
	[ProRes 422 HQ]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
	[ProRes 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps
	[ProRes 422 LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps
[2048×1080 CROP]	[AVC-Intra2K 422]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 23.98fps
	[AVC-Intra2K-LT]	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 23.98fps
[1920×1080]	[AVC-Intra444]	—	([NORMAL+Audio]*2: 23.98fps) *3
	[AVC-Intra422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps
	[AVC-Intra100]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2*4: 23.98fps
	[AVC-LongG50]	—	([NORMAL+Audio]*2: 23.98fps)*3
	[AVC-LongG25]	—	([NORMAL+Audio]*2: 23.98fps)*3
	[ProRes 4444 XQ]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps
	[ProRes 4444]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps
	[ProRes 422 HQ]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps
	[ProRes 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps
	[ProRes 422 LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 23.98fps
[1920×1080 CROP]	[AVC-Intra422]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 23.98fps
	[AVC-Intra-LT]	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 23.98fps
	[AVC-Intra100]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2*5: 23.98fps

*1   The frame rate will be the same as [MAIN CODEC].
*2   Audio is recorded.
*3   The [VFR PROXY REC] item is not displayed in the menu.
*4   Cannot be selected when [VFR] is set to [ON].
*5   The proxy data cannot be recorded when [VFR] is set to [ON].

When [SDI RAW] is set to [4K/12bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[2048×1080]	[AVC-Intra2K 444]	—	([NORMAL+Audio][1]: 23.98fps) [2]
	[OFF]	—	([NORMAL+Audio][1]: 23.98fps) [2]

[1] Audio is recorded.
[2] The [VFR PROXY REC] item is not displayed in the menu.

When [SDI RAW] is set to [4K/10bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN PIXEL]	VFR	[VFR PROXY REC]
[4096×2160]	[AVC-Intra4K 422]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 60p][1] [PROXY SLOT]: [SUB] • [VFR up to 60p][1] • [NORMAL+Audio][2]: 23.98fps
	[AVC-Intra4K-LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 60p][1] [PROXY SLOT]: [SUB] • [VFR up to 60p][1] • [NORMAL+Audio][2]: 23.98fps
	[OFF]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 60p][1] [PROXY SLOT]: [SUB] • [VFR up to 60p][1] • [NORMAL+Audio][2]: 23.98fps
[2048×1080]	[AVC-Intra2K 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 60p][1] [PROXY SLOT]: [SUB] • [VFR up to 60p][1] • [NORMAL+Audio][2]: 23.98fps
	[ProRes 4444 XQ]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 60p][1] [PROXY SLOT]: [SUB] • [VFR up to 60p][1] • [NORMAL+Audio][2]: 23.98fps
	[ProRes 4444]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 60p][1] [PROXY SLOT]: [SUB] • [VFR up to 60p][1] • [NORMAL+Audio][2]: 23.98fps
	[ProRes 422 HQ]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 60p][1] [PROXY SLOT]: [SUB] • [VFR up to 60p][1] • [NORMAL+Audio][2]: 23.98fps
	[ProRes 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 60p][1] [PROXY SLOT]: [SUB] • [VFR up to 60p][1] • [NORMAL+Audio][2]: 23.98fps
	[ProRes 422 LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 60p][1] [PROXY SLOT]: [SUB] • [VFR up to 60p][1] • [NORMAL+Audio][2]: 23.98fps
	[OFF]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 60p][1] [PROXY SLOT]: [SUB] • [VFR up to 60p][1] • [NORMAL+Audio][2]: 23.98fps

[1] The frame rate will be the same as [MAIN CODEC].
[2] Audio is recorded.

When [SDI RAW] is set to [UHD/12bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[1920×1080]	[AVC-Intra444]	—	([NORMAL+Audio][1]: 23.98fps) [2]
	[OFF]	—	([NORMAL+Audio][1]: 23.98fps) [2]

[1] Audio is recorded.
[2] The [VFR PROXY REC] item is not displayed in the menu.

When [SDI RAW] is set to [UHD/10bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[3840×2160]	[AVC-Intra4K 422]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 23.98fps
	[AVC-Intra4K-LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 23.98fps
	[OFF]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 23.98fps
[1920×1080]	[AVC-Intra422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 23.98fps
	[AVC-Intra100]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2][3]: 23.98fps
	[AVC-LongG50]	—	([NORMAL+Audio][2]: 23.98fps) [4]
	[AVC-LongG25]	—	([NORMAL+Audio][2]: 23.98fps) [4]
	[ProRes 4444 XQ]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 23.98fps
	[ProRes 4444]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 23.98fps
	[ProRes 422 HQ]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 23.98fps
	[ProRes 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 23.98fps
	[ProRes 422 LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 23.98fps
	[OFF]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 23.98fps

[1] The frame rate will be the same as [MAIN CODEC].
[2] Audio is recorded.

*3 Cannot be selected when [VFR] is set to [ON].
*4 The [VFR PROXY REC] item is not displayed in the menu.

When [SDI RAW] is set to [2K/10bit]

[MAIN PIXEL] will be set to [2048×1080 CROP].

[MAIN CODEC]	[HIGH SPEED]	VFR	[VFR PROXY REC]
[AVC-Intra2K 422]	—	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 23.98fps
[AVC-Intra2K-LT]	—	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 23.98fps
[OFF]	[OFF]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 23.98fps
[OFF]	[ON]	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 23.98fps

* Audio is recorded.

When [SDI RAW] is set to [HD/10bit]

[MAIN PIXEL] will be set to [1920×1080 CROP].

[MAIN CODEC]	[HIGH SPEED]	VFR	[VFR PROXY REC]
[AVC-Intra422]	—	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1]: 23.98fps
[AVC-Intra-LT]	—	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1]: 23.98fps
[AVC-Intra100]	—	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1][2]: 23.98fps
[OFF]	[OFF]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1]: 23.98fps
[OFF]	[ON]	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1]: 23.98fps

*1 Audio is recorded.
*2 The proxy data cannot be recorded when [VFR] is set to [ON].

When [FREQUENCY] is set to [24.00p]

When [SDI RAW] is set to [OFF]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[4096×2160]	[AVC-Intra4K 422]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 24.00fps
	[AVC-Intra4K-LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 24.00fps
[2048×1080]	[AVC-Intra2K 444]	—	([NORMAL+Audio][2]: 24.00fps) *3
	[AVC-Intra2K 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 24.00fps
	[ProRes 4444 XQ]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 24.00fps
	[ProRes 4444]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 24.00fps
	[ProRes 422 HQ]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 24.00fps

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
	[ProRes 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 24.00fps
	[ProRes 422 LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 24.00fps
[2048×1080 CROP]	[AVC-Intra2K 422]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 24.00fps
	[AVC-Intra2K-LT]	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 24.00fps

*1 The frame rate will be the same as [MAIN CODEC].
*2 Audio is recorded.
*3 The [VFR PROXY REC] item is not displayed in the menu.

When [SDI RAW] is set to [4K/12bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[2048×1080]	[AVC-Intra2K 444]	—	([NORMAL+Audio]*1: 24.00fps) *2
	[OFF]	—	([NORMAL+Audio]*1: 24.00fps) *2

*1 Audio is recorded.
*2 The [VFR PROXY REC] item is not displayed in the menu.

When [SDI RAW] is set to [4K/10bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[4096×2160]	[AVC-Intra4K 422]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 24.00fps
	[AVC-Intra4K-LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 24.00fps
	[OFF]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 24.00fps
[2048×1080]	[AVC-Intra2K 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 24.00fps
	[ProRes 4444 XQ]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 24.00fps
	[ProRes 4444]	1fps - 30fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 24.00fps
	[ProRes 422 HQ]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 24.00fps
	[ProRes 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 24.00fps

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
	[ProRes 422 LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 24.00fps
	[OFF]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 24.00fps

*1 The frame rate will be the same as [MAIN CODEC].

*2 Audio is recorded.

When [SDI RAW] is set to [2K/10bit]

[MAIN PIXEL] will be set to [2048×1080 CROP].

[MAIN CODEC]	[HIGH SPEED]	VFR	[VFR PROXY REC]
[AVC-Intra2K 422]	—	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 24.00fps
[AVC-Intra2K-LT]	—	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 24.00fps
[OFF]	[OFF]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 24.00fps
[OFF]	[ON]	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 24.00fps

* Audio is recorded.

When [FREQUENCY] is set to [25.00p]

When [SDI RAW] is set to [OFF]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[4096×2160]	[AVC-Intra4K 422]	1fps - 25.00fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p] *1 ● [NORMAL+Audio]*2: 25.00fps
	[AVC-Intra4K-LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
[3840×2160]	[AVC-Intra4K 422]	1fps - 25.00fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[AVC-Intra4K-LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
[2048×1080]	[AVC-Intra2K 444]	—	([NORMAL+Audio]*2: 25.00fps) *3
	[AVC-Intra2K 422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[ProRes 4444 XQ]	1fps - 25.00fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[ProRes 4444]	1fps - 25.00fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
	[ProRes 422 HQ]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[ProRes 422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[ProRes 422 LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
[2048×1080 CROP]	[AVC-Intra2K 422]	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 25.00fps
	[AVC-Intra2K-LT]	1fps - 200fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 25.00fps
[1920×1080]	[AVC-Intra444]	—	([NORMAL+Audio]*2: 25.00fps) *3
	[AVC-Intra422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[AVC-Intra100]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2*4: 25.00fps
	[AVC-LongG50]	—	([NORMAL+Audio]*2: 25.00fps)*3
	[AVC-LongG25]	—	([NORMAL+Audio]*2: 25.00fps)*3
	[ProRes 4444 XQ]	1fps - 25.00fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[ProRes 4444]	1fps - 25.00fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[ProRes 422 HQ]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[ProRes 422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[ProRes 422 LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
[1920×1080 CROP]	[AVC-Intra422]	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 25.00fps
	[AVC-Intra-LT]	1fps - 200fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 25.00fps
	[AVC-Intra100]	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2*5: 25.00fps

*1 The frame rate will be the same as [MAIN CODEC].

*2 Audio is recorded.

*3 The [VFR PROXY REC] item is not displayed in the menu.

*4 Cannot be selected when [VFR] is set to [ON].

*5 The proxy data cannot be recorded when [VFR] is set to [ON].

When [SDI RAW] is set to [4K/12bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[2048×1080]	[AVC-Intra2K 444]	—	([NORMAL+Audio]*1: 25.00fps) *2
	[OFF]	—	([NORMAL+Audio]*1: 25.00fps) *2

*1   Audio is recorded.
*2   The [VFR PROXY REC] item is not displayed in the menu.

When [SDI RAW] is set to [4K/10bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[4096×2160]	[AVC-Intra4K 422]	1fps - 25.00fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[AVC-Intra4K-LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[OFF]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
[2048×1080]	[AVC-Intra2K 422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[ProRes 4444 XQ]	1fps - 25.00fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[ProRes 4444]	1fps - 25.00fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[ProRes 422 HQ]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[ProRes 422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[ProRes 422 LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps
	[OFF]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 25.00fps

*1   The frame rate will be the same as [MAIN CODEC].
*2   Audio is recorded.

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When [SDI RAW] is set to [UHD/12bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[1920×1080]	[AVC-Intra444]	—	([NORMAL+Audio]*1: 25.00fps) *2
	[OFF]	—	([NORMAL+Audio]*1: 25.00fps) *2

*1 Audio is recorded.
*2 The [VFR PROXY REC] item is not displayed in the menu.

When [SDI RAW] is set to [UHD/10bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[3840×2160]	[AVC-Intra4K 422]	1fps - 25.00fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 50p]*1 [PROXY SLOT]: [SUB] • [VFR up to 50p]*1 • [NORMAL+Audio]*2: 25.00fps
	[AVC-Intra4K-LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 50p]*1 [PROXY SLOT]: [SUB] • [VFR up to 50p]*1 • [NORMAL+Audio]*2: 25.00fps
	[OFF]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 50p]*1 [PROXY SLOT]: [SUB] • [VFR up to 50p]*1 • [NORMAL+Audio]*2: 25.00fps
[1920×1080]	[AVC-Intra422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 50p]*1 [PROXY SLOT]: [SUB] • [VFR up to 50p]*1 • [NORMAL+Audio]*2: 25.00fps
	[AVC-Intra100]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 50p]*1 [PROXY SLOT]: [SUB] • [VFR up to 50p]*1 • [NORMAL+Audio]*2*3: 25.00fps
	[AVC-LongG50]	—	([NORMAL+Audio]*2: 25.00fps) *4
	[AVC-LongG25]	—	([NORMAL+Audio]*2: 25.00fps) *4
	[ProRes 4444 XQ]	1fps - 25.00fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 50p]*1 [PROXY SLOT]: [SUB] • [VFR up to 50p]*1 • [NORMAL+Audio]*2: 25.00fps
	[ProRes 4444]	1fps - 25.00fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 50p]*1 [PROXY SLOT]: [SUB] • [VFR up to 50p]*1 • [NORMAL+Audio]*2: 25.00fps
	[ProRes 422 HQ]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 50p]*1 [PROXY SLOT]: [SUB] • [VFR up to 50p]*1 • [NORMAL+Audio]*2: 25.00fps
	[ProRes 422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 50p]*1 [PROXY SLOT]: [SUB] • [VFR up to 50p]*1 • [NORMAL+Audio]*2: 25.00fps
	[ProRes 422 LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 50p]*1 [PROXY SLOT]: [SUB] • [VFR up to 50p]*1 • [NORMAL+Audio]*2: 25.00fps
	[OFF]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] • [VFR up to 50p]*1 [PROXY SLOT]: [SUB] • [VFR up to 50p]*1 • [NORMAL+Audio]*2: 25.00fps

*1 The frame rate will be the same as [MAIN CODEC].
*2 Audio is recorded.

*3 Cannot be selected when [VFR] is set to [ON].
*4 The [VFR PROXY REC] item is not displayed in the menu.

When [SDI RAW] is set to [2K/10bit]

[MAIN PIXEL] will be set to [2048×1080 CROP].

[MAIN CODEC]	[HIGH SPEED]	VFR	[VFR PROXY REC]
[AVC-Intra2K 422]	—	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 25.00fps
[AVC-Intra2K-LT]	—	1fps - 200fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 25.00fps
[OFF]	[OFF]	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 25.00fps
[OFF]	[ON]	1fps - 200fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 25.00fps

* Audio is recorded.

When [SDI RAW] is set to [HD/10bit]

[MAIN PIXEL] will be set to [1920×1080 CROP].

[MAIN CODEC]	[HIGH SPEED]	VFR	[VFR PROXY REC]
[AVC-Intra422]	—	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1]: 25.00fps
[AVC-Intra-LT]	—	1fps - 200fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1]: 25.00fps
[AVC-Intra100]	—	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1][2]: 25.00fps
[OFF]	[OFF]	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1]: 25.00fps
[OFF]	[ON]	1fps - 200fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1]: 25.00fps

*1 Audio is recorded.
*2 The proxy data cannot be recorded when [VFR] is set to [ON].

When [FREQUENCY] is set to [29.97p]

When [SDI RAW] is set to [OFF]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[4096×2160]	[AVC-Intra4K 422]	1fps - 29.97fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 29.97fps
	[AVC-Intra4K-LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 29.97fps
[3840×2160]	[AVC-Intra4K 422]	1fps - 29.97fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 29.97fps
	[AVC-Intra4K-LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 29.97fps
[2048×1080]	[AVC-Intra2K 444]	—	([NORMAL+Audio][2]: 29.97fps) *3
	[AVC-Intra2K 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 29.97fps
	[ProRes 4444 XQ]	1fps - 29.97fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p][1] [PROXY SLOT]: [SUB] ● [VFR up to 60p][1] ● [NORMAL+Audio][2]: 29.97fps

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
	[ProRes 4444]	1fps - 29.97fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 422 HQ]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 422 LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
[2048×1080 CROP]	[AVC-Intra2K 422]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 29.97fps
	[AVC-Intra2K-LT]	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 29.97fps
[1920×1080]	[AVC-Intra444]	—	([NORMAL+Audio]*2: 29.97fps) *3
	[AVC-Intra422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[AVC-Intra100]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2*4: 29.97fps
	[AVC-LongG50]	—	([NORMAL+Audio]*2: 29.97fps)*3
	[AVC-LongG25]	—	([NORMAL+Audio]*2: 29.97fps)*3
	[ProRes 4444 XQ]	1fps - 29.97fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 4444]	1fps - 29.97fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 422 HQ]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 422 LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
[1920×1080 CROP]	[AVC-Intra422]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 29.97fps
	[AVC-Intra-LT]	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 29.97fps
	[AVC-Intra100]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2*5: 29.97fps

*1   The frame rate will be the same as [MAIN CODEC].

*2   Audio is recorded.

*3   The [VFR PROXY REC] item is not displayed in the menu.

*4   Cannot be selected when [VFR] is set to [ON].

*5 The proxy data cannot be recorded when [VFR] is set to [ON].

When [SDI RAW] is set to [4K/12bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[2048×1080]	[AVC-Intra2K 444]	—	([NORMAL+Audio]*1: 29.97fps) *2
	[OFF]	—	([NORMAL+Audio]*1: 29.97fps) *2

*1 Audio is recorded.
*2 The [VFR PROXY REC] item is not displayed in the menu.

When [SDI RAW] is set to [4K/10bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[4096×2160]	[AVC-Intra4K 422]	1fps - 29.97fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[AVC-Intra4K-LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[OFF]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
[2048×1080]	[AVC-Intra2K 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 4444 XQ]	1fps - 29.97fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 4444]	1fps - 29.97fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 422 HQ]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 422 LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[OFF]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps

*1 The frame rate will be the same as [MAIN CODEC].
*2 Audio is recorded.

When [SDI RAW] is set to [UHD/12bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[1920×1080]	[AVC-Intra444]	—	([NORMAL+Audio]*1: 29.97fps) *2
	[OFF]	—	([NORMAL+Audio]*1: 29.97fps) *2

*1 Audio is recorded.
*2 The [VFR PROXY REC] item is not displayed in the menu.

When [SDI RAW] is set to [UHD/10bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[3840×2160]	[AVC-Intra4K 422]	1fps - 29.97fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[AVC-Intra4K-LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[OFF]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
[1920×1080]	[AVC-Intra422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[AVC-Intra100]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2*3: 29.97fps
	[AVC-LongG50]	—	([NORMAL+Audio]*2: 29.97fps) *4
	[AVC-LongG25]	—	([NORMAL+Audio]*2: 29.97fps) *4
	[ProRes 4444 XQ]	1fps - 29.97fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 4444]	1fps - 29.97fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 422 HQ]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 422]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[ProRes 422 LT]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps
	[OFF]	1fps - 60fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 29.97fps

*1 The frame rate will be the same as [MAIN CODEC].
*2 Audio is recorded.
*3 Cannot be selected when [VFR] is set to [ON].
*4 The [VFR PROXY REC] item is not displayed in the menu.

When [SDI RAW] is set to [2K/10bit]

[MAIN PIXEL] will be set to [2048×1080 CROP].

[MAIN CODEC]	[HIGH SPEED]	VFR	[VFR PROXY REC]
[AVC-Intra2K 422]	—	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 29.97fps
[AVC-Intra2K-LT]	—	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 29.97fps
[OFF]	[OFF]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 29.97fps
[OFF]	[ON]	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 29.97fps

* Audio is recorded.

When [SDI RAW] is set to [HD/10bit]

[MAIN PIXEL] will be set to [1920×1080 CROP].

[MAIN CODEC]	[HIGH SPEED]	VFR	[VFR PROXY REC]
[AVC-Intra422]	—	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1]: 29.97fps
[AVC-Intra-LT]	—	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1]: 29.97fps
[AVC-Intra100]	—	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1][2]: 29.97fps
[OFF]	[OFF]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1]: 29.97fps
[OFF]	[ON]	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1]: 29.97fps

[1] Audio is recorded.
[2] The proxy data cannot be recorded when [VFR] is set to [ON].

When [FREQUENCY] is set to [50.00p]

When [SDI RAW] is set to [OFF]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[4096×2160]	[AVC-Intra4K-LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p][1] [PROXY SLOT]: [SUB] ● [VFR up to 50p][1] ● [NORMAL+Audio][2]: 50fps
[3840×2160]	[AVC-Intra4K-LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p][1] [PROXY SLOT]: [SUB] ● [VFR up to 50p][1] ● [NORMAL+Audio][2]: 50fps
[2048×1080]	[AVC-Intra2K 422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p][1] [PROXY SLOT]: [SUB] ● [VFR up to 50p][1] ● [NORMAL+Audio][2]: 50fps
	[ProRes 422 HQ]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p][1] [PROXY SLOT]: [SUB] ● [VFR up to 50p][1] ● [NORMAL+Audio][2]: 50fps
	[ProRes 422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p][1] [PROXY SLOT]: [SUB] ● [VFR up to 50p][1] ● [NORMAL+Audio][2]: 50fps
	[ProRes 422 LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p][1] [PROXY SLOT]: [SUB] ● [VFR up to 50p][1] ● [NORMAL+Audio][2]: 50fps
[2048×1080 CROP]	[AVC-Intra2K 422]	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][2]: 50fps
	[AVC-Intra2K-LT]	1fps - 200fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][2]: 50fps

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[1920×1080]	[AVC-Intra422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 50fps
	[AVC-Intra100]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2*3: 50fps
	[AVC-LongG25]	—	([NORMAL+Audio]*2: 50fps) *4
	[ProRes 422 HQ]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 50fps
	[ProRes 422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 50fps
	[ProRes 422 LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 50fps
[1920×1080 CROP]	[AVC-Intra422]	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 50fps
	[AVC-Intra-LT]	1fps - 200fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 50fps
	[AVC-Intra100]	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2*5: 50fps

*1 The frame rate will be the same as [MAIN CODEC].
*2 Audio is recorded.
*3 Cannot be selected when [VFR] is set to [ON].
*4 The [VFR PROXY REC] item is not displayed in the menu.
*5 The proxy data cannot be recorded when [VFR] is set to [ON].

When [SDI RAW] is set to [4K/10bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[4096×2160]	[AVC-Intra4K-LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 50fps
	[OFF]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 50fps
[2048×1080]	[AVC-Intra2K 422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 50fps
	[ProRes 422 HQ]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 50fps
	[ProRes 422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 50fps
	[ProRes 422 LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 50p]*1 ● [NORMAL+Audio]*2: 50fps

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
	[OFF]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p][1] [PROXY SLOT]: [SUB] ● [VFR up to 50p][1] ● [NORMAL+Audio][2]: 50fps

[1] The frame rate will be the same as [MAIN CODEC].
[2] Audio is recorded.

When [SDI RAW] is set to [UHD/10bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[3840×2160]	[AVC-Intra4K-LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p][1] [PROXY SLOT]: [SUB] ● [VFR up to 50p][1] ● [NORMAL+Audio][2]: 50fps
	[OFF]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p][1] [PROXY SLOT]: [SUB] ● [VFR up to 50p][1] ● [NORMAL+Audio][2]: 50fps
[1920×1080]	[AVC-Intra422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p][1] [PROXY SLOT]: [SUB] ● [VFR up to 50p][1] ● [NORMAL+Audio][2]: 50fps
	[AVC-Intra100]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p][1] [PROXY SLOT]: [SUB] ● [VFR up to 50p][1] ● [NORMAL+Audio][2][3]: 50fps
	[AVC-LongG25]	—	([NORMAL+Audio][2]: 50fps) [4]
	[ProRes 422 HQ]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p][1] [PROXY SLOT]: [SUB] ● [VFR up to 50p][1] ● [NORMAL+Audio][2]: 50fps
	[ProRes 422]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p][1] [PROXY SLOT]: [SUB] ● [VFR up to 50p][1] ● [NORMAL+Audio][2]: 50fps
	[ProRes 422 LT]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p][1] [PROXY SLOT]: [SUB] ● [VFR up to 50p][1] ● [NORMAL+Audio][2]: 50fps
	[OFF]	1fps - 50fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 50p][1] [PROXY SLOT]: [SUB] ● [VFR up to 50p][1] ● [NORMAL+Audio][2]: 50fps

[1] The frame rate will be the same as [MAIN CODEC].
[2] Audio is recorded.
[3] Cannot be selected when [VFR] is set to [ON].
[4] The [VFR PROXY REC] item is not displayed in the menu.

When [SDI RAW] is set to [2K/10bit]

[MAIN PIXEL] will be set to [2048×1080 CROP].

[MAIN CODEC]	[HIGH SPEED]	VFR	[VFR PROXY REC]
[AVC-Intra2K 422]	—	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 50fps
[AVC-Intra2K-LT]	—	1fps - 200fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 50fps
[OFF]	[OFF]	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 50fps
[OFF]	[ON]	1fps - 200fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 50fps

* Audio is recorded.

When [SDI RAW] is set to [HD/10bit]

[MAIN PIXEL] will be set to [1920×1080 CROP].

[MAIN CODEC]	[HIGH SPEED]	VFR	[VFR PROXY REC]
[AVC-Intra422]	—	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*1: 50fps
[AVC-Intra-LT]	—	1fps - 200fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*1: 50fps
[AVC-Intra100]	—	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*1*2: 50fps
[OFF]	[OFF]	1fps - 100fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*1: 50fps
[OFF]	[ON]	1fps - 200fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*1: 50fps

*1 Audio is recorded.
*2 The proxy data cannot be recorded when [VFR] is set to [ON].

When [FREQUENCY] is set to [59.94p]

When [SDI RAW] is set to [OFF]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[4096×2160]	[AVC-Intra4K-LT]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
[3840×2160]	[AVC-Intra4K-LT]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
[2048×1080]	[AVC-Intra2K 422]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[ProRes 422 HQ]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[ProRes 422]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[ProRes 422 LT]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
[2048×1080 CROP]	[AVC-Intra2K 422]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 59.94fps
	[AVC-Intra2K-LT]	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 59.94fps
[1920×1080]	[AVC-Intra422]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[AVC-Intra100]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2*3: 59.94fps
	[AVC-LongG25]	—	([NORMAL+Audio]*2: 59.94fps) *4

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
	[ProRes 422 HQ]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[ProRes 422]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[ProRes 422 LT]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
[1920×1080 CROP]	[AVC-Intra422]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 59.94fps
	[AVC-Intra-LT]	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2: 59.94fps
	[AVC-Intra100]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*2*5: 59.94fps

*1 The frame rate will be the same as [MAIN CODEC].
*2 Audio is recorded.
*3 Cannot be selected when [VFR] is set to [ON].
*4 The [VFR PROXY REC] item is not displayed in the menu.
*5 The proxy data cannot be recorded when [VFR] is set to [ON].

When [SDI RAW] is set to [4K/10bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[4096×2160]	[AVC-Intra4K-LT]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[OFF]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
[2048×1080]	[AVC-Intra2K 422]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[ProRes 422 HQ]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[ProRes 422]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[ProRes 422 LT]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[OFF]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps

*1 The frame rate will be the same as [MAIN CODEC].
*2 Audio is recorded.

When [SDI RAW] is set to [UHD/10bit]

[HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[3840×2160]	[AVC-Intra4K-LT]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[OFF]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
[1920×1080]	[AVC-Intra422]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[AVC-Intra100]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2*3: 59.94fps
	[AVC-LongG25]	—	([NORMAL+Audio]*2: 59.94fps) *4
	[ProRes 422 HQ]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[ProRes 422]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[ProRes 422 LT]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps
	[OFF]	1fps - 59.94fps	[PROXY SLOT]: [MAIN & SUB]/[MAIN] ● [VFR up to 60p]*1 [PROXY SLOT]: [SUB] ● [VFR up to 60p]*1 ● [NORMAL+Audio]*2: 59.94fps

*1 The frame rate will be the same as [MAIN CODEC].
*2 Audio is recorded.
*3 Cannot be selected when [VFR] is set to [ON].
*4 The [VFR PROXY REC] item is not displayed in the menu.

When [SDI RAW] is set to [2K/10bit]

[MAIN PIXEL] will be set to [2048×1080 CROP].

[MAIN CODEC]	[HIGH SPEED]	VFR	[VFR PROXY REC]
[AVC-Intra2K 422]	—	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 59.94fps
[AVC-Intra2K-LT]	—	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 59.94fps
[OFF]	[OFF]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 59.94fps
[OFF]	[ON]	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*: 59.94fps

* Audio is recorded.

When [SDI RAW] is set to [HD/10bit]

[MAIN PIXEL] will be set to [1920×1080 CROP].

[MAIN CODEC]	[HIGH SPEED]	VFR	[VFR PROXY REC]
[AVC-Intra422]	—	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*1: 59.94fps
[AVC-Intra-LT]	—	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio]*1: 59.94fps

[MAIN CODEC]	[HIGH SPEED]	VFR	[VFR PROXY REC]
[AVC-Intra100]	—	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1][2]: 59.94fps
[OFF]	[OFF]	1fps - 120fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1]: 59.94fps
[OFF]	[ON]	1fps - 240fps	[PROXY SLOT]: [SUB] ● [NORMAL+Audio][1]: 59.94fps

[1] Audio is recorded.
[2] The proxy data cannot be recorded when [VFR] is set to [ON].

When [FREQUENCY] is set to [50.00i]

[SDI RAW] and [HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[1920×1080]	[AVC-Intra100]	—	([NORMAL+Audio][1]: 50.00i)[2]
	[ProRes 422 HQ]	—	([NORMAL+Audio][1]: 50.00i)[2]
	[ProRes 422]	—	([NORMAL+Audio][1]: 50.00i) [2]
	[ProRes 422 LT]	—	([NORMAL+Audio][1]: 50.00i) [2]
	[AVC-LongG50]	—	([NORMAL+Audio][1]: 50.00i)[2]
	[AVC-LongG25]	—	([NORMAL+Audio][1]: 50.00i) [2]

[1] Audio is recorded.
[2] The [VFR PROXY REC] item is not displayed in the menu.

When [FREQUENCY] is set to [59.94i]

[SDI RAW] and [HIGH SPEED] cannot be set.

[MAIN PIXEL]	[MAIN CODEC]	VFR	[VFR PROXY REC]
[1920×1080]	[AVC-Intra100]	—	([NORMAL+Audio][1]: 59.94i)[2]
	[ProRes 422 HQ]	—	([NORMAL+Audio][1]: 59.94i)[2]
	[ProRes 422]	—	([NORMAL+Audio][1]: 59.94i) [2]
	[ProRes 422 LT]	—	([NORMAL+Audio][1]: 59.94i) [2]
	[AVC-LongG50]	—	([NORMAL+Audio][1]: 59.94i)[2]
	[AVC-LongG25]	—	([NORMAL+Audio][1]: 59.94i) [2]

[1] Audio is recorded.
[2] The [VFR PROXY REC] item is not displayed in the menu.

Color setting

Applies the LUT to the recording image and monitor image.

It also sets the mode such as V-Log or V-709.

COLOR screen setting
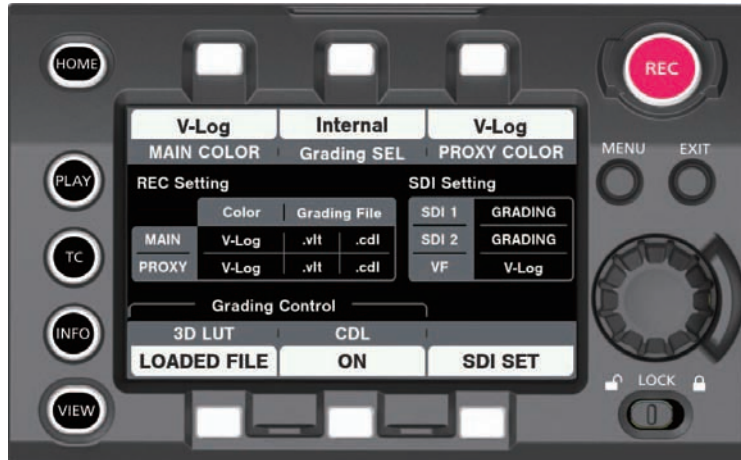
The following settings can be set in the COLOR screen. These can also be set from [MENU].

- [MAIN COLOR]: Color setting for main recording
- [Grading SEL]: Grading function setting
- [PROXY COLOR]: Color setting for proxy recording
- [3D LUT]: Setting for the 3D LUT function
- [CDL]: Setting for the CDL function
- [SDI SET]: Color setting for the output from the <SDI OUT 1>/<SDI OUT 2>/<VF SDI> terminal
- Both <SDI OUT1> and <SDI OUT2> are displayed as [RAW] when [SDI RAW] is set to anything other than [OFF], and [MENU] → [OUTPUT SETTINGS] → [SDI OUT] → [RAW OUTPUT] is set to [DUAL].
- <SDI OUT1> is displayed as [RAW] and <SDI OUT2> is displayed as [-] when [SDI RAW] is set to anything other than [OFF], and [MENU] → [OUTPUT SETTINGS] → [SDI OUT] → [RAW OUTPUT] is set to [SINGLE].

Control combinations through settings

[MAIN COLOR]	[Grading SEL]	[PROXY COLOR]	[3D LUT]	[CDL]	[SDI SET]	
					[SDI OUT 1] [SDI OUT 2]	[VF SDI]
[V-Log]	[External App]/ [Internal]	[V-Log]	[OFF]/[V-709]/ [Loaded File]	[ON]/[OFF]	[V-Log] [Grading]	[V-Log] [Grading]
		[Grading]				
	[OFF]	[V-Log]	[OFF]	[OFF]	[V-Log] [V-709]	[V-Log] [V-709]
		[V-709]				
[SCENE1] [SCENE2] [SCENE3] [SCENE4] [SCENE5]	[OFF]	[SCENE1] [SCENE2] [SCENE3] [SCENE4] [SCENE5]	[OFF]	[OFF]	[SCENE1] [SCENE2] [SCENE3] [SCENE4] [SCENE5]	[SCENE1] [SCENE2] [SCENE3] [SCENE4] [SCENE5]

[MAIN COLOR] setting

Sets the video (color of entire camera system) that is recorded in the main slot.

Fig. 1
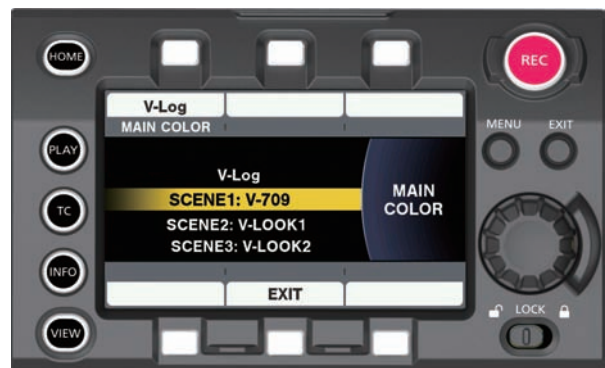
Fig. 2

[MAIN COLOR] setting is displayed in the status display area at the center of the COLOR screen.

[MAIN COLOR] is the item to be set as the master color space for that project only once before the production is started.

To ensure the [MAIN COLOR] setting is not changed unintentionally, move to the selection screen (Fig. 2) after the change confirmation screen (Fig. 1) is displayed.

● The grading function is enabled when [MAIN COLOR] is set to [V-Log].

The V-Log (master video) can be recorded to the main recorder and the grading video can be recorded to the proxy recorder simultaneously.

The graded video is output from the <SDI OUT 1>/<SDI OUT 2>/<VF SDI> terminal, and it can be monitored.

● In addition to [V-Log], [SCENE1]/[SCENE2]/[SCENE3]/[SCENE4]/[SCENE5] scene files can be selected for [MAIN COLOR].

The [SCENE FILE SETTINGS] menu is enabled when the scene file is selected, allowing the adjustment of image with various parameters.

The proxy recorder and the output video from the <SDI OUT 1>/<SDI OUT 2>/<VF SDI> terminal will be the video from the selected scene file.

● [MAIN COLOR] is fixed to [V-Log] when [SDI RAW] is set to anything other than [OFF].

[Grading SEL] setting

Selects the grading function.

The grading function is enabled when [MAIN COLOR] is set to [V-Log].
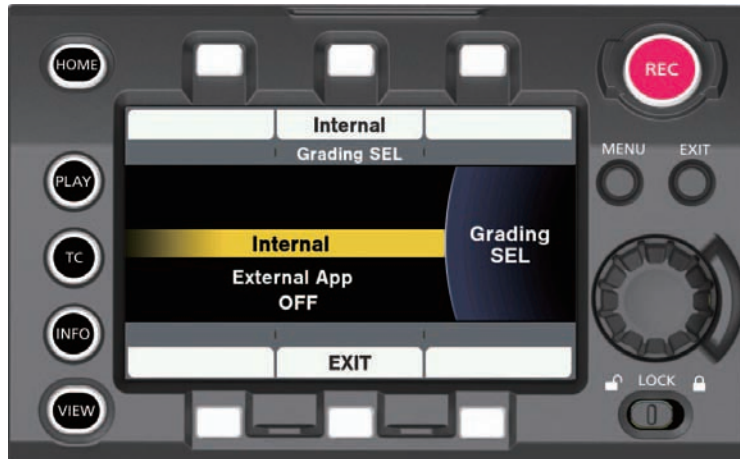
● [Internal]: Upload of the 3D LUT and CDL files can also be performed from the SD memory card. Controlling of the CDL parameter can be performed in real time from the [CDL] screen.
● [External App]: By connecting to an external device with LAN or WiFi and using the color grading application, upload of the 3D LUT file or parameter control of the CDL file can be performed in real time.
● [OFF]: Disables the grading function.

[PROXY COLOR] setting

Sets the color of video recorded as proxy.
● The item that can be selected is switched every time the control panel operation button is pressed.
For the item that can be selected, refer to "Control combinations through settings" (page 61).
● [PROXY COLOR] setting is displayed in the status display area in the COLOR screen.

[3D LUT] setting

Selects the 3D LUT function.

The grading function is enabled when [MAIN COLOR] is set to [V-Log] and [Grading SEL] is set to [Internal] or [External App].

■ **[3D LUT] screen**
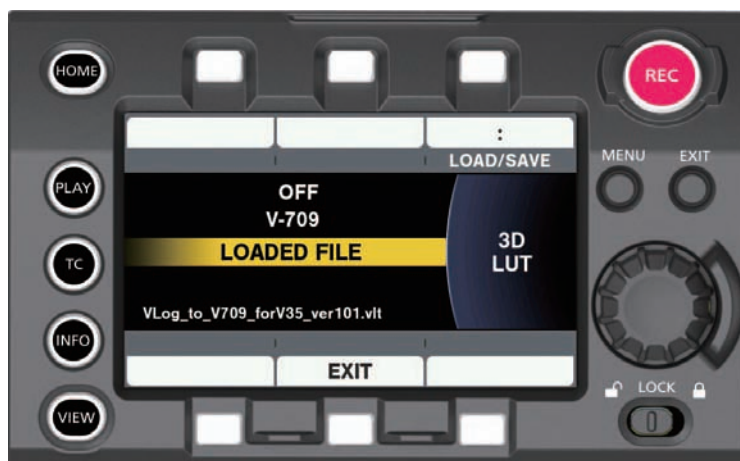
∎ **[LOAD/SAVE] screen**
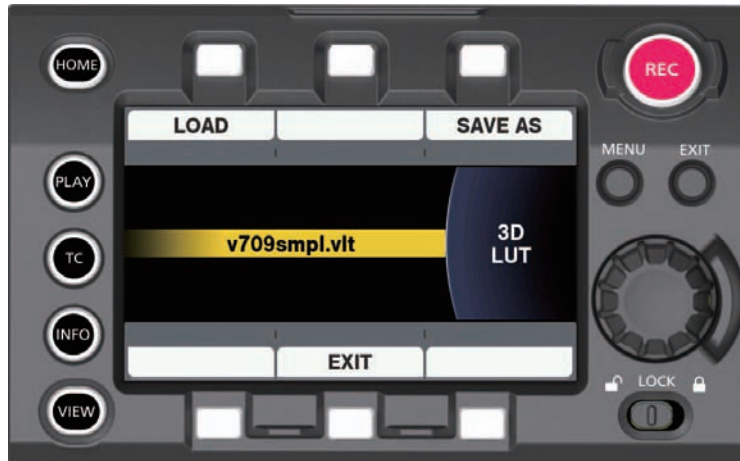
● 3D LUT is 17-grid format.

● Uploads to camera using the SD memory card. It can also upload from the external grading application via network.

[SAVE AS] operation allows to save with arbitrarily file name of up to eight characters (with file extension .vlt) to a SD memory card. It cannot be saved if there is a file with a same name.

● The V-709 file in the camera or the loaded file is recorded together with the video to the P2 card or the SD memory card when such a file is selected.

The recorded file name will be the same name as the video clip. The file extension is .vlt.

● The original file name for the loaded LUT is displayed at the bottom of the [3D LUT] screen.

∎ **[SAVE AS] screen**

[CDL] setting

Selects the CDL function.

The CDL function is enabled when [MAIN COLOR] is set to [V-Log] and [Grading SEL] is set to [Internal] or [External App].

∎ **[CDL] top screen ([Grading SEL] = [Internal])**

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■ **[CDL] top screen ([Grading SEL] = [External App])**
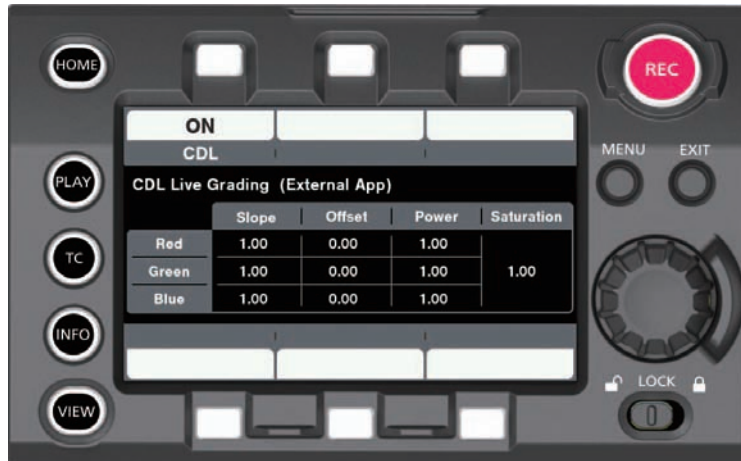
■ **[Slope] screen ([Offset], [Power])**
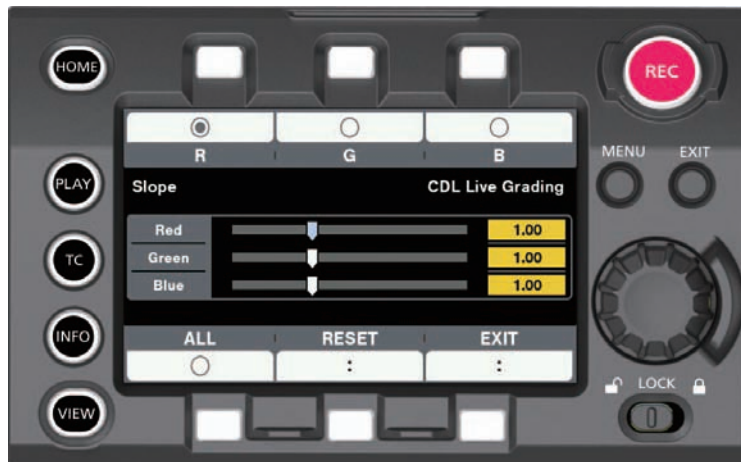
Various parameters can be adjusted from this screen when [Grading SEL] is set to [Internal].

This can be adjusted in 0.01 steps with the control panel operation button. It is reflected to video in real time.

■ **[Saturation] screen**

Various parameters can be adjusted from this screen when [Grading SEL] is set to [Internal].

This can be adjusted in 0.01 steps with the control panel operation button.

It is reflected to video in real time.

■ **[LOAD/SAVE] screen**
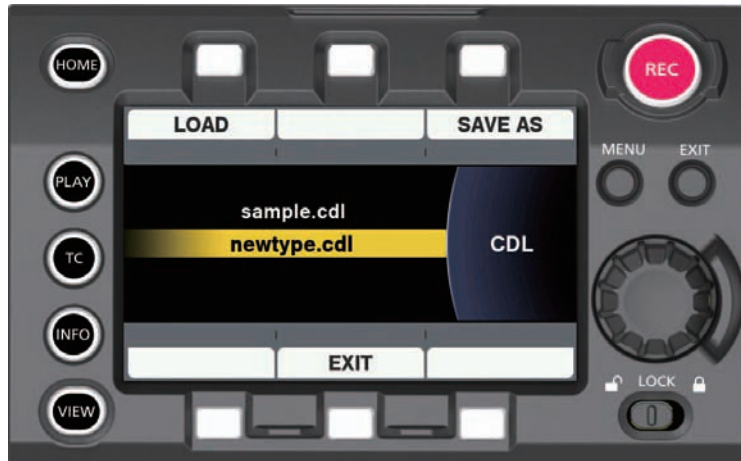
The .cdl file in the SD memory card is displayed and file can be selected.

● This can be controlled from each parameter setting screen in the control panel or the external grading application via network.

Upload of the CDL file can also be performed from the SD memory card.

[SAVE AS] operation allows to save with arbitrarily file name of up to eight characters (with file extension .cdl) to a SD memory card. It cannot be saved if there is a file with a same name.

● The CDL parameter can also be set from [MENU].

It is also saved in the setup file.

● All the parameters are recorded as a file together with the video on the P2 card or the SD memory card when the CDL function is enabled.

The recorded file name will be the same name as the video clip.

The file extension is .cdl.

● CDL can be changed even during recording when [Grading SEL] is set to [External App]. The setting value for the video in the last frame of the .cdl file is reflected to that file to be recorded.

■ **[SAVE AS] screen**

[SDI SET]

Sets the color of the video output from the <SDI OUT 1>/<SDI OUT 2>/<VF SDI> terminal.

- The item that can be selected is switched every time the control panel operation button is pressed.

  For the item that can be selected, refer to "Control combinations through settings" (page 61).
- [SDI SET] setting is displayed in the status display area in the COLOR screen.
- It can also be changed by the USER button.
- <SDI OUT1> and <SDI OUT2> are not displayed when [SDI RAW] is set to anything other than [OFF].

Image quality adjustment

The image quality for video to record can be adjusted in the camera when [MENU] → [SYSTEM SETTINGS] → [COLOR SETTINGS] → [MAIN] is [SCENE1]/[SCENE2]/[SCENE3]/[SCENE4]/[SCENE5].

● Set the image quality in [MENU] → [SCENE FILE SETTINGS].

● Setting is disabled when [MAIN] is set to [V-Log].

● It is necessary to use a measuring device such as vector scope to change the setting.

The content that can be set is as follows.

● Y: Can be set.

● N: Cannot be set.

[MENU] item	[MAIN] setting					
	[V-Log]	[SCENE1] ([V-709])	[SCENE2] ([V-LOOK1])	[SCENE3] ([V-LOOK2])	[SCENE4] ([BC-LOOK1])	[SCENE5] ([BC-LOOK2])
[CAMERA SETTINGS]						
● [WHITE]	Y	N				
● [BLACK]	Y	N				
● [EI]	Y	N				
[SCENE FILE SETTINGS]						
● [NAME EDIT]	N	Y*1				
● [WHITE]	N	Y				
● [BLACK]	N	Y				
● [EI]	N	Y				
● [GAMMA]	N	[V-709]	[V-406060]	[V-452080]	[VIDEO45]	[VIDEO50]
● [KNEE]	N	N*2			Y	
● [WHITE CLIP]	N	N*2			Y	
● [DETAIL]	N	Y				
● [SKIN DETAIL]	N	Y				
● [CHROMA]	N	N*3	Y			
● [MATRIX]	N	Y				
● [COLOR CORRECTION]	N	Y				

*1   The name of the scene file is displayed thereafter when [SCENE1]/[SCENE2]/[SCENE3]/[SCENE4]/[SCENE5] is selected in [MENU] → [SYSTEM SETTINGS] → [COLOR SETTINGS] → [MAIN].

*2   This cannot be set when [GAMMA] is set to anything other than [VIDEO45]/[VIDEO50].

*3   Setting is disabled when [GAMMA] is set to [V-709].

■ Scene files

● [V-LOOK1]/[V-LOOK2]: Represents VARICAM-LOOK. The gamma curve with 14+Stop latitude equivalent to V-Log is set.

● [BC-LOOK1]/[BC-LOOK2]: Represents BROADCAST-LOOK. The gamma curve with 600% dynamic range equivalent to the generally used video camera is set.

● The name can be changed in [MENU] → [SCENE FILE SETTINGS] → [NAME EDIT].

[EI]

Sets the sensitivity of the video.

Dual native ISO

The camera is equipped with two [NATIVE ISO], [800ISO] and [5000ISO], which are called as dual native ISO.

By installing the sensitivity switching circuit inside the image sensor, a high sensitivity and low noise [5000ISO] is realized.

However, the sensitivity will drop 1Stop when [MAIN CODEC] is set to [AVC-Intra2K-LT]/[AVC-Intra-LT] and [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. [NATIVE ISO] will become [400ISO] and [2500ISO].

The latitude will decrease according to the value when ISO range lower than [NATIVE ISO] is used.

■ Change of noise in shadow area by the ISO sensitivity

When [MAIN CODEC] is set to [AVC-Intra2K-LT]/[AVC-Intra-LT]

When [MAIN PIXEL] is set to anything other than [2048×1080 CROP]/[1920×1080 CROP]	When [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]
Conventional element	Conventional element
Noise — ISO sensitivity (800, 4000, 5000)	Noise — ISO sensitivity (400, 2000, 2500)
Dual native ISO	Dual native ISO
Noise — ISO sensitivity (800, 4000, 5000)	Noise — ISO sensitivity (400, 2000, 2500)
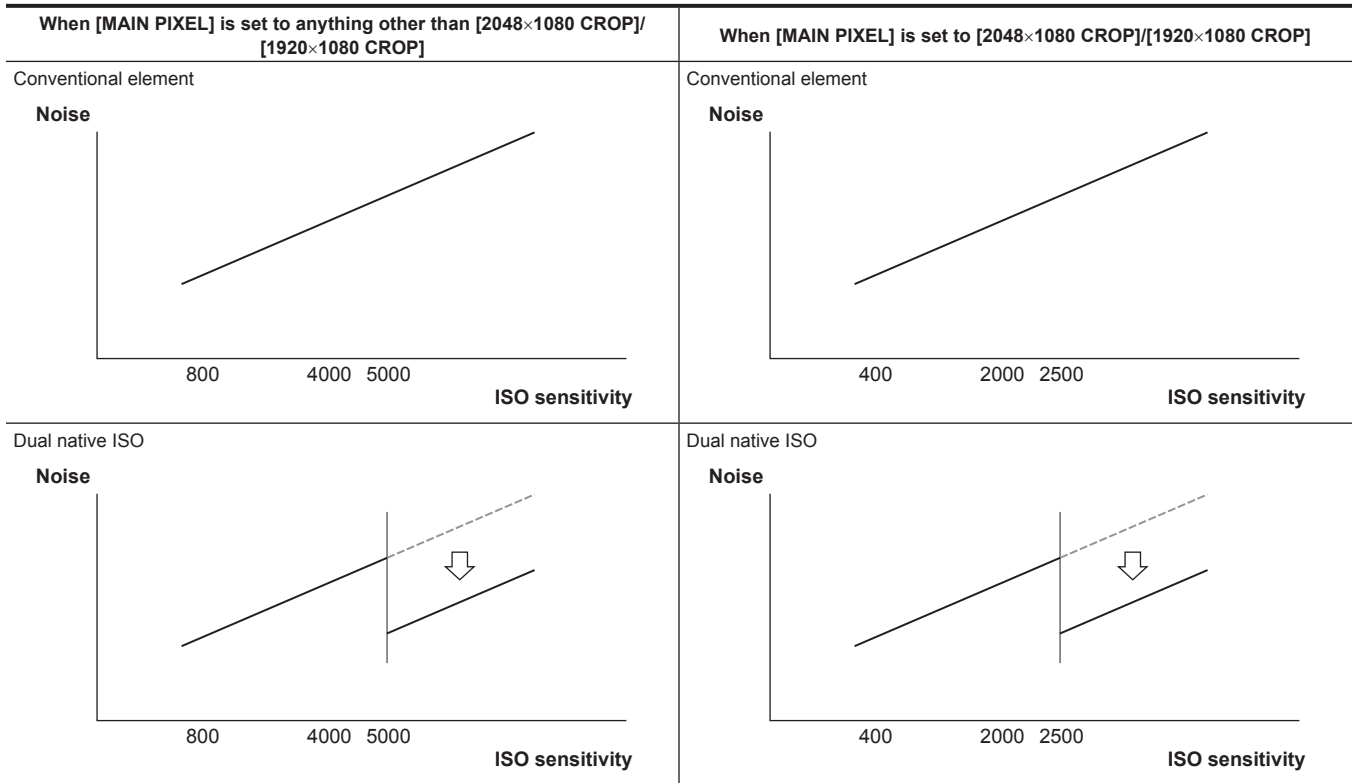
■ Change in latitude by the ISO sensitivity

When [MAIN CODEC] is set to [AVC-Intra2K-LT]/[AVC-Intra-LT]

When [MAIN PIXEL] is set to anything other than [2048×1080 CROP]/[1920×1080 CROP]	When [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]
Dual native ISO	Dual native ISO
Latitude: Standard (14+Stop), -1Stop, -2Stop — ISO sensitivity (200, 400, 800, 1250, 2500, 5000)	Latitude: Standard (14+Stop), -1Stop, -2Stop — ISO sensitivity (200, 400, 800, 1250, 2500, 5000)

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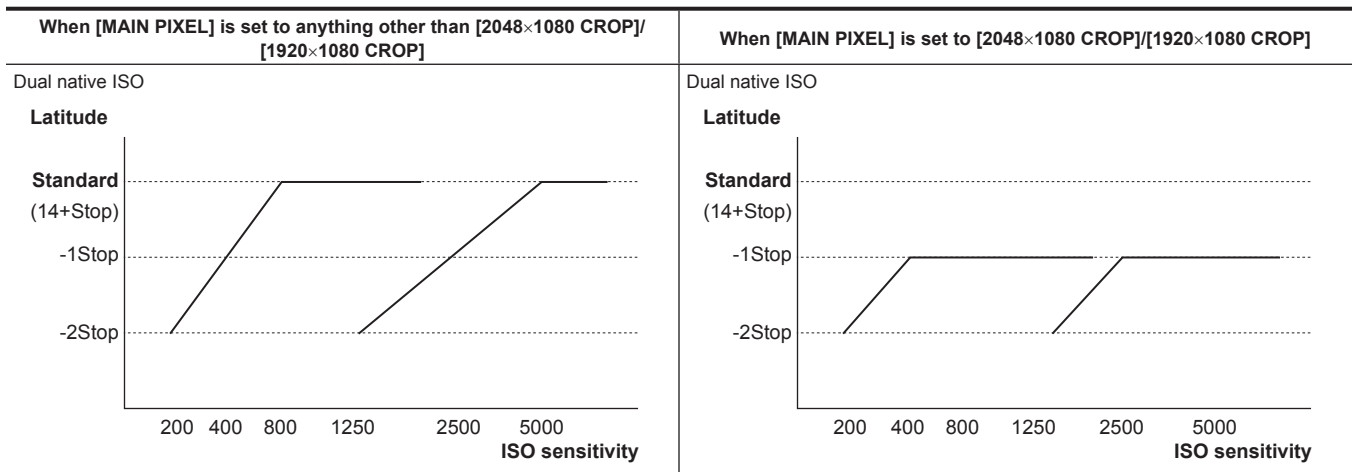
[dB]

There are two gain modes of [NORMAL] and [HIGH]. The standard sensitivity equivalent to [NATIVE ISO] is set as 0 dB.

However, the dynamic range will be set to 600% which is lower than [V-Log] or other gamma curve when the gamma curve is set to [VIDEO45]/[VIDEO50]. Therefore, the standard sensitivity will decrease.

■ Change of gain (0 dB) and dynamic range by the sensitivity

When [MAIN CODEC] is set to [AVC-Intra2K-LT]/[AVC-Intra-LT]

When [MAIN PIXEL] is set to anything other than [2048×1080 CROP]/[1920×1080 CROP]	When [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]
[V-Log]/[V-709]/[V-406060]/[V-452080]/[V-452080L] **Dynamic range**	[V-Log]/[V-709]/[V-406060]/[V-452080]/[V-452080L] **Dynamic range**

[VIDEO45]/[VIDEO50] **Dynamic range**	[VIDEO45]/[VIDEO50] **Dynamic range**
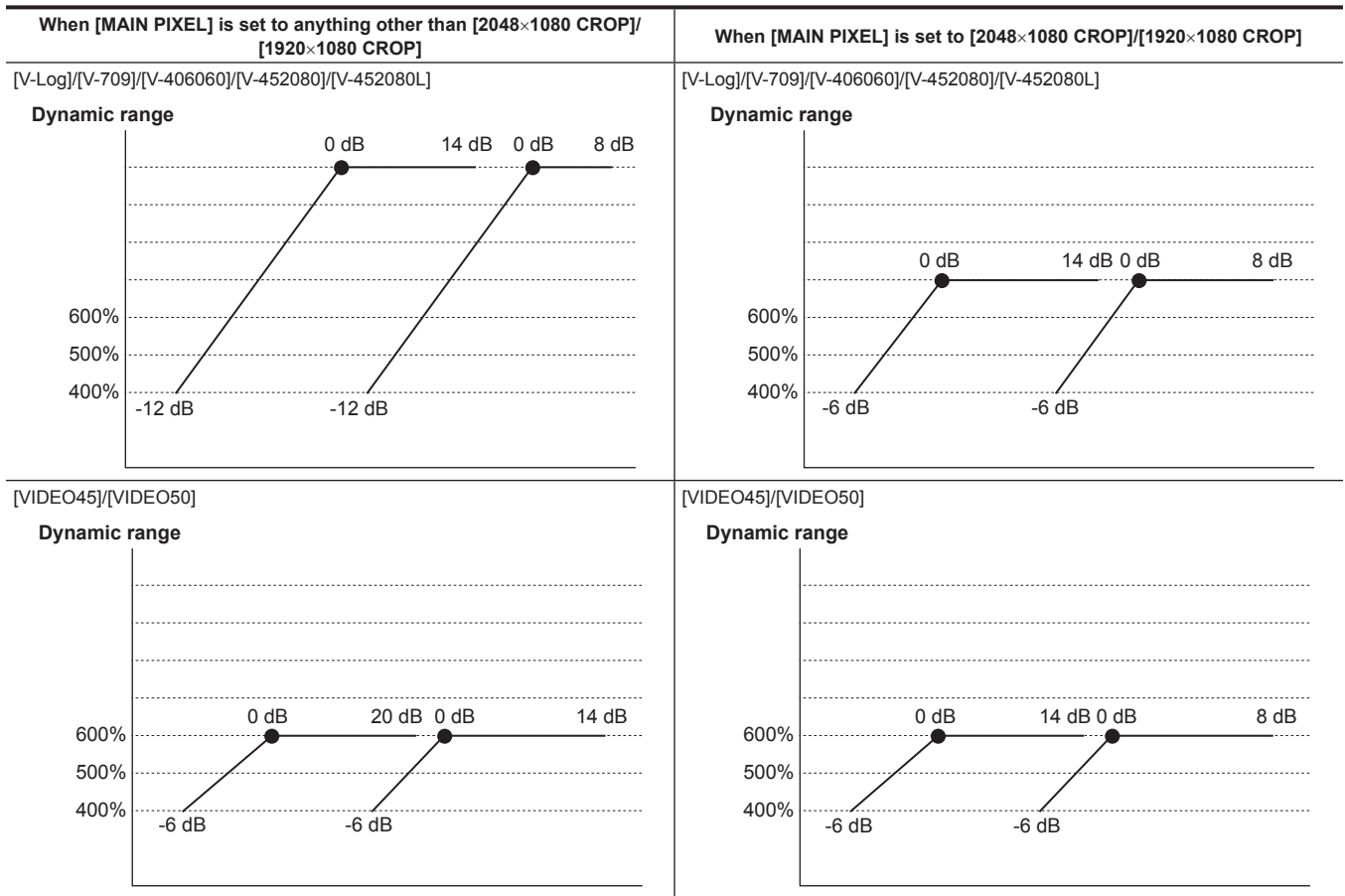
Setting method

■ When setting from [MENU]

● When [SYSTEM SETTINGS] → [COLOR SETTINGS] → [MAIN] is set to [V-Log]

Set with [MENU] → [CAMERA SETTINGS] → [EI].

● When [SYSTEM SETTINGS] → [COLOR SETTINGS] → [MAIN] is set to anything other than [V-Log]

Set with [MENU] → [SCENE FILE SETTINGS] → [EI].

■ When setting from the control panel

Set with [EI] in the [HOME] screen.

[WHITE]

[AWB] (automatic white balance adjustment)

1 Place the white pattern at a point where the light conditions match those for the light source for the subject, and display white in the screen.

2 Adjusts the luminance.

Adjust the iris and EXPOSURE INDEX with the <IRIS/SEL> dial button so the luminance display of Y GET is approximately 70%.
Y GET can be assigned to the USER button. (page 119)

3 Select [WB] → [AWB] from the HOME screen of the control panel, or [MENU] → [SCENE FILE SETTINGS] (or [CAMERA SETTINGS]) → [WHITE] → [AWB] → [EXECUTE].

It can also be adjusted with the <TOGGLE/WB> switch. (Only during shooting)
White balance is automatically adjusted.
The execution result will be added to the list of color temperatures (max. 12).
It will be overwritten with current value when it exceeds 12. (Only during shooting)
[A] is displayed in front of the color temperature.

■ **White pattern**

● A white object (white cloth or white wall) near the subject may also be used as the white pattern.

● Required size of white pattern is as follows.

1/2 or more of the screen width

1/2 or more of the screen height
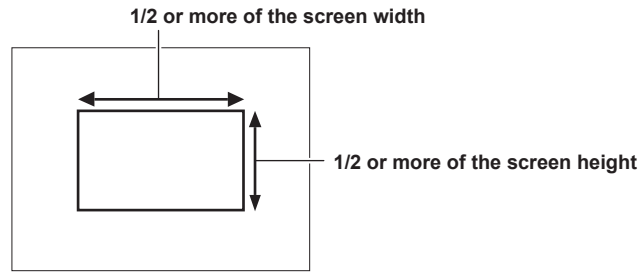
● Keep bright spotlights out of the screen.

● The white pattern must be placed at the center of the screen.

Manual setting of color temperature

Can be selected from the registered color temperature (max. 12).

1 **Select [WB] from the HOME screen of the control panel, or [MENU] → [SCENE FILE SETTINGS] (or [CAMERA SETTINGS]) → [WHITE] → [VALUE].**

It can also be adjusted with the <TOGGLE/WB> switch. (Only during shooting)

2 **Select the color temperature.**

■ **To register**

The result is automatically added to the selection when the automatic white balance is executed.

It will be overwritten with current value when it exceeds 12. (Only during shooting)

It can be added with the following method.

1 **Select [WB] → [ADD] from the HOME screen of the control panel, or [MENU] → [SCENE FILE SETTINGS] (or [CAMERA SETTINGS]) → [WHITE] → [ADD].**

[BLACK]

[ABB] (automatic black balance adjustment)

Adjust in the following cases.
● When the camera is used for the first time
● When using after not used for long period of time
● When the ambient temperature has changed considerably

1 **Place the cap on the lens.**

Make sure the light does not get to the image sensor.

2 **Select [MENU] → [SCENE FILE SETTINGS] (or [CAMERA SETTINGS]) → [BLACK] → [ABB] → [EXECUTE].**

Do not remove the lens cap or turn the power off while [ABB ACTIVE] is displayed.

Pedestal (standard black level)

Adjusts the black level to be the standard.

1 **Select [MENU] → [SCENE FILE SETTINGS] → [BLACK].**

2 **Select one from [M.PED]/[R PED]/[G PED]/[B PED].**

● [M.PED] (master pedestal):

Adjusts the standard black level for the entire video. The adjusted value is inherited even when the automatic black balance is executed.

● [R PED] (red signal pedestal), [G PED] (green signal pedestal), [B PED] (blue signal pedestal):

Adjusts the standard black level individually for each signal. It can be set to inherit or not inherit the adjusted value when the automatic black balance is executed by the [ABB OFFSET] setting.

[GAMMA]

Set to optimize the tone of video.

Selectable items vary depending on the [MENU] → [SYSTEM SETTINGS] → [COLOR SETTING] → [MAIN] setting.
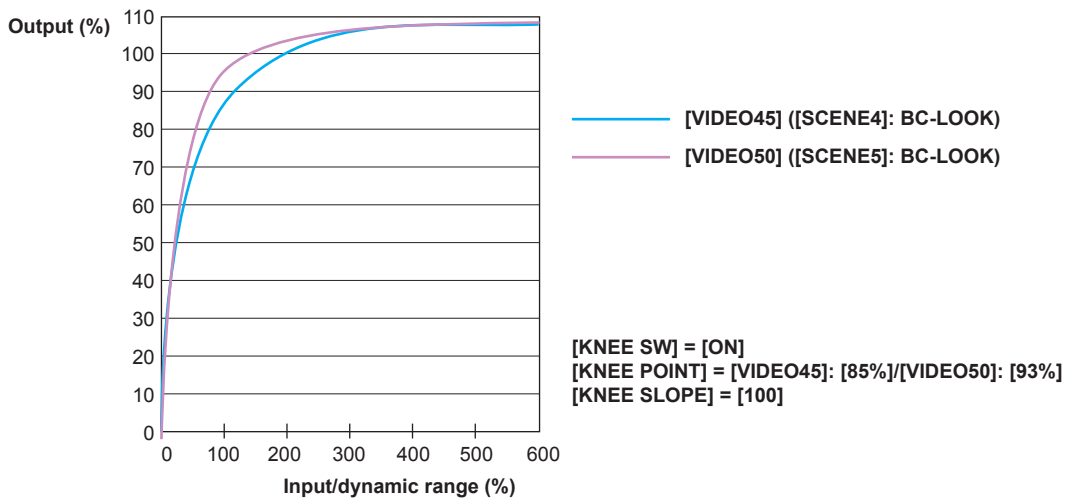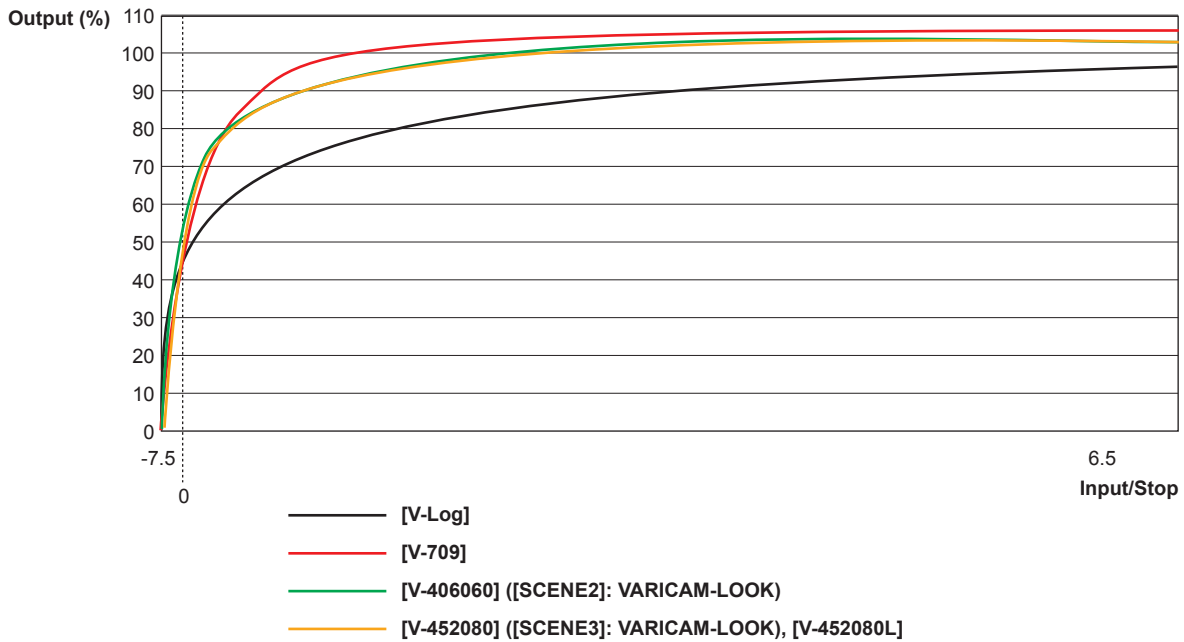
- [V-Log]:

  This is a gamma curve for gradation and wide latitude (exposure range). A grading process after recording is required.
- [V-709]:

  This is a gamma curve equivalent to Varicam standard CINE-LIKE. A tone optimum for preview on the monitor can be achieved.
- [V-406060]:

  This is the VARICAM-LOOK gamma curve with 14+Stop latitude equivalent to V-Log.

  The rise is equivalent to 4.0 times, and the gamma factor is 0.60, which means up to 60%.

  This is a setting focused on contrast. The color is not easily saturated up to upper limit of the latitude.

  It is recommended to record the face tone at 40% to 55%.
- [V-452080], [V-452080L]:

  This is the VARICAM-LOOK gamma curve with 14+Stop latitude equivalent to V-Log.

  The rise is equivalent to 4.5 times, and the gamma factor is 0.20, which means up to 80%.

  This is a setting focused on soft texture. The color is not easily saturated up to upper limit of the latitude.

  It is recommended to record the face tone at 40% to 60%.

  The color saturation of area with input is approximately 1.7 to 3 Stop is enhanced against the gamma curve up to software version 11.93-00-0.00.

  To use the gamma curve with color saturation up to software version 11.93-00-0.00, select [V-452080L].
- [VIDEO45]:

  This is the BC-LOOK gamma curve with 600% dynamic range equivalent to the generally used video camera.

  It means gamma factor 0.45.
- [VIDEO50]:

  This is the BC-LOOK gamma curve with 600% dynamic range equivalent to the generally used video camera.

  It means gamma factor 0.50.

  This is a design focused on contrast.

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■ **When [MAIN] is set to [V-Log]**

[GAMMA] will be [V-Log].

■ **When [MAIN] is [SCENE1]/[SCENE2]/[SCENE3]/[SCENE4]/[SCENE5]**

1 Select [MENU] → [SCENE FILE SETTINGS] → [GAMMA] → [GAMMA SELECT].

2 Select one from [V-709]/[V-406060]/[V-452080]/[V-452080L]/[VIDEO45]/[VIDEO50].

[KNEE]

This function sets the compression of video signals to prevent halation in images.

The dynamic range or compression rate of the signal will change depending on the setting.
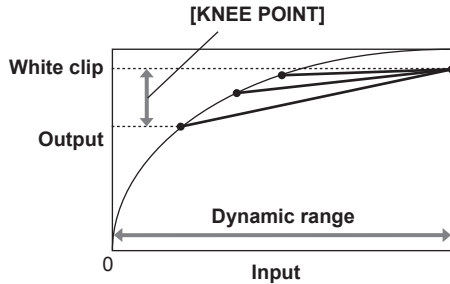
Fig. 1
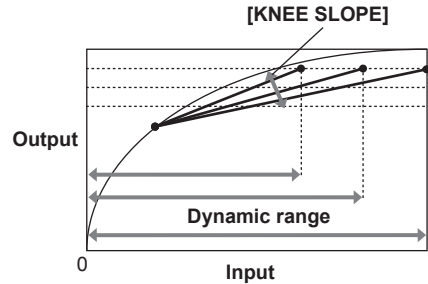
Fig. 2
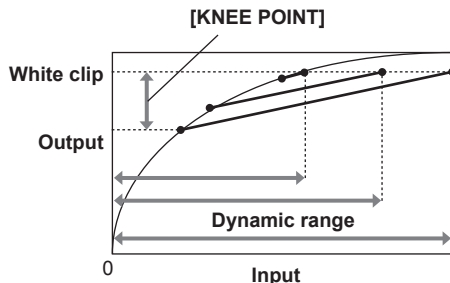
Fig. 3
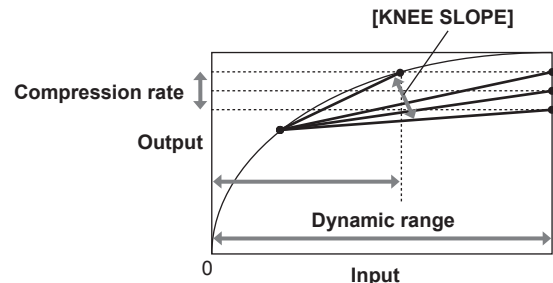
Fig. 4

[KNEE MODE]	[KNEE POINT]	[KNEE SLOPE]
[D RANGE]	Fig. 1 The dynamic range that can be represented will not change.	Fig. 2 The dynamic range that can be represented will change.
[PRESS]	Fig. 3 The dynamic range that can be represented will change.	Fig. 4 The dynamic range that can be represented and the compression rate of the signal will change.

■ **[KNEE MODE] (setting for knee operation mode)**

1 Select [MENU] → [SCENE FILE SETTINGS] → [KNEE].

2 Select [ON] in [KNEE SW].

3 Select either [D RANGE]/[PRESS] in [KNEE MODE].

■ **[KNEE POINT] (knee point position setting)**

1 Select [MENU] → [SCENE FILE SETTINGS] → [KNEE] → [KNEE POINT].

2 Sets the position of the knee point.

■ **[KNEE SLOPE] (setting for knee inclination)**

1 Select [MENU]→[SCENE FILE SETTINGS]→[KNEE]→[KNEE SLOPE].

2 Sets the knee inclination.

[WHITE CLIP]

This function sets the brightest part of video signals to be not brighter than a certain level.
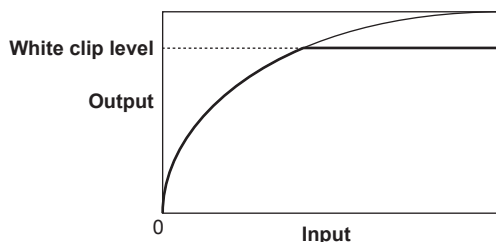
1 Select [ON] in [MENU] → [SCENE FILE SETTINGS] → [WHITE CLIP] → [SW].

2 Set the level with [LEVEL].

[DETAIL]

This function thickens or weakens the outlines of images.

It can have soft representation or sharp representation, but it can also have an effect to roughen the entire video by enhancing the noise or edge.

To avoid such problems, it is necessary not to add this effect on parts where emphasizing is not needed and keep the details of the parts.

The [DETAIL] function is disabled when [MAIN CODEC] is set to [AVC-Intra4K-LT]/[AVC-Intra2K-LT]/[AVC-Intra-LT].

1 Select [ON] in [MENU] → [SCENE FILE SETTINGS] → [DETAIL] → [SW].

2 Set the level with [CORING]/[MASTER LEVEL]/[FREQUENCY].

- [CORING]:
  Sets the level of signal (including noise) that does not activate the detail effect.
- [MASTER LEVEL]:
  Sets the level of the detail effect of the whole part.
- [FREQUENCY]:
  Sets the thickness of the detail entirely.

[SKIN DETAIL]

This function makes human skin look smoother in images.

The [SKIN DETAIL] is disabled when [MAIN CODEC] is set to [AVC-Intra4K-LT]/[AVC-Intra2K-LT]/[AVC-Intra-LT].

1 Select [ON] in [MENU] → [SCENE FILE SETTINGS] → [SKIN DETAIL] → [SW].

2 Set with [TABLE SELECT]/[ZEBRA SW]/[DETECT TABLE]/[GET]/[EFECT LEVEL].

- [TABLE SELECT]:
  Selects from the 3 table data of [A], [B], or [C] to determine which skin tone to operate the skin tone detail function.
  [A], [B], and [C] can be set individually or in combination.
- [ZEBRA SW]:
  Sets whether to superimpose the zebra signal to the color by which the skin tone detail is applied.
- [DETECT TABLE]:
  Selects the table to set from the 3 table data of [A], [B], or [C].
- [GET]:
  Obtains the color information of [A], [B], or [C] selected in [DETECT TABLE] from near the center marker.
  Data for [I CENTER] to [Q PHASE] is automatically acquired when executed.
- [EFECT LEVEL]:
  Sets the effect level of the skin tone detail for [A], [B], or [C] selected in [DETECT TABLE].

■ **Relationship between color composition of video signal and color difference signal**
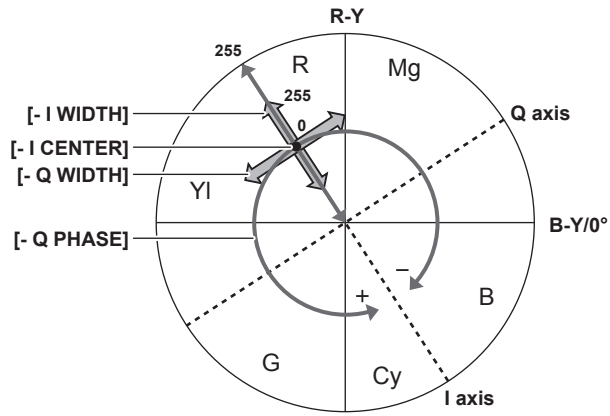
Fig. 1

The color composition of video signal (R/G/B) can be converted to color difference signal (R-Y/B-Y) as in (Fig. 1).

Within this, use the axis in the red-cyan color phase (I axis) and axis in the green-magenta color phase (Q axis) to set the area to apply the skin tone against the [A], [B], or [C] table selected in [DETECT TABLE].

● [- I CENTER]:

Sets the center position of the upper I axis (setting the area that applies the skin tone).

● [- I WIDTH]:

Sets the width of the area that applies the skin tone of the upper I axis that focus on [I CENTER].

● [- Q WIDTH]:

Sets the width of the area that applies the skin tone of the upper Q axis that focus on [I CENTER].

● [- Q PHASE]:

Sets the phase of the area that applies the skin tone regarding to the Q axis.

[CHROMA]

This function sets color saturation and phase in [MENU] → [SCENE FILE SETTINGS] → [CHROMA].

The effect is applied to the entire video. It cannot be set for individual color hues.

● [LEVEL]: Sets the chroma level of the P_R and P_B signals. The distance from the center (no color) increases or decreases the effect for the entire video when vector scope is used.

● [CHROMA PHASE]: Finely adjusts the chroma phase of P_R and P_B signals. The entire video rotates clockwise or counter-clockwise when vector scope is used.

[MATRIX]

The color representation of the video can be set by changing the setting value relatively against the matrix table that will select the optimal setting automatically against the gamma setting.

If the settings are changed, the representation of all the colors in the video will also be changed.

The color representation will differ when the set matrix table is different even if the value is the same since it is a relative adjustment.
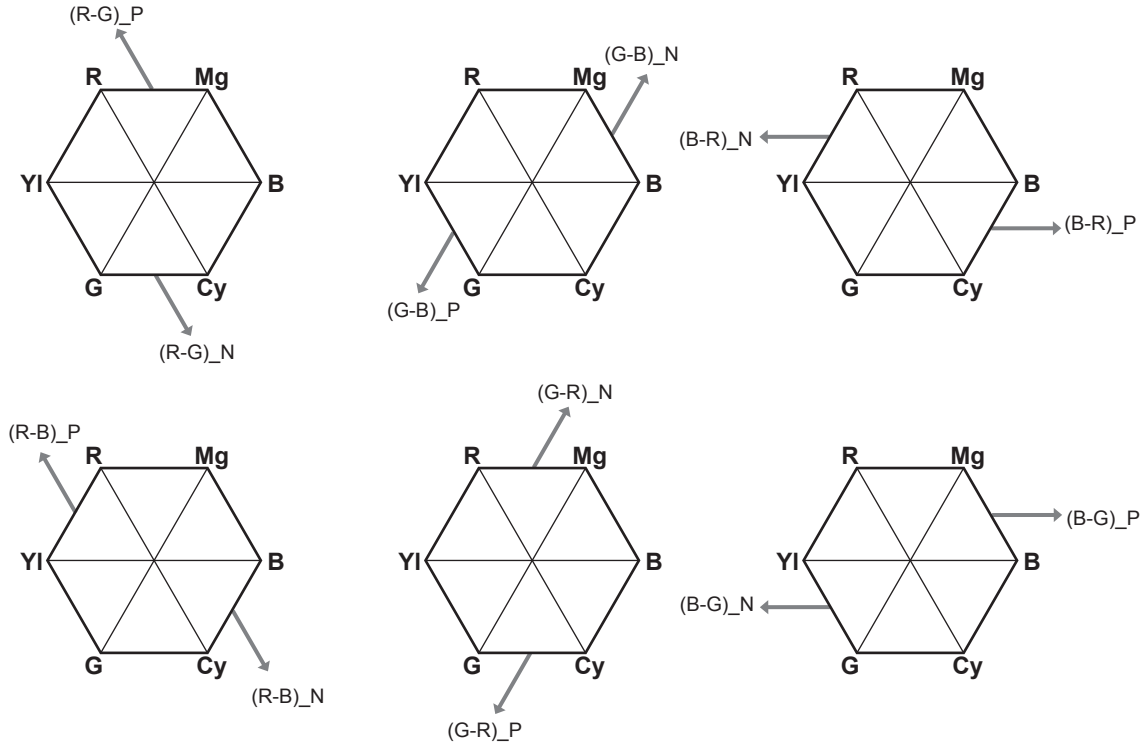
Example) An example when [(R-G)_P] is set toward + side and [(B-G)_N] is set toward − side
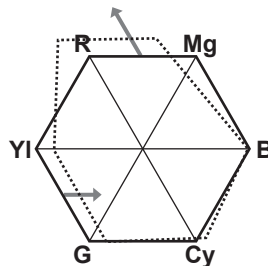
1 Select [ON] in [MENU] → [SCENE FILE SETTINGS] → [MATRIX] → [SW].

2 Set the [(R-G)_P] setting significantly toward + side, and the [(B-G)_N] setting significantly toward − side.

[COLOR CORRECTION]

This function sets color saturation and phase.

Effect is applied individually against 24 phases of the video.

It can be set to individual color hue.
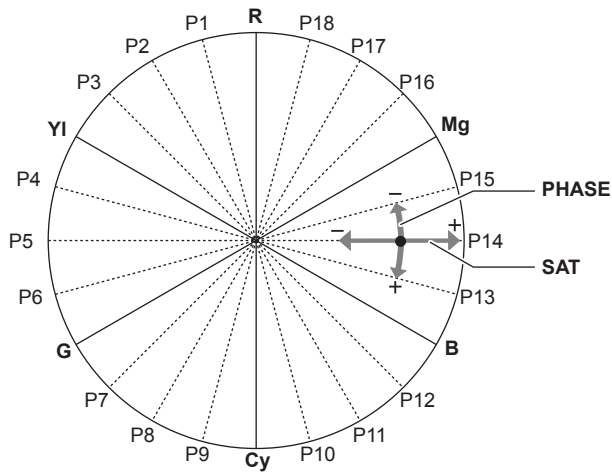
P1:	(Yl-R)-R
P2:	(Yl-R)
P3:	Yl-(Yl-R)
P4:	(G-Yl)-Yl
P5:	(G-Yl)
P6:	G-(G-Yl)
P7:	(Cy-G)-G
P8:	(Cy-G)
P9:	Cy-(Cy-G)
P10:	(B-Cy)-Cy
P11:	(B-Cy)
P12:	B-(B-Cy)
P13:	(Mg-B)-B
P14:	(Mg-B)
P15:	Mg-(Mg-B)
P16:	(R-Mg)-Mg
P17:	(R-Mg)
P18:	R-(R-MG)

- SAT: Changes the saturation.
- PHASE: Changes the phase. + rotates clockwise and − rotates counter-clockwise.
- The list at right is the relationship between the position and the phase.

1 Select [ON] in [MENU] → [SCENE FILE SETTINGS] → [COLOR CORRECTION] → [SW].

2 Set from [R (SAT)] to [P18(PHASE)].

Memory card

Insert memory card

When using the camera for the first time, be sure to set the time data beforehand. (page 34)

Insert the P2 card into the main slot and the SD memory card into the sub slot.

Main slot

Eject button

Card slot cover

Sub slot

Fig. 1   Fig. 2   Fig. 3
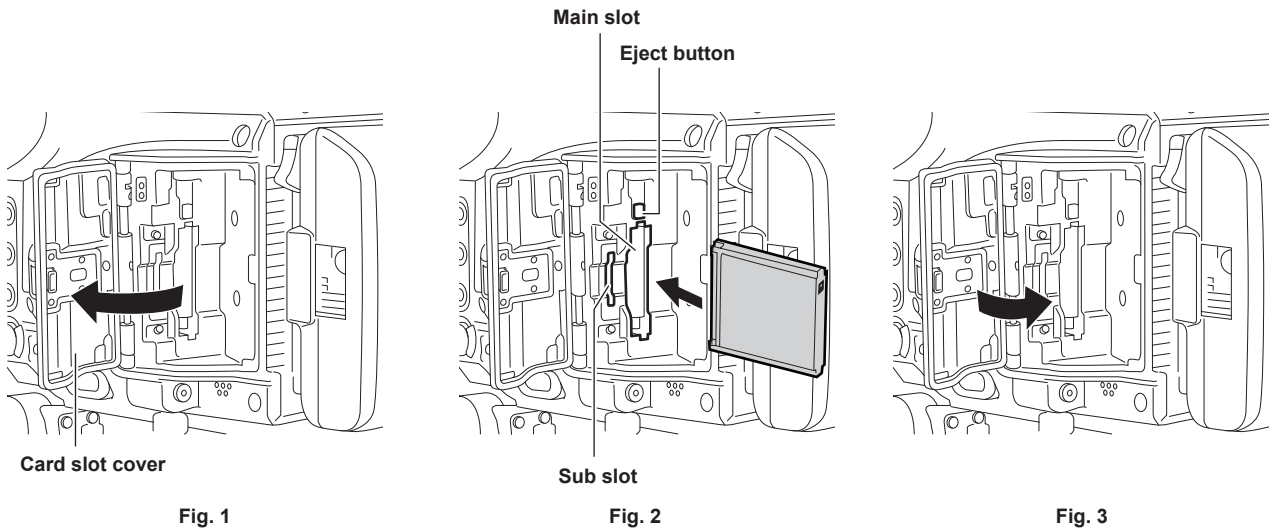
1 **Open the card slot cover. (Fig. 1)**

2 **Insert a card into the card slot. (Fig. 2)**

- P2 cards (main slot)
  - Insert the card with the logo facing outside until the eject button pops out.
  - Press the eject button that pops up to the top.
- SD memory cards (sub slot)
  - Insert with the label facing outside.

3 **Securely close the card slot cover. (Fig. 3)**

📝 *NOTE*

・ Be sure to format P2 cards only on the camera.
・ If a SD memory card is inserted slowly, [FORMAT ERROR!] or [NOT SUPPORTED!] may be displayed. In such a case, insert the card again.
  Take the following action if it still displays.
  - [FORMAT ERROR!]: Format the SD memory card.
  - [NOT SUPPORTED!]: That SD memory card cannot be used. Insert different SD memory card.
・ Recording or operation of the PLAY screen is not possible until the card slot cover is closed. The file operation on the SD memory card is possible.

Ejecting the memory card

Fig. 1   Fig. 2
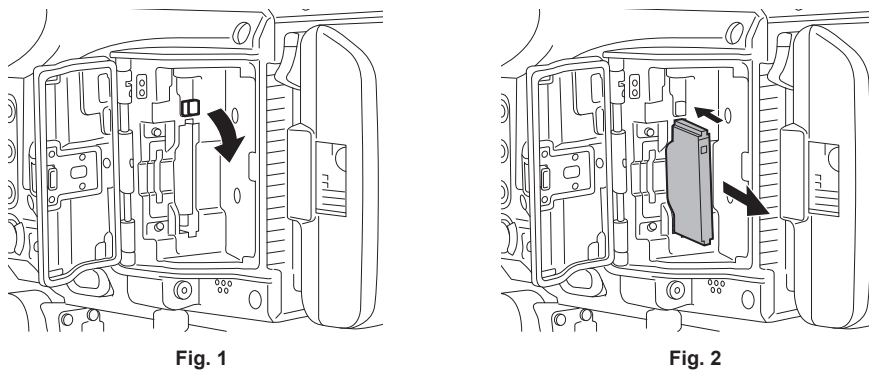
1 **Open the card slot cover.**

2 **Remove the card.**

- P2 cards
  - Lift the eject button (Fig. 1), and press in. (Fig. 2)
- SD memory cards
  - Press in the SD memory card further into the camera and let go.
  - The SD memory card is released from the card slot, and it can be removed.

✍ *NOTE*

・ Do not remove the P2 card after inserting it, while it is being accessed, or being detected (card access LED flashing in orange). Otherwise, it may result in a malfunction.
・ [TURN POWER OFF] is displayed in the viewfinder screen or the center of the control panel or in the warning message area at the top left of each output indicator, and a warning is displayed with the warning lamp, etc., when the P2 card being accessed is removed. Also, all card access LEDs flash rapidly in orange. Turn off the power. (page 195)
・ If the P2 card is removed while being accessed, clips on it may become irregular. Check the clips and restore them, if required.
・ If the P2 card being formatted is removed, formatting of the P2 card is not guaranteed. [TURN POWER OFF] is also displayed in the viewfinder screen or the center of the control panel or in the warning message area at the top left of each output indicator at this time. Turn off the power and then back on again, and reformat the P2 card.

To prevent unintentional erasing

To prevent unintentional erasing of the recorded contents in the memory card, move the write protect switch on the memory card to the Protect side (or the LOCK side).

Protect

Write-protect switch　　　　**Write-protect switch**
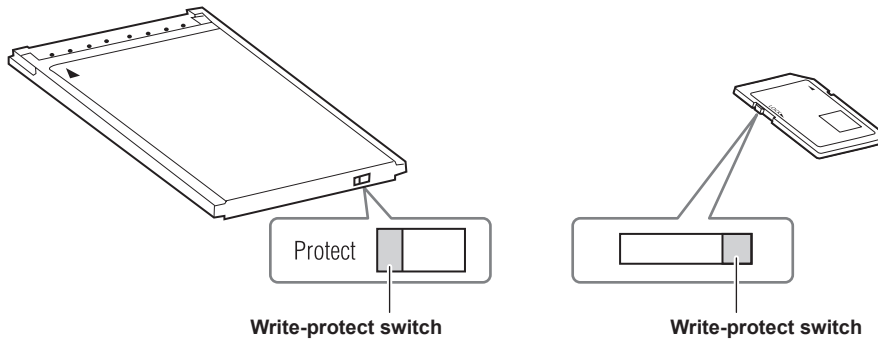
✍ *NOTE*

・ Write-protect switch can be switched while the card is being accessed (during recording or playback), but does not take effect until accessing of the card stops.

Status of card access LED and P2 card

Card access LED	P2 card status	
Illuminated in orange	Recording target	Reading/writing are both possible.
Flashing in orange	Accessing card	Reading/writing are currently being performed.
Flashing in orange rapidly	The card is being recognized.	The P2 card is being recognized.
Flashing in green slowly	Card full	There is no free space on the P2 card. Reading only is possible.
	Write protect	The write-protect switch on the P2 card is at the Protect position. Reading only is possible.
	Unrecordable card	It cannot record with the recording format that is currently set. To record, change the recording format or use the card that can record.
	Card not supported	This card cannot be used on the camera. Replace the card.
Off*	Illegal format	The P2 card is not properly formatted. Reformat the card.
	No card	The P2 card is not inserted. The card is waiting to be recognized.
	Unauthenticated card	This is a P2 card that cannot be authenticated. Unlock with the device the password was set if the CPS password is set.

* [ERR] is displayed on the HOME screen. Confirm the content in the INFO screen.

Status of card access LED and SD memory card

Card access LED	SD memory card status	
Illuminated in orange	Recording target	Reading/writing are both possible.
Flashing in orange	Accessing card	Reading/writing are currently being performed.
Flashing in orange rapidly	The card is being recognized.	The SD memory card is being recognized.
Flashing in green slowly	Accessing card	Reading files from the SD memory card or writing files to the SD memory card. (Scene files/setup files/CDL/3D LUT/update files)
Off*	Card full	There is no free space on the SD memory card. Reading only is possible.
	Write protect	The write-protect switch on the SD memory card is at the Protect position. Reading only is possible.
	Unrecordable card	It cannot record with the recording format that is currently set. To record, change the recording format or use the card that can record.
	Card not supported	This card cannot be used on the camera. Replace the card.
	Illegal format	The SD memory card is not properly formatted. Reformat the card.
	No card	The SD memory card is not inserted. The card is waiting to be recognized.
	Unauthenticated card	This is a SD memory card that cannot be authenticated.

* [ERR] may be displayed on the HOME screen. Confirm the content in the INFO screen.

Recording time of memory card

■ Main recorder

Main recording format ([MAIN CODEC])	Setting conditions	Recording time when using a 256 GB expressP2 memory card
[AVC-Intra4K 422]	[25.00p]/[29.97p] VFR: [OFF]	Approx. 72 min
[AVC-Intra100]	[50.00i]/[59.94i]	Approx. 256 min

An optional expressP2 memory card or P2 memory card can be used with the camera.

📝 NOTE

・ AJ-P2C002SG (2 GB) cards cannot be used.
・ Refer to our support desk at the following website for the latest information not included in this document.
  http://pro-av.panasonic.net/

■ Sub recorder

Sub recording format ([SUB CODEC])	Setting conditions	Recording time when using a 64 GB SD memory card
[AVC-Proxy G6]	[25.00p]/[29.97p]	Approx. 655 min

📝 NOTE

・ Indicated capacities include management and other area, so the space available for recording is less than the values in the table above.

Dividing clips recorded on P2 cards

The recording will continue automatically as a separate clip if a single continuous recording time has exceeded the time indicated below when a P2 card with capacity of 8 GB or larger is used with the camera. The thumbnail operation (display, delete, restore, etc.) for a clip on the P2 device can be performed as an operation for single clip. Clips may be displayed as separate clips in nonlinear editing software and on a computer.

The recording can be continued as a single clip when the expressP2 memory card is used as anything other than AVC-Intra 100. However, the recording will continue as a separate clip when it is simultaneously recorded to the SDHC memory card in the sub slot.

Recording format (excluding native recording)	Continuous recording time
AVC-Intra 4K 422 (25P/29.97P)	Approx. 1 min
AVC-Intra 100 (50.00i/59.94i)	Approx. 5 min

How to handle data recorded on P2 cards

P2 cards are semiconductor memory cards that are used as the recording medium in the professional video production and broadcasting devices that make up the DVCPRO P2 series.

● Since data recorded in the P2 format is in a file format, they have excellent compatibility with computers. The file structure is a unique format, which in addition to video and audio data in MXF files contains various other important information items. The folder structure links data recorded in the P2 format as shown below.

Drive:
├── **CONTENTS**
│   ├── **AVCLIP**
│   ├── **AUDIO**
│   ├── **CLIP**
│   ├── **ICON**
│   ├── **PROXY**
│   ├── **VIDEO**
│   └── **VOICE**
└── **LASTCLIP.TXT***
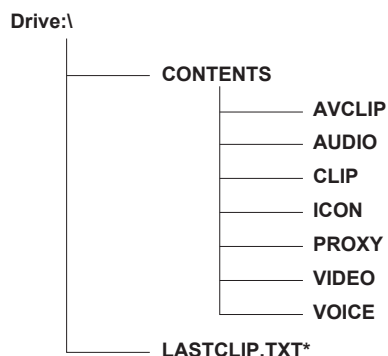
All these folders are required.

If even part of this information is modified or deleted, the data may no longer be recognized as P2 data, or the card may no longer be able to be used with P2 devices.

***This is the file to which the information of the final clip that was recorded with the P2 device is written.**

📝 NOTE

・ When transferring data from a P2 card to a computer, or when rewriting data saved on a computer back to a P2 card, to prevent data loss be sure to download the special "P2 Viewer Plus" software. For details on downloading P2 Viewer Plus and the operating environment, visit the support desk at the following website:
  http://pro-av.panasonic.net/

・ Follow the steps below to use general IT tools such as Microsoft Windows Explorer or Apple Finder to transfer the data to a computer. Be sure to use P2 Viewer Plus to write data back to a P2 card.
   - Transfer the corresponding CONTENTS folder and LASTCLIP.TXT file together as a set.
   - Do not transfer individual files from the CONTENTS folder.
   - When copying, copy the LASTCLIP.TXT file at the same time as the CONTENTS folder.
   - When transferring the data in multiple P2 cards to a computer, create a folder for each P2 card to prevent clips with the same name from being overwritten.
   - Do not delete data from the P2 card.
   - Be sure to format P2 cards on the camera or the latest P2 Viewer Plus.

Formatting a P2 card

■ **Operation from the menu**

1 **Select [MAIN SLOT] in [MENU] → [SYSTEM SETTINGS] → [CARDS/MEDIA] → [FORMAT MEDIA].**

　● Select [EXIT] when you do not wish to format the card.

2 **Select [YES] using the jog dial button.**

　The P2 card is formatted.

■ **Operation from the <INFO> button**

1 **Press the <INFO> button.**

2 **Press [MEDIA] to display the media information, and press the jog dial button.**

　● Press [EXIT] if it is not to be formatted.

3 **Press [FORMAT], and select the slot to format by turning the jog dial button.**

　● Press [CANCEL] if it is not to be formatted.

4 **Press [OK].**

　The card in the selected slot is formatted.

■ **Operation from the <PLAY> button**

1 **Press the <PLAY> button.**

2 **Press [DEL/FORMAT] → [FORMAT], and select the slot to format by turning the jog dial button.**

　● Press [CANCEL] if it is not to be formatted.

3 **Press [OK].**

　● The card in the selected slot is formatted.

📝 *NOTE*

・ Data deleted as a result of formatting cannot be restored. Always check the data before formatting.

Special recording functions

HD cutout high speed recording

A high speed recording up to 240p can be performed by cutting out the 2K or HD pixel region of the image sensor when [2048×1080 CROP] or [1920×1080 CROP] is selected in [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [MAIN PIXEL].

■ Normal recording

An image for 4K/UHD is generated using the whole recording region of the image sensor.
Or the 2K/HD image is generated from there.

For 4K

4096

2160
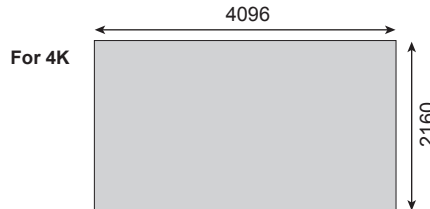
■ Cutout recording

The cutout recording will only use the 2K or the HD region of the image sensor to generate the 2K/HD image.

When 2K is cutout

2048

1080

Cutout region
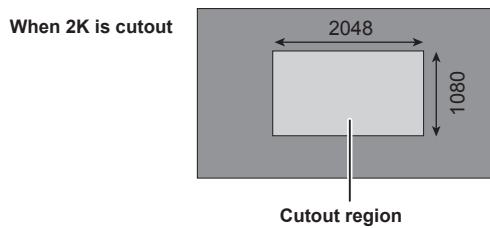
■ Relationship between the frame rate and [MAIN CODEC]

When [FREQUENCY] is set to [23.98p], [24.00p], or [29.97p].

Normal recording

Cutout recording
[2048×1080 CROP]/[1920×1080 CROP]

(FPS)

[AVC-Intra2K-LT]/
[AVC-Intra-LT]

240

4K/UHD

2K/HD

2K/HD

[AVC-Intra2K 422]/
[AVC-Intra422]

120

[AVC-Intra4K-LT]

[AVC-Intra2K 422]/
[AVC-Intra422]

60

[AVC-Intra4K 422]

30

1

[MAIN CODEC]
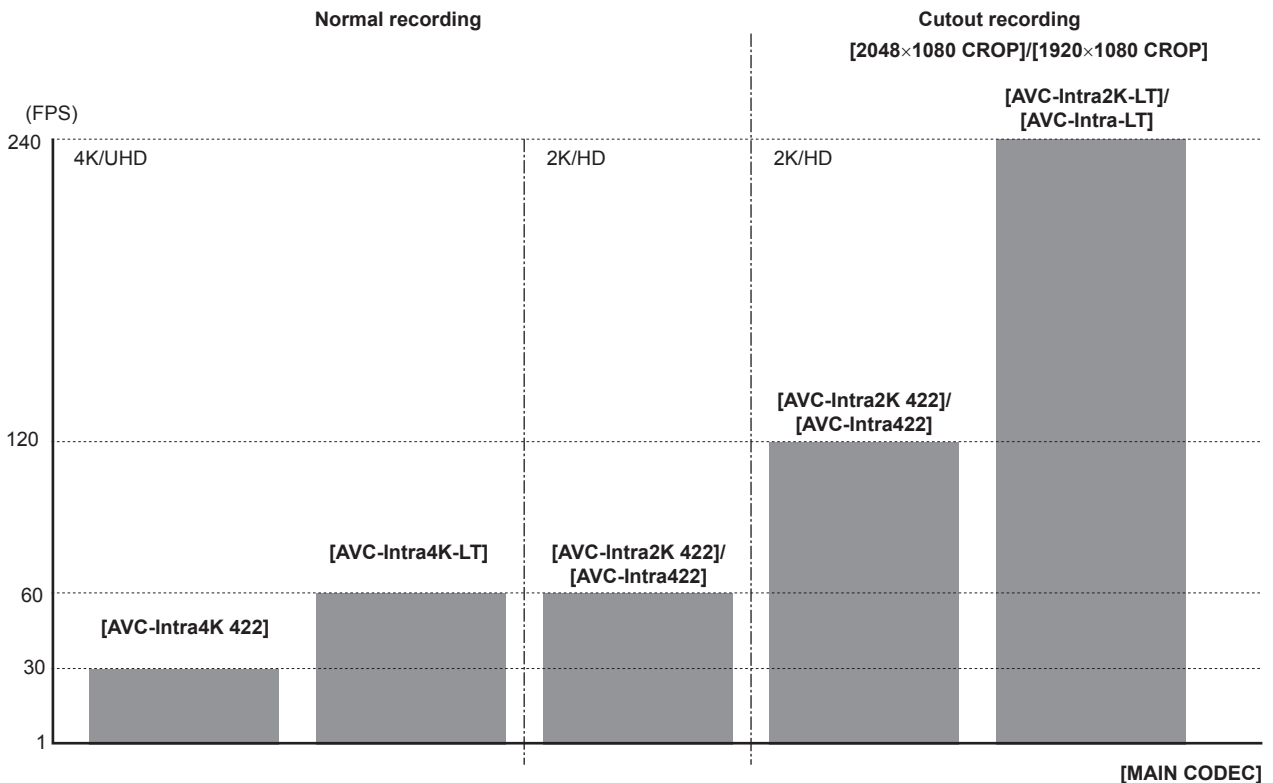
The sensitivity and the dynamic range will drop 1 level due to the limitation of fast speed recording in [AVC-Intra2K-LT]/[AVC-Intra-LT].

- ISO800→ISO400
- ISO5000→ISO2500

IR recording

The following video representation can be achieved by replacing the IR cut glass (blue glass) mounted in the optical block with a supplied IR recording glass (clear glass).

● Night shooting using the IR light

● Infrared photography using the IR filter (only IR optical transmittance)
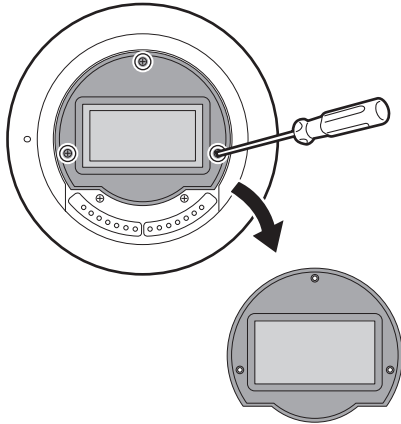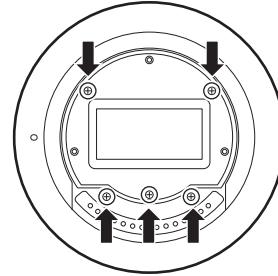
Fig. 1   **Fig. 2**

1 **Remove the lens mount.**

● For removing of the lens mount, refer to "Replacing the lens mount" (page 30).

2 **Remove the three screws securing the IR cut glass, and then remove the IR cut glass. (Fig. 1)**

● Use caution to not drop or lose the IR cut glass or screws to secure the glass.

● Do not remove the screw behind the IR cut glass. (Fig. 2)

Debris or dust could get inside of the camera.

3 **Mount the glass for IR recording, and then secure the glass using securing screws in three areas.**

● The recommended torque when tightening the screws is 0.1 N·m.

4 **Attach the lens mount.**

📝 NOTE

・ Replace the IR cut glass using the opposite procedure when returning to normal recording from IR recording.

・ Replace the IR cut glass and glass for IR recording in a stable location being careful not to drop the glass.

・ Blow the glass clean using a commercially available blower when the glass is covered in debris or dust.

Do not clean the glass using high-pressure air or gas.

・ Wipe the glass gently with a soft, clean cloth when the glass is smudged with water spots or fingerprints.

The glass may warp or the coating may peel when a solvent is used.

Shot mark recording function

Shot mark is the mark added to the thumbnail of each clip to distinguish that clip from others.

Only clips with shot marks attached can be displayed or played back.

Adding shot marks

1 **Set [SHOT MARK] in one of [USER1] to [USER3], [USER GRIP1] to [USER GRIP2] in [MENU] → [SYSTEM SETTINGS] → [USER SWITCHES].**

2 **During recording or while a clip is selected in the PLAY screen, press the button to which the shot mark is assigned.**

● [MARK ON] is displayed and the shot mark is added to the recorded clip.

● Another press of the button displays [MARK OFF] and the shot mark disappears.

Text memo recording function

Text memos can be added to any video point.

Adding text memos

1 **Set [TEXT MEMO] in one of [USER1] to [USER3], [USER GRIP1] to [USER GRIP2] in [MENU] → [SYSTEM SETTINGS] → [USER SWITCHES].**

2 **During a pause or while a clip is selected in the PLAY screen, press the button to which the text memo is assigned.**

[TEXT MEMO] is displayed, and the text memo is added to the video clip that was displayed when the button was pressed.

NOTE

・ Up to 100 text memos can be recorded to a single clip.

Pre-recording

This function enables recording of video and audio from a fixed amount of time (approx. three seconds) before the operation to start recording is performed.
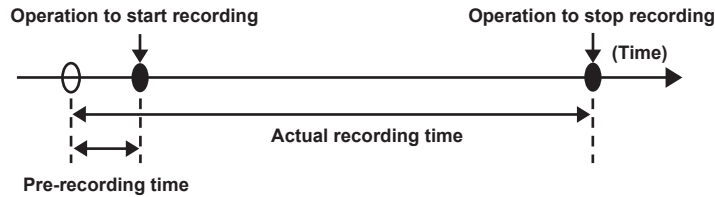
1 Set [MENU] → [REC SETTINGS] → [REC FUNCTION] → [PRE REC MODE] to [ON].

● [P-REC] is displayed on the [HOME] screen.

2 Press the <REC> button.

● [P-REC] lights up in red on the [HOME] screen.

NOTE

・ Video and audio for a fixed period of time (approx. three seconds) before recording may not be recorded in the following cases:
  - Immediately after the power is turned on
  - After recording-related settings have been altered in the setting menu
  - Immediately after the P2 card is inserted
  - After playback
  - When the [VFR] setting has been changed (When [ON]/[OFF] for [VFR] has been switched or the [FPS] setting has been changed)
  - During the time from recording stop until completion of writing to a card
・ The pre-recording function does not work in the following cases:
  - When the interval recording or one-shot recording is set
  - Right after the preview video is confirmed executing [DAILIES PREVIEW]
  - When [MAIN CODEC] is set to [AVC-LongG50] or [AVC-LongG25]

Interval recording

Perform recording at the set time intervals. One frame is recorded at a single recording.
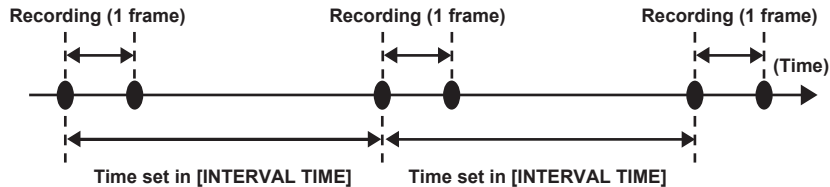
1 Set [MENU] → [REC SETTINGS] → [REC FUNCTION] → [REC MODE] to [INTERVAL].

2 Set the following related items from [MENU] → [REC SETTINGS] → [REC FUNCTION].

● [INTERVAL TIME]: Intermittent time (minimum two frames, maximum one hour)
● [START DELAY]: Delay time from the time when the <REC> button is pressed until the time when the first recording starts

3 Press the <REC> button.

Interval recording starts according to the set intermittent time.

● When [INTERVAL TIME] is set to two minutes or longer, the tally lamp flashes every five seconds to indicate that the camera is on standby.
● To stop recording, press the <REC> button.
● To clear settings, set [MENU] → [REC SETTINGS] → [REC FUNCTION] → [REC MODE] to [NORMAL].
● The followings are displayed on the [HOME] screen.
  - During recording: [i REC] lights up in red
  - During pause: [i REC] is inverted in red and white
    When [INTERVAL TIME] is set to less than two seconds, [i REC] lights up in red.
  - During stop: [i REC] in black character

NOTE

・ The card access LED will flash in orange while operating in the interval recording mode. Do not remove the P2 card. The data is destroyed when it is removed, so repair the clip. Note that even when the clips are restored, the last three to four seconds of the recording may still be lost (maximum ten seconds in cases that the card was removed during recording that divides clips).
・ Pre-recording does not function.
・ Audio is not recorded.
・ Recorded data (data recorded until the recording was stopped) is included in one file.
・ Interval recording is not possible when [MAIN CODEC] is set to [AVC-LongG50] or [AVC-LongG25].

One-shot recording

Recording takes place once for the set amount of time.

1 **Set [MENU] → [REC SETTINGS] → [REC FUNCTION] → [REC MODE] to [ONE SHOT].**

- When [VFR] is set, one-shot recording is not available.

2 **Set the following related items from [MENU] → [REC SETTINGS] → [REC FUNCTION].**

- [REC TIME]: Duration of each recording
- [START DELAY]: Delay time from the time when the <REC> button is pressed until the time the first recording starts

3 **Press the <REC> button.**

- Recording is performed for the time set in step **2**, and then pauses.
- To stop recording, perform one of the following operations.
  - Press and hold the <REC> button for at least two seconds. After recording operation is performed once, recording stops.
  - Press and hold the <HOME> button for at least two seconds.
- To clear settings, set [MENU] → [REC SETTINGS] → [REC FUNCTION] → [REC MODE] to [NORMAL].
- As an indicator of the viewfinder screen, the control panel, or the output from the <SDI OUT 1>/<SDI OUT 2> terminals, the following is displayed at the top left of the screen.
  - Displaying the control panel
  During recording: [i REC] lights up in red
  During pause: [i REC] is inverted in red and white
  During stop: [i REC] in black character
  - Displaying the viewfinder screen and the output from the <SDI OUT 1>/<SDI OUT 2> terminals.
  During recording: [i-REC]
  During pause: [i-PAUSE]
  During stop: [INTERVAL]

📝 *NOTE*

- The card access LED will flash in orange while operating in the one-shot recording mode. Do not remove the P2 card. The data is destroyed when it is removed, so repair the clip. Note that even when the clips are restored, the last three to four seconds of the recording may still be lost (maximum ten seconds in cases that the card was removed during recording that divides clips).
- Pre-recording does not function.
- Audio is not recorded.
- Recorded data (data recorded until the recording was stopped) is included in one file.
- When one-shot recording is continuously performed, the recording operation may be slower.
- One-shot recording is not possible when [MAIN CODEC] is set to [AVC-LongG50] or [AVC-LongG25].

Chapter 5 Operation

This chapter describes the method to change each setting and confirmation method of the setting status.

Control panel operation

Basic camera operations can be performed using the control panel.

- **a: <HOME> button**
- **b: <PLAY> button**
- **c: <TC> button**
- **d: <INFO> button**
- **e: <VIEW> button**
- **f: <EXIT> button**
- **g: <MENU> button**
- **h: Jog dial button**
- **i: <LOCK> switch**
- **j: Control panel operation buttons**

Camera status display
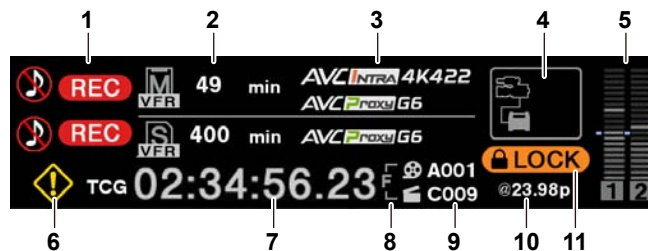
1 Recording status display
Top: Main slot recording status display
- [REC]: Currently recording

  🚫: When audio is not being recorded

Bottom: Sub slot recording status display
- [REC]: Currently recording

2 Media free space display
Top: Main slot media remaining capacity display
Bottom: Sub slot media remaining capacity display
- [＊＊＊min]: Remaining capacity (0 to 999 minutes, displays [999min] when it exceeds 999 minutes)
- [END]: No remaining free space
- [WP]: Write protected
- [OPEN]: When recording is not possible because the card slot cover is opened.
- [ERR]: When a card that cannot record is inserted

  The detailed status of the card such as the error information can be confirmed by opening the [DIAGNOSTICS] screen or [MEDIA] screen from the INFO screen.

3 Codec display
Top: Main slot codec display ([MAIN CODEC] and [PROXY CODEC] setting values)
Bottom: Sub slot codec display ([PROXY CODEC] setting value)
- [NO REC]: When the mode cannot perform proxy recording

4 Power supply display
For details, refer to "Power supply display".

5 Audio level meter display
- Channel display

  [1]/[2] or [3]/[4]

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- Level meter display

  Displays the level represented by 19 bars. (2 dB increments)

- Standard level bar

  At the −18 dB position or the −20 dB position

  The setting in [MENU] → [AUDIO SETTINGS] → [AUDIO LEVEL] → [HEADROOM] will be the standard.

6 Warning/error displays

◆: Warning (details are displayed on the time code display in the following cases)

- [SYSTEM ERROR !]
- [TURN POWER OFF !]
- [REC WARING !]
- [CARD ERROR !] (when recording has stopped)
- [TEMPORARY PAUSE]

◆: Alert

7 Time code display

- [TCG 12:59:59:20]: Displays the time code generator value.
- [UBG AB CD EF 98]: Displays the user bits generator value.
- [Dur.00:59:59:23]: Displays the duration.

8 CAM INDEX/REEL number recording method display

- F: Recorded as file name.
- M: Recorded in metadata as [TYPE3] of [USER CLIP NAME].

9 CAM INDEX/REEL number

Displays the CAM INDEX, REEL number, and clip number.

10 System frequency/recording status of the SDI signal

- The system frequency set in [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [FREQUENCY] is displayed.
- During SDI signal RAW output, or when [MENU] → [OUTPUT SETTINGS] → [SDI OUT] → [SDI REC REMOTE] is set to [ON], [SDI REC] is displayed while recording.

11 Lock display/network status display

Displayed when button operations are disabled due to the <LOCK> switch.

The <REC> button is enabled even while lock is active.

When using the wired LAN

- (No display): No compatible device.
- (White): Operating but not connected.
- (Yellow): Operating. A device is connected.
- (Red): An error has occurred.

When using wireless LAN

- (Gray): No compatible device.
- (White): Operating but not connected.
- (Yellow): Operating. A device is connected.
- (Red): An error has occurred.

When using 4G/LTE (the status of the bar to display changes by the signal status)

- (Gray): No compatible device.
- (White): Operating but not connected.
- (Yellow): Operating. A device is connected.
- (Red): An error has occurred.

Power supply display

Displays the connection status and remaining capacity of the battery and external power supply.

The remaining capacity information is displayed in "%" if there is any. It is displayed as voltage "V" if % display is not possible.

Displays [EMP] in red character when the end is reached, and [LOW] in yellow character when the near end is reached.

Select [DC POWER SUPPLY] or [BATTERY] to match the power supply to connect in [MENU] → [SYSTEM SETTINGS] → [POWER MANAGEMENT] → [DC IN SOURCE] when connecting an external power supply to the <DC IN> terminal.
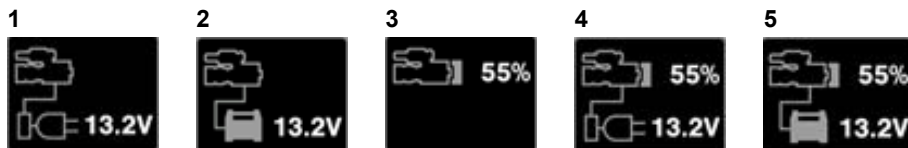
1 <DC IN> power supply display

This is the display when an AC adaptor ([DC POWER SUPPLY]) is connected to the <DC IN> terminal.

2 <DC IN> power supply display

This is the display when a battery is connected to the <DC IN> terminal.

3 Battery display

This is the display when a battery is connected to the battery holder.

4 Battery and <DC IN> power supply display

This is the display when a battery is connected to the battery holder and an AC adaptor ([DC POWER SUPPLY]) is connected to the <DC IN> terminal.

5 **Battery and <DC IN> power supply display**
   This is the display when a battery is connected to the battery holder and a battery is connected to the <DC IN> terminal.

HOME screen

The Home screen displays the basic camera settings and is used to change those settings.

[FPS]	Sets the frame rate. Selects from the predefined frame rate. Up to 150 (128 for [25.00p]/[50.00p]) can be registered. Presets can be added/deleted using [ADD]/[DELETE].	
	[VFR]	Toggles the variable frame rate. When this is [OFF], the frame rate become 1x the rate set in [MENU] → [SYSTEM SETTING] → [FREQUENCY]. ● Perform recording at the frame rate set in [FPS] when [ON]. Audio cannot be recorded. Audio can be recorded on the sub recorder side when [NORMAL+Audio] is selected in [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [VFR PROXY REC]. In this case, the sub recorder is in normal recording (frequency set in [SYSTEM MODE] → [FREQUENCY]) rather than recording at a variable frame rate.
[COLOR]	Sets the video colors (gamma and gamut).	
	[MAIN COLOR]	Sets the color of main codec video to be recorded in the main recorder.
	[PROXY COLOR]	Sets the color of proxy codec video to be recorded in the main recorder and the sub recorder.
	[Grading SEL]	Sets the grading function. Enabled only when [MAIN COLOR] is set to [V-Log]. Use the color data (3D LUT and CDL) inside the camera recorder by selecting [Internal]. Color data that is set from the grading application connected to the network can be used by selecting [External App].
	[3D LUT]	Sets the grading in the [3D LUT]. [Grading SEL] is disabled when this is [OFF]. Reads from the SD memory card when [Grading SEL] is set to [Internal]. The 3D LUT data is set from the grading application connected to the network when [Grading SEL] is set to [External App]. ● [LOAD/SAVE] allows to read from or save to the SD memory card.
	[CDL]	Sets the grading in [CDL]. [Grading SEL] is disabled when this is [OFF]. When [Grading SEL] is set to [Internal] ● Sets [Slope]/[Offset]/[Power]/[Saturation] on the control panel. ● [LOAD/SAVE] allows to read from or save to the SD memory card. The CDL data can not be changed during recording when [Grading SEL] is set to [Internal]. The data can be changed from the grading application even while recording when [External App] is set. The CDL data is set from the grading application connected to the network when [Grading SEL] is set to [External App].
	[SDI SET]	Sets the display color for [SDI OUT 1]/[SDI OUT 2]/[VF SDI]. The settings can only be changed when [MAIN COLOR] is set to [V-Log].
[SHUTTER]	Sets the shutter speed. Selects from the predefined shutter speed. Up to 12 can be registered. Presets can be added/deleted using [ADD]/[DELETE].	
	[ON]/[OFF]	It will be shutter off (opening angle 360 deg) when set to [OFF].
	[deg/sec]	Determines the shutter setting unit. [deg]: Open angle [sec]: Second
[EI]	Sets the EXPOSURE INDEX (gain).	
	[dB/ISO]	Selects the setting method.
	[NATIVE ONLY]	Only the native ISO can be selected. (when [ISO] is set)
	[800BASE]	The ISO800 standard value can be selected. (when [ISO] is set)
	[5000BASE]	The ISO5000 standard value can be selected. (when [ISO] is set)
	[NORMAL]	Sets [GAIN MODE] to [NORMAL]. (When [dB] is set)

		[HIGH]	Sets [GAIN MODE] to [HIGH]. (When [dB] is set)
[SYSTEM]			Sets the camera's system.
	[DAILIES]		Sets the data to superimpose on the video to be recorded in the sub recorder. [WATER MARK]: Superimposes the set character string. [FRAME MARK]: Superimposes the frame mark. [WINDOW BURN]: Sets [WINDOW BURN]. [PREVIEW]: Confirms the setting condition while displaying the current camera video.
	[CAM INDEX & REEL CNT]		Sets [CAM INDEX] and [NEXT REEL CNT]. [CAM INDEX]: Sets [CAM INDEX]. [NEXT REEL CNT]: Sets [NEXT REEL CNT].
	[SYSTEM MODE]		
		• [FREQUENCY]	Sets the system frequency. The basic system of the camera is determined by five settings of [FREQUENCY]/[SDI RAW]/[MAIN PIXEL]/[MAIN CODEC]/[HIGH SPEED]. Restarting the system is necessary if basic system setting is changed. Dialog prompting for restart is displayed in the center of the screen when one of the 5 settings is changed. Restart by operating the power switch of the camera, or by pressing the jog dial button and following the on-screen instruction.
		• [SDI RAW]	Sets the RAW output format from the <SDI OUT 1>/<SDI OUT 2> terminal.
		• [MAIN PIXEL]	Sets the camera's main resolution (number of pixels).
		• [MAIN CODEC]	Sets the main recorder's codec.
		• [PROXY CODEC]	[PROXY CODEC]: Sets the proxy codec to be recorded in the main recorder and the sub recorder. [VFR SUB REC]: Selects either [NORMAL+Audio] or [VFR up to 60p (50p)]. • [NORMAL+Audio]: Records in the frame of system frequency. Audio signal is also recorded. 　This cannot be selected when [PROXY SLOT] is set to [MAIN & SUB] or [MAIN]. 　This cannot be selected when [MAIN CODEC] is set to [AVC-Intra100] and [VFR] is set to [ON]. • [VFR up to 60p (50p)]: Records in a variable frame rate by synchronizing to the [VFR] setting of the main recorder. Audio signal is not recorded when [VFR] is set to [ON]. 　This cannot be selected when [MAIN PIXEL] is set to [2048×1080 CROP] or [1920×1080 CROP]. [PROXY SLOT]: Sets the slot to record the proxy video. • [MAIN & SUB]: Records to both the main recorder and the sub recorder. • [MAIN]: Records only to the main recorder. • [SUB]: Records only to the sub recorder.
	[AUDIO]		Sets the audio input and recording. [AUDIO VOL]: Sets the input volume. [AUDIO IN]: Sets input channel switching and level control. [AUDIO OUT]: Sets the output to a speaker or headphone.
	[HIGH SPEED]		Sets the frame rate when [SDI RAW] is set to [2K/10bit] or [HD/10bit], and [MAIN CODEC] is set to [OFF]. [ON], [OFF] • Factory setting: [OFF]
[WB]			Sets the color temperature (white balance). Selects from the predefined white balance value. Up to 12 can be registered. Presets can be added/deleted using [ADD]/[DELETE].
	[AWB]		Executes automatic white balance. The execution results are automatically registered as one list of 12 items.

PLAY screen

The Play screen is the screen for playing recorded videos.
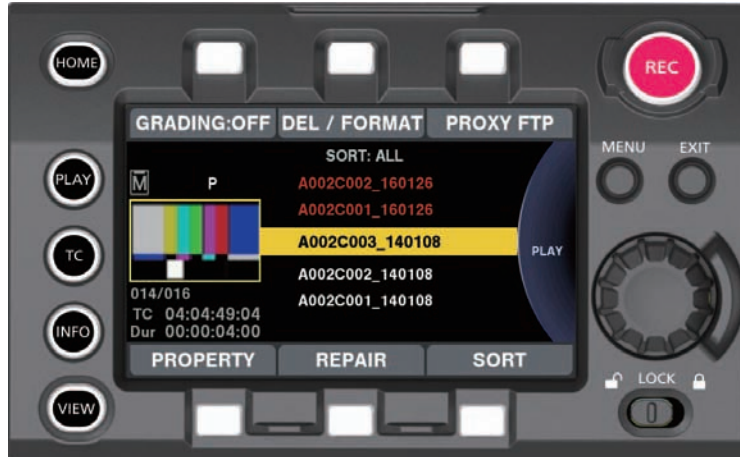
You can select clips by turning the jog dial button.

Play the clip selected in the middle by pressing the jog dial button.

At the end of the clip, the display will return to the list display.

Playback is paused by pressing the jog dial button.

Fast-forward/fast-reverse at 4x speed by turning the jog dial button during playback. Fast-forward/fast-reverse at 16x speed by further turning the jog dial button in the same direction.

Playback is stopped by pressing the control panel operation button ([REPAIR]) during playback.

[GRADING:ON]	[GRADING:ON]: Applies grading process to playback video based on the grading information of the recording. [GRADING:OFF]: Applies grading process to playback video based on the [COLOR] → [SDI SET] settings. The grading process is applied only to video recording V-Log.
[DEL/FORMAT]	Deletes the selected clip or formats the card.
[PROXY FTP]	Selects the proxy clip to perform FTP transfer, and executes the transfer.
[PROPERTY]	Displays the properties of the clip selected in the middle.
[REPAIR]	Selects and repairs the target clip (file).
[SORT]	Sets the conditions for displaying clips in a list.

The proxy clip recorded in the main slot or the sub slot cannot be played back.

Operation of the PLAY screen cannot be performed while the slot cover is opened.

TC screen

The TC screen is the screen for setting the time code.

[TC/UB/Dur.]	Switches between the HOME screen and status display. [TC]: Time code [UB]: User bits [Dur.]: Duration
[FREE/REC RUN]	Switches between free run and recording run. This is fixed to recording run when the variable frame rate function is enabled.
[DF/NDF]	Switches between drop frame and non-drop frame.
[SET]	Sets the time code generator.

INFO screen

The INFO screen displays information about the camera.
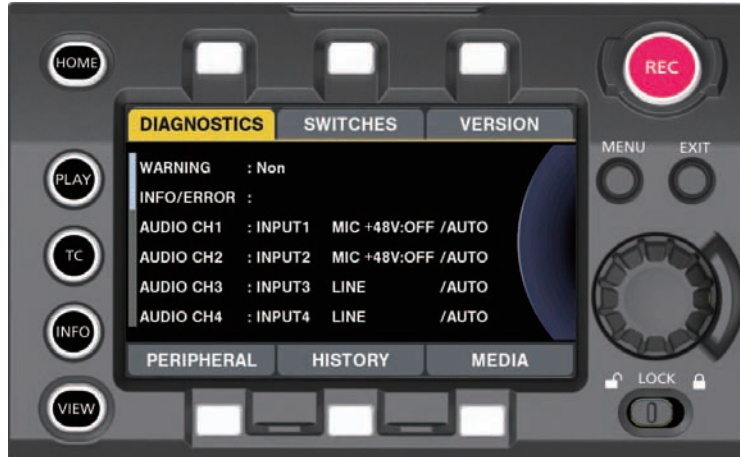
[DIAGNOSTICS]	Displays camera statuses such as warnings.
[SWITCHES]	The switch information assigned to each USER switch by [MENU] → [SYSTEM SETTINGS] → [USER SWITCHES] is listed.
[VERSION]	Displays the firmware version. [UPDATE]: Performs an update of the firmware.
[PERIPHERAL]	Displays information about peripheral devices (USB, network, etc).
[HISTORY]	Performs operations related to services. [USB]: Enters the support mode using the USB. [TRACE LOG]: Writes the trace log to an SD memory card.
[MEDIA]	Performs operations related to recording media such as formatting, etc. [FORMAT]: Moves to the screen for performing card formatting operations.

VIEW screen

Displays video. For status display contents, configure [MENU] → [OUTPUT SETTINGS] → [VF SDI INDICATOR].

MENU screen

Displays the [MENU]. (page 132)

[MENU] is also displayed in the output from the <SDI OUT 1> terminal and the <SDI OUT 2> terminal depending on the [MENU] → [OUTPUT SETTINGS] → [SDI OUT] → [MENU DISP] setting.
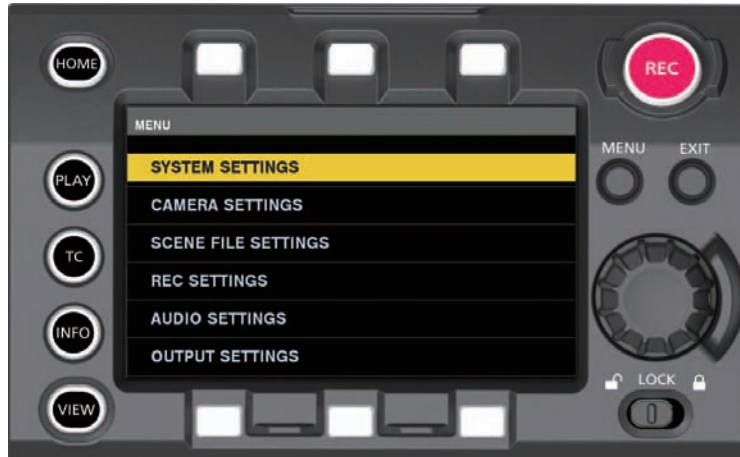
Operation of the camera buttons

Basic camera operation can be performed with the buttons on the camera.

There are buttons with different operations when the control panel is connected or not connected.

1 <USER 1>/<PLAY> button

■ When the control panel is connected

● When the <USER 1> button

Turns ON/OFF the function selected in [MENU] → [SYSTEM SETTINGS] → [USER SWITCHES] → [USER1].

However, the enable/disable differs depending on the assigned function and its status.

● When disabled

- When the menu is displayed on the control panel

■ When the control panel is not connected

● When the <USER 1> button

- When outputting the camera video to the viewfinder connected to the <VF SDI> terminal
 Turns ON/OFF the function selected in [MENU] → [SYSTEM SETTINGS] → [USER SWITCHES] → [USER1].
 However, the enable/disable differs depending on the assigned function and its status.

● When the <PLAY> button

- When outputting the HOME screen or the INFO screen to the viewfinder connected to the <VF SDI> terminal
 The PLAY screen is output to the viewfinder.
- When the menu is output to the viewfinder by pressing the <MENU> button on the camera after outputting the HOME screen to the viewfinder connected to the <VF SDI> terminal by pressing the <SYSTEM CHK> button
 The PLAY screen is output to the viewfinder.

● When disabled

- During playback
- When the menu is output to the viewfinder connected to the <VF SDI> terminal by pressing the <MENU> button on the camera.

2 <USER 2>/<INFO> button

■ When the control panel is connected

● When the <USER 2> button

Turns ON/OFF the function selected in [MENU] → [SYSTEM SETTINGS] → [USER SWITCHES] → [USER2].

However, the enable/disable differs depending on the assigned function and its status.

● When disabled

- When the menu is displayed on the control panel

■ When the control panel is not connected

● When the <USER 2> button

- When outputting the camera video to the viewfinder connected to the <VF SDI> terminal
 Turns ON/OFF the function selected in [MENU] → [SYSTEM SETTINGS] → [USER SWITCHES] → [USER2].
 However, the enable/disable differs depending on the assigned function and its status.

● When the <INFO> button

- When outputting the HOME screen or the PLAY screen to the viewfinder connected to the <VF SDI> terminal
 The INFO screen is output to the viewfinder.
- When the menu is output to the viewfinder by pressing the <MENU> button on the camera after outputting the HOME screen to the viewfinder connected to the <VF SDI> terminal by pressing the <SYSTEM CHK> button
 The INFO screen is output to the viewfinder.

● When disabled

- During playback
- When the menu is output to the viewfinder connected to the <VF SDI> terminal by pressing the <MENU> button on the camera.

3 <USER 3>/<EXIT> button

■ **When the control panel is connected**

● **When the <USER 3> button**

Turns ON/OFF the function selected in [MENU] → [SYSTEM SETTINGS] → [USER SWITCHES] → [USER3].

However, the enable/disable differs depending on the assigned function and its status.

● **When the <EXT> button**

- When the menu is output to the viewfinder connected to the <VF SDI> terminal by pressing the <MENU> button on the camera.

It will return the level of the menu one level or return without setting the setting value.

● **When disabled**

- When the menu is displayed by pressing the <MENU> button on the control panel

■ **When the control panel is not connected**

● **When the <USER 3> button**

- When outputting the camera video to the viewfinder connected to the <VF SDI> terminal

Turns ON/OFF the function selected in [MENU] → [SYSTEM SETTINGS] → [USER SWITCHES] → [USER3].

However, the enable/disable differs depending on the assigned function and its status.

● **When the <EXT> button**

- When outputting the menu to the viewfinder connected to the <VF SDI> terminal

It will return the level of the menu one level or return without setting the setting value.

- When outputting the HOME screen to the viewfinder connected to the <VF SDI> terminal

The camera video is output to the viewfinder.

- When outputting the PLAY screen or the INFO screen to the viewfinder connected to the <VF SDI> terminal

The HOME screen is output to the viewfinder.

● **When the stop button**

- Stops the playback during playback.

4 **<SYSTEM CHK> button**

■ **When the control panel is connected**

Disabled.

■ **When the control panel is not connected**

Disabled when recording or displaying the menu.

● **When outputting the camera video to the viewfinder connected to the <VF SDI> terminal**

Displays the HOME screen.

● **When outputting the HOME screen to the viewfinder connected to the <VF SDI> terminal**

The HOME screen is erased and the camera video is output to the viewfinder.

● **When outputting the PLAY screen or the INFO screen to the viewfinder connected to the <VF SDI> terminal**

The PLAY screen or the INFO screen is erased and the camera video is output to the viewfinder.

● **When outputting the playback video to the viewfinder connected to the <VF SDI> terminal**

Playback is stopped and the camera video is output to the viewfinder.

5 **<REC> button**

Record/pause will switch every time it is pressed while recording is possible.

6 **<MENU> button**

Switches display/hide of the menu.

■ **When the control panel is connected**

Displays the menu in the viewfinder connected to the <VF SDI> terminal and the control panel.

■ **When the control panel is not connected**

Displays the menu in the viewfinder connected to the <VF SDI> terminal.

■ **Menu output to the monitor**

Also displays the menu to the monitor connected to the <SDI OUT 1> terminal when [MENU] → [OUTPUT SETTINGS] → [SDI OUT] → [MENU DISP] is set to [ON].

At that time, the menu is also displayed in the monitor connected to the <SDI OUT 2> terminal when [MENU] → [OUTPUT SETTINGS] → [SDI OUT] → [SDI OUT 2 SIGNAL SEL] is set to [SDI OUT 1].

7 **<IRIS/SEL> dial button**

■ **When the control panel is connected**

Disabled when the menu is displayed during the playback or by pressing the <MENU> button of the control panel.

● **When recording or any GUI screen other than the menu is displayed in the control panel**

It will become the dial for controlling the iris of the EF lens.

However, this will be the audio level increase/decrease operation when the direct volume control is enabled.

- Turn upward: Controls to close the iris (or increase the audio level)
- Turn downward: Controls to open the iris (or decrease the audio level)
- Press: Switches [AUTO]/[MANUAL] by toggling (disabled during the direct volume control)

● **When the menu is displayed by pressing the <MENU> button on the left of the camera**

It will become the menu selection dial.

- Turn upward: Moves the menu selection cursor upward, or changes the setting value
- Turn downward: Moves the menu selection cursor downward, or changes the setting value
- Press: Determines the menu selection cursor position, moves to next level, or confirms the setting value

■ **When the control panel is not connected**

● **When outputting the camera video to the viewfinder connected to the <VF SDI> terminal**

It will become the dial for controlling the iris of the EF lens.

However, this will be the audio level increase/decrease operation when the direct volume control is enabled.

- Turn upward: Controls to close the iris (or increase the audio level)
- Turn downward: Controls to open the iris (or decrease the audio level)
- Press: Switches [AUTO]/[MANUAL] by toggling (disabled during the direct volume control)

● **When outputting the menu to the viewfinder connected to the <VF SDI> terminal**

It will become the menu selection dial.

- Turn upward: Moves the menu selection cursor downward, or changes the setting value
- Turn downward: Moves the menu selection cursor upward, or changes the setting value
- Press: Determines the menu selection cursor position, moves to next level, or confirms the setting value

● **When outputting the PLAY screen to the viewfinder connected to the <VF SDI> terminal**

It will become the playback clip selection dial.

- Turn upward: Scrolls down the playback clip selection list
- Turn downward: Scrolls up the playback clip selection list
- Press: Plays back the selected clip

● **When playing back**

It will become the playback operation key.

- Turn upward: Fast-reverse playback (−4x playback; −16x playback by further turning upward)
- Turn downward: Fast-forward playback (4x playback; 16x playback by further turning downward)
- Press: Pauses the playback, plays back normally by pressing again, or normal playback during fast-reverse/fast-forward

● **When displaying the INFO screen in the viewfinder connected to the <VF SDI> terminal**

- Turn upward: Scrolls down the displayed contents
- Turn downward: Scrolls up the displayed contents
- Press: Moves the item

📝 *NOTE*
- The <IRIS/SEL> dial button is a part that requires maintenance.
  Contact your dealer for more information.

8 **<TOGGLE/WB> switch**

The function assigned in [MENU] → [SYSTEM SETTINGS] → [USER SWITCHES] → [USER TOGGLE(USER4)] is executed every time the <TOGGLE/WB> switch is operated up or down.

● [SHUTTER]

- Upward: Lengthens the exposure time ([deg]); shortens the exposure time ([sec])
- Downward: Shortens the exposure time ([deg]); lengthens the exposure time ([sec])

● [EI]

- Upward: Increases the gain
- Downward: Decreases the gain

The setting value will continuously change by holding the switch operation when [SHUTTER] or [EI] is assigned.

● [WB]

- Upward: Increases the color temperature
- Downward: Decreases the color temperature

The automatic white balance is executed by holding the upward operation when [WB] is assigned.

Holding the downward operation is disabled.

9 **Power switch**

Turn the power ON/standby.

● The power supply disconnection process is started after turning off the power switch and three seconds have elapsed.

The power supply disconnection process will not start when the power is turned on again within three seconds.

10 **<LOCK> switch**

All the operations other than the power switch on the camera body is disabled when the <LOCK> switch is slid toward <🔒> side.

Sets the buttons and switches to apply in [MENU] → [SYSTEM SETTINGS] → [SIDE LOCK].

11 **Card slot cover open/close lever**

Close the card slot cover.

However, the recording will continue if it opens during the recording.

● Playback is not possible when the card slot cover is opened.

● The playback is stopped and the dialog is displayed when the card slot cover is opened during the playback.

● The operation is continued and the dialog is displayed after the deleting is completed when the card slot cover is opened during deleting the clip.

● The operation is continued without displaying the dialog when the card slot cover is opened during the formatting of the card.

12 **<FILTER> knob**

Switches the ND filter.

Chapter 6   Audio recording

This chapter describes how to prepare and adjust audio recorded at the time of shooting.

Preparing for audio input

Prepare the camera for connecting audio input devices.

When using a stereo microphone

Microphones such as the stereo microphone kit AJ-MC900G (optional) can be mounted.
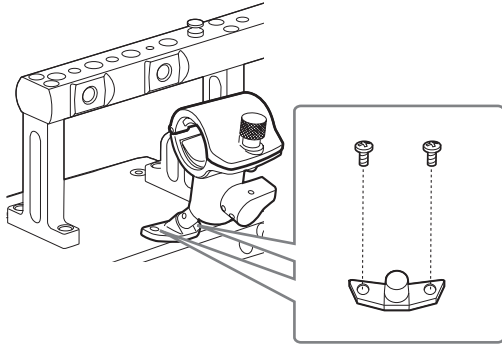
Fig. 1
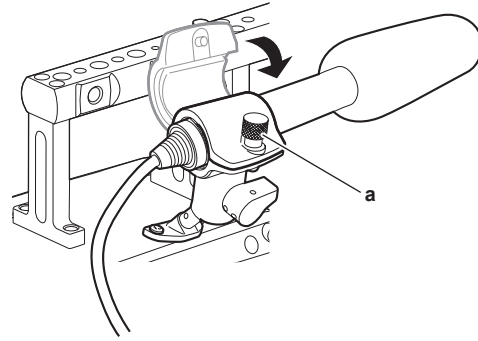
Fig. 2
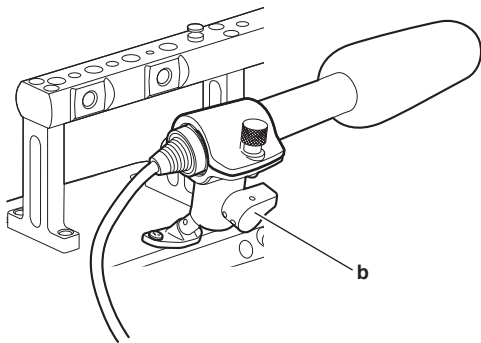
Fig. 3
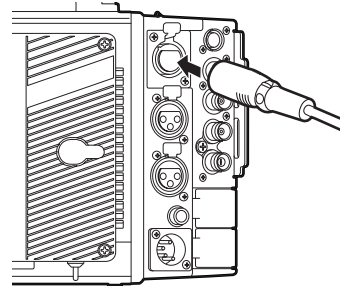
Fig. 4

1 **Remove the screws at the microphone holder mounting position and attach the microphone holder AJ-MH800G (optional). (Fig. 1)**

2 **Attach the microphone and tighten the clamping screw (a). (Fig. 2)**

Mount with the UP indication on the microphone facing up.

3 **Loosen the lock lever (b), adjust the angle of the microphone, and tighten the lock lever. (Fig. 3)**

4 **Connect the microphone cable to the <INPUT 1/2> terminal of the camera. (Fig. 4)**

5 **Select [INPUT1] and [INPUT2] in the audio input of the control panel depending on the audio channel to record.**

Setting the audio input using the control panel
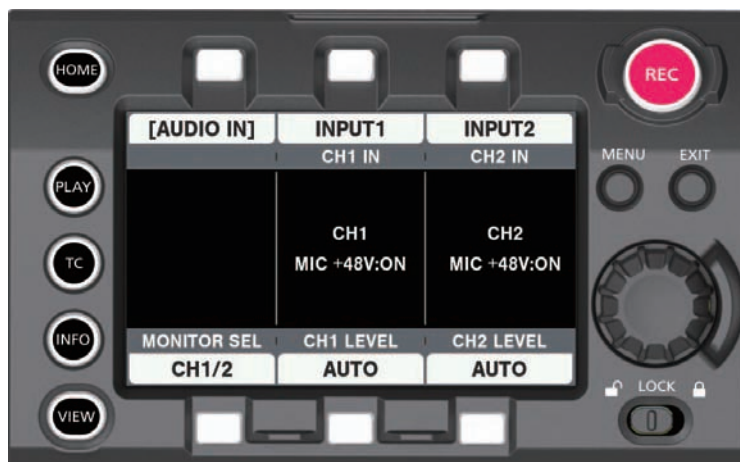
1 **Press the <HOME> button to display the HOME screen.**

2 **From [SYSTEM] → [AUDIO], select [AUDIO IN].**

3 **Select [INPUT1] in [CH1 IN], and [INPUT2] in [CH2 IN].**

To record the stereo microphone audio input of the <INPUT 1/2> terminal to audio channels 3/4, switch to [CH3/4] in [MONITOR SEL], and then select [INPUT1] in [CH3 IN], and [INPUT2] in [CH4 IN].

Using audio devices
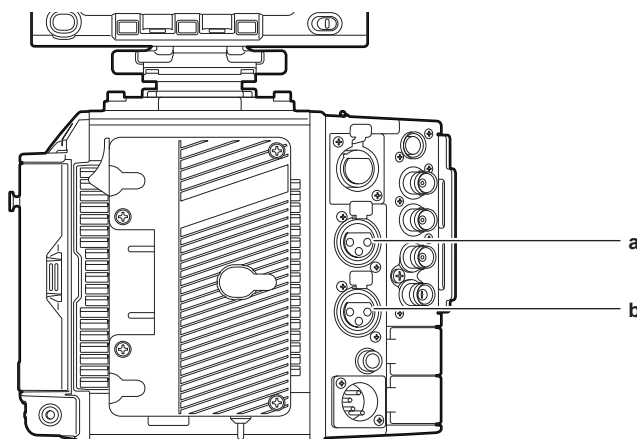
a: **<INPUT 3> terminal**

b: **<INPUT 4> terminal**

1 **Connect the audio device and the <INPUT 3> terminal or the <INPUT 4> terminal with the XLR cable.**

2 **In accordance with the channel with the XLR cable connected, select [INPUT3] and [INPUT4] in the audio input on the control panel.**

3 **Select [LINE] in [MENU] → [AUDIO SETTINGS] → [AUDIO INPUT] → [INPUT 3 LINE/MIC SEL] and [INPUT 4 LINE/MIC SEL].**

Setting the control panel
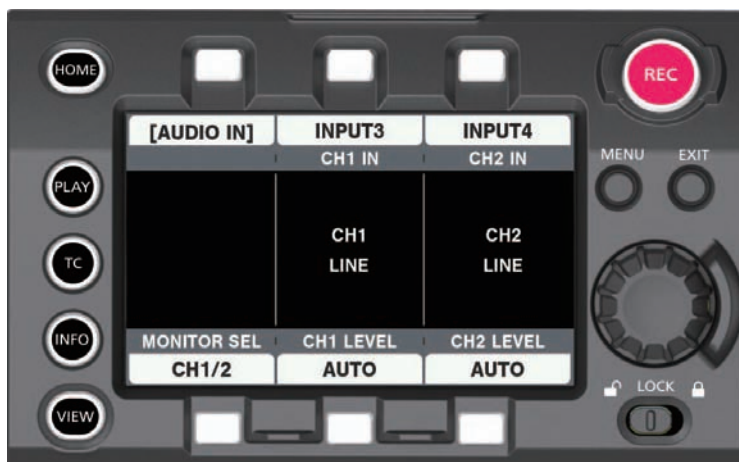
1 **Press the <HOME> button to display the HOME screen.**

2 **From [SYSTEM] → [AUDIO], select [AUDIO IN].**

3 **Select [INPUT3] in [CH1 IN], and [INPUT4] in [CH2 IN].**

To record the stereo microphone audio input of the <INPUT 3>/<INPUT 4> terminal to audio channels 3/4, switch to [CH3/4] in [MONITOR SEL], and then select [INPUT3] in [CH3 IN], and [INPUT4] in [CH4 IN].

Selecting audio input and adjusting recording levels

The camera supports independent 4-channel sound recording in all recording formats.

Selecting audio input signals
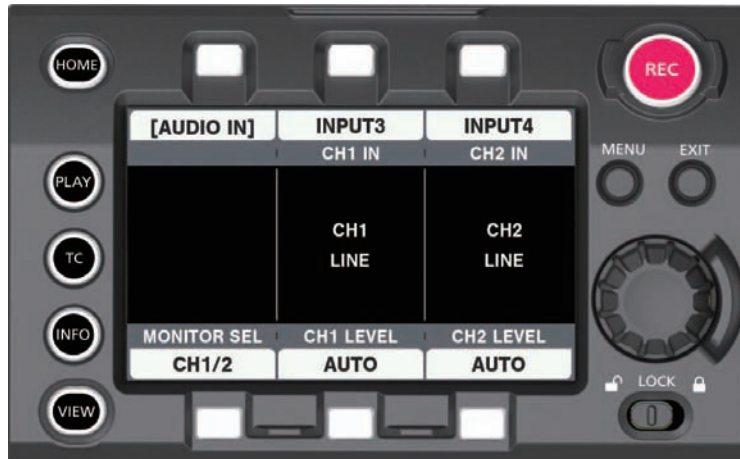
1 **Press the <HOME> button to display the HOME screen.**

2 **From [SYSTEM] → [AUDIO], select [AUDIO IN].**

3 **Select the audio to record in audio channel 1 with [CH1 IN], and select the audio to record in audio channel 2 with [CH2 IN].**

4 **Select the audio to record in audio channel 3 with [CH3 IN], and select the audio to record in audio channel 4 with [CH4 IN] after switching to [CH3/4] in [MONITOR SEL].**

NOTE

· The audio signal to be recorded is output straight as SDI signal. The details regarding audio is set in [MENU] → [AUDIO SETTINGS] → [AUDIO INPUT], [AUDIO LEVEL], and [AUDIO OUTPUT].
· Audio is not recorded when [MENU] → [AUDIO SETTINGS] → [AUDIO RECORD] is set to [OFF].
  Also, the audio is not recorded for recording in variable frame rate, interval recording, and one-shot recording.

Adjusting the recording levels

The camera performs manual adjustment and automatic adjustment of recording levels.

Automatic adjustment

The recording levels in audio channel 1/2 can be automatically adjusted. Audio channels 3/4 can be set in the same manner.

1 **Press the <HOME> button to display the HOME screen.**

2 **From [SYSTEM] → [AUDIO], select [AUDIO IN].**

3 **Select [AUTO] in [CH1 LEVEL] or [CH2 LEVEL].**

Manual adjustment

The recording levels in audio channel 1/2 can be manually adjusted. Audio channels 3/4 can be set in the same manner.
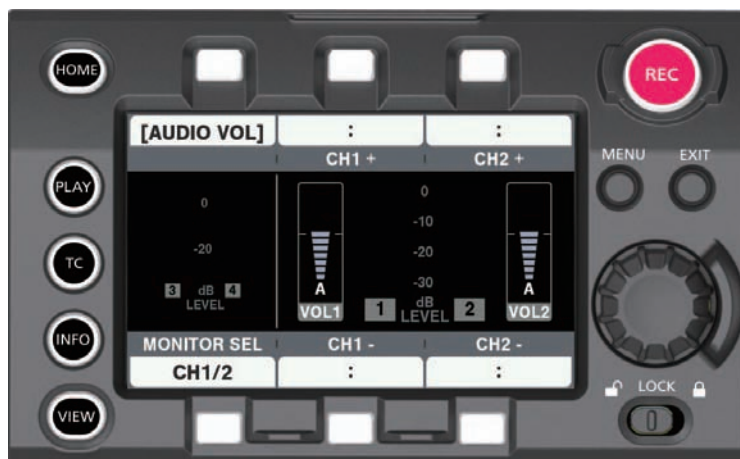
1 **Press the <HOME> button to display the HOME screen.**

2 **From [SYSTEM] → [AUDIO], set [AUDIO IN].**

For [CH3/4], switch to [CH1/2] in [MONITOR SEL].

3 **Select [MANUAL] in [CH1 LEVEL] or [CH2 LEVEL].**

If [AUTO] is selected, [A] is displayed on the [AUDIO VOL] screen and manual adjustment is not possible.

4 **Select [AUDIO VOL] in [SYSTEM] → [AUDIO].**

5 **Adjust with [CH1+]/[CH1−] or [CH2+]/[CH2−], or turning the jog dial button while viewing the display of the audio channel level meter.**

When the topmost bar (0 dB) is exceeded, the red bar display lights up to indicate that input volume is excessive. Adjust the maximum level so that the display does not reach 0 dB.

Both of the audio channel levels are simultaneously increased or decreased for the operation with the jog dial button. It will not increase or decrease when set to [AUTO].

■ **Recording standard level**

[18dB] or [20dB] can be selected in [MENU] → [AUDIO SETTINGS] → [AUDIO LEVEL] → [HEADROOM].

Common settings for channels 1 through 4.

📝 *NOTE*

• To set the level adjustment to [MANUAL], set if [CH1 LIMITER]/[CH2 LIMITER]/[CH3 LIMITER]/[CH4 LIMITER] is to be enabled or not in [MENU] → [AUDIO SETTINGS] → [AUDIO LEVEL]. This is set to [OFF] in the factory settings.

Audio monitor

Audio of the camera can be heard with a speaker or headphone.
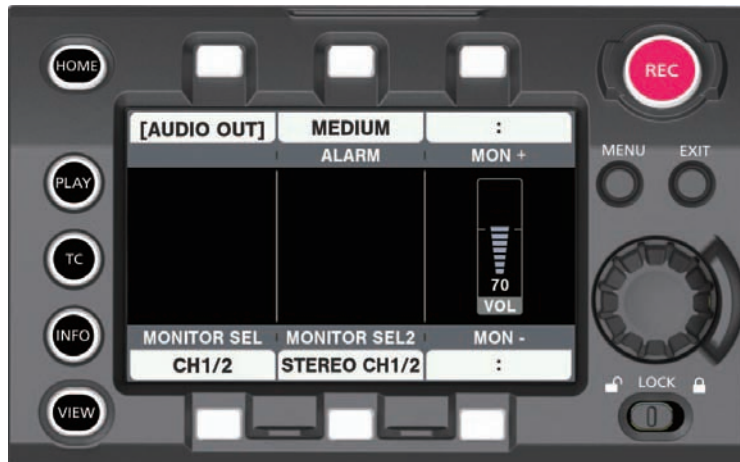
1 **Press the <HOME> button to display the HOME screen.**

2 **From [SYSTEM] → [AUDIO], select [AUDIO OUT].**

■ **Setting the monitor output audio**

1 **Select the output signal (mono, stereo, mix) in [MONITOR SEL].**

■ **Adjusting the monitor output audio level**

1 **Adjust with [MON+]/[MON−] or turning the jog dial button.**

Direct volume control

The audio level can be adjusted with the <IRIS/SEL> dial button or the <IRIS> dial on the grip module without displaying the audio operation screen of the control panel.

■ **Preparation**

1 **Set [DIRECT VOL CTRL] to one of [USER1] to [USER3], [USER GRIP1] to [USER GRIP2] with [MENU] → [SYSTEM SETTINGS] → [USER SWITCHES].**

2 **Set [AUDIO MONITOR CH] to one of [USER1] to [USER3], [USER GRIP1] to [USER GRIP2] with [MENU] → [SYSTEM SETTINGS] → [USER SWITCHES] as necessary.**

■ **Operation method**

1 **Press the USER button (<USER 1>, <USER 2>, <USER 3>, <USER GRIP1>, <USER GRIP2>) that [DIRECT VOL CTRL] is assigned.**

The direct volume control function is called.

The audio level meter is displayed in the status display of the output from the <SDI OUT 1>/<SDI OUT 2>/<VF SDI> terminal, and an icon indicating the channel ([CH1/2] or [CH3/4]) will flash.

2 **Adjust the audio level by turning the <IRIS/SEL> dial button or the <IRIS> dial on the grip module.**

3 **Switches the channel to operate the volume by pressing the USER button (<USER 1>, <USER 2>, <USER 3>, <USER GRIP1>, <USER GRIP2>) that [AUDIO MONITOR CH] is assigned as necessary.**

4 **Adjust the audio level of the switched channel by turning the <IRIS/SEL> dial button or the <IRIS> dial on the grip module.**

5 **Press the USER button (<USER 1>, <USER 2>, <USER 3>, <USER GRIP1>, <USER GRIP2>) button that [DIRECT VOL CTRL] is assigned.**

The direct volume control function will end.

The icon indicating the audio channel ([CH1/2] or [CH3/4]) in the status display of the output from the <SDI OUT 1>/<SDI OUT 2>/<VF SDI> terminal will change to continuous illumination. Or the audio level meter in the status display of the output from the <SDI OUT 1>/<SDI OUT 2>/<VF SDI> terminal will disappear.

The <IRIS/SEL> dial button and the <IRIS> dial on the grip module will return to it original iris control operation.

NOTE

· Display of the audio when the direct volume control is disabled will differ depending on the settings of [MENU] → [OUTPUT SETTINGS] → [VF SDI INDICATOR] → [AUDIO LEVEL METER] and the [MENU] → [OUTPUT SETTINGS] → [SDI OUT INDICATOR] → [AUDIO LEVEL METER].

· It will be menu or contents selection move operation instead of the direct volume control when operating the MENU screen or the PLAY screen.

· Operation is not possible when a camera image is not displayed in the output from the <SDI OUT 1>/<SDI OUT 2>/<VF SDI> terminal.

· [AUDIO LEVEL METER] for the status display is not displayed when [MENU] → [OUTPUT SETTINGS] → [VF SDI OUT] → [VF SDI CLEAN VIEW] is set to [ON] while [AUDIO] is displayed in the status display of the output from the <VF SDI> terminal.

· [AUDIO LEVEL METER] for the status display is not displayed when [MENU] → [OUTPUT SETTINGS] → [SDI OUT] → [SDI OUT 1 CLEAN VIEW] is set to [ON] while [AUDIO] is displayed in the status display of the output from the <SDI OUT1> terminal.

· [AUDIO LEVEL METER] for the status display is not displayed when [MENU] → [OUTPUT SETTINGS] → [SDI OUT] → [SDI OUT 2 CLEAN VIEW] is set to [ON] while [AUDIO] is displayed in the status display of the output from the <SDI OUT2> terminal.

· The display of the audio level meter during the normal speed playback (excluding playback pause/fast-forward playback/fast-reverse playback) differs depending on the settings of [MENU] → [OUTPUT SETTINGS] → [VF SDI INDICATOR] → [AUDIO LEVEL METER] and [MENU] → [OUTPUT SETTINGS] → [SDI OUT INDICATOR] → [AUDIO LEVEL METER].

Chapter 7   Viewfinder

This chapter describes the viewfinder screen display and how to make adjustments.

Adjusting and setting the viewfinder

The camera's panel is OLED (organic EL).
Positioning your eye near the viewfinder will trigger the eye sensor to automatically display the image.

Adjustment method
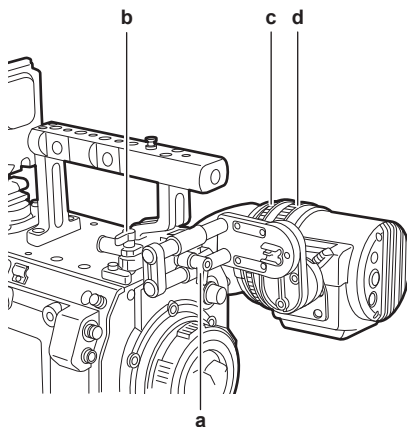
a: **Lock lever (left/right position)**

b: **Lock lever (front/back position)**

c: **Visibility adjustment ring**

d: **Zoom ring**

■ **Left/right position adjustment**

1 **Loosen the lock lever (left/right positions).**

2 **Slide the viewfinder from side to side.**

Adjust to a comfortable position.

3 **Lock the lock lever (left/right position).**

■ **Front/back position adjustment**

1 **Loosen the lock lever (front/rear positions).**

2 **Slide the viewfinder back and forth.**

Adjust to a comfortable position.

3 **Lock the lock lever (front/back position).**

■ **Visibility adjustment**

1 **Turn the visibility adjustment ring while pressing holding the upper button.**

Visibility adjustment range: −3.6 D - +1.4 D

■ **Zoom adjustment**

1 **Adjust by turning the zoom ring.**

Adjust to a comfortable view angle while checking the video.
Perform adjustment when adjusting the focus.
Vignetting may occur around the screen of the enlarged image.

Viewfinder status display

In addition to video, the viewfinder displays messages, a center marker, safety zone marker, zebra patterns, and other information that indicate the camera settings and operation status.

Lamp display
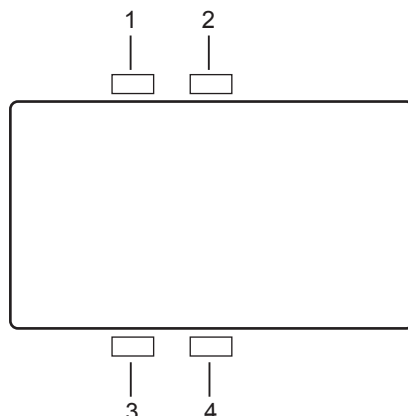
1 Green tally lamp
Lights up in green when green tally signals are received.

2 Red tally/recording lamp
Lights up in red during recording or when red tally signals are received.
This will illuminate in red during recording with an external device when [SDI REC REMOTE] is set to [ON], or [SDI RAW] is set to anything other than [OFF].

3 Warning lamp
Flashes or lights up when a warning occurs with the camera.

4 Battery lamp
Starts flashing when the remaining battery level is low. Illuminates when it reaches the battery end.

Status display

Refer to "Status display (STATUS)" (page 115).

Adjusting the screen

1 Press the <EVF MENU> button.

Screen adjustment items are displayed on the upper part of the screen.

2 Turn the jog dial button to select the items you want to adjust.

3 Press the jog dial button.

4 Turn the jog dial button to make adjustments.

5 Press the jog dial button.

6 Press the <EVF MENU> button.

The screen adjustment items display disappears.
This can also be done in [EVF MENU] → [DISPLAY SETUP].

Direct camera settings

The following camera settings can be set directly through viewfinder operation.
[FPS]/[SHUTTER]/[EI]/[WB]

1 Press the <CAM MENU> button of the viewfinder.

Setting items are displayed on the lower part of the screen.

2 Turn the jog dial button to select the items you want to set.

3 Press the jog dial button.

4 Turn the jog dial button to select setting details.

5 Press the <CAM MENU> button.

📖 *NOTE*

・ Direct camera settings cannot be performed when the [MENU] or [HOME] screen of the camera is displayed.
・ To display the [HOME] screen, press the <SYSTEM CHK> button. For details, refer to "Operation of the camera buttons" (page 96).

[MENU] settings from the viewfinder

[MENU] of the camera can be directly set with the viewfinder operation.

1 Press and hold the <CAM MENU> button of the viewfinder for at least two seconds.

The camera [MENU] is displayed.
[MENU] is also displayed on the control panel of the camera.

[EVF MENU] operation

1 Press and hold the <EVF MENU> button for at least two seconds.

[EVF MENU] is displayed.

[EVF MENU] list

■ [DISPLAY SETUP]

Item	Description of settings
[COLOR]	Adjusts the color level. **[−32] - [31]** ● Factory setting: [0]
[CONTRAST]	Adjusts the contrast. **[−32] - [31]** ● Factory setting: [0]
[BRIGHT]	Adjusts the brightness. **[−32] - [31]** ● Factory setting: [0]
[PEAKING]	Adjusts the outline of the image in the viewfinder. **[0] - [9]** ● Factory setting: [0]
[R BRT]	Adjusts the red color brightness. **[−32] - [31]** ● Factory setting: [0]
[G BRT]	Adjusts the green color brightness. **[−32] - [31]** ● Factory setting: [0]
[B BRT]	Adjusts the blue color brightness. **[−32] - [31]** ● Factory setting: [0]

■ [SW MODE]

Item	Description of settings
[FRONT TALLY]	Switches enable/disable of the front tally lamp function. **[ON]/[OFF]** ● Factory setting: [ON]
[EYE SENSOR]	Sets sensitivity of eye sensor. **[NORMAL]:** Displays the viewfinder screen according to the eye sensor. **[1min]:** Keeps the viewfinder screen display for one minute after the eye sensor is released. **[5min]:** Keeps the viewfinder screen display for five minutes after the eye sensor is released. ● Factory setting: [NORMAL]
[B/W]	Switches to monochrome mode. **[ON]:** Display will be all black and white. **[OFF]:** Disables the monochrome mode. ● Factory setting: [OFF]
[SCAN]	Reverses the display. **[NORMAL]/[REVERSE]** ● Factory setting: [NORMAL]
[PIC. SIZE]	Adjusts the image size displayed in the viewfinder. **[0] - [3]** ● Factory setting: [0]

■ **[USER SW 1]/[USER SW 2]**

Selects the function assigned to the <EVF USER 1>/<EVF USER 2> button.

This is the common setting as the content displayed and set with [MENU] → [OUTPUT SETTINGS] in the camera.

Description of settings
[CLEAN VIEW]: Switches to display only video or superimposes the display of markers or indicators. **[MARKER]:** Displays/hides markers. **[CENTER MARKER]:** Displays/hides the center marker. **[SAFETY MARKER]:** Switches the display/hide of the safety marker. **[FRAME MARK]:** Displays/hides the frame marker. **[USER BOX]:** Displays/hides the user box. **[VF COLOR]:** Switches the image. **[ZEBRA]:** Displays/hides the zebra display. **[FALSE COLOR]:** Enables/disables false color mode. **[EXPAND1]:** Switches enable/disable of the enlargement function 1. **[IN COLOR F.A.]:** Switches enable/disable of the focus in color function. **[SQ. F.A.]:** Switches enable/disable of the focus square function. **[MONO F.A.]:** Switches enable/disable of monochrome display function. **[SMOOTH MODE]:** Enables/disables the smooth mode. **[WFM]:** Displays/hides waveform monitor. ● Factory setting: [MARKER]

■ **[INFORMATION]**

Item	Description of settings
[OPERATION TIME]	Displays the total display time of the organic EL panel of the viewfinder.
[VERSION]	Displays the firmware version of the viewfinder.

Convenient shooting functions

Zebra patterns display

The camera can display two types of zebra patterns.

The zebra pattern can be set in [MENU] → [OUTPUT SETTINGS] → [VF SDI EI ASSIST].

Item	Description of settings
[ZEBRA SW]	Sets if the zebra signal is superimposed or not to the output from the <VF SDI> terminal. **[ON]**, **[OFF]** ● Factory setting: [OFF]
[- ZEBRA1 DETECT]	Sets the detection level of zebra pattern 1. **[0%]** - **[109%]** ● Factory setting: [80%]
[- ZEBRA2 DETECT]	Sets the detection level of zebra pattern 2. **[0%]** - **[109%]** ● Factory setting: [100%]
[- ZEBRA2]	Enables/disables zebra pattern 2 and selects [SPOT]. **[ON]**, **[SPOT]**, **[OFF]** ● Factory setting: [OFF]

[SPOT]: The image level from the setting value of [- ZEBRA1 DETECT] to the setting value of [- ZEBRA2 DETECT] is displayed in the zebra pattern.
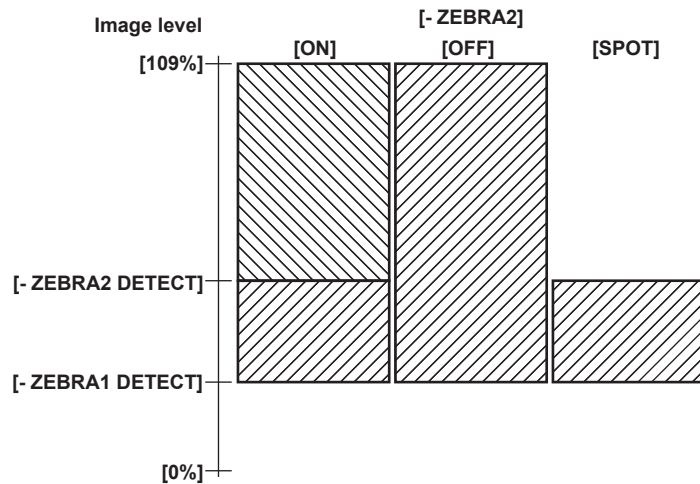
Displaying the center marker

Displayed when [MENU] → [OUTPUT SETTINGS] → [VF SDI MARKER] → [CENTER MARKER] is set to anything other than [OFF].
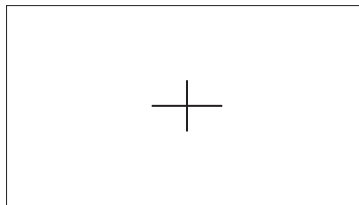
Displaying the safety zone marker

The ones selected in [MENU] → [OUTPUT SETTINGS] → [VF SDI MARKER] → [SAFETY MARKER] is displayed.

Size of the safety zone marker can be changed in [MENU] → [OUTPUT SETTINGS] → [VF SDI MARKER] → [SAFETY AREA].

Displaying frame marker

Displayed when [MENU] → [OUTPUT SETTINGS] → [VF SDI MARKER] → [FRAME MARK] is set to [ON].

Set the view angle in [MENU] → [OUTPUT SETTINGS] → [VF SDI MARKER] → [FRAME SIG].

Set the level for outside in [MENU] → [OUTPUT SETTINGS] → [VF SDI MARKER] → [FRAME LEVEL].

Focus assist function

The focus assist function enables you to focus the target easily.

Enlarged display, peaking display (display with the contour in the video is framed in red), focus square display (display with the size of square displayed in each area), and monochrome display is possible with the output video from the <VF SDI> terminal.

It is also possible to make the focusing easier by changing the aperture of the iris to decrease the depth of field.

Expanded display

Set [MENU] → [OUTPUT SETTINGS] → [VF SDI FOCUS ASSIST] → [EXPAND1 SW]/[EXPAND2 SW] to [ON].
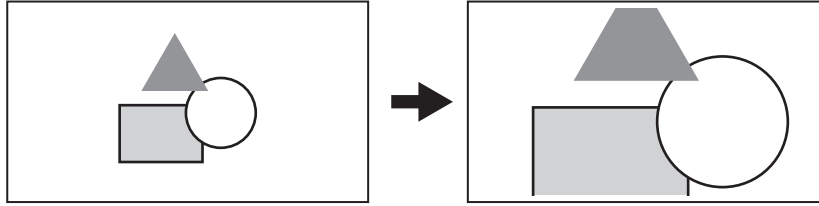
● The display mode can be set in [MENU] → [OUTPUT SETTINGS] → [VF SDI FOCUS ASSIST] → [EXPAND MODE]/[- POS1]/[- VALUE1]/[- POS2]/
[- VALUE2].

NOTE

· The output video from the <VF SDI> terminal is enlarged.
· The output from the <SDI OUT 1> terminal is not enlarged.
· The output from the <SDI OUT 2> terminal will be the same display as the output from the <VF SDI> terminal when [VF SDI] is selected in [MENU] →
  [OUTPUT SETTINGS] → [SDI OUT] → [SDI OUT 2 SIGNAL SEL].

Focus in color

Peaking display (focus in red)

Set [MENU] → [OUTPUT SETTINGS] → [VF SDI FOCUS ASSIST] → [FOCUS IN COLOR SW] to [ON].
Set [MENU] → [OUTPUT SETTINGS] → [VF SDI FOCUS ASSIST] → [- COLOR SEL] to [RED].
Adjust the focus so that the contours of the subject you want to focus on turn red.
[GREEN] or [WHITE] can also be selected in [MENU] → [OUTPUT SETTINGS] → [VF SDI FOCUS ASSIST] → [- COLOR SEL].
The region that is colored is changed by [MENU] → [OUTPUT SETTINGS] → [VF SDI FOCUS ASSIST] → [- PEAKING VALUE].
The video in background can be changed to monochrome by [MENU] → [OUTPUT SETTINGS] → [VF SDI FOCUS ASSIST] → [- MONO].

NOTE

· This is displayed only on the output video from the <VF SDI> terminal.

Focus square display

Set [MENU] → [OUTPUT SETTINGS] → [VF SDI FOCUS ASSIST] → [FOCUS SQUARES SW] to [ON].
Adjust the focus so that the square size displayed in the area of the subject to be focused becomes the largest.
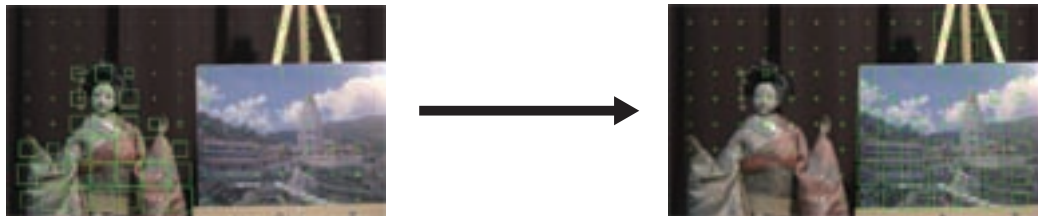
When focused on the doll   **When focused on the panel**

NOTE

· This is displayed only on the output video from the <VF SDI> terminal.

Monochrome display

Set [MENU] → [OUTPUT SETTINGS] → [VF SDI FOCUS ASSIST] → [MONO SW] to [ON].

NOTE

· This is displayed only on the output video from the <VF SDI> terminal.

Open iris focus assist function

This is a function to make focusing easier by decreasing the depth of field by opening the iris. At the same time, the brightness is kept constant by
operating the shutter.
The diaphragm is operated automatically when the EF lens is used.
The diaphragm is required to be operated manually when the PL lens is used.
Set [MENU] → [OUTPUT SETTINGS] → [OPEN IRIS FOCUS ASSIST] → [OPEN IRIS FOCUS SW] to [ON].
The function is automatically cancelled when the time set in [MENU] → [OUTPUT SETTINGS] → [OPEN IRIS FOCUS ASSIST] → [VALUE] has
elapsed.
The time that can be set is 10 seconds or 30 seconds.
The function is forced to cancel when the recording is started.

False color mode

Check the exposure using the false color.

Set [MENU] → [OUTPUT SETTINGS] → [VF SDI FOCUS ASSIST] → [FALSE COLOR SW] to [ON].

Image will be displayed with colors sored by luminosity signals. Images of other levels are displayed in black and white.

The false color can be displayed through output from the <VF SDI> terminal.

Display patterns

■ When [MAIN COLOR] is [V-Log]

Color	Level	Description
(Red)	(White clip −3%) or more*	White-level clip
(Yellow)	(White clip −6%) to (White clip −3%)*	Lower area of the white-level clip
(Pink)	48.7% - 51.8%	One-stopover color from neutral gray
(Green)	40.5% - 43.6%	18% gray neutral color
(Blue)	10.3% - 13.2%	Upper area of the black-level clip
(Purple)	7.3% - 10.3%	Black-level clip

* The white clip level will differ according to the [EI] and [MAIN CODEC] settings.

■ When [MAIN COLOR] is not [V-Log]

Color	Level	Description
(Red)	(White clip −1%) or more*	White-level clip
(Yellow)	98% - 100%	100% level of video output
(Blue)	2.5% - 4.0%	Upper area of the black-level clip
(Purple)	0% - 2.5%	Black-level clip

* The white clip level will differ according to the [EI] and [MAIN CODEC] settings.

Chapter 8 Output and Screen Display

This chapter describes video output.

Output

Output format list

- HD (1920×1080) is always output as the output from the <SDI OUT 1>/<SDI OUT 2>/<VF SDI> terminals regardless of the [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [MAIN PIXEL] settings.
  It is output in HD letterbox (black band at top and bottom of the output video) when [MAIN PIXEL] is set to [4096×2160] or [2048×1080].
- The setting for the <SDI OUT 1>/<SDI OUT 2> terminal can be switched in conjunction.
- It is output in the format in the table regardless of the enable/disable of the variable frame rate function.
- The output video from the <SDI OUT 2> terminal can be set in [MENU] → [OUTPUT SETTINGS] → [SDI OUT] → [SDI OUT 2 SIGNAL SEL].
  - [SDI OUT 1]: It will be the same video as the output from the <SDI OUT 1> terminal.
    The color setting and setting for display/hide of the marker/indicator can be set individually.
  - [VF SDI]: It will be the same video (color, marker, indicator, format) as the output from the <VF SDI> terminal.

[FREQUENCY]	Output Format	
	<SDI OUT 1> terminal <SDI OUT 2> terminal	<VF SDI> terminal
[23.98p]	23.98PsF	23.98PsF 59.94p 59.94i However, this becomes 23.98PsF when [MAIN CODEC] is set to [AVC-Intra2K 444] and [AVC-Intra444].
[24.00p]	24.00PsF	24.00PsF 60.00p 60.00i However, this becomes 24.00PsF when [MAIN CODEC] is set to [AVC-Intra2K 444].
[25.00p]	25.00PsF	25.00PsF 50.00p 50.00i However, this becomes 25.00PsF when [MAIN CODEC] is set to [AVC-Intra2K 444] and [AVC-Intra444].
[29.97p]	29.97PsF	29.97PsF 59.94p 59.94i However, this becomes 29.97PsF when [MAIN CODEC] is set to [AVC-Intra2K 444] and [AVC-Intra444].
[50.00p]	50.00p 50.00i	50.00p 50.00i
[50.00i]	50.00i	50.00i
[59.94p]	59.94p 59.94i	59.94p 59.94i
[59.94i]	59.94i	59.94i

Screen status display

Status display (STATUS)

This is the status screen displayed in the <SDI OUT 1>, <SDI OUT 2>, and <VF SDI> output, and the control panel (VIEW screen).
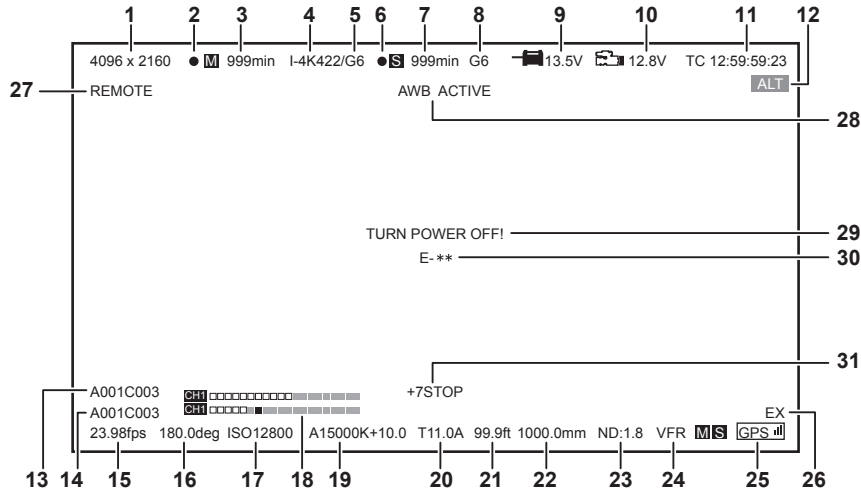
1 **System pixel**

2 **Main slot card recording status**

3 **Main slot card remaining capacity and card status**

4 **Main codec**

5 **Proxy codec (main card)**

6 **Sub slot card recording status**

7 **Sub slot card remaining capacity and card status**

8 **Proxy codec (sub card)**

9 **Voltage value of the power supply connected to the <DC IN> terminal**

10 **Remaining capacity of the battery connected to the battery holder, or voltage value of the power supply (by the battery)**

11 **Time code/user bits/duration (only when recording)**

12 **Warning/alert**

13 **User clip name ([TYPE3] only)**

14 **Clip name**

15 **FPS**

16 **Shutter**

17 **EXPOSURE INDEX**

18 **Audio level meter**

19 **White balance**

20 **Iris**

21 **Focus position**

22 **Zoom**

23 **ND filter**

24 **VFR setting**

25 **GPS status**

26 **Extender**

27 **ROP app control status**

28 **AWB/ABB status**

29 **System error (<VF SDI> terminal and control panel (VIEW screen) only)**

30 **Error number (<VF SDI> terminal and control panel (VIEW screen) only)**

31 **Y GET**

● Status display item for the <SDI OUT 1>/<SDI OUT 2> terminal is selected in [MENU] → [OUTPUT SETTINGS] → [SDI OUT INDICATOR].

● Display/hide of the status display to the <SDI OUT 1> terminal is switched in [MENU] → [OUTPUT SETTINGS] → [SDI OUT INDICATOR] → [SDI OUT 1 SW].

● Display/hide of the status display to the <SDI OUT 2> terminal is switched in [MENU] → [OUTPUT SETTINGS] → [SDI OUT INDICATOR] → [SDI OUT 2 SW].

● Status display item for the <VF SDI> terminal and the control panel is selected in [MENU] → [OUTPUT SETTINGS] → [VF SDI INDICATOR].

● Display/hide of the status display to the <VF SDI> terminal and the control panel is switched in [MENU] → [OUTPUT SETTINGS] → [VF SDI INDICATOR] → [VF SDI SW].

● RAW is displayed in the system pixel display area when [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [SDI RAW] is set to anything other than [OFF].

● The recording command status against the external RAW recorder is displayed instead of the main slot card recording status when [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [MAIN CODEC] is set to [OFF]. At this time, the main slot card free space and card status, sub slot card recording status, sub slot card free space and card status, and proxy codec are not displayed.

Chapter 9   Other Useful Functions

This chapter describes other useful features such as function buttons, etc.

Getting position information using the GPS

The camera has a built-in GPS. Positioning information can be recorded through GPS.

The GPS antenna is built inside the top of the camera.

Do not hold the handle or block the upper section of the camera with an obstruction when the GPS function is in use.

● When positioning is complete, [GPS] lights up and GPS signal reception strength is indicated by 4-level bars.

● If the time is received using GPS, the time of the internal clock is maintained accurately based on the time received (Greenwich mean time) and the time zone.

● If the date and time display is different from the local time, the time zone setting may be incorrect. Recheck the time zone settings.

NOTE

・ If it cannot position even after waiting several minutes, it means that the GPS signals are weak and difficult to receive.
・ Position in the open space with a clear view of the sky.
・ Detecting altitude may take more time than detecting latitude and longitude.
・ The followings are locations where the signals from the GPS satellite cannot be properly received. Thus, you may not be able to position or you have large margin of errors.
  - Indoors
  - Near buildings or a canyon of buildings
  - In underground shopping areas
  - In forests
  - While moving in trains or automobiles
  - Inside a tunnel

Assigning functions to the USER buttons

Selected function can be assigned to the USER buttons (<USER 1> to <USER 3>, <TOGGLE/WB> (USER4), <USER GRIP1> to <USER GRIP2>) and the control panel operation buttons (USER5 to USER10).

Set the function to assign to each with [USER1] to [USER3]/[USER TOGGLE(USER4)]/[USER5] to [USER10]/[USER GRIP1] to [USER GRIP2] in [MENU] → [SYSTEM SETTINGS] → [USER SWITCHES].

There are no functions assigned to the USER button in the factory settings.
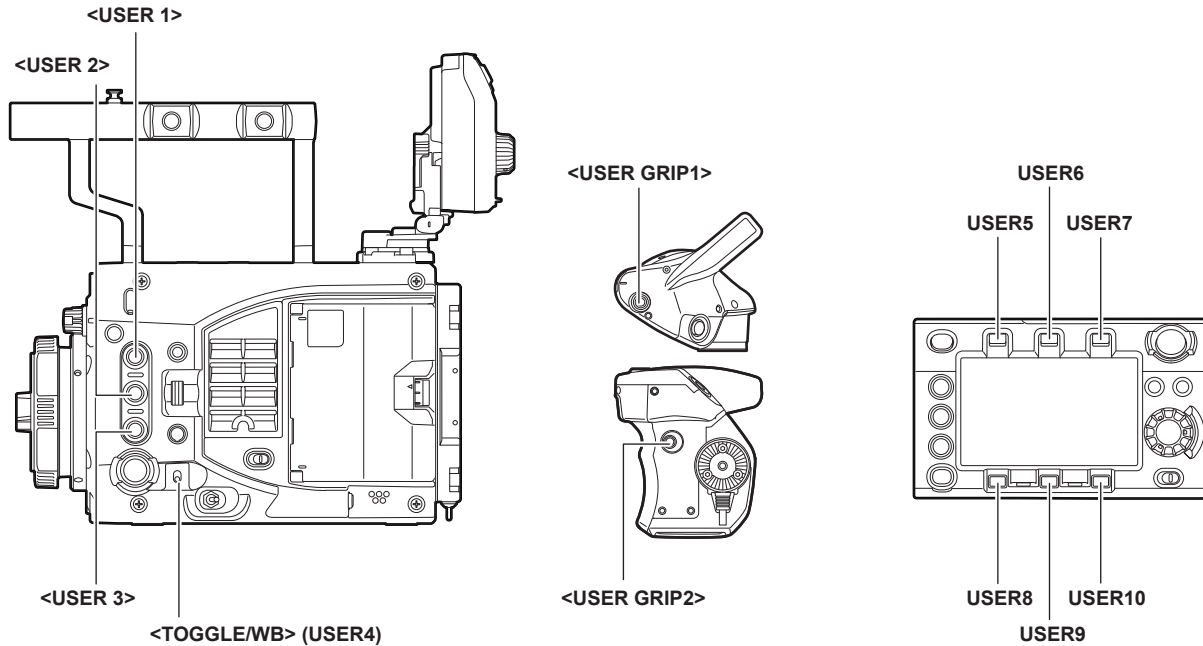
Selectable functions

Item	Description
[INHIBIT]	Disables assignment of functions.
[SIX USER BUTTONS]	Sets against the <USER 1> to <USER 3> buttons, when the control panel operation button is used as the USER button.
[AWB]	Assigns the automatic white balance function.
[Y GET]	Assigns the function for displaying the luminance level of the image at the position indicated by the square marker displayed near the center.
[EXPAND1]	Assigns the enlargement function 1.
[EXPAND2]	Assigns the enlargement function 2.
[OPEN IRIS F.A.]	Assigns the open iris focus assist function.
[IN COLOR F.A.]	Assigns the focus in color function.
[SQ. F.A.]	Assigns the focus square function.
[MONO F.A.]	Assigns the monochrome display function.
[WFM]	Enables/disables the viewfinder wave form display.
[BARS]	Assigns the color bars display function.
[ONE PUSH A. IRIS]	Executes the one-push auto iris.
[FALSE COLOR]	Enables/disables the false color mode.
[ZEBRA]	Superimposes the zebra signal to the output from the <VF SDI> terminal.
[VF SDI COLOR]	Switches output images from the <VF SDI> terminal.
[SDI OUT 1 COLOR]	Switches the output image from the <SDI OUT 1> terminal.
[SDI OUT 2 COLOR]	Switches the output image from the <SDI OUT 2> terminal.
[VF SDI CLEAN]	Sets so only video is output from the <VF SDI> terminal.
[VF SDI MARKER]	Sets so video and marker signal are output from the <VF SDI> terminal.
[VF SDI DESQUEEZE]	Switches ON/OFF of the de-squeeze function against the output from the <VF SDI> terminal.
[VF SDI IMAGE INVERT]	Switches ON/OFF of the invert display function against the output from the <VF SDI> terminal.
[SMOOTH MODE]	Assigns the smooth mode function.
[TEXT MEMO]	Assigns the text memo function.
[SHOT MARK]	Assigns the shot mark function.
[REC SW]	Assigns the function of the <REC> button.
[AUDIO MON VOL]	Calls the screen to adjust the audio monitor output to the control panel.
[AUDIO IN VOL]	Calls the screen to adjust the audio input to the control panel.

Item	Description
[AUDIO MONITOR CH]	Switches the audio channel to output to the <PHONES> terminal. Switches the setting of [MENU] → [AUDIO SETTINGS] → [AUDIO OUTPUT] → [MONITOR CH].
[DIRECT VOL CTRL]	Calls the function to adjust the audio input with the <IRIS/SEL> dial button or the <IRIS> dial on the grip module. The channel set with [MENU] → [AUDIO SETTINGS] → [AUDIO OUTPUT] → [MONITOR CH] will be adjusted.
[VFR SW]	Enables/disables the variable frame rate function.
[CHECK LAST CLIP START]	Plays back the first 5 seconds of the newest clip of the clips recorded after the power was turned on. Enabled only in the HOME screen or the VIEW screen.
[CHECK LAST CLIP END]	Plays back the last 5 seconds of the newest clip of the clips recorded after the power was turned on. Enabled only in the HOME screen or the VIEW screen.

NOTE

・ Only the following functions can be assigned to [USER5] to [USER10].
[INHIBIT], [EXPAND1], [EXPAND2], [IN COLOR F.A.], [SQ. F.A.], [MONO F.A.], [FALSE COLOR], [VF SDI COLOR], [SDI OUT 1 COLOR], [SDI OUT 2 COLOR], [SMOOTH MODE], [VFR SW]
・ Only the following functions can be assigned to [USER TOGGLE(USER4)] (<TOGGLE/WB>) switch.
[WB], [SHUTTER], [EI]

Handling setting data

File structure of the setting data

The [SCENE1] to [SCENE5] scene files can be saved in the camera according to the scene file number.

Scene file ([SCENE1] to [SCENE5]) data can be saved as a file in the SD memory card, which can be loaded and used.

The setting value that can be saved as a scene file is the content of [MENU] → [SCENE FILE SETTINGS].

Setting data file structure of the camera is as follows.

∎ **Scene file**
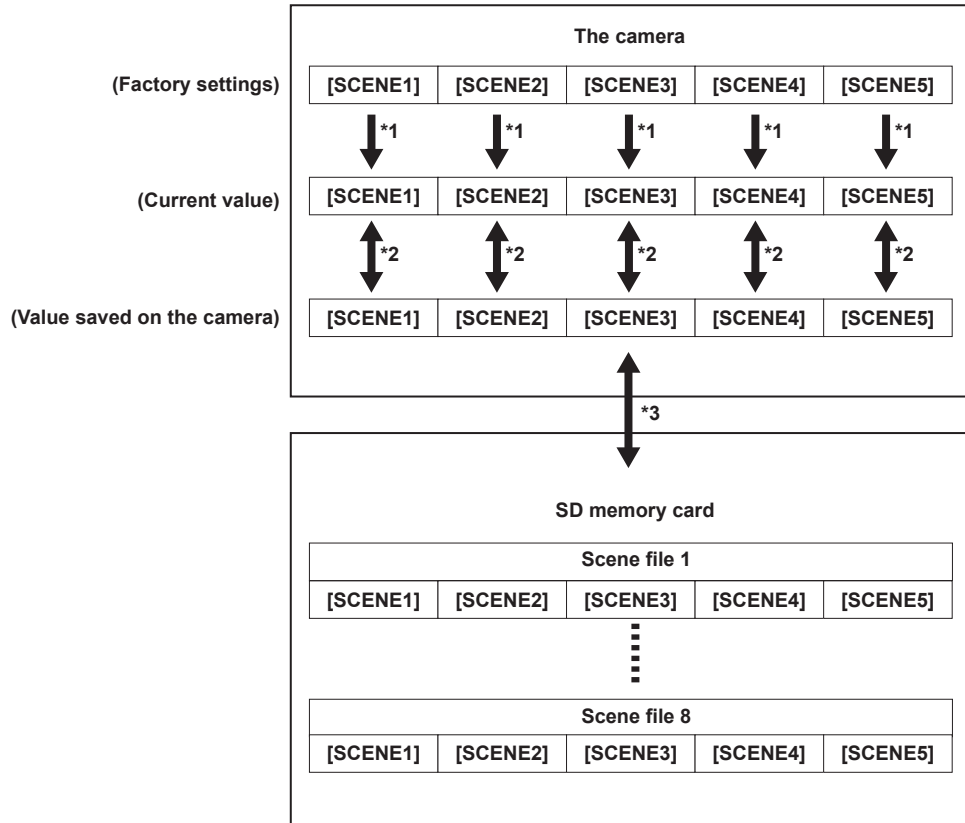
*1   Select [INITIALIZE] in [MENU] → [SCENE FILE SETTINGS] → [SCENE DATA].
*2   Select [LOAD] or [SAVE] in [MENU] → [SCENE FILE SETTINGS] → [SCENE DATA].
*3   Select [LOAD(SD CARD)] or [SAVE(SD CARD)] in [MENU] → [FILE] → [SCENE FILE].
      [SCENE1] to [SCENE5] at once

Handling SD memory cards

The SD memory card can be removed and inserted, either before or after the power is turned on.

Inserting SD memory cards
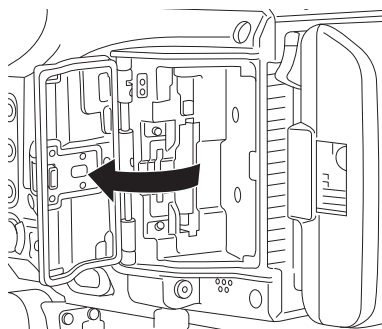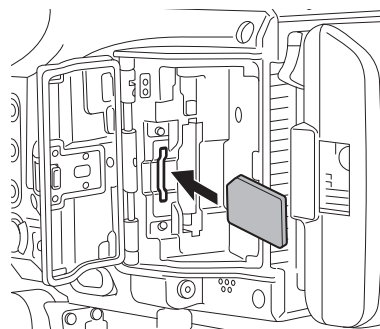
Fig. 1   **Fig. 2**

1 Open the slot cover. (Fig. 1)

2 Insert the SD memory card with the label facing forward into the sub slot, and close the slot cover. (Fig. 2)

✎ NOTE

- The SD memory card must be inserted with the correct side facing the SD card slot. If the SD memory card is hard to insert, it may be reversed or upside-down. Do not force it into the slot. Check the orientation of the card before reinserting it.
- Cautions when using SD memory cards
  - On the camera, use SD memory cards that conform to the SD standard, SDHC standard, or the SDXC standard.
  - MMC (Multi Media Card) cannot be used. (Bear in mind that taking pictures may no longer be possible if you use them.)
  - When using miniSD/microSD cards with the camera, always install the adaptor specially designed for miniSD/microSD cards.
    (The camera will not work properly if only the miniSD/microSD adaptor is inserted. Make sure that the card has been inserted into the adaptor before use.)
  - Use of Panasonic SD memory cards and miniSD/microSD cards is recommended. Also, make sure that the format is performed on the camera.
  - Refer to our support desk at the following website for the latest information not included in this document.
    http://pro-av.panasonic.net/
  - SDHC memory cards are a standard that was established in 2006 by the SD Association for large-capacity memory cards that exceed 2 GB.
  - SDXC memory cards are a standard that was established in 2009 by the SD Association for large-capacity memory cards that exceed 32 GB.
- The sub slot is used to read and write the proxy recording and also the setting data.
  It may take some time to be recognized when inserted.
  An error is displayed for the SD memory card with less than Class10, that cannot record proxy. It can be used for reading or writing the setting data.

Removing SD memory cards

Open the card slot cover, confirm that the card access LED on the sub slot side is not flashing in orange or green, press the SD memory card further in toward the camera, and let go. The SD memory card is released from the card slot, so pull out the SD memory card and close the card slot cover.

Note the following points when using or storing memory cards.

- Avoid high temperature and humidity.
- Avoid water droplets.
- Avoid charging with electricity.

Use the SD memory card inserted in the camera and the slot cover closed.

Performing operations on SD memory cards

If the SD memory card that was formatted in a standard other than the SD/SDHC/SDXC standards on a device other than the camera is inserted, [LOAD] or [SAVE] operation of the file cannot be performed. Format the SD memory card again.

Formatting SD memory cards

1 Select [SUB SLOT] in [MENU] → [SYSTEM SETTINGS] → [CARDS/MEDIA] → [FORMAT MEDIA] and press the jog dial button.

The confirmation screen is displayed.

2 Select [YES] on the confirmation screen, and press the jog dial button.

When not formatting, select [NO], and press the jog dial button.

3 When the completion message is displayed, select [OK], and press the jog dial button.

✎ NOTE

- Data deleted as a result of formatting cannot be restored. Always check the data before formatting.

Saving and reading the setup file

The specified menu item can be saved to the SD memory card and read into the camera.
There are two operations for saving to the SD memory card, [SAVE(SD CARD)] to overwrite the existing file and [SAVE AS(SD CARD)] to create a new file.

To overwrite and save the setup file to the SD memory card

1 Select [SAVE(SD CARD)] in [MENU] → [FILE] → [SETUP FILE], and press the jog dial button.

The list of setup files currently saved in the SD memory card is displayed.

2 Select the file to overwrite and save from the file list.

The file name entry screen and the keyboard are displayed.

3 Enter the text to set with the keyboard.

It is saved as a new file when the file name is changed.

4 Select [OK] with the jog dial button and press the jog dial button.

The confirmation screen is displayed.

5 Select [YES] and press the jog dial button.

The file is saved and the file list is updated.

To save the setup file to the SD memory card as a new file

1 Select [SAVE AS(SD CARD)] in [MENU] → [FILE] → [SETUP FILE], and press the jog dial button.

The entry screen for the file name and title, and the keyboard are displayed.
A title name and a file name with month/date/hour/minute are displayed as the factory setting.

2 **Enter the text to set with the keyboard.**

3 **Select [OK] with the jog dial button and press the jog dial button.**

The confirmation screen is displayed.

4 **Select [YES] and press the jog dial button.**

Saving of the file is started.

5 **When the completion message is displayed, select [OK], and press the jog dial button.**

When an error message is displayed, refer to "Cases indicated by error messages" (page 195).

NOTE

・ The setup file saved by this camera cannot be used in other cameras.
・ The setup file saved by other cameras cannot be used in this camera.
・ The setup file and scene file can be operated even if the card slot cover is opened.
・ The setup file and scene file can be operated even if the [REC IMPOSSIBLE] error is displayed.

To load the setup data written in the SD memory card

1 **Select [LOAD(SD CARD)] in [MENU] → [FILE] → [SETUP FILE], and press the jog dial button.**

The list of setup files stored in the specified folder in the SD memory card is displayed.

2 **Select the file name to load, and press the jog dial button.**

The confirmation screen is displayed.
The camera will restart after loading is completed if [SYSTEM RESTART] is displayed in the confirmation screen.

3 **Select [YES] and press the jog dial button.**

Loading of the file is started.
When an error message is displayed, refer to "Cases indicated by error messages" (page 195).

Setting the time data

The camera provides time codes, user bits, and date and time (real time) data as time data, and they are recorded in the frame in sync with video. They are also recorded as data for clip metadata files.

Definition of time data

■ Time code

You can switch to [REC RUN] and [FREE RUN] with the control panel.
- **[FREE RUN]:** The time code always advances even when the power is turned off, and it can be handled in the same way as time. It can also be recorded slaved to the time code input to the <TC IN/OUT> terminal.
- **[REC RUN]:** Advances only while recording. The recording is started with the value continuing from the last time code of previous recording.

📝 *NOTE*

- In the following case, the values are not continuous.
  - When recording is interrupted due to a malfunction of [REC WARNING], etc. during recording.

■ User bits

Two types of user bits are built in.
- LTC UB: Recorded as LTC and output from the <TC IN/OUT> terminal. It is also output as LTC of the SDI signal.
- VITC UB: Recorded as VITC. It is also output as VITC of the SDI signal.

LTC UB can select and record user set values, time, year/month/day, the same value as time codes, camera frame rate information, and input value of external signals from the <TC IN/OUT> terminal, etc.
VITC UB records the camera frame rate information.
The LTC UB value of the recording start time can be recorded on the user bits of the clip metadata.

■ Duration (clip length) counter

This counter counts from 0 each time recording starts.The duration of the recorded clip is displayed after recording.

■ Date/time (real time)

- The internal clock is used for measuring the free run time code while the power is off and as time and year/month/day data of the user bits. It is also used as the reference for file generation times during clip recording, which determine the sorting order of thumbnails and the order of playback.
- It is also used to generate clip metadata and UMID (Unique Material Identifier).
  For details, refer to "Setting the date/time of the internal clock" (page 34).

User bits settings

Sets the user bits to be recorded in the sub code area with the control panel.

Item	Description
[FRAME RATE]	Records the camera photo frame rate information. The frame rate information same as the VITC UB is output when playing back the clip recorded with the system frequency anything other than [50.00p], [59.94p], [50.00i], or [59.94i]. Use at this setting when the editing device such as a computer uses the frame rate information of the user bits.
[USER]	Records internal user values. The user value can be set from [MENU] → [REC SETTINGS] → [TC] → [SET UB], the user value can be set. Setting values are held even when the power is turned off. For details, refer to "How to input user bits" (page 124).
[EXT INPUT]	Records the user bits values currently entered to the <TC IN/OUT> terminal.
[TIME]	Records the time measured by the internal clock.
[DATE]	Records the time digit of year/month/day/time measured by the internal clock.
[USER CLIP NAME (TYPE3)]	A numeric value of CAM INDEX (1 character) and REEL number (3 digit number) from left, each converted to ASCII character code is recorded when the [USER CLIP NAME] is recorded as [TYPE3]. F is recorded in every digit when it is [TYPE1] or [TYPE2].

Only the value of when the recording has started is output for playback even when an item that changes in real time such as [TIME] is recorded in the ProRes format.

How to input user bits

By setting user bits, information such as memos (date, time) up to eight digits long (hexadecimal) can be recorded.

1 Set [MENU] → [REC SETTINGS] → [TC] → [UB MODE] to [USER].

2 From [MENU] → [REC SETTINGS] → [TC], select [SET UB].

The user bits setting screen is displayed.

3 Set the user bits using the jog dial button.

Set them by two digits for each.

4 Press the jog dial button to confirm the user bits setting value.

📝 *NOTE*

- If you exit the user bits setting screen without pressing the jog dial button, the set values will be disabled.

Retention of user bits in memory

User bit settings are automatically recorded and are retained even if the power is turned off.

Frame rate information

The relationship between frame rates, image pull-down, and time codes/user bits is as follows.
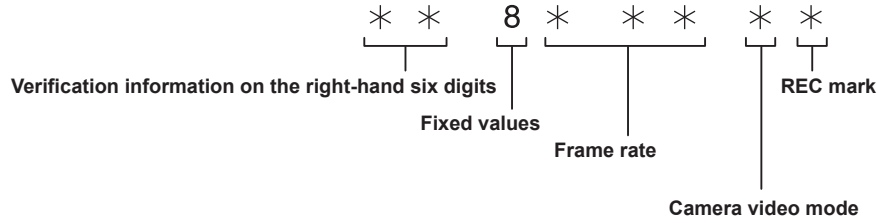
- Camera video mode

  The display differs depending on the setting of [FREQUENCY] and [VFR].

[FREQUENCY]	[VFR]	
	[ON]	When [OFF] or [VFR] is [ON] and [FPS] is the same as [FREQUENCY]
[23.98p]	D	C
[24.00p]	F	E
[29.97p]	9	8
[59.94p]	9	8
[25.00p]	B	A
[50.00p]	B	A
[59.94i]	—	0
[50.00i]	—	2

Setting the time code

1 **Press the <TC> button to display the TC screen.**

2 **From the time code display, select [DF] or [NDF] in [DF/NDF].**

Set [DF] to advance the time code in the drop frame mode, and set [NDF] to advance it in the non-drop frame mode. Note, however, that the time code always runs in [NDF] in the 24p (23.98p) mode.

3 **Select [SET].**

The [SET TC] screen is displayed.

4 **Set the time code using the jog dial button.**

5 **Press the jog dial button to confirm the time code setting value.**

Settable time code range

59.94i, 29.97p, 59.94i	00:00:00:00 to 23:59:59:29
23.98p, 24.00p	00:00:00:00 to 23:59:59:23
50.00p, 25.00p, 50.00i	00:00:00:00 to 23:59:59:24

📝 *NOTE*

- If you exit the time code setting screen without pressing the jog dial button, the set values will be disabled.

Time code function during battery replacement

Even during battery replacement, the backup mechanism functions, allowing the time code generator to continue operating.

When each item of the system mode has been changed, the time code of free run may shift. Turn on the power again, confirm the time code, and set it again if necessary.

Time codes in variable frame rate

- The time code is fixed to [REC RUN], and advances in the speed of the ration of the system frequency [FREQUENCY] and the recording frame rate [FPS] during the recording for the variable frame rate.

  As an example, when [FREQUENCY] is [24.00p] and [FPS] is [60fps], it will advance 60/24 every second (2 seconds 12 frames).

- The time code output from the <TC IN/OUT> terminal or the <SDI OUT 1>/<SDI OUT 2> terminal will advance in 1x speed from the time the recording is started.

  It is fixed to the value last recorded when the recording is paused.

Externally locking the time code

The internal time code generator of the camera can be locked to an external generator.

Example of connections for external locking

As shown in the figure, connect both the reference video signal and the reference time code.

| Reference time code | <TC IN/OUT> terminal |
| Reference video signal | <GENLOCK IN> terminal |
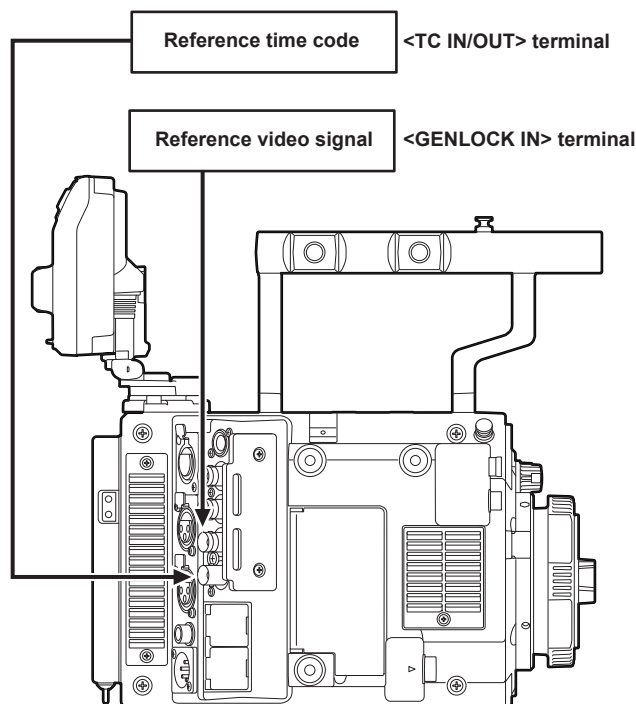
External lock operation procedure

To externally lock the time code, follow the steps below.

1 **Press the <TC> button to display the TC screen.**

2 **From the time code display, select [FREE RUN] in [FREE/REC RUN].**

3 **From [MENU] → [REC SETTINGS] → [TC] → [TC IN/OUT SEL], select [TC IN].**

4 **Set [MENU] → [SYSTEM SETTINGS] → [GENLOCK] → [GENLOCK MODE] to [EXT] and synchronize to the genlock signal input.**

5 **Enter the external time code from the <TC IN/OUT> terminal.**

The [TCG] characters on the HOME screen are displayed in black and white inversion.

- Input the same SDI signal as the system signal format ([FREQUENCY]) for the reference video signal.
- When the system frequency is 59.94p or 50p, the time code may be out of sync by one field.

  To externally lock without shifting the time code at this time, input the 59.94i signal for when system frequency is [59.94p], or 50.00i signal for [50.00p] into the <GENLOCK IN> terminal. Input the synchronized time code signal from the <TC IN/OUT> terminal to there.

- When the input reference signal of generator lock is disrupted, recording cannot be performed normally. [TEMPORARY PAUSE] is displayed in the viewfinder screen, and the clip is divided. The synchronization with the time code is also not guaranteed. Recording will resume when the signal returns to normal.
- The time code is instantly locked to the external time code, and the same value as the external time code value is displayed in the time code display area when the external lock operation is performed. Do not set to the recording mode for several seconds until the internal system lock has stabilized. Furthermore, lock the time code to the <TC IN/OUT> terminal signal.
- If you execute the slave once, even if there is no longer <TC IN/OUT> terminal and <GENLOCK IN> terminal input, the slave status is maintained. However, in the following cases, the slave status will be released.
  - When [TC SET] is executed
  - When the power is turned off
  - When switched [DF]/[NDF]
  - When set to [REC RUN]
  - When a variable frame rate is applied
- If [EXT INPUT] is selected in [UB MODE] of the UB screen, regardless of the time code slave status, the user bits can be matched with the user bits input in the <TC IN/OUT> terminal. In this case, [UBG] characters are black and white inverted.

Cautions when switching the power supply from the battery to the external power supply while an external lock is active

To maintain the continuity of the power supply for the time code generator, connect an external power supply to the <DC IN> terminal, and disconnect the battery in the battery holder after confirming the battery information of the <DC IN> terminal side is displayed in the viewfinder or the HOME screen. If the battery pack is removed first, there is no guarantee that the time code will stay externally locked.

Supplying the time code externally

You can supply the output time codes to an external recording device from the camera by matching the camera videos or the playback videos.

Connection example for supplying to external device

■ **When locking external devices to the camera**

<SDI OUT 1>/<SDI OUT 2> terminal

HD SDI IN terminal

VTR, etc.

TC IN terminal
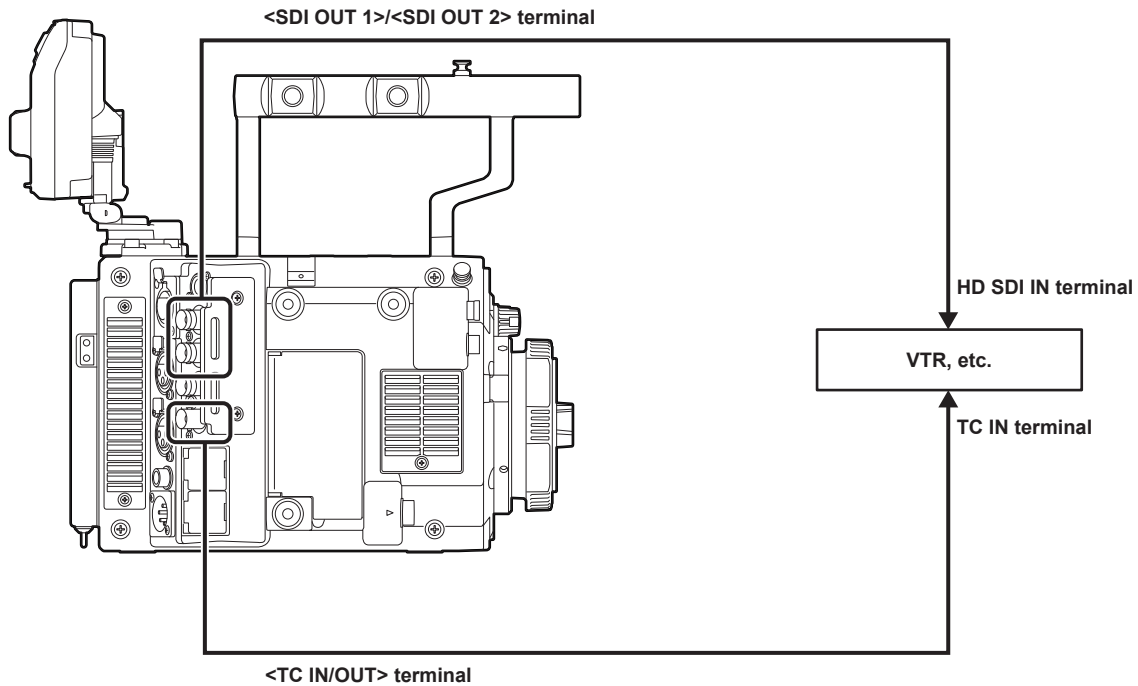
<TC IN/OUT> terminal

✐ NOTE

• Set [MENU] → [REC SETTINGS] → [TC] → [TC IN/OUT SEL] to [TC OUT].
• To match the time code output from the <TC IN/OUT> terminal to the SDI output and monitor output image, set [MENU] → [REC SETTINGS] → [TC] → [TC OUT REF] to [SDI OUT].
• To output TCR during playback, set [MENU] → [REC SETTINGS] → [TC] → [TC OUT] to [TCG/TCR].
  These settings are not required, if the internal device uses LTC or VITC output multiplexed to the SDI output.

■ **When two cameras are connected and one is used as a reference camera**

When using two cameras in which one is used as a reference camera to slave the time code, make the connection as follows.

Reference camera

Slave camera

<TC IN/OUT> terminal

<GENLOCK IN> terminal
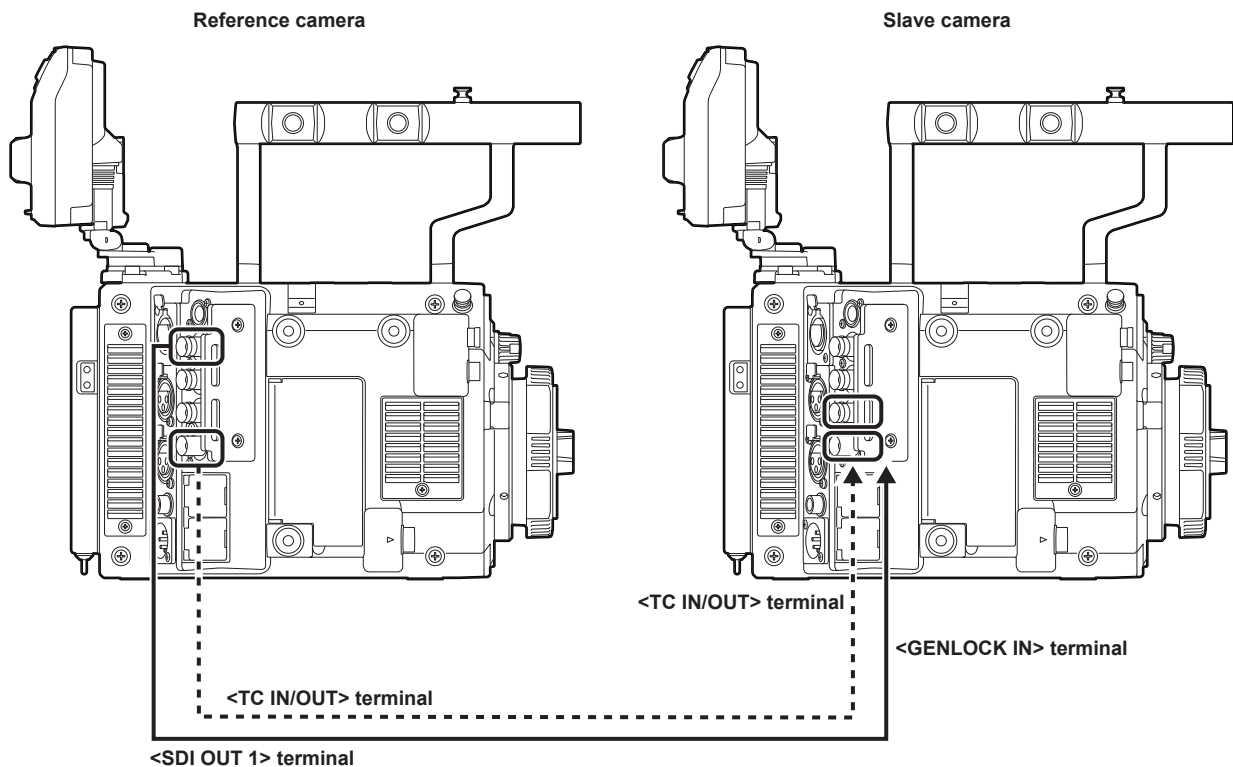
<TC IN/OUT> terminal

<SDI OUT 1> terminal

NOTE

- Sets the <TC IN/OUT> terminal to output or input in [MENU] → [REC SETTINGS] → [TC] → [TC IN/OUT SEL].
- By setting [MENU] → [REC SETTINGS] → [TC] → [TC OUT REF] to [RECORDING] on both cameras, the two cameras will be able to record with the same time code on the video at the same time.

Connection through the <USB DEVICE> terminal

Connecting to a computer in the USB device mode

Connecting to a computer

USB cable (optional)
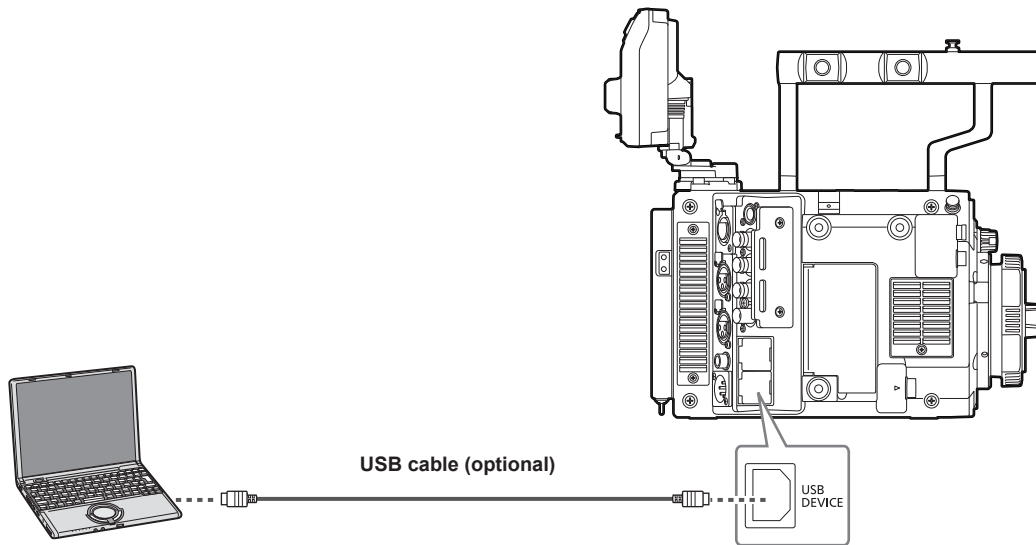
USB DEVICE

Fig. 1

1 **Connect the USB cable to the <USB DEVICE> terminal (device). (Fig. 1)**

2 **Set the [MENU] → [SYSTEM SETTINGS] → [INFORMATION] to [USB].**

For details, refer to "Setting menu basic operations" (page 132).
During USB connection, [USB DEVICE CONNECTED] is displayed in the center of the control panel.
If it is not connected properly, [USB DEVICE DISCONNECTED] is displayed.

3 **Exit the USB device mode.**

There are following two methods:
● Turn the power switch of the camera to <l>.
● Press the <EXIT> button.

📝 *NOTE*

・ The USB 2.0 cable is not supplied with the camera. Prepare a commercial USB 2.0 cable (double-shielded for noise suppression).
・ A USB connection cable of up to 5 m is supported, however, a cable of 3 m or shorter is recommended as preferable.
・ When the camera is operating in the USB device mode, no camera shooting, recording/playback operation or clip thumbnail operation is allowed.
・ When the camera is operating in the USB device mode, the P2 card remaining capacity and status are not displayed. Also, video/audio cannot be output or displayed.

Chapter 10   Menu Operations

This chapter describes how to operate the camera menus, the structure, and details of the setting menu.

Setting menu structure

Menu configuration

The setting menu is configured as follows.

[SYSTEM SETTINGS]	Sets the system in general. The system frequency, number of recorded pixels, recording format, and recording method are set here.
[CAMERA SETTINGS]	Sets the basic camera setting.
[SCENE FILE SETTINGS]	The image quality adjustment of the camera is set in detail when [MENU] → [SYSTEM SETTINGS] → [COLOR SETTINGS] → [MAIN] is set to [SCENE1] to [SCENE5].
[REC SETTINGS]	The various setting items of the recording function of the camera.
[AUDIO SETTINGS]	The various setting items for the audio recording function of the camera.
[OUTPUT SETTINGS]	The various setting items for the video output function of the camera.
[FILE]	Performs file-related operations such as reading/writing menu settings data from/to an SD memory card.
[PERIPHERAL]	Applies settings related to functions used in conjunction with peripheral devices, such as network and GPS devices.

[SCENE FILE SETTINGS]

The camera is equipped with the [SCENE FILE SETTINGS] menu allowing to perform the detailed image quality adjustment of the camera video.

[SCENE FILE SETTINGS] cannot be selected when [MENU] → [SYSTEM SETTINGS] → [COLOR SETTINGS] → [MAIN] is set to [V-Log].

Setting menu display

Setting menu basic operations

You can change camera settings using the setting menu according to the shooting scene and recording details.

Set data are written and saved in the internal memory of the camera.

Operate with the control panel. It can also be operated with the buttons on the camera unit when the control panel is not installed.
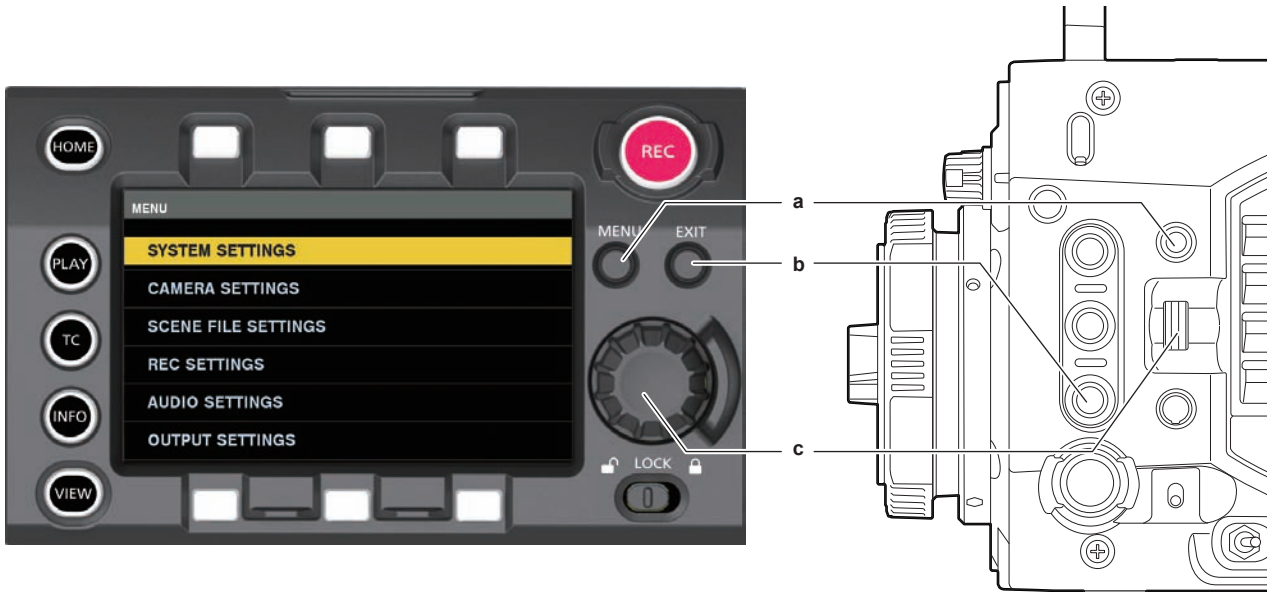
a: **<MENU> button**

b: **<EXIT> button**

c: **Jog dial button/<IRIS/SEL> dial button**

1 **Press the <MENU> button when not recording.**

- The [MENU] screen is displayed on the control panel.
- The [MENU] screen is also displayed in the viewfinder connected to the <VF SDI> terminal when the <MENU> button on the camera is pressed.

2 **Turn the jog dial button (<IRIS/SEL>) and align the cursor to the corresponding menu item.**

- The cursor will move up or down when the jog dial button (<IRIS/SEL> dial button) is turned.

3 **Press the jog dial button (<IRIS/SEL> dial button).**

- The next level of screen is displayed.
  If there is another level, press the jog dial button again to display it.
- The current setting value of the item selected on the right is displayed.

4 **Turn the jog dial button (<IRIS/SEL>) and align the cursor to the corresponding item.**

5 **Press the jog dial button (<IRIS/SEL> dial button).**

The item is in the setting status.
If there are two items, the setting value selection frame may be displayed on the right.

6 **Turn the jog dial button (<IRIS/SEL>) and align the cursor to the corresponding item.**

7 **Press the jog dial button (<IRIS/SEL> dial button).**

Setting is completed.

8 **Press the <EXIT> button to close the menu.**

Setting menu initialization

The values set in the setting menu can be reset to the factory setting.

1 **Select [LOAD FACTORY DATA] from [MENU] → [SYSTEM SETTINGS] → [INITIALIZE].**

[MENU] setting values are reset to factory settings.

Menu list

[SYSTEM SETTINGS]

Sets the system in general.

Item		Description of settings
[SYSTEM MODE]	[FREQUENCY]	Sets the system frequency. The basic system of the camera is determined by five settings of [FREQUENCY]/[SDI RAW]/[MAIN PIXEL]/[MAIN CODEC]/[HIGH SPEED]. Restarting the system is necessary if basic system setting is changed. Dialog prompting for restart is displayed when one of the 5 settings is changed. Restart by operating the power switch of the camera, or by pressing the jog dial button and following the on-screen instruction. **[23.98p], [24.00p], [25.00p], [29.97p], [50.00p], [59.94p], [50.00i], [59.94i]** ● Factory setting: [23.98p]
	[SDI RAW]	Sets the number of RAW pixels and the bit depth of the output from the <SDI OUT 1>/<SDI OUT 2> terminal. **[OFF], [4K/10bit], [4K/12bit], [2K/10bit], [UHD/10bit], [UHD/12bit], [HD/10bit]** ● Factory setting: [OFF]
	[MAIN PIXEL]	Sets the main recorder's number of recording pixels. Selectable items vary depending on the [SDI RAW] setting. **[4096×2160], [3840×2160], [2048×1080], [2048×1080 CROP], [1920×1080], [1920×1080 CROP]** ● Factory setting: [4096×2160] Selectable items vary when [SDI RAW] is set as follows. ● [2048×1080 CROP]/[1920×1080 CROP] cannot be selected when it is set to [OFF]. ● Only [2048×1080] can be selected when it is set to [4K/12bit]. ● Only [1920×1080] can be selected when it is set to [UHD/12bit].
	[MAIN CODEC]	Sets the recording codec of the main recorder. Selectable items vary depending on the [FREQUENCY]/[SDI RAW]/[MAIN PIXEL] setting. **[AVC-Intra4K 422], [AVC-Intra4K-LT], [AVC-Intra2K 444], [AVC-Intra2K 422], [AVC-Intra2K-LT], [AVC-Intra444], [AVC-Intra422], [AVC-Intra-LT], [AVC-Intra100], [AVC-LongG50], [AVC-LongG25], [ProRes 4444 XQ], [ProRes 4444], [ProRes 422 HQ], [ProRes 422], [ProRes 422 LT], [OFF]** [OFF] can be set when [SDI RAW] is set to anything other than [OFF]. ● Factory setting: [AVC-Intra4K 422]
	[PROXY CODEC]	Sets the codec of the proxy recording. At the same time, it switches enable/disable of the proxy data recording. **[AVC-Proxy G6], [OFF]** ● Factory setting: [AVC-Proxy G6]
	[PROXY SLOT]	Sets the slot to record the proxy. **[MAIN & SUB], [MAIN], [SUB]** [NORMAL+Audio] cannot be recorded when the variable frame rate function is enabled with [MAIN & SUB], [MAIN]. The proxy recorded in the SD memory card cannot be transferred via network. ● Factory setting: [MAIN & SUB]
	[VFR PROXY REC]	Sets the operation of the sub recorder during the variable frame rate operation. **[VFR up to 60p (50p)], [NORMAL+Audio]** ● Factory setting: [VFR up to 60p]
	[HIGH SPEED]	Sets the frame rate when [SDI RAW] is set to [2K/10bit] or [HD/10bit], and [MAIN CODEC] is set to [OFF]. **[OFF], [ON]** ● Factory setting: [OFF]
[COLOR SETTING]	[MAIN]	Sets the colors of videos (entire camera system) recorded in the main recorder. **[V-Log]/[SCENE1]/[SCENE2]/[SCENE3]/[SCENE4]/[SCENE5]** ● Factory setting: [V-Log]
	[GRADING]	Sets whether to apply the grading process. This only enabled when [V-Log] is set in [MAIN]. **[Internal]:** Sets grading with the control panel. **[OFF]:** Disables the grading process. **[External App]:** Sets the grading using an external application. ● Factory setting: [OFF]
	[PROXY]	Sets the color of video recorded as proxy. Selectable items vary depending on the [MAIN] setting. When [MAIN] is set to [V-Log] and [GRADING] is set to [Internal] or [External App] **[V-Log]/[GRADING]** When [MAIN] is set to [V-Log] and [GRADING] is set to [OFF] **[V-Log]/[V-709]** When [MAIN] is set to [SCENE1]/[SCENE2]/[SCENE3]/[SCENE4]/[SCENE5] **[SCENE1]/[SCENE2]/[SCENE3]/[SCENE4]/[SCENE5]** ● Factory setting: [V-Log]
	[3D LUT]	Sets the grading process method when [GRADING] is set to [Internal] or [External App]. When [GRADING] is set to [Internal] or [External App] **[OFF]/[V-709]/[LOADED FILE]** **[FILE SEL]:** Reads the 3D LUT applied when [LOADED FILE] is selected from the SD memory card. **[SAVE AS(SD CARD)]:** Writes the 3D LUT applied currently to the SD memory card. When [GRADING] is set to [OFF] **[OFF]** ● Factory setting: [OFF]

Item		Description of settings
	[PLAYBACK GRADING]	Sets if the grading process is applied or not on the playback video. **[OFF], [ON]** ● Factory setting: [OFF]
	[CDL]	Sets the grading process method when [GRADING] is set to [Internal] or [External App]. When [GRADING] is set to [Internal] or [External App] **[ON]/[OFF]** **[FILE SEL]:** Reads the CDL setting from the SD memory card. **[SAVE AS(SD CARD)]:** Writes the current CDL setting to the SD memory card. When [GRADING] is set to [OFF] **[OFF]** ● Factory setting: [OFF]
	[SLOPE-R]	Sets the value of [SLOPE-R]. **[0.5] - [2.0]** (0.01 step) ● Factory setting: [1.00]
	[SLOPE-G]	Sets the value of [SLOPE-G]. **[0.5] - [2.0]** (0.01 step) ● Factory setting: [1.00]
	[SLOPE-B]	Sets the value of [SLOPE-B]. **[0.5] - [2.0]** (0.01 step) ● Factory setting: [1.00]
	[OFFSET-R]	Sets the value of [OFFSET-R]. **[−0.5] - [0.5]** (0.01 step) ● Factory setting: [0.00]
	[OFFSET-G]	Sets the value of [OFFSET-G]. **[−0.5] - [0.5]** (0.01 step) ● Factory setting: [0.00]
	[OFFSET-B]	Sets the value of [OFFSET-B]. **[−0.5] - [0.5]** (0.01 step) ● Factory setting: [0.00]
	[POWER-R]	Sets the value of [POWER-R]. **[0.5] - [2.0]** (0.01 step) ● Factory setting: [1.00]
	[POWER-G]	Sets the value of [POWER-G]. **[0.5] - [2.0]** (0.01 step) ● Factory setting: [1.00]
	[POWER-B]	Sets the value of [POWER-B]. **[0.5] - [2.0]** (0.01 step) ● Factory setting: [1.00]
	[SATURATION]	Sets the value of [SATURATION]. **[0] - [2.0]** (0.01 step) ● Factory setting: [1.00]
	[SDI OUT 1]	Sets the output image from the <SDI OUT 1> terminal. Selectable items vary depending on the [MAIN] setting. When [MAIN] is set to [V-Log] and [GRADING] is set to [Internal] or [External App] **[V-Log]/[GRADING]** When [MAIN] is set to [V-Log] and [GRADING] is set to [OFF] **[V-Log]/[V-709]** When [MAIN] is set to [SCENE1]/[SCENE2]/[SCENE3]/[SCENE4]/[SCENE5] **[SCENE1]/[SCENE2]/[SCENE3]/[SCENE4]/[SCENE5]** ● Factory setting: [V-Log]
	[SDI OUT 2]	Sets the output image from the <SDI OUT 2> terminal. Selectable items vary depending on the [MAIN] setting. When [MAIN] is set to [V-Log] and [GRADING] is set to [Internal] or [External App] **[V-Log]/[GRADING]** When [MAIN] is set to [V-Log] and [GRADING] is set to [OFF] **[V-Log]/[V-709]** When [MAIN] is set to [SCENE1]/[SCENE2]/[SCENE3]/[SCENE4]/[SCENE5] **[SCENE1]/[SCENE2]/[SCENE3]/[SCENE4]/[SCENE5]** ● Factory setting: [V-Log]
	[VF SDI]	Sets the output image from the <VF SDI> terminal. Selectable items vary depending on the [MAIN] setting. When [MAIN] is set to [V-Log] and [GRADING] is set to [Internal] or [External App] **[V-Log]/[GRADING]** ● [V-Log]/[V-709] when [SURROUND VIEW SW] is set to [ON]. When [MAIN] is set to [V-Log] and [GRADING] is set to [OFF] **[V-Log]/[V-709]** When [MAIN] is set to [SCENE1]/[SCENE2]/[SCENE3]/[SCENE4]/[SCENE5] **[SCENE1]/[SCENE2]/[SCENE3]/[SCENE4]/[SCENE5]** ● Factory setting: [V-Log]
[ANAMORPHIC DESQUEEZE]	[PROXY & SDI OUT]	Sets if the video to be recorded in the proxy and the SDI output video is to be de-squeezed. **[ON], [OFF]** ● Factory setting: [OFF]
	[VF SDI]	Sets if the output video from the <VF SDI> terminal is to be de-squeezed. **[ON], [OFF]** ● Factory setting: [OFF]

Item		Description of settings
	[DESQUEEZE RATIO]	Sets the de-squeeze ratio. **[1.3x]:** De-squeeze 1.3 times in horizontal direction. **[1.3xmag]:** It will be in aspect ratio of 2.39:1 for mastering generated from the image de-squeezed 1.3 times in horizontal direction. **[2.0x]:** De-squeeze 2.0 times in horizontal direction. **[2.0xmag]:** It will be in aspect ratio of 2.39:1 for mastering generated from the image de-squeezed 2.0 times in horizontal direction. ● Factory setting: [1.3x]
[IMAGE INVERT]	[PROXY & SDI OUT]	Sets if the video to be recorded in the proxy and the SDI output video is to be inverted. The thumbnail of the clip to be recorded in the main slot is reversed when set to [ON]. (The recorded video is not reversed.) **[ON], [OFF]** ● Factory setting: [OFF]
	[VF SDI]	Sets if the output video from the <VF SDI> terminal is to be inverted. **[ON], [OFF]** ● Factory setting: [OFF]
	[INVERT SELECT]	Sets the type of inversion. **[HORIZONTAL]:** Invert horizontally **[VERTICAL]:** Invert vertically **[180° ROTATE]:** Invert vertically and horizontally ● Factory setting: [HORIZONTAL]
[USER SWITCHES]	[USER1]	Sets the function to be assigned to the <USER 1> button. **[INHIBIT], [SIX USER BUTTONS], [AWB], [Y GET], [EXPAND1], [EXPAND2], [OPEN IRIS F.A.], [IN COLOR F.A.], [SQ. F.A.], [MONO F.A.], [WFM], [BARS], [ONE PUSH A. IRIS], [FALSE COLOR], [ZEBRA], [VF SDI COLOR], [SDI OUT 1 COLOR], [SDI OUT 2 COLOR], [VF SDI CLEAN], [VF SDI MARKER], [VF SDI DESQUEEZE], [VF SDI IMAGE INVERT], [SMOOTH MODE], [TEXT MEMO], [SHOT MARK], [REC SW], [AUDIO MON VOL], [AUDIO IN VOL], [AUDIO MONITOR CH], [DIRECT VOL CTRL], [VFR SW], [CHECK LAST CLIP START], [CHECK LAST CLIP END]** Even if [BARS] is assigned, this item will not operate when [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. The color bar is not output from the <SDI OUT 1>/<SDI OUT 2> terminal even if [BARS] is assigned when [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [SDI RAW] is set to anything other than [OFF]. ● Factory setting: [INHIBIT]
	[USER2]	Sets the function to be assigned to the <USER 2> button. **[INHIBIT], [SIX USER BUTTONS], [AWB], [Y GET], [EXPAND1], [EXPAND2], [OPEN IRIS F.A.], [IN COLOR F.A.], [SQ. F.A.], [MONO F.A.], [WFM], [BARS], [ONE PUSH A. IRIS], [FALSE COLOR], [ZEBRA], [VF SDI COLOR], [SDI OUT 1 COLOR], [SDI OUT 2 COLOR], [VF SDI CLEAN], [VF SDI MARKER], [VF SDI DESQUEEZE], [VF SDI IMAGE INVERT], [SMOOTH MODE], [TEXT MEMO], [SHOT MARK], [REC SW], [AUDIO MON VOL], [AUDIO IN VOL], [AUDIO MONITOR CH], [DIRECT VOL CTRL], [VFR SW], [CHECK LAST CLIP START], [CHECK LAST CLIP END]** Even if [BARS] is assigned, this item will not operate when [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. The color bar is not output from the <SDI OUT 1>/<SDI OUT 2> terminal even if [BARS] is assigned when [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [SDI RAW] is set to anything other than [OFF]. ● Factory setting: [INHIBIT]
	[USER3]	Sets the function to be assigned to the <USER 3> button. **[INHIBIT], [SIX USER BUTTONS], [AWB], [Y GET], [EXPAND1], [EXPAND2], [OPEN IRIS F.A.], [IN COLOR F.A.], [SQ. F.A.], [MONO F.A.], [WFM], [BARS], [ONE PUSH A. IRIS], [FALSE COLOR], [ZEBRA], [VF SDI COLOR], [SDI OUT 1 COLOR], [SDI OUT 2 COLOR], [VF SDI CLEAN], [VF SDI MARKER], [VF SDI DESQUEEZE], [VF SDI IMAGE INVERT], [SMOOTH MODE], [TEXT MEMO], [SHOT MARK], [REC SW], [AUDIO MON VOL], [AUDIO IN VOL], [AUDIO MONITOR CH], [DIRECT VOL CTRL], [VFR SW], [CHECK LAST CLIP START], [CHECK LAST CLIP END]** Even if [BARS] is assigned, this item will not operate when [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. The color bar is not output from the <SDI OUT 1>/<SDI OUT 2> terminal even if [BARS] is assigned when [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [SDI RAW] is set to anything other than [OFF]. ● Factory setting: [INHIBIT]
	[USER TOGGLE(USER4)]	Sets the function to be assigned to the <TOGGLE/WB> button. **[WB], [SHUTTER], [EI]** ● Factory setting: [WB]
	[USER5]	Sets the function to be assigned to the control panel operation button. The control panel operation button functions as a USER button. Assign [SIX USER BUTTONS] to the <USER 1> to <USER 3> buttons. **[INHIBIT], [EXPAND1], [EXPAND2], [OPEN IRIS F.A.], [IN COLOR F.A.], [SQ. F.A.], [MONO F.A.], [FALSE COLOR], [VF SDI COLOR], [SDI OUT 1 COLOR], [SDI OUT 2 COLOR], [SMOOTH MODE], [VFR SW]** ● Factory setting: [INHIBIT]
	[USER6]	Sets the function to be assigned to the control panel operation button. The control panel operation button functions as a USER button. Assign [SIX USER BUTTONS] to the <USER 1> to <USER 3> buttons. **[INHIBIT], [EXPAND1], [EXPAND2], [OPEN IRIS F.A.], [IN COLOR F.A.], [SQ. F.A.], [MONO F.A.], [FALSE COLOR], [VF SDI COLOR], [SDI OUT 1 COLOR], [SDI OUT 2 COLOR], [SMOOTH MODE], [VFR SW]** ● Factory setting: [INHIBIT]

Item		Description of settings
	[USER7]	Sets the function to be assigned to the control panel operation button. The control panel operation button functions as a USER button. Assign [SIX USER BUTTONS] to the <USER 1> to <USER 3> buttons. **[INHIBIT], [EXPAND1], [EXPAND2], [OPEN IRIS F.A.], [IN COLOR F.A.], [SQ. F.A.], [MONO F.A.], [FALSE COLOR], [VF SDI COLOR], [SDI OUT 1 COLOR], [SDI OUT 2 COLOR], [SMOOTH MODE], [VFR SW]** ● Factory setting: [INHIBIT]
	[USER8]	Sets the function to be assigned to the control panel operation button. The control panel operation button functions as a USER button. Assign [SIX USER BUTTONS] to the <USER 1> to <USER 3> buttons. **[INHIBIT], [EXPAND1], [EXPAND2], [OPEN IRIS F.A.], [IN COLOR F.A.], [SQ. F.A.], [MONO F.A.], [FALSE COLOR], [VF SDI COLOR], [SDI OUT 1 COLOR], [SDI OUT 2 COLOR], [SMOOTH MODE], [VFR SW]** ● Factory setting: [INHIBIT]
	[USER9]	Sets the function to be assigned to the control panel operation button. The control panel operation button functions as a USER button. Assign [SIX USER BUTTONS] to the <USER 1> to <USER 3> buttons. **[INHIBIT], [EXPAND1], [EXPAND2], [OPEN IRIS F.A.], [IN COLOR F.A.], [SQ. F.A.], [MONO F.A.], [FALSE COLOR], [VF SDI COLOR], [SDI OUT 1 COLOR], [SDI OUT 2 COLOR], [SMOOTH MODE], [VFR SW]** ● Factory setting: [INHIBIT]
	[USER10]	Sets the function to be assigned to the control panel operation button. The control panel operation button functions as a USER button. Assign [SIX USER BUTTONS] to the <USER 1> to <USER 3> buttons. **[INHIBIT], [EXPAND1], [EXPAND2], [OPEN IRIS F.A.], [IN COLOR F.A.], [SQ. F.A.], [MONO F.A.], [FALSE COLOR], [VF SDI COLOR], [SDI OUT 1 COLOR], [SDI OUT 2 COLOR], [SMOOTH MODE], [VFR SW]** ● Factory setting: [INHIBIT]
	[USER GRIP1]	Sets the function to be assigned to the <USER GRIP1> button of the grip module. **[INHIBIT], [SIX USER BUTTONS], [AWB], [Y GET], [EXPAND1], [EXPAND2], [OPEN IRIS F.A.], [IN COLOR F.A.], [SQ. F.A.], [MONO F.A.], [WFM], [BARS], [ONE PUSH A. IRIS], [FALSE COLOR], [ZEBRA], [VF SDI COLOR], [SDI OUT 1 COLOR], [SDI OUT 2 COLOR], [VF SDI CLEAN], [VF SDI MARKER], [VF SDI DESQUEEZE], [VF SDI IMAGE INVERT], [SMOOTH MODE], [TEXT MEMO], [SHOT MARK], [REC SW], [AUDIO MON VOL], [AUDIO IN VOL], [AUDIO MONITOR CH], [DIRECT VOL CTRL], [VFR SW]** Even if [BARS] is assigned, this item will not operate when [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. The color bar is not output from the <SDI OUT 1>/<SDI OUT 2> terminal even if [BARS] is assigned when [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [SDI RAW] is set to anything other than [OFF]. ● Factory setting: [INHIBIT]
	[USER GRIP2]	Sets the function to be assigned to the <USER GRIP2> button of the grip module. **[INHIBIT], [SIX USER BUTTONS], [AWB], [Y GET], [EXPAND1], [EXPAND2], [OPEN IRIS F.A.], [IN COLOR F.A.], [SQ. F.A.], [MONO F.A.], [WFM], [BARS], [ONE PUSH A. IRIS], [FALSE COLOR], [ZEBRA], [VF SDI COLOR], [SDI OUT 1 COLOR], [SDI OUT 2 COLOR], [VF SDI CLEAN], [VF SDI MARKER], [VF SDI DESQUEEZE], [VF SDI IMAGE INVERT], [SMOOTH MODE], [TEXT MEMO], [SHOT MARK], [REC SW], [AUDIO MON VOL], [AUDIO IN VOL], [AUDIO MONITOR CH], [DIRECT VOL CTRL], [VFR SW]** Even if [BARS] is assigned, this item will not operate when [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. The color bar is not output from the <SDI OUT 1>/<SDI OUT 2> terminal even if [BARS] is assigned when [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [SDI RAW] is set to anything other than [OFF]. ● Factory setting: [INHIBIT]
[SIDE LOCK]	[REC(FRONT)]	Sets if the <REC> button on the camera is to be locked or not with the <LOCK> switch on the camera. **[LOCK]:** It will be locked. **[UNLOCK]:** It will not be locked. ● Factory setting: [UNLOCK]
	[USER1/PLAY]	Sets if the <USER1>/<PLAY> button is to be locked or not with the <LOCK> switch on the camera. **[LOCK]:** It will be locked. **[UNLOCK]:** It will not be locked. ● Factory setting: [LOCK]
	[USER2/INFO]	Sets if the <USER2>/<INFO> button is to be locked or not with the <LOCK> switch on the camera. **[LOCK]:** It will be locked. **[UNLOCK]:** It will not be locked. ● Factory setting: [LOCK]
	[USER3/EXT]	Sets if the <USER3>/<EXT> button is to be locked or not with the <LOCK> switch on the camera. **[LOCK]:** It will be locked. **[UNLOCK]:** It will not be locked. ● Factory setting: [LOCK]
	[IRIS/SEL]	Sets if the <IRIS/SEL> dial button is to be locked or not with the <LOCK> switch on the camera. **[LOCK]:** It will be locked. **[UNLOCK]:** It will not be locked. ● Factory setting: [LOCK]

Item		Description of settings
	[MENU]	Sets if the <MENU> button is to be locked or not with the <LOCK> switch on the camera. **[LOCK]:** It will be locked. **[UNLOCK]:** It will not be locked. ● Factory setting: [LOCK]
	[SYS CHECK]	Sets if the <SYSTEM CHK> button is to be locked or not with the <LOCK> switch on the camera. **[LOCK]:** It will be locked. **[UNLOCK]:** It will not be locked. ● Factory setting: [LOCK]
	[TOGGLE]	Sets if the <TOGGLE/WB> is to be locked or not with the <LOCK> switch on the camera. **[LOCK]:** It will be locked. **[UNLOCK]:** It will not be locked. ● Factory setting: [LOCK]
[CARDS/MEDIA]	[FORMAT MEDIA]	Formats the card in the specified slot after the format menu is selected. **[MAIN SLOT], [SUB SLOT]** Data deleted as a result of formatting cannot be restored. Always check the data before formatting.
	[MEDIA END ALARM]	Sets if the alarm is to be sounded when there is no remaining capacity in the memory card. **[ON], [OFF]** ● Factory setting: [ON]
[POWER MANAGEMENT]	[DC IN SOURCE]	Sets the type of the external power supply input into the <DC IN> terminal. **[DC POWER SUPPLY]:** Selected when connecting an AC adaptor. In this case, the remaining battery charge level is not displayed. **[BATTERY]:** Selected when connecting a battery to the <DC IN> terminal. Remaining charge level is detected from the voltage level. ● Factory setting: [DC POWER SUPPLY]
	[DC IN BATTERY SETTINGS]	Following items are settings for the external battery connected to the <DC IN> terminal.
	[- FULL VOLT]	Sets the voltage to be displayed in the remaining charge level full display when an external battery is input from the <DC IN> terminal. **[13.0V] - [17.0V]** (0.1 V step) ● Factory setting: [15.5V]
	[- NEAR END VOLT]	Sets the remaining charge level near end voltage when an external battery is input from the <DC IN> terminal. **[11.0V] - [15.0V]** (0.1 V step) ● Factory setting: [13.2V]
	[- END VOLT]	Sets the remaining charge level end voltage when an external battery is input from the <DC IN> terminal. **[11.0V] - [15.0V]** (0.1 V step) ● Factory setting: [12.5V]
	[ONBOARD BATTERY SETTINGS]	Following items are settings for the external battery connected to the battery holder.
	[- BATTERY SELECT]	Selected according to the battery used. **[DIONIC], [HyTRON], [ENDURA], [PAG]:** The remaining charge level is detected and a warning is displayed according to the [- NEAR END INFO] and [- END VOLT] settings. When there is no remaining charge level information, the remaining charge level is detected from the voltage level. **[other]:** Remaining charge level is detected from the voltage level. ● Factory setting: [DIONIC]
	[- FULL VOLT]	Sets the voltage in the remaining charge level full display when the battery remaining charge level is detected from the voltage level. **[13.0V] - [17.0V]** (0.1 V step) ● Factory setting: [15.5V]
	[- NEAR END VOLT]	Sets the remaining charge level near end voltage when the battery remaining charge level is detected from the voltage level. **[11.0V] - [15.0V]** (0.1 V step) ● Factory setting: [13.2V]
	[- END VOLT]	Sets the remaining charge level end voltage when the battery remaining charge level is detected from the voltage level. **[11.0V] - [15.0V]** (0.1 V step) ● Factory setting: [12.5V]
	[- NEAR END INFO]	Sets the percentage value of the remaining charge level near end when remaining charge level information is acquired from the battery. **[4%], [5%], [6%], [7%], [8%], [9%], [10%], [12%], [14%], [16%], [18%], [20%]** ● Factory setting: [5%]
	[- END INFO]	Sets the percentage value of the remaining charge level end when remaining charge level information is acquired from the battery. **[1%] - [10%]** (1% step) ● Factory setting: [1%]
	[END ALARM]	Sets whether to sound an alarm at battery remaining charge level end. **[ON], [OFF]** ● Factory setting: [ON]
[FAN]	[FAN SPEED]	Select the rotation speed of the fan. **[REC AUTO]:** The rotation speed is lowered simultaneously with start of recording. However, the fan will rotate in maximum speed when it reaches the specified temperature. **[MATCH CODEC]:** The fan will operate in rotation speed appropriate for each in accordance with [MAIN CODEC]. **[ALWAYS FULL]:** The fan will always rotate at the maximum speed. ● Factory setting: [REC AUTO]

Item		Description of settings
[GENLOCK]	[GENLOCK MODE]	Switches the synchronization signal of the camera signal. **[INT]:** Synchronizes to the internal standard signal. **[EXT]:** Synchronizes to the entered external standard signal. ● Factory setting: [INT]
	[H PHASE COARSE]	Roughly adjusts to match horizontal synchronization phase when building a system. **[−100] - [100]** ● Factory setting: [0]
	[H PHASE FINE]	Minutely adjusts to match horizontal synchronization phase when building a system. **[−100] - [100]** ● Factory setting: [0]
[CONTROL DISPLAY]	[BRIGHTNESS]	Adjusts the brightness of the control panel. **[−15] - [15]** ● Factory setting: [0]
	[COLOR LEVEL]	Adjusts the color levels of the control panel. **[−15] - [15]** ● Factory setting: [0]
	[CONTRAST]	Adjusts the contrast of the control panel. **[−30] - [30]** ● Factory setting: [0]
	[BACK LIGHT]	Sets the brightness of the control panel backlight. **[−1]:** Will be darker than [0]. **[0]:** Standard brightness. **[1]:** Will be brighter than [0]. ● Factory setting: [0]
	[BUTTON LED]	Illuminates each button of the control panel and the camera. **[ON], [OFF]** ● Factory setting: [ON]
[CLOCK]	[CLOCK SETTING]	Sets the built-in calendar (year/month/day) and time. **[YEAR]:** [2016] - [2037] **[MONTH]:** [JAN] - [DEC] ([1] - [12]) **[DAY]:** [1] - [31] ([28], [29], [30]) **[HOUR]:** [0] - [23] **[MINUTE]:** [0] - [59]
	[TIME ZONE]	Sets the time zone. After setting the time, when changing the time zone setting, the displayed and registered times switch to the time with the time difference. **[−12:00] - [+13:00]** (30-minute interval, without [+12:30] and with [+12:45])
	[DATE FORMAT]	Sets the display order of year/month/day. This is also applied to the recording date displayed in the clip properties. **[Y-M-D]/[M-D-Y]/[D-M-Y]** ● Factory setting: [Y-M-D]
[INFORMATION]	[OPERATION TIME]	**[TOTAL OPERATION]:** Displays the operation time of the camera. **[IRIS DIAL]:** Displays the total number of upward turn or downward turn with the operation of the <IRIS/SEL> dial button on the camera every 100 operations. ("T" indicates the number.)
	[VERSION]	Displays the information of the camera. **[MODEL]:** Displays the product name. **[SERIAL NO.]:** Displays the serial number. **[PRODUCT VERSION]:** Displays the version.
	[UPDATE]	Performs an update of the camera firmware. (Enabled only when there is a dedicated update file on the SD memory card.) **[YES], [NO]**
	[USB]	Switches the camera to mode for USB device function. **[YES], [NO]**
	[TRACE LOG]	Reads the camera's execution log from an SD memory card. **[YES], [NO]**
	[SENSOR TEMP]	Displays the temperature around the sensor of the camera.
[LANGUAGE]		Switches the display language of the menu. **[ENGLISH], [CHINESE]** ● Factory setting: [ENGLISH]
[INITIALIZE]	[LOAD FACTORY DATA]	Returns the menu values to their factory settings. **[YES], [NO]**

[CAMERA SETTINGS]

Sets the basic camera function.

[WHITE]/[BLACK]/[EI] is enabled only when [MENU] → [SYSTEM SETTINGS] → [COLOR SETTING] → [MAIN] is set to [V-Log].

Item		Description of settings
[FPS]	[VFR SW]	Enables/disables the variable frame rate function. **[ON]:** Enables the variable frame rate function. The arbitrary frame rate can be set in [VALUE]. Audio cannot be recorded. **[OFF]:** Disables the variable frame rate function. [VFR SW] will be fixed to [ON] when [SYSTEM SETTINGS] → [SYSTEM MODE] → [MAIN CODEC] is set to [AVC-Intra4K-LT]/[AVC-Intra2K-LT]/[AVC-Intra-LT]. However, it will not be fixed when [FREQUENCY] in [AVC-Intra4K-LT] is set to [50.00p] or [59.94p]. ● Factory setting: [OFF]
	[VALUE]	Selects from a maximum of 150 registered values. ● Factory setting: [23.98fps]
	[ADD]	Newly registers to the list. The value newly registered can be selected with [VALUE]. It will replace the currently selected value when there are 150 registered already.
	[DELETE]	Deletes from the list. Deletion is not possible when there is only one registered value. **[YES], [NO]**
[WHITE]	[AWB]	Executes automatic white balance. **[EXECUTE], [CANCEL]**
	[VALUE]	Selects a value from a maximum of 12 registered values. Preset values that can be selected in the factory settings are [3200K+0.0GMg], [4300K+0.0GMg], [5600K+0.0GMg], and [6300K+0.0GMg]. ● Factory setting: [3200K+0.0GMg]
	[ADD]	Newly registers to the list. The value newly registered can be selected with [VALUE]. It will replace the currently selected value when there are 12 registered already.
	[DELETE]	Deletes from the list. Deletion is not possible when there is only one registered value. **[YES], [NO]**
[BLACK]	[ABB]	Executes automatic black balance. When executing automatic black balance, put the cap on the lens to keep any light from entering the image sensor. **[EXECUTE], [CANCEL]**
[NR]	[ISO800]	Switches the noise reduction effect in the range of ISO200 to ISO4000. **[ON], [OFF]** This will be in the range between ISO200 and ISO2000 when [MAIN CODEC] is set to [AVC-Intra2K-LT]/[AVC-Intra-LT], and [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. The range is within [NORMAL] in the [GAIN MODE] setting when the [MODE] setting in [EI] is set to [dB]. ● Factory setting: [OFF]
	[ISO5000]	Switches the noise reduction effect in the range of ISO1250 to ISO12800. **[ON], [OFF]** This will be in the range between ISO2500 and ISO6400 when [MAIN CODEC] is set to [AVC-Intra2K-LT]/[AVC-Intra-LT], and [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. The range is within [HIGH] in the [GAIN MODE] setting when the [MODE] setting in [EI] is set to [dB]. ● Factory setting: [OFF]
[EI]	[MODE]	Switches the EXPOSURE INDEX control unit. **[ISO], [dB]** ● Factory setting: [ISO]
	[ISO SELECT]	Selects the operation of ISO. **[NATIVE ONLY], [800BASE], [5000BASE]** ● Factory setting: [NATIVE ONLY]
	[NATIVE ISO]	Sets the value when [NATIVE ONLY] is selected. **[800ISO], [5000ISO]** This will be [400ISO] or [2500ISO] when [MAIN CODEC] is set to [AVC-Intra2K-LT]/[AVC-Intra-LT], and [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. ● Factory setting: [800ISO]
	[800BASE ISO]	Sets the value when [800BASE] is selected. **[200ISO], [250ISO], [320ISO], [400ISO], [500ISO], [640ISO], [800ISO], [1000ISO], [1250ISO], [1600ISO], [2000ISO], [2500ISO], [3200ISO], [4000ISO]** This will be [200ISO], [250ISO], [320ISO], [400ISO], [500ISO], [640ISO], [800ISO], [1000ISO], [1250ISO], [1600ISO], or [2000ISO] when [MAIN CODEC] is set to [AVC-Intra2K-LT]/[AVC-Intra-LT], and [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. ● Factory setting: [800ISO]
	[5000BASE ISO]	Sets the value when [5000BASE] is selected. **[1250ISO], [1600ISO], [2000ISO], [2500ISO], [3200ISO], [4000ISO], [5000ISO], [6400ISO], [8000ISO], [10000ISO], [12800ISO]** This will be [1250ISO], [1600ISO], [2000ISO], [2500ISO], [3200ISO], [4000ISO], [5000ISO], or [6400ISO] when [MAIN CODEC] is set to [AVC-Intra2K-LT]/[AVC-Intra-LT], and [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. ● Factory setting: [5000ISO]
	[GAIN MODE]	Sets the operation when [dB] is selected. **[NORMAL], [HIGH]** ● Factory setting: [NORMAL]
	[GAIN SELECT]	Sets the value when [dB] is selected. **[−12dB], [−10dB], [−8dB], [−6dB], [−4dB], [−2dB], [0dB], [2dB], [4dB], [6dB], [8dB], [10dB], [12dB], [14dB]** This will be [−6dB], [−4dB], [−2dB], [0dB], [2dB], [4dB], [6dB], [8dB], [10dB], [12dB], or [14dB] when [MAIN CODEC] is set to [AVC-Intra2K-LT]/[AVC-Intra-LT], and [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. ● Factory setting: [0dB]

Item		Description of settings
[SHUTTER]	[SW]	Enables/disables the shutter function. **[ON], [OFF]** ● Factory setting: [ON]
	[DISPLAY MODE]	Sets the shutter display unit. **[sec]:** Displays in time. **[deg]:** Displays at shutter open angle. ● Factory setting: [deg]
	[VALUE deg]	Selects the angle control ([deg]) value from the maximum of 12 registered values. Preset values that can be selected in the factory settings are [11.5d], [22.5d], [45.0d], [90.0d], [120.0d], [144.0d], [172.8d], [180.0d], [270.0d], and [358.0d]. ● Factory setting: [180.0d]
	[VALUE sec]	Selects the time control ([sec]) value from the maximum of 12 registered values. Preset values that can be selected in the factory settings are [1/60.0], [1/100.0], [1/120.0], [1/250], [1/500], [1/1000], and [1/2000]. ● Factory setting: [1/60.0]
	[ADD deg]	Newly registers the angle control ([deg]) value to the list. Newly registered value can be selected with [VALUE]. It will replace the currently selected value when there are 12 numbers registered already.
	[ADD sec]	Newly registers the time control ([sec]) value to the list. Newly registered value can be selected with [VALUE]. It will replace the currently selected value when there are 12 numbers registered already.
	[DELETE deg]	Deletes the angle control ([deg]) value from the list. Deletion is not possible when there is only one registered value. **[YES], [NO]**
	[DELETE sec]	Deletes the time control ([sec]) value from the list. Deletion is not possible when there is only one registered value. **[YES], [NO]**
[LENS SETTING]	[LENS CONNECT TYPE]	Sets the type of lens to be connected. **[EF]:** Lens controlled with EF **[LDS]:** Lens controlled with LDS (Lens Data System) **[B4]:** Lens controlled with 12-pin connector **[Cooke-i]:** Lens controlled with cooke/i communication **[OFF]:** Other lenses ● Factory setting: [EF]
	[A.IRIS TYPE]	Sets the location to control the speed of the auto iris when [LENS CONNECT TYPE] is set to [B4]. **[LENS]:** Lens volume **[CAM]:** Set with [A.IRIS SPEED] ● Factory setting: [LENS]
	[A.IRIS SPEED]	Sets the speed of the auto iris when [LENS CONNECT TYPE] is set to [B4] and [A.IRIS TYPE] is set to [CAM]. **[1] - [20]** ● Factory setting: [10]
	[A.IRIS LEVEL EFFECT]	Sets the target value during auto iris operation. **[0] - [100]** ● Factory setting: [50]
	[A.IRIS WINDOW]	Selects the auto iris detection window. **[NORMAL1]:** Window that is near screen center. **[NORMAL2]:** Window that is near screen bottom. **[CENTER]:** Window that is a spot in the screen center. ● Factory setting: [NORMAL1]
	[A.IRIS PEAK/AVE]	Sets the ratio included in the peak for auto iris standard. **[0] - [100]** ● Factory setting: [30]
	[ONE PUSH A. IRIS]	Executes the one-push auto iris. **[EXECUTE], [CANCEL]**
	[EF LENS IRIS MODE]	Sets the operation of the iris when [EF] is selected. **[MANUAL]:** Manual control **[AUTO]:** Auto control ● Factory setting: [MANUAL]
	[GRIP IRIS]	Sets the turning direction of the <IRIS> dial and the iris control of the grip module. **[RIGHT OPEN]:** The iris will open when the <IRIS> dial is turned clockwise. **[LEFT OPEN]:** The iris will open when the <IRIS> dial is turned counterclockwise. ● Factory setting: [RIGHT OPEN]

[SCENE FILE SETTINGS]

Sets the detailed image quality adjustment of the camera video.

[WHITE]/[BLACK]/[EI] is enabled only when [MENU] → [SYSTEM SETTINGS] → [COLOR SETTING] → [MAIN] is set to anything other than [V-Log].

Item		Description of settings
[NAME EDIT]		Edits the name of the scene file selected in the scene file menu. (Maximum eight characters)
[SCENE DATA]	[LOAD]	Selects and reads the scene file saved in the internal memory of the camera. **[YES], [NO]**

Item		Description of settings
	[SAVE]	Saves the current setting value as a scene file in the memory inside the camera by specifying the title and the file number. **[YES], [NO]**
	[INITIALIZE]	Returns the selected scene file (one to five) to the factory setting. **[YES], [NO]**
[WHITE]	[AWB]	Executes automatic white balance. **[EXECUTE], [CANCEL]**
	[VALUE]	Selects a value from a maximum of 12 registered values. Preset values that can be selected in the factory settings are [3200K+0.0GMg], [4300K+0.0GMg], [5600K+0.0GMg], and [6300K+0.0GMg]. ● Factory setting: [3200K+0.0GMg]
	[ADD]	Newly registers to the list. Newly registered value can be selected with [VALUE]. It will replace the currently selected value when there are 12 numbers registered already.
	[DELETE]	Deletes from the list. Deletion is not possible when there is only one registered value. **[YES], [NO]**
	[R GAIN]	Adjusts the Rch gain. **[−200] - [200]** ● Factory setting: [0]
	[B GAIN]	Adjusts the Bch gain. **[−200] - [200]** ● Factory setting: [0]
	[AWB OFFSET]	Sets the Rch gain and Bch gain value when performing automatic white balance. **[ON]:** Maintains and adds the values of [R GAIN] and [B GAIN] after performing automatic white balance. **[OFF]:** Resets the value of [R GAIN] and [B GAIN] after performing automatic white balance. ● Factory setting: [OFF]
	[SHOCKLESS WHITE]	Sets the transition time when switching preset values. **[OFF]:** Values are immediately switched. **[1]:** Switches in approximately one second. **[2]:** Switches in approximately two seconds. **[3]:** Switches in approximately five seconds. ● Factory setting: [OFF]
[BLACK]	[ABB]	Executes automatic black balance. When executing automatic black balance, put the cap on the lens to keep any light from entering the image sensor. **[EXECUTE], [CANCEL]**
	[M.PED]	Sets the master pedestal level. **[−100] - [100]** ● Factory setting: [0]
	[R PED]	Adjusts the Rch pedestal level. **[−100] - [100]** ● Factory setting: [0]
	[G PED]	Adjusts the Gch pedestal level. **[−100] - [100]** ● Factory setting: [0]
	[B PED]	Adjusts the Bch pedestal level. **[−100] - [100]** ● Factory setting: [0]
	[ABB OFFSET]	Sets the Rch, Gch, and Bch pedestal levels after adjusting the automatic black balance. **[ON]:** Maintains and adds the values of [R PED], [G PED], and [B PED] after performing the automatic black balance. **[OFF]:** Resets the values of [R PED], [G PED], and [B PED] after performing the automatic black balance. ● Factory setting: [OFF]
[EI]	[MODE]	Switches the EXPOSURE INDEX control unit. **[ISO], [dB]** ● Factory setting: [ISO]
	[ISO SELECT]	Selects the operation of ISO. **[NATIVE ONLY], [800BASE], [5000BASE]** ● Factory setting: [NATIVE ONLY]
	[NATIVE ISO]	Sets the value when [NATIVE ONLY] is selected. **[800ISO], [5000ISO]** This will be [400ISO] or [2500ISO] when [MAIN CODEC] is set to [AVC-Intra2K-LT]/[AVC-Intra-LT], and [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. ● Factory setting: [800ISO]
	[800BASE ISO]	Sets the value when [800BASE] is selected. **[200ISO], [250ISO], [320ISO], [400ISO], [500ISO], [640ISO], [800ISO], [1000ISO], [1250ISO], [1600ISO], [2000ISO], [2500ISO], [3200ISO], [4000ISO], [5000ISO], [6400ISO], [8000ISO], [10000ISO], [12800ISO]** This will be [200ISO], [250ISO], [320ISO], [400ISO], [500ISO], [640ISO], [800ISO], [1000ISO], [1250ISO], [1600ISO], [2000ISO], [2500ISO], [3200ISO], [4000ISO], [5000ISO], or [6400ISO] when [MAIN CODEC] is set to [AVC-Intra2K-LT]/[AVC-Intra-LT], and [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. ● Factory setting: [800ISO]

Item		Description of settings
	[5000BASE ISO]	Sets the value when [5000BASE] is selected. **[1250ISO], [1600ISO], [2000ISO], [2500ISO], [3200ISO], [4000ISO], [5000ISO], [6400ISO], [8000ISO], [10000ISO], [12800ISO]** This will be [1250ISO], [1600ISO], [2000ISO], [2500ISO], [3200ISO], [4000ISO], [5000ISO], or [6400ISO] when [MAIN CODEC] is set to [AVC-Intra2K-LT]/[AVC-Intra-LT], and [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. ● Factory setting: [5000ISO]
	[GAIN MODE]	Sets the operation when [dB] is selected. **[NORMAL], [HIGH]** ● Factory setting: [NORMAL]
	[GAIN SELECT]	Sets the value when [dB] is selected. **[−12dB], [−10dB], [−8dB], [−6dB], [−4dB], [−2dB], [0dB], [2dB], [4dB], [6dB], [8dB], [10dB], [12dB], [14dB]** This will be [−8dB], [−6dB], [−4dB], [−2dB], [0dB], [2dB], [4dB], [6dB], [8dB], [10dB], [12dB], or [14dB] when [MAIN CODEC] is set to [AVC-Intra2K-LT]/[AVC-Intra-LT], and [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. **When [GAMMA] → [GAMMA SELECT] is set to [VIDEO45]/[VIDEO50]** This will be set to [−6dB], [−4dB], [−2dB], [0dB], [2dB], [4dB], [6dB], [8dB], [10dB], [12dB], [14dB], [16dB], [18dB], or [20dB]. Also, this will be [−6dB], [−4dB], [−2dB], [0dB], [2dB], [4dB], [6dB], [8dB], [10dB], [12dB], [14dB] when [MAIN CODEC] is set to [AVC-Intra2K-LT]/[AVC-Intra-LT] and [MAIN PIXEL] is set to [2048×1080 CROP]/[1920×1080 CROP]. ● Factory setting: [0dB]
	[GAIN OFFSET SW]	Sets whether to perform fine adjustment of control when [dB] is selected. **[ON], [OFF]** ● Factory setting: [OFF]
	[GAIN OFFSET LEVEL]	Sets the fine adjustment level. **[0.0dB] - [0.9dB]** (0.1 dB step) ● Factory setting: [0.0dB]
[GAMMA] (page 71)	[GAMMA SELECT]	Selects the gamma mode. **[V-709]:** This is a gamma curve equivalent to Varicam standard CINE-LIKE. A tone optimum for preview on the monitor can be achieved. **[V-406060]:** A VARICAM-LOOK gamma curve with a latitude of 14+Stop. This is a setting focused on contrast. **[V-452080]/[V-452080L]:** This is a VARICAM-LOOK gamma curve with a latitude of 14+Stop. This is a setting focused on soft texture. **[VIDEO45]:** A BC-LOOK gamma curve with 600% dynamic range. **[VIDEO50]:** A BC-LOOK gamma curve with 600% dynamic range. This is a setting focused on contrast. ● Factory setting: [V-709]
[KNEE] (page 72)	[KNEE SW]	Enables/disables knee operation. **[ON], [OFF]** ● Factory setting: [OFF]
	[KNEE MODE]	Sets the knee operation mode. **[D RANGE]:** Determines the dynamic range that can be represented by the [KNEE SLOPE] value. The dynamic range that can be represented does not change even if the [KNEE POINT] value changes. **[PRESS]:** Determines the signal compression rate through the [KNEE SLOPE] value. The value of the dynamic range that can be represented changes when the [KNEE POINT] value changes. ● Factory setting: [D RANGE]
	[KNEE POINT]	Sets the position of the knee point. **[75%] - [109%]** (1% step) ● Factory setting: [85%]
	[KNEE SLOPE]	Sets the knee inclination. **[0] - [100]** ● Factory setting: [100]
[WHITE CLIP] (page 73)	[SW]	Switches the enable/disable of the white clip function. **[ON], [OFF]** ● Factory setting: [OFF]
	[LEVEL]	Sets the white clip function level. **[90%] - [109%]** ● Factory setting: [109%]
[DETAIL]	[SW]	Switches the enable/disable of the detail function. **[ON], [OFF]** ● Factory setting: [OFF]
	[CORING]	Sets the coring amount for the detail signal. **[0] - [60]** ● Factory setting: [1]
	[MASTER LEVEL]	Sets the effect level for the detail signal. **[−31] - [31]** ● Factory setting: [0]
	[FREQUENCY]	Sets the thickness of the detail. **[1] - [3]** ● Factory setting: [3]
[SKIN DETAIL] (page 73)	[SW]	Switches enable/disable of the skin tone detail function. **[OFF], [ON]** ● Factory setting: [OFF]

Item		Description of settings
	[TABLE SELECT]	Selects the table for the skin tone detail. **[A], [B], [C], [A+B], [A+C], [B+C], [A+B+C]** • Factory setting: [A]
	[GET]	Sets whether to register the screen center color as the color by which the skin tone detail is applied. **[EXECUTE], [CANCEL]**
	[ZEBRA SW]	Sets whether to superimpose the zebra signal to the color by which the skin tone detail is applied. **[ON], [OFF]** • Factory setting: [OFF]
	[EFFECT LEVEL]	Sets the effective level of the skin tone detail. The higher the value, the more significant the effect. **[0] - [31]** • Factory setting: [16]
	[DETECT TABLE]	Selects the skin tone table of the subject that displays the skin tone detail. **[A], [B], [C]** • Factory setting: [A]
	[- I CENTER]	Sets the center position of the upper I axis (setting the area that displays the skin tone). **[0] - [255]** • Factory setting: [35]
	[- I WIDTH]	Sets the width of the area that displays the skin tone of the upper I axis that focus on [I CENTER]. **[0] - [255]** • Factory setting: [55]
	[- Q WIDTH]	Sets the width of the area that displays the skin tone of the upper Q axis that focus on [I CENTER]. **[0] - [127]** • Factory setting: [22]
	[- Q PHASE]	Sets the phase of the area that displays the skin tone regarding to the Q axis. **[0] - [255]** • Factory setting: [0]
[CHROMA]	[LEVEL]	Sets the chroma level of P_R and P_B signals. **[OFF], [−99%] - [99%]** • Factory setting: [0%]
	[PHASE]	Fine adjusts the chroma phase of P_R and P_B signals. **[−31] - [31]** • Factory setting: [0]
[MATRIX] (page 75)	[SW]	Switches the enable/disable of the matrix function. **[ON], [OFF]** • Factory setting: [OFF]
	[(R-G)_N]	Adjusts the linear matrix. **[−127] - [127]** • Factory setting: [0]
	[(R-G)_P]	Adjusts the linear matrix. **[−127] - [127]** • Factory setting: [0]
	[(R-B)_N]	Adjusts the linear matrix. **[−127] - [127]** • Factory setting: [0]
	[(R-B)_P]	Adjusts the linear matrix. **[−127] - [127]** • Factory setting: [0]
	[(G-R)_N]	Adjusts the linear matrix. **[−127] - [127]** • Factory setting: [0]
	[(G-R)_P]	Adjusts the linear matrix. **[−127] - [127]** • Factory setting: [0]
	[(G-B)_N]	Adjusts the linear matrix. **[−127] - [127]** • Factory setting: [0]
	[(G-B)_P]	Adjusts the linear matrix. **[−127] - [127]** • Factory setting: [0]
	[(B-R)_N]	Adjusts the linear matrix. **[−127] - [127]** • Factory setting: [0]
	[(B-R)_P]	Adjusts the linear matrix. **[−127] - [127]** • Factory setting: [0]
	[(B-G)_N]	Adjusts the linear matrix. **[−127] - [127]** • Factory setting: [0]
	[(B-G)_P]	Adjusts the linear matrix. **[−127] - [127]** • Factory setting: [0]
[COLOR CORRECTION] (page 76)	[SW]	Enables/disables the color correction function. **[ON], [OFF]** • Factory setting: [OFF]

Item	Description of settings
[R (SAT)]	Corrects red color saturation. **[−63] - [63]** ● Factory setting: [0]
[R (PHASE)]	Corrects the red hue. **[−63] - [63]** ● Factory setting: [0]
[P1(SAT)]	Corrects the color saturation between red and "between red and yellow". **[−63] - [63]** ● Factory setting: [0]
[P1(PHASE)]	Corrects the hue between red and "between red and yellow". **[−63] - [63]** ● Factory setting: [0]
[P2(SAT)]	Corrects the color saturation between red and yellow. **[−63] - [63]** ● Factory setting: [0]
[P2(PHASE)]	Corrects the hue between red and yellow. **[−63] - [63]** ● Factory setting: [0]
[P3(SAT)]	Corrects the color saturation between yellow and "between yellow and red". **[−63] - [63]** ● Factory setting: [0]
[P3(PHASE)]	Corrects the color saturation between yellow and "between yellow and red". **[−63] - [63]** ● Factory setting: [0]
[Yl (SAT)]	Corrects yellow color saturation. **[−63] - [63]** ● Factory setting: [0]
[Yl (PHASE)]	Corrects the yellow hue. **[−63] - [63]** ● Factory setting: [0]
[P4(SAT)]	Corrects the color saturation between yellow and "between yellow and green". **[−63] - [63]** ● Factory setting: [0]
[P4(PHASE)]	Corrects the hue between yellow and "between yellow and green". **[−63] - [63]** ● Factory setting: [0]
[P5(SAT)]	Corrects the color saturation between yellow and green. **[−63] - [63]** ● Factory setting: [0]
[P5(PHASE)]	Corrects the hue between yellow and green. **[−63] - [63]** ● Factory setting: [0]
[P6(SAT)]	Corrects the color saturation between "between yellow and green" and green. **[−63] - [63]** ● Factory setting: [0]
[P6(PHASE)]	Corrects the hue between "between yellow and green" and green. **[−63] - [63]** ● Factory setting: [0]
[G (SAT)]	Corrects green color saturation. **[−63] - [63]** ● Factory setting: [0]
[G (PHASE)]	Corrects the green hue. **[−63] - [63]** ● Factory setting: [0]
[P7(SAT)]	Corrects the color saturation between green and "between green and cyan". **[−63] - [63]** ● Factory setting: [0]
[P7(PHASE)]	Corrects the hue between green and "between green and cyan". **[−63] - [63]** ● Factory setting: [0]
[P8(SAT)]	Corrects the color saturation between green and cyan. **[−63] - [63]** ● Factory setting: [0]
[P8(PHASE)]	Corrects the hue between green and cyan. **[−63] - [63]** ● Factory setting: [0]
[P9(SAT)]	Corrects the color saturation between "between green and cyan" and cyan. **[−63] - [63]** ● Factory setting: [0]
[P9(PHASE)]	Corrects the hue between "between green and cyan" and cyan. **[−63] - [63]** ● Factory setting: [0]

Item	Description of settings
[Cy (SAT)]	Corrects cyan color saturation. **[−63] - [63]** ● Factory setting: [0]
[Cy (PHASE)]	Corrects the cyan hue. **[−63] - [63]** ● Factory setting: [0]
[P10(SAT)]	Corrects the color saturation between cyan and "between cyan and blue". **[−63] - [63]** ● Factory setting: [0]
[P10(PHASE)]	Corrects the hue between cyan and "between cyan and blue". **[−63] - [63]** ● Factory setting: [0]
[P11(SAT)]	Corrects the color saturation between cyan and blue. **[−63] - [63]** ● Factory setting: [0]
[P11(PHASE)]	Corrects the hue between cyan and blue. **[−63] - [63]** ● Factory setting: [0]
[P12(SAT)]	Corrects the color saturation between "between cyan and blue" and blue. **[−63] - [63]** ● Factory setting: [0]
[P12(PHASE)]	Corrects the hue between "between cyan and blue" and blue. **[−63] - [63]** ● Factory setting: [0]
[B (SAT)]	Corrects blue color saturation. **[−63] - [63]** ● Factory setting: [0]
[B (PHASE)]	Corrects the blue hue. **[−63] - [63]** ● Factory setting: [0]
[P13(SAT)]	Corrects the color saturation between blue and "between blue and magenta". **[−63] - [63]** ● Factory setting: [0]
[P13(PHASE)]	Corrects the hue between blue and "between blue and magenta". **[−63] - [63]** ● Factory setting: [0]
[P14(SAT)]	Corrects the color saturation between blue and magenta. **[−63] - [63]** ● Factory setting: [0]
[P14(PHASE)]	Corrects the hue between blue and magenta. **[−63] - [63]** ● Factory setting: [0]
[P15(SAT)]	Corrects the color saturation between "between blue and magenta" and magenta. **[−63] - [63]** ● Factory setting: [0]
[P15(PHASE)]	Corrects the hue between "between blue and magenta" and magenta. **[−63] - [63]** ● Factory setting: [0]
[Mg (SAT)]	Corrects magenta color saturation. **[−63] - [63]** ● Factory setting: [0]
[Mg (PHASE)]	Corrects the magenta hue. **[−63] - [63]** ● Factory setting: [0]
[P16(SAT)]	Corrects the color saturation between magenta and "between magenta and red". **[−63] - [63]** ● Factory setting: [0]
[P16(PHASE)]	Corrects the hue between magenta and "between magenta and red". **[−63] - [63]** ● Factory setting: [0]
[P17(SAT)]	Corrects the color saturation between magenta and red. **[−63] - [63]** ● Factory setting: [0]
[P17(PHASE)]	Corrects the hue between magenta and red. **[−63] - [63]** ● Factory setting: [0]
[P18(SAT)]	Corrects the color saturation between "between magenta and red" and red. **[−63] - [63]** ● Factory setting: [0]
[P18(PHASE)]	Corrects the hue between "between magenta and red" and red. **[−63] - [63]** ● Factory setting: [0]

[REC SETTINGS]

The various setting items of the recording function of the camera.

Item		Description of settings
[FILE NAME STYLE]		Sets the format of the file name. **[CINE]:** Records CAM INDEX/REEL number as the file name. **[P2]:** Records the file name as a format unique to P2. [MENU] → [REC SETTINGS] → [REC META DATA] → [USER CLIP NAME] is fixed to [TYPE3] when set to [CINE]. ● Factory setting: [CINE]
[REC FUNCTION]	[REC MODE]	Selects the special recording function. **[NORMAL]:** Normal recording **[INTERVAL]:** Interval recording (function to perform intermittent recording in constant interval) **[ONE SHOT]:** One-shot recording (function to perform recording of specified duration every time the <REC> button is pressed) It is fixed to [NORMAL] when [MENU] → [CAMERA SETTINGS] → [FPS] → [VFR SW] is set to [ON]. ● Factory setting: [NORMAL]
	[REC TIME]	Sets the recording duration of single one-shot recording. **[00s01f] - [59s23f]** The maximum value of the frame digit differs depending on the system frequency. ● Factory setting: [00s01f]
	[INTERVAL TIME]	Sets the intermittent recording frequency of single interval recording. **[0h00min00s02f] - [1h00min00s00f]** ● Factory setting: [0h05min00s00f]
	[START DELAY]	Sets the delay time to start recording for the interval recording and the one-shot recording. **[0s] - [10s]** ● Factory setting: [0s]
	[PRE REC MODE]	Selects the pre-recording (function to record few seconds earlier than when the <REC> button is pressed by accumulation into the internal memory). **[ON], [OFF]** The setting is fixed to [OFF] when [REC MODE] is set to [INTERVAL] or [ONE SHOT]. ● Factory setting: [OFF]
[TC]	[SET TC]	Sets the default value of the time code to record. Hour: **[00] - [23]** Minute: **[00] - [59]** Second: **[00] - [59]** Frame: **[00] - [23]** (for [24p], [23.98p]), **[00] - [24]** (for [50i], [50p], [25p]), **[00] - [29]** (for [59.94i], [59.94p], [29.97p]) ● Factory setting: [00] (various items)
	[SET UB]	Sets user bits. Enabled only when [USER] is selected in [UB MODE]. This can be set by each digit from [00] to [FF]. ● Factory setting: [00]
	[TC/UB/Dur.]	Switches the time code display to the user bits and duration counter display. The duration counter is not displayed during the playback. **[TC], [UB], [Dur.]** ● Factory setting: [TC]
	[FREE/REC RUN]	Sets the operation mode to advance the built-in time code generator. It will be fixed to [REC RUN] when [MENU] → [CAMERA SETTINGS] → [FPS] → [VFR SW] is set to [ON]. **[FREE RUN]:** Advances regardless of the operation mode. **[REC RUN]:** Advances when recording is in process. ● Factory setting: [FREE RUN]
	[DF/NDF]	Sets count method for the built-in time code generator of the camera. **[DF]:** Uses the drop frame mode. **[NDF]:** Uses the non-drop frame mode. ● Factory setting: [NDF] Enabled only when [59.94i], [59.94p], or [29.97p] is selected in [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [FREQUENCY].
	[UB MODE]	Selects the user bits mode. **[FRAME RATE]:** Selects camera imaging information (such as frame rate). **[USER]:** Selects the user bits value that has been set. **[EXT INPUT]:** Records the user bits values currently input to the <TC IN/OUT> terminal. **[TIME]:** Selects the local time. (hh, mm, ss) **[DATE]:** Selects the local date and time. (YY, MM, DD, hh) **[USER CLIP NAME (TYPE3)]:** CAM INDEX (A-Z) in ASCII character code will go into MSB. Also, the REEL number in ASCII character code will go into LSB 3 digits. Example: A123=0x41 0x31 0x32 0x33 0XFFFF is recorded if [USER CLIP NAME] is set to anything other than [TYPE3]. ● Factory setting: [USER CLIP NAME (TYPE3)]
	[TC IN/OUT SEL]	Sets the input/output of the <TC IN/OUT> terminal. **[TC IN], [TC OUT]** ● Factory setting: [TC IN]
	[TC OUT]	Selects the time code output to the <TC IN/OUT> terminal. **[TCG], [TCG/TCR]** ● Factory setting: [TCG]
	[TC OUT REF]	Sets the output delay of the time code output from the <TC IN/OUT> terminal. **[RECORDING], [SDI OUT]** ● Factory setting: [RECORDING]

Item		Description of settings
[REC META DATA]	[LOAD]	Loads the metadata upload file saved to the SD memory card.
	[RECORD]	Sets whether to add loaded metadata at a recording. **[ON]:** Adds metadata. **[OFF]:** Does not add metadata. ● Factory setting: [OFF]
	[USER CLIP NAME]	Sets data to be recorded to [USER CLIP NAME]. (When [RECORD] is [ON]) **[TYPE1]:** Records setting values of the loaded data. **[TYPE2]:** Records the loaded data and counter value. **[TYPE3]:** Records the setting value prescribed with CAM INDEX or REEL number. (When [RECORD] is [OFF]) **[TYPE1]:** Records the same value as [GLOBAL CLIP ID]. **[TYPE2]:** Records the same value as [CLIP NAME]. **[TYPE3]:** Records the setting value prescribed with CAM INDEX or REEL number. ● Factory setting: [TYPE3]
	[CAM INDEX]	Sets CAM INDEX used in [TYPE3] of [USER CLIP NAME]. **[A] - [Z]** ● Factory setting: [A]
	[NEXT REEL COUNT]	Sets REEL used in [TYPE3] of [USER CLIP NAME]. The REEL number for the card that the REEL number is already assigned would not change. **[001] - [999]** ● Factory setting: [001]
	[COUNTER RESET]	Resets the counter value when [USER CLIP NAME] is set to [TYPE2].
	[PROPERTY]	Checks loaded metadata. This cannot be modified.
[REC BEEP SOUND]	[MODE]	Sets if the beep sound is generated when starting or stopping the recording. **[OFF]:** The beep sound is not generated. **[START]:** The beep sound is generated only when the recording is started. **[STOP]:** The beep sound is generated only when the recording is stopped. **[START & STOP]:** The beep sound is generated when the recording is started and stopped. The output time of the beep sound when the recording is stopped will be 1.5 times of when the recording is started. ● Factory setting: [OFF]
	[VOLUME]	Sets the volume of the beep sound when starting or stopping the recording. **[LOUD], [MEDIUM], [SMALL]** ● Factory setting: [MEDIUM]
[DAILIES PREVIEW]		Displays the setting of [WATER MARK]/[FRAME MARK]/[WINDOW BURN] together with the current camera video for five seconds.
[WINDOW BURN SW]		Writes the text display into the video to be recorded in the sub recorder. **[ON], [OFF]** ● Factory setting: [OFF]
[WINDOW BURN SETTINGS]	[UPPER LEFT]	Selects the display for top left. **[NONE]/[CUSTOM BURN DATA1]/[CUSTOM BURN DATA2]/[CUSTOM BURN DATA3]/[CAM INDEX]/ [REEL COUNT]/[CLIP NAME]/[USER CLIP NAME (TYPE3)]/[SHOOT DATE]/[SENSOR FPS]/ [SHUTTER]/[EI]/[COLOR TEMP]** ● Factory setting: [NONE]
	[UPPER CENTER]	Selects the display for top center. **[NONE]/[CUSTOM BURN DATA1]/[CUSTOM BURN DATA2]/[CUSTOM BURN DATA3]/[CAM INDEX]/ [REEL COUNT]/[CLIP NAME]/[USER CLIP NAME (TYPE3)]/[SHOOT DATE]/[SENSOR FPS]/ [SHUTTER]/[EI]/[COLOR TEMP]** ● Factory setting: [NONE]
	[UPPER RIGHT]	Selects the display for top right. **[NONE]/[CUSTOM BURN DATA1]/[CUSTOM BURN DATA2]/[CUSTOM BURN DATA3]/[CAM INDEX]/ [REEL COUNT]/[CLIP NAME]/[USER CLIP NAME (TYPE3)]/[SHOOT DATE]/[SENSOR FPS]/ [SHUTTER]/[EI]/[COLOR TEMP]** ● Factory setting: [NONE]
	[LOWER LEFT]	Selects the display for bottom left. **[NONE]/[CUSTOM BURN DATA1]/[CUSTOM BURN DATA2]/[CUSTOM BURN DATA3]/[CAM INDEX]/ [REEL COUNT]/[CLIP NAME]/[USER CLIP NAME (TYPE3)]/[SHOOT DATE]/[SENSOR FPS]/ [SHUTTER]/[EI]/[COLOR TEMP]** ● Factory setting: [NONE]
	[LOWER CENTER]	Selects the display for bottom center. **[NONE]/[CUSTOM BURN DATA1]/[CUSTOM BURN DATA2]/[CUSTOM BURN DATA3]/[CAM INDEX]/ [REEL COUNT]/[CLIP NAME]/[USER CLIP NAME (TYPE3)]/[SHOOT DATE]/[SENSOR FPS]/ [SHUTTER]/[EI]/[COLOR TEMP]** ● Factory setting: [NONE]
	[LOWER RIGHT]	Selects the display for bottom right. **[NONE]/[CUSTOM BURN DATA1]/[CUSTOM BURN DATA2]/[CUSTOM BURN DATA3]/[CAM INDEX]/ [REEL COUNT]/[CLIP NAME]/[USER CLIP NAME (TYPE3)]/[SHOOT DATE]/[SENSOR FPS]/ [SHUTTER]/[EI]/[COLOR TEMP]/[TC]** ● Factory setting: [NONE]
	[CUSTOM BURN DATA1]	Sets [CUSTOM BURN DATA1] for the [WINDOW BURN] function. (20 characters or less) ● Factory setting: (blank field)
	[CUSTOM BURN DATA2]	Sets [CUSTOM BURN DATA2] for the [WINDOW BURN] function. (20 characters or less) ● Factory setting: (blank field)

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Item		Description of settings
	[CUSTOM BURN DATA3]	Sets [CUSTOM BURN DATA3] for the [WINDOW BURN] function. (20 characters or less) ● Factory setting: (blank field)
[WATER MARK SW]		Selects the watermark (a transparent text to insert in the video to be recorded in the sub recorder). **[ON], [OFF]** ● Factory setting: [OFF]
[WATER MARK SETTINGS]	[MARK POSITION]	Selects the position to superimpose the watermark. **[UPPER LEFT], [UPPER CENTER], [UPPER RIGHT], [CENTER LEFT], [CENTER], [CENTER RIGHT], [LOWER LEFT], [LOWER CENTER], [LOWER RIGHT]** ● Factory setting: [CENTER]
	[MARK LEVEL]	Selects the transparency of the watermark. It is more transparent as larger the value. It will be opaque when set to [0%]. **[0%], [25%], [50%], [75%]** ● Factory setting: [0%]
	[CHAR EDIT]	Edits the text of the watermark. (32 characters or less) ● Factory setting: (blank field)
	[CHAR SIZE]	Selects the text size of the watermark. **[SMALL], [LARGE]** ● Factory setting: [LARGE]
[FRAME MARK SW]		Selects the framemark (a framemark to insert in the video to be recorded in the sub recorder). **[ON], [OFF]** ● Factory setting: [OFF]
[FRAME MARK SETTINGS]	[FRAME ASPECT]	Selects the aspect ratio of the framemark. **[1.33:1], [1.44:1], [1.56:1], [1.78:1], [1.85:1], [2.00:1], [2.201:1], [2.35:1], [2.39:1]** ● Factory setting: [2.39:1]
	[FRAME LEVEL]	Sets the level for outside the framemark. Video is more transparent as larger the value. It will become opaque black when set to [0%]. **[0%], [25%], [50%], [75%]** ● Factory setting: [0%]

[AUDIO SETTINGS]

Sets the audio recording function.

Item		Description of settings
[AUDIO RECORD]		Sets if the recording and output of the audio of the camera is to be performed or not. **[ON], [OFF]** ● Factory setting: [ON]
[AUDIO INPUT]	[INPUT 3 LINE/MIC SEL]	Sets the audio input signal from the device connected to the <INPUT 3> terminal. **[LINE]:** Sets this when an audio device is connected to the line input. **[MIC]:** Sets this when connected to an external microphone. ● Factory setting: [LINE]
	[INPUT 4 LINE/MIC SEL]	Sets the audio input signal from the device connected to the <INPUT 4> terminal. **[LINE]:** Sets this when an audio device is connected to the line input. **[MIC]:** Sets this when connected to an external microphone. ● Factory setting: [LINE]
	[INPUT 1/2 MIC POWER]	Switches the enable/disable of the phantom power supply of the external microphone connected to the <INPUT 1/2> terminal. **[ON], [OFF]** ● Factory setting: [OFF]
	[INPUT 1/2 MIC LEVEL]	Sets the level of the external microphone connected to the <INPUT 1/2> terminal. **[−40dB]/[−50dB]/[−60dB]** ● Factory setting: [−40dB]
	[INPUT3 MIC POWER]	Switches the enable/disable of the phantom power supply of the external microphone connected to the <INPUT 3> terminal. **[ON], [OFF]** ● Factory setting: [OFF]
	[INPUT4 MIC POWER]	Switches the enable/disable of the phantom power supply of the external microphone connected to the <INPUT 4> terminal. **[ON], [OFF]** ● Factory setting: [OFF]
	[INPUT3 MIC LEVEL]	Sets the level of the external microphone connected to the <INPUT 3> terminal. **[−40dB]/[−50dB]/[−60dB]** ● Factory setting: [−60dB]
	[INPUT4 MIC LEVEL]	Sets the level of the external microphone connected to the <INPUT 4> terminal. **[−40dB]/[−50dB]/[−60dB]** ● Factory setting: [−60dB]
	[INPUT3/4 LINE LEVEL]	Sets the line input level of the device connected to <INPUT 3> terminal and <INPUT 4> terminal. **[4dB]/[0dB]/[−3dB]** ● Factory setting: [4dB]
	[CH1 IN SEL]	Sets the input signal to be recorded to audio channel 1. **[INPUT1]/[INPUT3]** ● Factory setting: [INPUT3]

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Item		Description of settings
	[CH2 IN SEL]	Sets the input signal to be recorded to audio channel 2. **[INPUT2]/[INPUT4]** ● Factory setting: [INPUT4]
	[CH3 IN SEL]	Sets the input signal to be recorded to audio channel 3. **[INPUT1]/[INPUT3]** ● Factory setting: [INPUT3]
	[CH4 IN SEL]	Sets the input signal to be recorded to audio channel 4. **[INPUT2]/[INPUT4]** ● Factory setting: [INPUT4]
	[CH1 MIC LOWCUT]	Enables/disables the lowcut filter for audio channel 1. **[ON], [OFF]** ● Factory setting: [OFF]
	[CH2 MIC LOWCUT]	Enables/disables the lowcut filter for audio channel 2. **[ON], [OFF]** ● Factory setting: [OFF]
	[CH3 MIC LOWCUT]	Enables/disables the lowcut filter for audio channel 3. **[ON], [OFF]** ● Factory setting: [OFF]
	[CH4 MIC LOWCUT]	Enables/disables the lowcut filter for audio channel 4. **[ON], [OFF]** ● Factory setting: [OFF]
	[TEST TONE]	Sets if the test signal (tone signal with specification level 1 kHz) is output or not when the video is switched to color bar. The standard level varies depending on the setting of [HEADROOM]. **[ON], [OFF]** ● Factory setting: [ON]
[AUDIO LEVEL]	[CH1 LEVEL]	Sets if the recording level adjustment method for audio channel 1 is to be automatic or manual. **[AUTO]:** Adjust automatically. **[MANUAL]:** Enables manual adjustment. ● Factory setting: [AUTO]
	[CH2 LEVEL]	Sets if the recording level adjustment method for audio channel 2 is to be automatic or manual. **[AUTO]:** Adjust automatically. **[MANUAL]:** Enables manual adjustment. ● Factory setting: [AUTO]
	[CH3 LEVEL]	Sets if the recording level adjustment method for audio channel 3 is to be automatic or manual. **[AUTO]:** Adjust automatically. **[MANUAL]:** Enables manual adjustment. ● Factory setting: [AUTO]
	[CH4 LEVEL]	Sets if the recording level adjustment method for audio channel 4 is to be automatic or manual. **[AUTO]:** Adjust automatically. **[MANUAL]:** Enables manual adjustment. ● Factory setting: [AUTO]
	[CH1 VOL]	Adjusts with this item when the recording level adjustment method for audio channel 1 is [MANUAL]. **[0] - [100]** ● Factory setting: [70]
	[CH2 VOL]	Adjusts with this item when the recording level adjustment method for audio channel 2 is [MANUAL]. **[0] - [100]** ● Factory setting: [70]
	[CH3 VOL]	Adjusts with this item when the recording level adjustment method for audio channel 3 is [MANUAL]. **[0] - [100]** ● Factory setting: [70]
	[CH4 VOL]	Adjusts with this item when the recording level adjustment method for audio channel 4 is [MANUAL]. **[0] - [100]** ● Factory setting: [70]
	[CH1 LIMITER]	Switches enable/disable of the audio channel 1 limiter when the audio recording level adjustment method for audio channel 1 is [MANUAL]. **[ON], [OFF]** ● Factory setting: [OFF]
	[CH2 LIMITER]	Switches enable/disable of the audio channel 2 limiter when the audio recording level adjustment method for audio channel 2 is [MANUAL]. **[ON], [OFF]** ● Factory setting: [OFF]
	[CH3 LIMITER]	Switches enable/disable of the audio channel 3 limiter when the audio recording level adjustment method for audio channel 3 is [MANUAL]. **[ON], [OFF]** ● Factory setting: [OFF]
	[CH4 LIMITER]	Switches enable/disable of the audio channel 4 limiter when the audio recording level adjustment method for audio channel 4 is [MANUAL]. **[ON], [OFF]** ● Factory setting: [OFF]
	[HEADROOM]	Sets the headroom (standard level). **[18dB], [20dB]** ● Factory setting: [20dB]

Item		Description of settings
[AUDIO OUTPUT]	[MONITOR CH]	Sets the audio channel to be output from the <PHONES> terminal. The display channel of the audio level meter and the channel for the audio volume are also switched in conjunction. This will be the operation target channel for the direct volume control. **[CH1/2]:** Outputs audio channel 1/2. **[CH3/4]:** Outputs audio channel 3/4. ● Factory setting: [CH1/2]
	[MONITOR SEL]	Sets the audio format (mono, stereo, mix) to be output from the <PHONES> terminal. When [MONITOR CH] is set to [CH1/2]: **[MONO CH1], [MONO CH2], [STEREO CH1/2], [MIX CH1/2]** When [MONITOR CH] is set to [CH3/4]: **[MONO CH3], [MONO CH4], [STEREO CH3/4], [MIX CH3/4]** ● Factory setting: [STEREO CH1/2]
	[MONITOR DELAY]	Sets whether to delay the audio from the <PHONES> terminal to match the monitor output. **[ON], [OFF]** ● Factory setting: [OFF]
	[MONITOR VOL]	Adjusts the level of audio to be output from the <PHONES> terminal. **[0] - [100]** ● Factory setting: [70]
	[ALARM]	Sets the volume of the warning sound to be output from the <PHONES> terminal. **[LOUD], [MEDIUM], [SMALL], [OFF]** ● Factory setting: [MEDIUM]

[OUTPUT SETTINGS]

Sets the display contents of the output video and output from the <SDI OUT 1>/<SDI OUT 2>/<VF SDI> terminal.

Item		Description of settings
[SDI OUT]	[RAW OUTPUT]	Sets if the RAW output from the <SDI OUT 1>/<SDI OUT 2> terminal will be dual output (DUAL) or single output (SINGLE). **[DUAL], [SINGLE]** ● Factory setting: [DUAL] It can be set to [SINGLE] only when the following three conditions are fulfilled. It will be fixed to [DUAL] for all other cases. ● When [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [FREQUENCY] is set to [29.97p] or lower ● When [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [SDI RAW] is set to [4K/10bit] or [UHD/10bit] ● When [MENU] → [SYSTEM SETTINGS] → [SYSTEM MODE] → [MAIN CODEC] is set to [AVC-Intra4K 422]
	[SDI REC REMOTE]	Sets if the recording operation control function against the external device (such as recorder) connected to the <SDI OUT 1>/<SDI OUT 2> terminal is used or not. It can be output from the <SDI OUT 2> terminal only when [SDI OUT2 SIGNAL SEL] is set to [SDI OUT 1]. The recording operation can be controlled only when the camera is recording. **[ON]:** Controls the recording operation of the external device. **[OFF]:** Does not control the recording operation of the external device. ● Factory setting: [OFF]
	[SDI OUT FORMAT]	Selects the signal to be output from the <SDI OUT 1>/<SDI OUT 2> terminal. It is output in the HD (1920×1080) format letterbox regardless of the [MAIN PIXEL] setting. Item that can be selected depends on the [FREQUENCY] setting. This can be selected only when [FREQUENCY] is set to [50.00p] or [59.94p]. When [FREQUENCY] is set to [23.98p]: **[23.98PsF]** When [FREQUENCY] is set to [24.00p]: **[24.00PsF]** When [FREQUENCY] is set to [25.00p]: **[25.00PsF]** When [FREQUENCY] is set to [29.97p]: **[29.97PsF]** When [FREQUENCY] is set to [50.00p]: **[50.00p]/[50.00i]** When [FREQUENCY] is set to [59.94p]: **[59.94p]/[59.94i]** When [FREQUENCY] is set to [50.00i]: **[50.00i]** When [FREQUENCY] is set to [59.94i]: **[59.94i]** ● Factory setting: [23.98PsF]
	[3G-SDI OUT]	Sets the format for the 3G-SDI signal output from the <SDI OUT 1>/<SDI OUT 2> terminal. **[LEVEL-A]:** Selects the LEVEL-A method. **[LEVEL-B]:** Selects the LEVEL-B DL method. ● Factory setting: [LEVEL-B]
	[SDI OUT 2 SIGNAL SEL]	Sets the output from the <SDI OUT 2> terminal. **[SDI OUT 1]:** Same output as the <SDI OUT 1> terminal. **[VF SDI]:** Same output as the <VF SDI> terminal. ● Factory setting: [SDI OUT 1]
	[SDI OUT 1 CLEAN VIEW]	Sets if the output from the <SDI OUT 1> terminal will be video only or to superimpose the signal for marker or indicator. **[ON]:** Outputs video only. **[OFF]:** Outputs the signals for video and marker or indicator. ● Factory setting: [OFF]

Item		Description of settings
	[SDI OUT 2 CLEAN VIEW]	Sets if the output from the <SDI OUT 2> terminal will be video only or to superimpose the signal for marker or indicator. **[ON]:** Outputs video only. **[OFF]:** Outputs the signals for video and marker or indicator. ● Factory setting: [OFF]
	[MENU DISP]	Sets if the menu is displayed in the output from the <SDI OUT 1>/<SDI OUT 2> terminal. **[ON], [OFF]** ● Factory setting: [OFF]
	[PLAY DISP & CTRL]	Sets if the PLAY screen is displayed in the output from the <SDI OUT 1>/<SDI OUT 2> terminal, and playback control is performed or not with the remote operation panel AK-HRP200G. **[ON], [OFF]** ● Factory setting: [OFF]
[VF SDI OUT]	[VF SDI OUT FORMAT]	Selects the signal to be output from the <VF SDI> terminal. It is output in the HD (1920×1080) format regardless of the [MAIN PIXEL] setting. The items that can be set differ depending on the settings of [FREQUENCY] and [MAIN CODEC]. **When [MAIN CODEC] is set to [AVC-Intra2K 444] or [AVC-Intra444]** When [FREQUENCY] is set to [23.98p]: **[23.98PsF]** When [FREQUENCY] is set to [24.00p]: **[24.00PsF]** When [FREQUENCY] is set to [25.00p]: **[25.00PsF]** When [FREQUENCY] is set to [29.97p]: **[29.97PsF]** **When [MAIN CODEC] is set to anything other than above** When [FREQUENCY] is set to [23.98p]: **[23.98PsF]/[59.94p]/[59.94i]** When [FREQUENCY] is set to [24.00p]: **[24.00PsF]/[60.00p]/[60.00i]** When [FREQUENCY] is set to [25.00p]: **[25.00PsF]/[50.00p]/[50.00i]** When [FREQUENCY] is set to [29.97p]: **[29.97PsF]/[59.94p]/[59.94i]** When [FREQUENCY] is set to [50.00p]: **[50.00p]/[50.00i]** When [FREQUENCY] is set to [59.94p]: **[59.94p]/[59.94i]** When [FREQUENCY] is set to [50.00i]: **[50.00i]** When [FREQUENCY] is set to [59.94i]: **[59.94i]** ● Factory setting: [59.94p]
	[3G-SDI OUT]	Sets the format of the 3G SDI signal output from the <VF SDI> terminal. **[LEVEL-A]:** Selects the LEVEL-A method. **[LEVEL-B]:** Selects the LEVEL-B DL method. ● Factory setting: [LEVEL-B]
	[VF SDI CLEAN VIEW]	Sets if the output from the <VF SDI> terminal will be video only or to superimpose the signal for marker or indicator. **[ON]:** Outputs video only. **[OFF]:** Outputs the signals for video and marker or indicator. ● Factory setting: [OFF]
	[SURROUND VIEW SW]	Selects enable/disable of the surround view function (a function to display the video outside the valid area to the viewfinder). **[ON], [OFF]** ● Factory setting: [OFF]
	[SURROUND VIEW AREA]	Selects the area for the surround view. **[UPPER (NORMAL)], [LOWER]** The recorded video will shift approximately 396 µm upward from the center of the lens when [LOWER] is selected. Take caution when using a zoom lens. ● Factory setting: [UPPER (NORMAL)]
	[SURROUND VIEW LINE SW]	Selects enable/disable of the line mark display function for valid area. **[ON], [OFF]** ● Factory setting: [ON]
	[SURROUND VIEW COLOR]	Selects the color of the line mark for valid area. **[WHITE], [BLACK], [RED], [GREEN], [BLUE], [YELLOW]** ● Factory setting: [WHITE]
	[SURROUND VIEW LEVEL]	Sets the mask level against the surround signal. **[OFF], [75%], [50%], [25%]** ● Factory setting: [OFF]
[SDI OUT INDICATOR]	[SDI OUT 1 SW]	Switches display/hide of the item to set with [SDI OUT INDICATOR] to the output from the <SDI OUT 1> terminal. **[ON]:** Items are individually displayed/hidden. **[OFF]:** Hides all. ● Factory setting: [ON]
	[SDI OUT 2 SW]	Switches display/hide of the item to set with [SDI OUT INDICATOR] to the output from the <SDI OUT 2> terminal. **[ON]:** Items are individually displayed/hidden. **[OFF]:** Hides all. ● Factory setting: [ON]
	[SYSTEM PIXEL]	Switches display/hide of the system pixels. **[ON], [OFF]** ● Factory setting: [ON]
	[REC FORMAT]	Switches display/hide of the recording format display. **[ON], [OFF]** ● Factory setting: [ON]

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Item		Description of settings
	[REC MODE]	Switches display/hide of the status for the interval recording or the pre-recording. **[ON], [OFF]** ● Factory setting: [ON]
	[VFR]	Switches display/hide of the variable frame rate status. **[ON], [OFF]** ● Factory setting: [ON]
	[FPS]	Switches display/hide of the frame rate. **[ON], [OFF]** ● Factory setting: [ON]
	[SHUTTER]	Switches display/hide of the shutter speed. **[ON], [OFF]** ● Factory setting: [ON]
	[EI]	Switches display/hide of EXPOSURE INDEX. **[ON], [OFF]** ● Factory setting: [ON]
	[WHITE]	Switches display/hide of the color temperature. **[ON], [OFF]** ● Factory setting: [ON]
	[IRIS]	Switches display/hide of the iris value. **[ON], [OFF]** ● Factory setting: [ON]
	[FOCUS]	Switches display/hide of the focus distance. **[ON], [OFF]** ● Factory setting: [ON]
	[ZOOM]	Switches display/hide of the zoom value. **[ON], [OFF]** ● Factory setting: [ON]
	[FILTER]	Switches display/hide of the optical filter transmittance. **[ON], [OFF]** ● Factory setting: [ON]
	[EXTENDER]	Switches display/hide of the extender. **[ON], [OFF]** ● Factory setting: [ON]
	[Y GET]	Switches display/hide of the brightness of Y GET. **[ON], [OFF]** ● Factory setting: [ON]
	[TC]	Switches display/hide of the time code, user bits, and duration counter displays. **[TCG/TCR], [TCG], [OFF]** ● Factory setting: [TCG/TCR]
	[P2 CARD REMAIN]	Switches display/hide of the remaining recording free space of a P2 card. **[ON], [OFF]** ● Factory setting: [ON]
	[BATTERY REMAIN]	Switches display/hide of the remaining battery charge level. **[ON], [OFF]** ● Factory setting: [ON]
	[GPS]	Switches display/hide of GPS signal reception status. **[ON], [OFF]** ● Factory setting: [ON]
	[CLIP NAME]	Switches display/hide of the clip names. **[ON], [OFF]** ● Factory setting: [ON]
	[USER CLIP NAME (TYPE3)]	Switches display/hide of the user clip name when [MENU] → [REC SETTINGS] → [REC META DATA] → [USER CLIP NAME] is set to [TYPE3]. **[ON], [OFF]** ● Factory setting: [OFF]
	[REMOTE CTRL]	Switches display/hide of ROP app control status. **[ON], [OFF]** ● Factory setting: [ON]
	[AUDIO LEVEL METER]	Switches display/hide of the audio level meter. **[ON], [OFF]** ● Factory setting: [OFF]
[SDI OUT MARKER]	[SDI OUT 1 SW]	Switches display/hide of the marker display against the output from the <SDI OUT 1> terminal. **[ON], [OFF]** ● Factory setting: [OFF]
	[SDI OUT 2 SW]	Switches display/hide of the marker display against the output from the <SDI OUT 2> terminal. **[ON], [OFF]** ● Factory setting: [OFF]
	[PB MARKER SW]	Switches display/hide of the marker display against the playback video output from the <SDI OUT 1>/<SDI OUT 2> terminal. **[ON], [OFF]** ● Factory setting: [OFF]

Item		Description of settings
	[MARKER & CHAR LEVEL]	Sets the marker and character luminance. **[50%] - [100%]** (10% step) ● Factory setting: [70%]
	[CENTER MARKER]	Switches the center marker. **[1]:** + (large) **[2]:** Open center (large) **[3]:** + (medium) **[4]:** Open center (medium) **[5]:** + (small) **[6]:** Open center (small) **[7]:** + (very small) **[OFF]:** Does not display. ● Factory setting: [1]
	[SAFETY MARKER]	Selects the type of frame for the safety zone marker. **[1]:** Box **[2]:** Corners **[OFF]:** Does not display. ● Factory setting: [OFF]
	[SAFETY AREA]	Sets the size of the safety zone marker. **[80%] - [100%]** (1% step, fixed aspect ratio) ● Factory setting: [90%]
	[FRAME MARK]	Switches enable/disable of the frame marker. **[ON], [OFF]** ● Factory setting: [OFF]
	[FRAME COLOR]	Sets the color of the frame marker. **[WHITE], [BLACK], [RED], [GREEN], [BLUE], [YELLOW]** ● Factory setting: [WHITE]
	[FRAME SIG]	Sets frame marker aspect ratio. **[1.33:1], [1.44:1], [1.56:1], [1.78:1], [1.85:1], [2.00:1], [2.201:1], [2.35:1], [2.39:1]** ● Factory setting: [2.39:1]
	[FRAME LEVEL]	Sets the level of the outside of the frame marker. **[0%] - [100%]** (10% step) ● Factory setting: [100%]
	[USER BOX]	Switches display/hide of the user box. **[ON], [OFF]** ● Factory setting: [OFF]
	[USER BOX WIDTH]	Sets the width of the user box. **[1] - [100]** ● Factory setting: [13]
	[USER BOX HEIGHT]	Sets the height of the user box. **[1] - [100]** ● Factory setting: [13]
	[USER BOX H POS]	Sets the horizontal position of the center of the user box. **[−50] - [50]** ● Factory setting: [0]
	[USER BOX V POS]	Sets the vertical position of the center of the user box. **[−50] - [50]** ● Factory setting: [0]
[VF SDI INDICATOR]	[VF SDI SW]	Displays/hides the items to be set in [VF SDI INDICATOR] on the image output from the <VF SDI> terminal and on the control panel screen. **[ON]:** Items are individually displayed/hidden. **[OFF]:** Hides all. ● Factory setting: [ON]
	[SYSTEM PIXEL]	Displays/hides system pixels. **[ON], [OFF]** ● Factory setting: [ON]
	[REC FORMAT]	Displays/hides recording format display. **[ON], [OFF]** ● Factory setting: [ON]
	[REC MODE]	Displays/hides the status for the interval recording or the pre-recording. **[ON], [OFF]** ● Factory setting: [ON]
	[VFR]	Displays/hides the variable frame rate status. **[ON], [OFF]** ● Factory setting: [ON]
	[FPS]	Displays/hides [FPS]. **[ON], [OFF]** ● Factory setting: [ON]
	[SHUTTER]	Displays/hides shutter speed. **[ON], [OFF]** ● Factory setting: [ON]
	[EI]	Displays/hides EXPOSURE INDEX. **[ON], [OFF]** ● Factory setting: [ON]

Item		Description of settings
	[WHITE]	Displays/hides color temperature. **[ON], [OFF]** ● Factory setting: [ON]
	[IRIS]	Displays/hides iris value. **[ON], [OFF]** ● Factory setting: [ON]
	[FOCUS]	Displays/hides focus distance. **[ON], [OFF]** ● Factory setting: [ON]
	[ZOOM]	Displays/hides zoom value. **[ON], [OFF]** ● Factory setting: [ON]
	[FILTER]	Displays/hides the optical filter transmittance. **[ON], [OFF]** ● Factory setting: [ON]
	[EXTENDER]	Displays/hides the extender. **[ON], [OFF]** ● Factory setting: [ON]
	[Y GET]	Displays/hides brightness of Y GET. **[ON], [OFF]** ● Factory setting: [ON]
	[TC]	Displays/hides the time code, user bits, and duration counter displays. **[TCG/TCR], [TCG], [OFF]** ● Factory setting: [TCG/TCR]
	[P2 CARD REMAIN]	Displays/hides the display of the remaining recording free space of a P2 card. **[ON], [OFF]** ● Factory setting: [ON]
	[BATTERY REMAIN]	Displays/hides the remaining battery charge level. **[ON], [OFF]** ● Factory setting: [ON]
	[GPS]	Displays/hides GPS signal reception status. **[ON], [OFF]** ● Factory setting: [ON]
	[REC TALLY]	Displays/hides the method of displaying the recording status. **[RED]:** The red tally lamp lights up. **[GREEN]:** The green tally lamp lights up. **[CHAR]:** The characters [REC] are displayed in the viewfinder. Regardless of this setting, when [SDI REC REMOTE] is set to [ON], or [SDI RAW] is set to anything other than [OFF], the red tally lamp will illuminate during recording with an external device. ● Factory setting: [RED]
	[CLIP NAME]	Displays/hides clip names. **[ON], [OFF]** ● Factory setting: [OFF]
	[USER CLIP NAME (TYPE3)]	Switches display/hide of the user clip name when [MENU] → [REC SETTINGS] → [REC META DATA] → [USER CLIP NAME] is set to [TYPE3]. **[ON], [OFF]** ● Factory setting: [OFF]
	[AUDIO LEVEL METER]	Switches display/hide of the audio level meter. **[ON], [OFF]** ● Factory setting: [OFF]
	[REMOTE CTRL]	Switches display/hide of ROP app control status. **[ON], [OFF]** ● Factory setting: [ON]
[VF SDI MARKER]	[VF SDI SW]	Switches display/hide of the marker display against the output from the <VF SDI> terminal and the control panel screen. **[ON], [OFF]** ● Factory setting: [ON]
	[PB MARKER SW]	Switches display/hide of the marker display against the playback video output from the <VF SDI> terminal and the control panel screen. **[ON], [OFF]** ● Factory setting: [OFF]
	[MARKER & CHAR LVL]	Sets the marker and character luminance. **[50%], [60%], [70%]** ● Factory setting: [50%]
	[CENTER MARKER]	Switches the center marker. **[1]:** + (large) **[2]:** Open center (large) **[3]:** + (medium) **[4]:** Open center (medium) **[5]:** + (small) **[6]:** Open center (small) **[7]:** + (very small) **[OFF]:** Does not display. ● Factory setting: [1]

Item		Description of settings
	[SAFETY MARKER]	Selects the type of frame for the safety zone marker. **[1]:** Box **[2]:** Corners **[OFF]:** Does not display. ● Factory setting: [OFF]
	[SAFETY AREA]	Sets the size of the safety zone marker. **[80%] - [100%]** (1% step, constant aspect ratio) ● Factory setting: [90%]
	[FRAME MARK]	Switches enable/disable of the frame marker. **[ON], [OFF]** ● Factory setting: [OFF]
	[FRAME SIG]	Sets frame marker aspect ratio. **[1.33:1], [1.44:1], [1.56:1], [1.78:1], [1.85:1], [2.00:1], [2.201:1], [2.35:1], [2.39:1]** ● Factory setting: [2.39:1]
	[FRAME COLOR]	Sets the color of the frame marker. **[WHITE], [BLACK], [RED], [GREEN], [BLUE], [YELLOW]** ● Factory setting: [WHITE]
	[FRAME LEVEL]	Sets the level of the outside of the frame marker. **[0%] - [100%]** (10% step) ● Factory setting: [100%]
	[USER BOX]	Switches enable/disable of the user box display. **[ON], [OFF]** ● Factory setting: [OFF]
	[USER BOX WIDTH]	Sets the width of the user box. **[1] - [100]** ● Factory setting: [13]
	[USER BOX HEIGHT]	Sets the height of the user box. **[1] - [100]** ● Factory setting: [13]
	[USER BOX H POS]	Sets the horizontal position of the center of the user box. **[−50] - [50]** ● Factory setting: [0]
	[USER BOX V POS]	Sets the vertical position of the center of the user box. **[−50] - [50]** ● Factory setting: [0]
[VF SDI FOCUS ASSIST]	[EXPAND MODE]	Sets the enlargement display function mode. **[10SEC]:** Disables the enlarged display function after ten seconds have elapsed. **[HOLD]:** Enables the enlarged display function. **[UNTIL REC]:** Enables the enlarged display function until performing recording operation. ● Factory setting: [10SEC]
	[EXPAND1 SW]	Switches display/hide of the enlargement display function 1. **[ON], [OFF]** ● Factory setting: [OFF]
	[- POS1]	Adjusts the source signal position in an enlarged display. **[0] - [8]** ● Factory setting: [4]
	[- VALUE1]	Adjusts the enlargement factor. **[x2], [x3], [x4]** ● Factory setting: [x2]
	[EXPAND2 SW]	Switches display/hide of the enlargement display function 2. **[ON], [OFF]** ● Factory setting: [OFF]
	[- POS2]	Adjusts the source signal position in an enlarged display. **[0] - [8]** ● Factory setting: [4]
	[- VALUE2]	Adjusts the enlargement factor. **[x2], [x3], [x4]** ● Factory setting: [x2]
	[FOCUS IN COLOR SW]	Displays/hides the peaking function. **[ON], [OFF]** ● Factory setting: [OFF]
	[- PEAKING VALUE]	Sets the peaking function mode. **[LOW], [MID], [HIGH]** ● Factory setting: [MID]
	[- COLOR SEL]	Sets the peaking function color. **[RED], [GREEN], [WHITE]** ● Factory setting: [RED]
	[- MONO]	Switches enable/disable of the monochrome display function when the peaking function is displayed. **[ON], [OFF]** Even if it is set to [OFF], background image is displayed in monochrome when [MONO SW] is set to [ON]. If it is set to [ON], background image is displayed in monochrome even when [MONO SW] is set to [OFF]. ● Factory setting: [OFF]

Item		Description of settings
	[FOCUS SQUARES SW]	Displays/hides the focus square function. **[ON], [OFF]** ● Factory setting: [OFF]
	[MONO SW]	Switches enable/disable of monochrome display function. **[ON], [OFF]** Even if it is set to [OFF], background image is displayed in monochrome when [- MONO] is set to [ON]. If it is set to [ON], background image is displayed in monochrome even when [- MONO] is set to [OFF]. ● Factory setting: [OFF]
	[FOCUS DISP]	Sets the unit for the focus distance display. **[Meter], [Feet]** ● Factory setting: [Feet]
[OPEN IRIS FOCUS ASSIST]	[OPEN IRIS FOCUS SW]	Switches enable/disable of the open iris focus assist function. **[ON], [OFF]** ● Factory setting: [OFF]
	[VALUE]	Sets the time for the open iris focus is to assist. **[10SEC], [30SEC]** ● Factory setting: [10SEC]
[VF SDI EI ASSIST]	[ZEBRA SW]	Sets if the zebra signal is superimposed or not to the output from the <VF SDI> terminal. **[ON], [OFF]** ● Factory setting: [OFF]
	[- ZEBRA1 DETECT]	Sets the detection level of zebra pattern 1. **[0%] - [109%]** ● Factory setting: [80%]
	[- ZEBRA2 DETECT]	Sets the extraction level of zebra pattern 2. **[0%] - [109%]** ● Factory setting: [100%]
	[- ZEBRA2]	Enables/disables zebra pattern 2 and selects [SPOT]. **[ON], [SPOT], [OFF]** ● Factory setting: [OFF]
	[WFM SW]	Displays/hides waveform monitor. **[ON]/[OFF]** ● Factory setting: [OFF]
	[- TYPE]	Sets the display format of the waveform monitor. **[Y], [YGBR]** ● Factory setting: [Y]
	[- TRANSPARENCE]	Sets the transparency of the waveform monitor display. **[0%], [25%], [50%], [75%]** ● Factory setting: [50%]
	[Y GET SW]	Switches enable/disable of the Y GET display function. The user box function will not operate when [Y GET SW] is set to [ON]. **[ON], [OFF]** ● Factory setting: [OFF]
	[- UNIT]	Sets the [Y GET] display unit when [MENU] → [SYSTEM SETTINGS] → [COLOR SETTINGS] → [MAIN] is set to [V-Log]. It will be fixed to [%] when [MENU] → [SYSTEM SETTINGS] → [COLOR SETTINGS] → [MAIN] is set to anything other than [V-Log]. **[STOP], [%]** ● Factory setting: [STOP]
	[- AREA SIZE]	Sets the size of area to detect with the Y GET display function. **[S], [M], [L]** ● Factory setting: [M]
	[FALSE COLOR SW]	Switches display/hide of the false color. **[ON], [OFF]** ● Factory setting: [OFF]
[SMOOTH MODE]		Switches enable/disable of the smooth mode (a function to smooth the video of the viewfinder when the 24P, half shutter function is operated). **[ON], [OFF]** ● Factory setting: [OFF]
[TEST SIG]	[TEST SIG SEL]	Sets the test signal output. It will not operate when [MAIN PIXEL] is set to [2048×1080 CROP] or [1920×1080 CROP]. **[OFF]:** Does not output a test signal. **[BARS]:** Outputs the color bar set in [COLOR BARS TYPE]. ● Factory setting: [OFF]
	[COLOR BARS TYPE]	Sets the color bar to be used. **[SMPTE]:** Uses the color bar of the SMPTE standard. **[FULL]:** Uses the full color bar. ● Factory setting: [SMPTE]

[FILE]

Performs file-related operations such as reading/writing menu settings data from/to an SD memory card.

Item		Description of settings
[SCENE FILE]	[LOAD(SD CARD)]	Selects the scene file saved in the SD memory card and loads it into the camera.

Item		Description of settings
	[SAVE(SD CARD)]	Overwrites the current setting value in the camera to the file selected from the file list of the scene files saved in the SD memory card.
	[SAVE AS(SD CARD)]	Saves the current setting value in the camera as a new scene file in the SD memory card by entering the file name/title name.
[SETUP FILE]	[LOAD(SD CARD)]	Selects the setup file saved to the SD memory card and to be read in the camera.
	[SAVE(SD CARD)]	Overwrites the current setting values in the camera to the file selected from the setup file file list saved to the SD memory card.
	[SAVE AS(SD CARD)]	Enters a file name or title name for the file containing the current setting values of the camera and saves it in the SD memory card as a new setup file.

[PERIPHERAL]

Applies settings related to functions used in conjunction with peripheral devices, such as network and GPS devices.

Item		Description of settings
[GPS]		Configures internal GPS settings. **[ON]:** Activates the GPS operation. Outputs the location information as a signal to the <SDI OUT> terminal and records it as clip metadata. **[OFF]:** Does not activate the GPS operation. Does not output and record the location information. ● Factory setting: [OFF]
[NETWORK SEL]		Sets the connection method when connecting the camera with an external device (such as a computer) via network. **[LAN]:** Connects via the <LAN> terminal. **[WLAN]:** Connects via wireless LAN. **[4G/LTE]:** Connects via 4G/LTE. **[OFF]:** Does not connect. ● Factory setting: [OFF]
[NETWORK FUNC]	[USER ACCOUNT]	Sets the user account to be used for authentication in the network function of the camera.
	[ACCOUNT LIST]	Displays the currently set account name. Also registers new accounts and deletes accounts.
[FTP CLIENT SERVICE]	[SERVER URL]	Sets the proxy file transfer destination server name and folder for the FTP client function. Transfers to the login folder of the server if only server name or address is entered. Transfers to the specified folder of the server if entered in server name or address/folder format.
	[LOGIN USER]	Sets the user ID to connect to.
	[LOGIN PASSWORD]	Sets the password to connect to. The menu setting value is displayed with [∗].
	[SSH]	Sets when transferring files using SSH. **[ENABLE]:** Uses SSH. **[DISABLE]:** Does not use SSH. ● Factory setting: [DISABLE]
	[SSH PORT]	Sets the network port number when SSH is used. Sets to the same number as the server. The menu setting value is displayed with [∗]. ● Factory setting: [22]
[LAN PROPERTY]	[MAC ADDRESS]	Displays the MAC address of the <LAN> terminal on the camera. (Cannot be changed.)
	[DHCP]	Sets whether to use automatic acquisition via DHCP. (Mutually exclusive with [DHCP SERVER] setting) **[ENABLE]:** Uses automatic acquisition. **[DISABLE]:** Does not use automatic acquisition. Set [IP ADDRESS], [SUBNET MASK], [DEFAULT GATEWAY], [PRIMARY DNS], and [SECONDARY DNS]. ● Factory setting: [ENABLE]
	[IP ADDRESS]	Sets the IP address when [DISABLE] is selected in [DHCP]. ● Factory setting: [192.168.0.1]
	[SUBNET MASK]	Sets the subnet mask when [DISABLE] is selected in [DHCP]. ● Factory setting: [255.255.255.0]
	[DEFAULT GATEWAY]	Sets the default gateway when [DISABLE] is selected in [DHCP]. ● Factory setting: [192.168.0.254]
	[PRIMARY DNS]	Sets the primary DNS server when [DISABLE] is selected in [DHCP]. ● Factory setting: [0.0.0.0]
	[SECONDARY DNS]	Sets the secondary DNS server when [DISABLE] is selected in [DHCP]. ● Factory setting: [0.0.0.0]
	[DHCP SERVER]	Sets whether to use the DHCP SERVER function when connected via wired LAN. (Mutually exclusive with [DHCP] setting) **[ENABLE]:** Uses the DHCP SERVER function. **[DISABLE]:** Does not use the DHCP SERVER function. ● Factory setting: [DISABLE]
[WIRELESS PROPERTY]	[MAC ADDRESS]	Displays the MAC address of the wireless LAN of the camera. (Cannot be changed.)
	[TYPE]	Sets the connection method. **[DIRECT]:** Accesses to the network function of the camera directly from a smartphone, tablet, or computer. **[INFRA]:** Connects to the wireless access point. ● Factory setting: [DIRECT]

Item		Description of settings
	[SSID INPUT MODE]	Sets the setting method of SSID. When [TYPE] in [WIRELESS PROPERTY] is set to [INFRA], this item can be set. **[SELECT]:** Selects from the access point list. **[MANUAL]:** For entering the access point manually. ● Factory setting: [SELECT]
	[SSID]	Displays network name (SSID). Factory setting: [AU-V35LT1]
	[BAND]	Switches between two transmission methods (2.4 GHz or 5 GHz). **[2.4GHz], [5GHz]** ● Factory setting: [2.4GHz]
	[CHANNEL(2.4GHz)]	Sets the channels to be used when [DIRECT] is selected in [TYPE], [2.4GHz] is selected in [BAND], and the camera is connected via wireless LAN. **[AUTO], [CH1], [CH6], [CH11]** ● Factory setting: [AUTO]
	[CHANNEL(5GHz)]	Sets the channels to be used when [DIRECT] is selected in [TYPE], [5GHz] is selected in [BAND], and the camera is connected via wireless LAN. The selection differs depending on the installed wireless module. **[AUTO], [CH36], [CH40], [CH44], [CH48], [CH149], [CH153], [CH157], [CH161], [CH165]** ● Factory setting: [AUTO]
	[ENCRYPTION]	Sets the encryption format. **[WPA-TKIP], [WPA-AES], [WPA2-TKIP], [WPA2-AES], [NONE]** ● Factory setting: [WPA2-AES]
	[ENCRYPT KEY]	Sets the encryption key. Set the key using a string of 8 to 63 characters or a hexadecimal number with 64 digits. ● Factory setting: [01234567890123456789abcdef]
	[DHCP]	Sets whether to use automatic acquisition via DHCP when [INFRA] is selected in [TYPE]. **[ENABLE]:** Uses automatic acquisition. **[DISABLE]:** Does not use automatic acquisition. Set [IP ADDRESS], [SUBNET MASK], [DEFAULT GATEWAY], [PRIMARY DNS], and [SECONDARY DNS]. ● Factory setting: [ENABLE]
	[IP ADDRESS]	Sets the IP address when [DISABLE] is selected in [DHCP]. ● Factory setting: [192.168.0.1]
	[SUBNET MASK]	Sets the subnet mask when [DISABLE] is selected in [DHCP]. ● Factory setting: [255.255.255.0]
	[DEFAULT GATEWAY]	Sets the default gateway when [INFRA] is selected in [TYPE] and [DISABLE] is selected in [DHCP]. ● Factory setting: [192.168.0.254]
	[PRIMARY DNS]	Sets the primary DNS server when [INFRA] is selected in [TYPE] and [DISABLE] is selected in [DHCP], or when [ENABLE] is selected in [DHCP] and the primary DNS server cannot be obtained. ● Factory setting: [0.0.0.0]
	[SECONDARY DNS]	Sets the secondary DNS server when [INFRA] is selected in [TYPE] and [DISABLE] is selected in [DHCP], or when [ENABLE] is selected in [DHCP] and the primary DNS server cannot be obtained. ● Factory setting: [0.0.0.0]
	[DHCP SERVER]	Sets if the DHCP SERVER function is to be used or not when [DIRECT] is selected in [TYPE]. **[ENABLE]:** Uses the DHCP SERVER function. **[DISABLE]:** Does not use the DHCP SERVER function. ● Factory setting: [ENABLE]
[4G/LTE PROPERTY]	[APN]	Sets the APN (Access Point Name) provided by the provider.
	[USER ID]	Sets the user name provided by the provider.
	[PASSWORD]	Sets the password provided by the provider.
	[DIAL NO.]	Sets the phone number. For details, refer to the manual of the provider you have contracted.
[NETWORK TOOLS]	[LOG DISPLAY]	Displays the connection log.
	[STATUS DISPLAY]	Displays the network status.
	[INITIALIZE]	Restores the network setting status to the factory settings.
	[PING]	Checks the connection of the network using the PING command against the server specified in [MENU] → [PERIPHERAL] → [FTP CLIENT SERVICE] → [SERVER URL].

Initial value of the scene file

Initial value and the selectable item for [CAMERA SETTINGS]/[SCENE FILE SETTINGS] will differ depending on the [MENU] → [SYSTEM SETTINGS] → [COLOR SETTINGS] → [MAIN] setting.

[CAMERA SETTINGS]

	[MAIN] setting					
	[V-Log]	[SCENE1] ([V-709])	[SCENE2] ([V-LOOK1])	[SCENE3] ([V-LOOK2])	[SCENE4] ([BC-LOOK1])	[SCENE5] ([BC-LOOK2])
[FPS]						
• [VFR SW]	[OFF]	[OFF]	[OFF]	[OFF]	[OFF]	[OFF]
• [VALUE]	[23.98fps]	[23.98fps]	[23.98fps]	[23.98fps]	[23.98fps]	[23.98fps]
• [ADD]	—	—	—	—	—	—
• [DELETE]	—	—	—	—	—	—
[WHITE]						
• [AWB]	[CANCEL]	Set with [SCENE FILE SETTINGS]				
• [VALUE]	[3200K+0.0GMg]	Set with [SCENE FILE SETTINGS]				
• [ADD]	—	Set with [SCENE FILE SETTINGS]				
• [DELETE]	—	Set with [SCENE FILE SETTINGS]				
[BLACK]						
• [ABB]	[CANCEL]	Set with [SCENE FILE SETTINGS]				
[NR]						
• [ISO800]	[OFF]	[OFF]	[OFF]	[OFF]	[OFF]	[OFF]
• [ISO5000]	[OFF]	[OFF]	[OFF]	[OFF]	[OFF]	[OFF]
[EI]						
• [MODE]	[ISO]	Set with [SCENE FILE SETTINGS]				
• [ISO SELECT]	[NATIVE ONLY]	Set with [SCENE FILE SETTINGS]				
• [NATIVE ISO]	[800ISO]	Set with [SCENE FILE SETTINGS]				
• [800BASE ISO]	[800ISO]	Set with [SCENE FILE SETTINGS]				
• [5000BASE ISO]	[5000ISO]	Set with [SCENE FILE SETTINGS]				
• [GAIN MODE]	[NORMAL]	Set with [SCENE FILE SETTINGS]				
• [GAIN SELECT]	[0dB]	Set with [SCENE FILE SETTINGS]				
[SHUTTER]						
• [SW]	[ON]	[ON]	[ON]	[ON]	[ON]	[ON]
• [DISPLAY MODE]	[deg]	[deg]	[deg]	[deg]	[deg]	[deg]
• [VALUE deg]	[180.0]	[180.0]	[180.0]	[180.0]	[180.0]	[180.0]
• [VALUE sec]	[1/60]	[1/60]	[1/60]	[1/60]	[1/60]	[1/60]
• [ADD deg]	Current [deg] value					
• [ADD sec]	Current [sec] value					
• [DELETE deg]	—	—	—	—	—	—
• [DELETE sec]	—	—	—	—	—	—
[LENS SETTING]						
• [LENS CONNECT TYPE]	[EF]	[EF]	[EF]	[EF]	[EF]	[EF]
• [A.IRIS TYPE]	[LENS]	[LENS]	[LENS]	[LENS]	[LENS]	[LENS]
• [A.IRIS SPEED]	[10]	[10]	[10]	[10]	[10]	[10]
• [A.IRIS LEVEL EFFECT]	[50]	[50]	[50]	[50]	[50]	[50]
• [A.IRIS WINDOW]	[NORMAL1]	[NORMAL1]	[NORMAL1]	[NORMAL1]	[NORMAL1]	[NORMAL1]
• [A.IRIS PEAK/AVE]	[30]	[30]	[30]	[30]	[30]	[30]
• [ONE PUSH A. IRIS]	[CANCEL]	[CANCEL]	[CANCEL]	[CANCEL]	[CANCEL]	[CANCEL]
• [EF LENS IRIS MODE]	[MANUAL]	[MANUAL]	[MANUAL]	[MANUAL]	[MANUAL]	[MANUAL]

[SCENE FILE SETTINGS]

N: Not used.

	[MAIN] setting					
	[V-Log]	[SCENE1] ([V-709])	[SCENE2] ([V-LOOK1])	[SCENE3] ([V-LOOK2])	[SCENE4] ([BC-LOOK1])	[SCENE5] ([BC-LOOK2])
[SCENE DATA]						
• [LOAD]	N	—	—	—	—	—
• [SAVE]	N	—	—	—	—	—
• [INITIALIZE]	N	—	—	—	—	—
[WHITE]						
• [AWB]	N	[CANCEL]	[CANCEL]	[CANCEL]	[CANCEL]	[CANCEL]
• [VALUE]	N	[3200K+0.0GMg]	[3200K+0.0GMg]	[3200K+0.0GMg]	[3200K+0.0GMg]	[3200K+0.0GMg]

	[MAIN] setting					
	[V-Log]	[SCENE1] ([V-709])	[SCENE2] ([V-LOOK1])	[SCENE3] ([V-LOOK2])	[SCENE4] ([BC-LOOK1])	[SCENE5] ([BC-LOOK2])
● [ADD]	N	—	—	—	—	—
● [DELETE]	N	—	—	—	—	—
● [R GAIN]	N	[0]	[0]	[0]	[0]	[0]
● [B GAIN]	N	[0]	[0]	[0]	[0]	[0]
● [AWB OFFSET]	N	[OFF]	[OFF]	[OFF]	[OFF]	[OFF]
● [SHOCKLESS WHITE]	N	[OFF]	[OFF]	[OFF]	[OFF]	[OFF]
[BLACK]						
● [ABB]	N	[CANCEL]	[CANCEL]	[CANCEL]	[CANCEL]	[CANCEL]
● [M.PED]	N	[0]	[0]	[0]	[0]	[0]
● [R PED]	N	[0]	[0]	[0]	[0]	[0]
● [G PED]	N	[0]	[0]	[0]	[0]	[0]
● [B PED]	N	[0]	[0]	[0]	[0]	[0]
● [ABB OFFSET]	N	[OFF]	[OFF]	[OFF]	[OFF]	[OFF]
[EI]						
● [MODE]	N	[ISO]	[ISO]	[ISO]	[ISO]	[ISO]
● [ISO SELECT]	N	[NATIVE ONLY]	[800BASE]	[800BASE]	[800BASE]	[800BASE]
● [NATIVE ISO]	N	[800ISO]	[800ISO]	[800ISO]	[800ISO]	[800ISO]
● [800BASE ISO]	N	[800ISO]	[400ISO]	[400ISO]	[400ISO]	[400ISO]
● [5000BASE ISO]	N	[5000ISO]	[2500ISO]	[2500ISO]	[2500ISO]	[2500ISO]
● [GAIN MODE]	N	[NORMAL]	[NORMAL]	[NORMAL]	[NORMAL]	[NORMAL]
● [GAIN SELECT]	N	[0dB]	[0dB]	[0dB]	[0dB]	[0dB]
● [GAIN OFFSET SW]	N	[OFF]	[OFF]	[OFF]	[OFF]	[OFF]
● [GAIN OFFSET LEVEL]	N	[0.0dB]	[0.0dB]	[0.0dB]	[0.0dB]	[0.0dB]
[GAMMA]						
● [GAMMA SELECT]	N	[V-709]	[V-406060]	[V-452080]	[VIDEO45]	[VIDEO50]
[KNEE]						
● [KNEE SW]	N	N*1	N*1	N*1	[ON]	[ON]
● [KNEE MODE]	N	N*1	N*1	N*1	[D RANGE]	[D RANGE]
● [KNEE POINT]	N	N*1	N*1	N*1	[85%]	[93%]
● [KNEE SLOPE]	N	N*1	N*1	N*1	[100]	[100]
[WHITE CLIP]						
● [SW]	N	N*1	N*1	N*1	[OFF]	[OFF]
● [LEVEL]	N	N*1	N*1	N*1	[109%]	[109%]
[DETAIL]						
● [SW]	N	[OFF]	[ON]	[ON]	[ON]	[ON]
● [CORING]	N	[1]	[1]	[1]	[1]	[1]
● [MASTER LEVEL]	N	[0]	[0]	[0]	[0]	[0]
● [FREQUENCY]	N	[3]	[1]	[1]	[1]	[1]
[SKIN DETAIL]						
● [SW]	N	[OFF]	[OFF]	[OFF]	[OFF]	[OFF]
● [TABLE SELECT]	N	[A]	[A]	[A]	[A]	[A]
● [GET]	N	[CANCEL]	[CANCEL]	[CANCEL]	[CANCEL]	[CANCEL]
● [ZEBRA SW]	N	[OFF]	[OFF]	[OFF]	[OFF]	[OFF]
● [EFFECT LEVEL]	N	[16]	[16]	[16]	[16]	[16]
● [DETECT TABLE]	N	[A]	[A]	[A]	[A]	[A]
● [- I CENTER]	N	[35]	[35]	[35]	[35]	[35]
● [- I WIDTH]	N	[55]	[55]	[55]	[55]	[55]
● [- Q WIDTH]	N	[22]	[22]	[22]	[22]	[22]
● [- Q PHASE]	N	[0]	[0]	[0]	[0]	[0]
[CHROMA]						
● [LEVEL]	N	N*2	[0%]	[0%]	[0%]	[10%]
● [PHASE]	N	N*2	[0]	[0]	[0]	[0]
[MATRIX]						
● [SW]	N	[OFF]	[OFF]	[OFF]	[OFF]	[OFF]
● [(R-G)_N]	N	[0]	[0]	[0]	[0]	[0]
● [(R-G)_P]	N	[0]	[0]	[0]	[0]	[0]
● [(R-B)_N]	N	[0]	[0]	[0]	[0]	[0]
● [(R-B)_P]	N	[0]	[0]	[0]	[0]	[0]
● [(G-R)_N]	N	[0]	[0]	[0]	[0]	[0]
● [(G-R)_P]	N	[0]	[0]	[0]	[0]	[0]
● [(G-B)_N]	N	[0]	[0]	[0]	[0]	[0]

	[MAIN] setting					
	[V-Log]	**[SCENE1] ([V-709])**	**[SCENE2] ([V-LOOK1])**	**[SCENE3] ([V-LOOK2])**	**[SCENE4] ([BC-LOOK1])**	**[SCENE5] ([BC-LOOK2])**
● [(G-B)_P]	N	[0]	[0]	[0]	[0]	[0]
● [(B-R)_N]	N	[0]	[0]	[0]	[0]	[0]
● [(B-R)_P]	N	[0]	[0]	[0]	[0]	[0]
● [(B-G)_N]	N	[0]	[0]	[0]	[0]	[0]
● [(B-G)_P]	N	[0]	[0]	[0]	[0]	[0]
[COLOR CORRECTION]						
● [SW]	N	[OFF]	[OFF]	[OFF]	[OFF]	[OFF]
● [R (SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [R (PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P1(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P1(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P2(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P2(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P3(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P3(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [Yl (SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [Yl (PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P4(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P4(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P5(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P5(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P6(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P6(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [G (SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [G (PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P7(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P7(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P8(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P8(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P9(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P9(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [Cy (SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [Cy (PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P10(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P10(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P11(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P11(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P12(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P12(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [B (SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [B (PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P13(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P13(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P14(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P14(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P15(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P15(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [Mg (SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [Mg (PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P16(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P16(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P17(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P17(PHASE)]	N	[0]	[0]	[0]	[0]	[0]
● [P18(SAT)]	N	[0]	[0]	[0]	[0]	[0]
● [P18(PHASE)]	N	[0]	[0]	[0]	[0]	[0]

*1 Cannot be selected when [GAMMA] is set to anything other than [VIDEO45]/[VIDEO50].
*2 Cannot be selected when [GAMMA] is set to [V-709].

Menu operations

■ **Operation**

- UI: Settings can be performed using the control panel.
- SW: Settings can be performed using switches and buttons.
- VF: Settings can be performed using viewfinder menu and buttons.
- ✓: Items for operation.
- —: Non-operation items.

[SYSTEM SETTINGS]

Item		Operation		
		UI	SW	VF
[SYSTEM MODE]	[FREQUENCY]	✓	—	—
	[SDI RAW]	✓	—	—
	[MAIN PIXEL]	✓	—	—
	[MAIN CODEC]	✓	—	—
	[PROXY CODEC]	✓	—	—
	[PROXY SLOT]	✓	—	—
	[VFR PROXY REC]	✓	—	—
	[HIGH SPEED]	✓	—	—
[COLOR SETTING]	[MAIN]	✓	—	—
	[GRADING]	✓	—	—
	[PROXY]	✓	—	—
	[3D LUT]	✓	—	—
	[PLAYBACK GRADING]	✓	—	—
	[CDL]	✓	—	—
	[SLOPE-R]	✓	—	—
	[SLOPE-G]	✓	—	—
	[SLOPE-B]	✓	—	—
	[OFFSET-R]	✓	—	—
	[OFFSET-G]	✓	—	—
	[OFFSET-B]	✓	—	—
	[POWER-R]	✓	—	—
	[POWER-G]	✓	—	—
	[POWER-B]	✓	—	—
	[SATURATION]	✓	—	—
	[SDI OUT 1]	✓	✓	—
	[SDI OUT 2]	✓	✓	—
	[VF SDI]	✓	✓	—
[ANAMORPHIC DESQUEEZE]	[PROXY & SDI OUT]	—	—	—
	[VF SDI]	—	✓	—
	[DESQUEEZE RATIO]	—	—	—
[IMAGE INVERT]	[PROXY & SDI OUT]	—	—	—
	[VF SDI]	—	✓	—
	[INVERT SELECT]	—	—	—
[USER SWITCHES]	[USER1]	—	✓	—
	[USER2]	—	✓	—
	[USER3]	—	✓	—
	[USER TOGGLE(USER4)]	—	✓	—
	[USER5]	✓	✓	—
	[USER6]	✓	✓	—
	[USER7]	✓	✓	—
	[USER8]	✓	✓	—
	[USER9]	✓	✓	—
	[USER10]	✓	✓	—
	[USER GRIP1]	—	✓	—
	[USER GRIP2]	—	✓	—
[SIDE LOCK]	[REC(FRONT)]	—	—	—
	[USER1/PLAY]	—	—	—
	[USER2/INFO]	—	—	—
	[USER3/EXT]	—	—	—

Item		Operation		
		UI	SW	VF
	[IRIS/SEL]	—	—	—
	[MENU]	—	—	—
	[SYS CHECK]	—	—	—
	[TOGGLE]	—	—	—
[CARDS/MEDIA]	[FORMAT MEDIA]	✓	—	—
	[MEDIA END ALARM]	—	—	—
[POWER MANAGEMENT]	[DC IN SOURCE]	—	—	—
	[DC IN BATTERY SETTINGS]	—	—	—
	[- FULL VOLT]	—	—	—
	[- NEAR END VOLT]	—	—	—
	[- END VOLT]	—	—	—
	[ONBOARD BATTERY SETTINGS]	—	—	—
	[- BATTERY SELECT]	—	—	—
	[- FULL VOLT]	—	—	—
	[- NEAR END VOLT]	—	—	—
	[- END VOLT]	—	—	—
	[- NEAR END INFO]	—	—	—
	[- END INFO]	—	—	—
	[END ALARM]	—	—	—
[FAN]	[FAN SPEED]	—	—	—
[GENLOCK]	[GENLOCK MODE]	—	—	—
	[H PHASE COARSE]	—	—	—
	[H PHASE FINE]	—	—	—
[CONTROL DISPLAY]	[BRIGHTNESS]	—	—	—
	[COLOR LEVEL]	—	—	—
	[CONTRAST]	—	—	—
	[BACK LIGHT]	—	—	—
	[BUTTON LED]	—	—	—
[CLOCK]	[CLOCK SETTING]	—	—	—
	[TIME ZONE]	—	—	—
	[DATE FORMAT]	—	—	—
[INFORMATION]	[OPERATION TIME]	✓	—	—
	[VERSION]	✓	—	—
	[UPDATE]	✓	—	—
	[USB]	✓	—	—
	[TRACE LOG]	✓	—	—
	[SENSOR TEMP]	✓	—	—
[INITIALIZE]	[LOAD FACTORY DATA]	—	—	—

[CAMERA SETTINGS]

Item		Operation		
		UI	SW	VF
[FPS]	[VFR SW]	✓	—	—
	[VALUE]	✓	—	✓
	[ADD]	✓	—	—
	[DELETE]	✓	—	—
[WHITE]	[AWB]	✓	—	—
	[VALUE]	✓	✓	✓
	[ADD]	✓	✓	✓
	[DELETE]	✓	—	—
[BLACK]	[ABB]	—	—	—
[NR]	[ISO800]	—	—	—
	[ISO5000]	—	—	—
[EI]	[MODE]	✓	—	—
	[ISO SELECT]	✓	—	—
	[NATIVE ISO]	✓	✓	✓
	[800BASE ISO]	✓	✓	✓
	[5000BASE ISO]	✓	✓	✓
	[GAIN MODE]	✓	✓	✓

Item		Operation		
		UI	SW	VF
	[GAIN SELECT]	✓	✓	✓
[SHUTTER]	[SW]	✓	—	—
	[DISPLAY MODE]	✓	—	—
	[VALUE deg]	✓	✓	✓
	[VALUE sec]	✓	✓	✓
	[ADD deg]	✓	✓	✓
	[ADD sec]	✓	✓	✓
	[DELETE deg]	✓	✓	✓
	[DELETE sec]	✓	✓	✓
[LENS SETTING]	[LENS CONNECT TYPE]	—	—	—
	[A.IRIS TYPE]	—	—	—
	[A.IRIS SPEED]	—	—	—
	[A.IRIS LEVEL EFFECT]	—	—	—
	[A.IRIS WINDOW]	—	—	—
	[A.IRIS PEAK/AVE]	—	—	—
	[ONE PUSH A. IRIS]	—	—	—
	[EF LENS IRIS MODE]	—	—	—
	[GRIP IRIS]	—	—	—

[SCENE FILE SETTINGS]

Item		Operation		
		UI	SW	VF
[NAME EDIT]		—	—	—
[SCENE DATA]	[LOAD]	—	—	—
	[SAVE]	—	—	—
	[INITIALIZE]	—	—	—
[WHITE]	[AWB]	✓	—	—
	[VALUE]	✓	✓	✓
	[ADD]	✓	✓	✓
	[DELETE]	✓	✓	✓
	[R GAIN]	—	—	—
	[B GAIN]	—	—	—
	[AWB OFFSET]	—	—	—
	[SHOCKLESS WHITE]	—	—	—
[BLACK]	[ABB]	—	—	—
	[M.PED]	—	—	—
	[R PED]	—	—	—
	[G PED]	—	—	—
	[B PED]	—	—	—
	[ABB OFFSET]	—	—	—
[EI]	[MODE]	✓	—	—
	[ISO SELECT]	✓	—	—
	[NATIVE ISO]	✓	✓	✓
	[800BASE ISO]	✓	✓	✓
	[5000BASE ISO]	✓	✓	✓
	[GAIN MODE]	✓	✓	✓
	[GAIN SELECT]	✓	✓	✓
[GAMMA]	[GAMMA SELECT]	—	—	—
[KNEE]	[KNEE SW]	—	—	—
	[KNEE MODE]	—	—	—
	[KNEE POINT]	—	—	—
	[KNEE SLOPE]	—	—	—
[WHITE CLIP]	[SW]	—	—	—
	[LEVEL]	—	—	—
[DETAIL]	[SW]	—	—	—
	[CORING]	—	—	—
	[MASTER LEVEL]	—	—	—
	[FREQUENCY]	—	—	—
[SKIN DETAIL]	[SW]	—	—	—

Item		Operation		
		UI	SW	VF
	[TABLE SELECT]	—	—	—
	[GET]	—	—	—
	[ZEBRA SW]	—	—	—
	[EFFECT LEVEL]	—	—	—
	[DETECT TABLE]	—	—	—
	[- I CENTER]	—	—	—
	[- I WIDTH]	—	—	—
	[- Q WIDTH]	—	—	—
	[- Q PHASE]	—	—	—
[CHROMA]	[LEVEL]	—	—	—
	[PHASE]	—	—	—
[MATRIX]	[SW]	—	—	—
	[(R-G)_N]	—	—	—
	[(R-G)_P]	—	—	—
	[(R-B)_N]	—	—	—
	[(R-B)_P]	—	—	—
	[(G-R)_N]	—	—	—
	[(G-R)_P]	—	—	—
	[(G-B)_N]	—	—	—
	[(G-B)_P]	—	—	—
	[(B-R)_N]	—	—	—
	[(B-R)_P]	—	—	—
	[(B-G)_N]	—	—	—
	[(B-G)_P]	—	—	—
[COLOR CORRECTION]	[SW]	—	—	—
	[R (SAT)]	—	—	—
	[R (PHASE)]	—	—	—
	[P1(SAT)]	—	—	—
	[P1(PHASE)]	—	—	—
	[P2(SAT)]	—	—	—
	[P2(PHASE)]	—	—	—
	[P3(SAT)]	—	—	—
	[P3(PHASE)]	—	—	—
	[YI (SAT)]	—	—	—
	[YI (PHASE)]	—	—	—
	[P4(SAT)]	—	—	—
	[P4(PHASE)]	—	—	—
	[P5(SAT)]	—	—	—
	[P5(PHASE)]	—	—	—
	[P6(SAT)]	—	—	—
	[P6(PHASE)]	—	—	—
	[G (SAT)]	—	—	—
	[G (PHASE)]	—	—	—
	[P7(SAT)]	—	—	—
	[P7(PHASE)]	—	—	—
	[P8(SAT)]	—	—	—
	[P8(PHASE)]	—	—	—
	[P9(SAT)]	—	—	—
	[P9(PHASE)]	—	—	—
	[Cy (SAT)]	—	—	—
	[Cy (PHASE)]	—	—	—
	[P10(SAT)]	—	—	—
	[P10(PHASE)]	—	—	—
	[P11(SAT)]	—	—	—
	[P11(PHASE)]	—	—	—
	[P12(SAT)]	—	—	—
	[P12(PHASE)]	—	—	—
	[B (SAT)]	—	—	—
	[B (PHASE)]	—	—	—
	[P13(SAT)]	—	—	—

Item		Operation		
		UI	SW	VF
	[P13(PHASE)]	—	—	—
	[P14(SAT)]	—	—	—
	[P14(PHASE)]	—	—	—
	[P15(SAT)]	—	—	—
	[P15(PHASE)]	—	—	—
	[Mg (SAT)]	—	—	—
	[Mg (PHASE)]	—	—	—
	[P16(SAT)]	—	—	—
	[P16(PHASE)]	—	—	—
	[P17(SAT)]	—	—	—
	[P17(PHASE)]	—	—	—
	[P18(SAT)]	—	—	—
	[P18(PHASE)]	—	—	—

[REC SETTINGS]

Item		Operation		
		UI	SW	VF
[FILE NAME STYLE]		—	—	—
[REC FUNCTION]	[REC MODE]	—	—	—
	[REC TIME]	—	—	—
	[INTERVAL TIME]	—	—	—
	[START DELAY]	—	—	—
	[PRE REC MODE]	—	—	—
[TC]	[SET TC]	✓	—	—
	[SET UB]	—	—	—
	[TC/UB/Dur.]	✓	—	—
	[FREE/REC RUN]	✓	—	—
	[DF/NDF]	✓	—	—
	[UB MODE]	—	—	—
	[TC IN/OUT SEL]	—	—	—
	[TC OUT]	—	—	—
	[TC OUT REF]	—	—	—
[REC META DATA]	[LOAD]	—	—	—
	[RECORD]	—	—	—
	[USER CLIP NAME]	—	—	—
	[CAM INDEX]	✓	—	—
	[NEXT REEL COUNT]	✓	—	—
	[COUNTER RESET]	—	—	—
	[PROPERTY]	—	—	—
[REC BEEP SOUND]	[MODE]	—	—	—
	[VOLUME]	—	—	—
[DAILIES PREVIEW]		✓	—	—
[WINDOW BURN SW]		✓	—	—
[WINDOW BURN SETTINGS]	[UPPER LEFT]	✓	—	—
	[UPPER CENTER]	✓	—	—
	[UPPER RIGHT]	✓	—	—
	[LOWER LEFT]	✓	—	—
	[LOWER CENTER]	✓	—	—
	[LOWER RIGHT]	✓	—	—
	[CUSTOM BURN DATA1]	✓	—	—
	[CUSTOM BURN DATA2]	✓	—	—
	[CUSTOM BURN DATA3]	✓	—	—
[WATER MARK SW]		✓	—	—
[WATER MARK SETTINGS]	[MARK POSITION]	✓	—	—
	[MARK LEVEL]	✓	—	—
	[CHAR EDIT]	✓	—	—
	[CHAR SIZE]	✓	—	—
[FRAME MARK SW]		✓	—	—
[FRAME MARK SETTINGS]	[FRAME ASPECT]	✓	—	—

Item		Operation		
		UI	SW	VF
	[FRAME LEVEL]	✓	—	—

[AUDIO SETTINGS]

Item		Operation		
		UI	SW	VF
[AUDIO RECORD]		—	—	—
[AUDIO INPUT]	[INPUT 3 LINE/MIC SEL]	—	—	—
	[INPUT 4 LINE/MIC SEL]	—	—	—
	[INPUT 1/2 MIC POWER]	—	—	—
	[INPUT 1/2 MIC LEVEL]	—	—	—
	[INPUT3 MIC POWER]	—	—	—
	[INPUT4 MIC POWER]	—	—	—
	[INPUT3 MIC LEVEL]	—	—	—
	[INPUT4 MIC LEVEL]	—	—	—
	[INPUT3/4 LINE LEVEL]	—	—	—
	[CH1 IN SEL]	✓	—	—
	[CH2 IN SEL]	✓	—	—
	[CH3 IN SEL]	✓	—	—
	[CH4 IN SEL]	✓	—	—
	[CH1 MIC LOWCUT]	—	—	—
	[CH2 MIC LOWCUT]	—	—	—
	[CH3 MIC LOWCUT]	—	—	—
	[CH4 MIC LOWCUT]	—	—	—
	[TEST TONE]	—	—	—
[AUDIO LEVEL]	[CH1 LEVEL]	✓	—	—
	[CH2 LEVEL]	✓	—	—
	[CH3 LEVEL]	✓	—	—
	[CH4 LEVEL]	✓	—	—
	[CH1 VOL]	✓	—	—
	[CH2 VOL]	✓	—	—
	[CH3 VOL]	✓	—	—
	[CH4 VOL]	✓	—	—
	[CH1 LIMITER]	—	—	—
	[CH2 LIMITER]	—	—	—
	[CH3 LIMITER]	—	—	—
	[CH4 LIMITER]	—	—	—
	[HEADROOM]	—	—	—
[AUDIO OUTPUT]	[MONITOR CH]	✓	—	—
	[MONITOR SEL]	✓	—	—
	[MONITOR DELAY]	—	—	—
	[MONITOR VR]	✓	—	—
	[ALARM]	✓	—	—

[OUTPUT SETTINGS]

Item		Operation		
		UI	SW	VF
[SDI OUT]	[RAW OUTPUT]	—	—	—
	[SDI REC REMOTE]	—	—	—
	[SDI OUT FORMAT]	—	—	—
	[3G-SDI OUT]	—	—	—
	[SDI OUT 2 SIGNAL SEL]	—	—	—
	[SDI OUT 1 CLEAN VIEW]	—	—	—
	[SDI OUT 2 CLEAN VIEW]	—	—	—
	[MENU DISP]	—	—	—
	[PLAY DISP & CTRL]	—	—	—
[VF SDI OUT]	[VF SDI OUT FORMAT]	—	—	—
	[3G-SDI OUT]	—	—	—
	[VF SDI CLEAN VIEW]	—	✓	✓

Item		Operation		
		UI	SW	VF
	[SURROUND VIEW SW]	—	—	—
	[SURROUND VIEW AREA]	—	—	—
	[SURROUND VIEW LINE SW]	—	—	—
	[SURROUND VIEW COLOR]	—	—	—
	[SURROUND VIEW LEVEL]	—	—	—
[SDI OUT INDICATOR]	[SDI OUT 1 SW]	—	—	—
	[SDI OUT 2 SW]	—	—	—
	[SYSTEM PIXEL]	—	—	—
	[REC FORMAT]	—	—	—
	[REC MODE]	—	—	—
	[VFR]	—	—	—
	[FPS]	—	—	—
	[SHUTTER]	—	—	—
	[EI]	—	—	—
	[WHITE]	—	—	—
	[IRIS]	—	—	—
	[FOCUS]	—	—	—
	[ZOOM]	—	—	—
	[FILTER]	—	—	—
	[EXTENDER]	—	—	—
	[Y GET]	—	—	—
	[TC]	—	—	—
	[P2 CARD REMAIN]	—	—	—
	[BATTERY REMAIN]	—	—	—
	[GPS]	—	—	—
	[CLIP NAME]	—	—	—
	[USER CLIP NAME (TYPE3)]	—	—	—
	[AUDIO LEVEL METER]	✓	—	—
	[REMOTE CTRL]	—	—	—
[SDI OUT MARKER]	[SDI OUT 1 SW]	—	—	—
	[SDI OUT 2 SW]	—	—	—
	[PB MARKER SW]	—	—	—
	[MARKER & CHAR LEVEL]	—	—	—
	[CENTER MARKER]	—	—	—
	[SAFETY MARKER]	—	—	—
	[SAFETY AREA]	—	—	—
	[FRAME MARK]	—	—	—
	[FRAME COLOR]	—	—	—
	[FRAME SIG]	—	—	—
	[FRAME LEVEL]	—	—	—
	[USER BOX]	—	—	—
	[USER BOX WIDTH]	—	—	—
	[USER BOX HEIGHT]	—	—	—
	[USER BOX H POS]	—	—	—
	[USER BOX V POS]	—	—	—
[VF SDI INDICATOR]	[VF SDI SW]	—	—	—
	[SYSTEM PIXEL]	—	—	—
	[REC FORMAT]	—	—	—
	[REC MODE]	—	—	—
	[VFR]	—	—	—
	[FPS]	—	—	—
	[SHUTTER]	—	—	—
	[EI]	—	—	—
	[WHITE]	—	—	—
	[IRIS]	—	—	—
	[FOCUS]	—	—	—
	[ZOOM]	—	—	—
	[FILTER]	—	—	—
	[EXTENDER]	—	—	—
	[Y GET]	—	—	—

Item		Operation		
		UI	SW	VF
	[TC]	—	—	—
	[P2 CARD REMAIN]	—	—	—
	[BATTERY REMAIN]	—	—	—
	[GPS]	—	—	—
	[REC TALLY]	—	—	—
	[CLIP NAME]	—	—	—
	[USER CLIP NAME (TYPE3)]	—	—	—
	[AUDIO LEVEL METER]	✓	—	—
	[REMOTE CTRL]	—	—	—
[VF SDI MARKER]	[VF SDI SW]	—	✓	✓
	[PB MARKER SW]	—	—	—
	[MARKER & CHAR LVL]	—	—	—
	[CENTER MARKER]	—	—	✓
	[SAFETY MARKER]	—	—	✓
	[SAFETY AREA]	—	—	—
	[FRAME MARK]	—	—	✓
	[FRAME SIG]	—	—	—
	[FRAME LEVEL]	—	—	—
	[FRAME COLOR]	—	—	—
	[USER BOX]	—	—	✓
	[USER BOX WIDTH]	—	—	—
	[USER BOX HEIGHT]	—	—	—
	[USER BOX H POS]	—	—	—
	[USER BOX V POS]	—	—	—
[VF SDI FOCUS ASSIST]	[EXPAND MODE]	—	—	—
	[EXPAND1 SW]	—	✓	✓
	[- POS1]	—	—	—
	[- VALUE1]	—	—	—
	[EXPAND2 SW]	—	✓	✓
	[- POS2]	—	—	—
	[- VALUE2]	—	—	—
	[FOCUS IN COLOR SW]	—	✓	✓
	[- PEAKING VALUE]	—	—	—
	[- COLOR SEL]	—	—	—
	[- MONO]	—	—	—
	[FOCUS SQUARES SW]	—	✓	✓
	[MONO SW]	—	✓	✓
	[FOCUS DISP]	—	—	—
[OPEN IRIS FOCUS ASSIST]	[OPEN IRIS FOCUS SW]	—	✓	—
	[VALUE]	—	—	—
[VF SDI EI ASSIST]	[ZEBRA SW]	—	✓	✓
	[- ZEBRA1 DETECT]	—	—	—
	[- ZEBRA2 DETECT]	—	—	—
	[- ZEBRA2]	—	—	—
	[WFM SW]	—	✓	✓
	[- TYPE]	—	—	—
	[- TRANSPARENCE]	—	—	—
	[Y GET SW]	—	✓	—
	[- UNIT]	—	—	—
	[- AREA SIZE]	—	—	—
	[FALSE COLOR SW]	—	✓	✓
[SMOOTH MODE]		—	✓	✓
[TEST SIG]	[TEST SIG SEL]	—	—	—
	[COLOR BARS TYPE]	—	—	—

[FILE]

Item		Operation		
		UI	SW	VF
[SCENE FILE]	[LOAD(SD CARD)]	—	—	—

Item		Operation		
		UI	SW	VF
	[SAVE(SD CARD)]	—	—	—
	[SAVE AS(SD CARD)]	—	—	—
[SETUP FILE]	[LOAD(SD CARD)]	—	—	—
	[SAVE(SD CARD)]	—	—	—
	[SAVE AS(SD CARD)]	—	—	—

[PERIPHERAL]

Item		Operation		
		UI	SW	VF
[GPS]		✓	—	—
[NETWORK SEL]		✓	—	—
[NETWORK FUNC]	[USER ACCOUNT]	—	—	—
	[ACCOUNT LIST]	—	—	—
[FTP CLIENT SERVICE]	[SERVER URL]	—	—	—
	[LOGIN USER]	—	—	—
	[LOGIN PASSWORD]	—	—	—
	[SSH]	—	—	—
	[SSH PORT]	—	—	—
[LAN PROPERTY]	[MAC ADDRESS]	—	—	—
	[DHCP]	—	—	—
	[IP ADDRESS]	—	—	—
	[SUBNET MASK]	—	—	—
	[DEFAULT GATEWAY]	—	—	—
	[PRIMARY DNS]	—	—	—
	[SECONDARY DNS]	—	—	—
	[DHCP SERVER]	—	—	—
[WIRELESS PROPERTY]	[MAC ADDRESS]	—	—	—
	[TYPE]	—	—	—
	[SSID INPUT MODE]	—	—	—
	[SSID]	—	—	—
	[BAND]	—	—	—
	[CHANNEL(2.4GHz)]	—	—	—
	[CHANNEL(5GHz)]	—	—	—
	[ENCRYPTION]	—	—	—
	[ENCRYPT KEY]	—	—	—
	[DHCP]	—	—	—
	[IP ADDRESS]	—	—	—
	[SUBNET MASK]	—	—	—
	[DEFAULT GATEWAY]	—	—	—
	[PRIMARY DNS]	—	—	—
	[SECONDARY DNS]	—	—	—
	[DHCP SERVER]	—	—	—
[4G/LTE PROPERTY]	[APN]	—	—	—
	[USER]	—	—	—
	[PASSWORD]	—	—	—
	[DIAL NO.]	—	—	—
[NETWORK TOOLS]	[LOG DISPLAY]	—	—	—
	[STATUS DISPLAY]	—	—	—
	[INITIALIZE]	—	—	—
	[PING]	—	—	—

Target items for saving and initialization

■ **Target items for scene file/setup file/initialization**

● SCENE: Items saved in scene files.

● SETUP: Items saved in setup files.

● INITIALIZE: Items initialized by [MENU] → [SYSTEM SETTINGS] → [INITIALIZE] → [LOAD FACTORY DATA].

● ✓: Is a target.

● —: Not a target.

[SYSTEM SETTINGS]

Item		SCENE	SETUP	INITIALIZE
[SYSTEM MODE]	[FREQUENCY]	—	✓	✓
	[SDI RAW]	—	✓	✓
	[MAIN PIXEL]	—	✓	✓
	[MAIN CODEC]	—	✓	✓
	[PROXY CODEC]	—	✓	✓
	[PROXY SLOT]	—	✓	✓
	[VFR PROXY REC]	—	✓	✓
[COLOR SETTING]	[MAIN]	—	✓	✓
	[GRADING]	—	✓	✓
	[PROXY]	—	✓	✓
	[3D LUT]	—	✓	✓
	[PLAYBACK GRADING]	—	✓	✓
	[CDL]	—	✓	✓
	[SLOPE-R]	—	✓	✓
	[SLOPE-G]	—	✓	✓
	[SLOPE-B]	—	✓	✓
	[OFFSET-R]	—	✓	✓
	[OFFSET-G]	—	✓	✓
	[OFFSET-B]	—	✓	✓
	[POWER-R]	—	✓	✓
	[POWER-G]	—	✓	✓
	[POWER-B]	—	✓	✓
	[SATURATION]	—	✓	✓
	[SDI OUT 1]	—	✓	✓
	[SDI OUT 2]	—	✓	✓
	[VF SDI]	—	✓	✓
[ANAMORPHIC DESQUEEZE]	[PROXY & SDI OUT]	—	✓	✓
	[VF SDI]	—	✓	✓
	[DESQUEEZE RATIO]	—	✓	✓
[IMAGE INVERT]	[PROXY & SDI OUT]	—	✓	✓
	[VF SDI]	—	✓	✓
	[INVERT SELECT]	—	✓	✓
[USER SWITCHES]	[USER1]	—	✓	✓
	[USER2]	—	✓	✓
	[USER3]	—	✓	✓
	[USER TOGGLE(USER4)]	—	✓	✓
	[USER5]	—	✓	✓
	[USER6]	—	✓	✓
	[USER7]	—	✓	✓
	[USER8]	—	✓	✓
	[USER9]	—	✓	✓
	[USER10]	—	✓	✓
	[USER GRIP1]	—	✓	✓
	[USER GRIP2]	—	✓	✓
[SIDE LOCK]	[REC(FRONT)]	—	✓	✓
	[USER1/PLAY]	—	✓	✓
	[USER2/INFO]	—	✓	✓
	[USER3/EXT]	—	✓	✓
	[IRIS/SEL]	—	✓	✓
	[MENU]	—	✓	✓

Item		SCENE	SETUP	INITIALIZE
	[SYS CHECK]	—	✓	✓
	[TOGGLE]	—	✓	✓
[CARDS/MEDIA]	[FORMAT MEDIA]	—	—	—
	[MEDIA END ALARM]	—	✓	✓
[POWER MANAGEMENT]	[DC IN SOURCE]	—	✓	✓
	[DC IN BATTERY SETTINGS]	—	—	—
	[- FULL VOLT]	—	✓	✓
	[- NEAR END VOLT]	—	✓	✓
	[- END VOLT]	—	✓	✓
	[ONBOARD BATTERY SETTINGS]	—	—	—
	[- BATTERY SELECT]	—	✓	✓
	[- FULL VOLT]	—	✓	✓
	[- NEAR END VOLT]	—	✓	✓
	[- END VOLT]	—	✓	✓
	[- NEAR END INFO]	—	✓	✓
	[- END INFO]	—	✓	✓
	[END ALARM]	—	✓	✓
[FAN]	[FAN SPEED]	—	✓	✓
[GENLOCK]	[GENLOCK MODE]	—	✓	✓
	[H PHASE COARSE]	—	✓	✓
	[H PHASE FINE]	—	✓	✓
[CONTROL DISPLAY]	[BRIGHTNESS]	—	✓	✓
	[COLOR LEVEL]	—	✓	✓
	[CONTRAST]	—	✓	✓
	[BACK LIGHT]	—	✓	✓
	[BUTTON LED]	—	✓	✓
[CLOCK]	[CLOCK SETTING]	—	—	—
	[TIME ZONE]	—	✓	—
	[DATE FORMAT]	—	✓	✓
[INFORMATION]	[OPERATION TIME]	—	—	—
	[VERSION]	—	—	—
	[UPDATE]	—	—	—
	[USB]	—	—	—
	[TRACE LOG]	—	—	—
	[SENSOR TEMP]	—	—	—
[INITIALIZE]	[LOAD FACTORY DATA]	—	—	—

[CAMERA SETTINGS]

Item		SCENE	SETUP	INITIALIZE
[FPS]	[VFR SW]	—	✓	✓
	[VALUE]	—	✓	✓
	[ADD]	—	—	—
	[DELETE]	—	—	—
[WHITE]	[AWB]	—	—	—
	[VALUE]	—	✓	✓
	[ADD]	—	—	✓
	[DELETE]	—	—	—
[BLACK]	[ABB]	—	—	—
[NR]	[ISO800]	—	✓	✓
	[ISO5000]	—	✓	✓
[EI]	[MODE]	—	✓	✓
	[ISO SELECT]	—	✓	✓
	[NATIVE ISO]	—	✓	✓
	[800BASE ISO]	—	✓	✓
	[5000BASE ISO]	—	✓	✓
	[GAIN MODE]	—	✓	✓
	[GAIN SELECT]	—	✓	✓
[SHUTTER]	[SW]	—	✓	✓
	[DISPLAY MODE]	—	✓	✓

Item		SCENE	SETUP	INITIALIZE
	[VALUE deg]	—	✓	✓
	[VALUE sec]	—	✓	✓
	[ADD deg]	—	—	—
	[ADD sec]	—	—	—
	[DELETE deg]	—	—	—
	[DELETE sec]	—	—	—
[LENS SETTING]	[LENS CONNECT TYPE]	—	✓	✓
	[A.IRIS TYPE]	—	✓	✓
	[A.IRIS SPEED]	—	✓	✓
	[A.IRIS LEVEL EFFECT]	—	✓	✓
	[A.IRIS WINDOW]	—	✓	✓
	[A.IRIS PEAK/AVE]	—	✓	✓
	[ONE PUSH A. IRIS]	—	—	—
	[EF LENS IRIS MODE]	—	✓	✓
	[GRIP IRIS]	—	✓	✓

[SCENE FILE SETTINGS]

Item		SCENE	SETUP	INITIALIZE
[NAME EDIT]		—	—	—
[SCENE DATA]	[LOAD]	—	—	—
	[SAVE]	—	—	—
	[INITIALIZE]	—	—	—
[WHITE]	[AWB]	—	—	—
	[VALUE]	✓	—	✓
	[ADD]	—	—	✓
	[DELETE]	—	—	—
	[R GAIN]	✓	—	✓
	[B GAIN]	✓	—	✓
	[AWB OFFSET]	✓	—	✓
	[SHOCKLESS WHITE]	✓	—	✓
[BLACK]	[ABB]	—	—	—
	[M.PED]	✓	—	✓
	[R PED]	✓	—	✓
	[G PED]	✓	—	✓
	[B PED]	✓	—	✓
	[ABB OFFSET]	✓	—	✓
[EI]	[MODE]	✓	—	✓
	[ISO SELECT]	✓	—	✓
	[NATIVE ISO]	✓	—	✓
	[800BASE ISO]	✓	—	✓
	[5000BASE ISO]	✓	—	✓
	[GAIN MODE]	✓	—	✓
	[GAIN SELECT]	✓	—	✓
[GAMMA]	[GAMMA SELECT]	✓	—	✓
[KNEE]	[KNEE SW]	✓	—	✓
	[KNEE MODE]	✓	—	✓
	[KNEE POINT]	✓	—	✓
	[KNEE SLOPE]	✓	—	✓
[WHITE CLIP]	[SW]	✓	—	✓
	[LEVEL]	✓	—	✓
[DETAIL]	[SW]	✓	—	✓
	[CORING]	✓	—	✓
	[MASTER LEVEL]	✓	—	✓
	[FREQUENCY]	✓	—	✓
[SKIN DETAIL]	[SW]	✓	—	✓
	[TABLE SELECT]	✓	—	✓
	[GET]	✓	—	✓
	[ZEBRA SW]	✓	—	✓
	[EFFECT LEVEL]	✓	—	✓

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Item		SCENE	SETUP	INITIALIZE
	[DETECT TABLE]	✓	—	✓
	[I CENTER]	✓	—	✓
	[I WIDTH]	✓	—	✓
	[Q WIDTH]	✓	—	✓
	[Q PHASE]	✓	—	✓
[CHROMA]	[LEVEL]	✓	—	✓
	[PHASE]	✓	—	✓
[MATRIX]	[SW]	✓	—	✓
	[(R-G)_N]	✓	—	✓
	[(R-G)_P]	✓	—	✓
	[(R-B)_N]	✓	—	✓
	[(R-B)_P]	✓	—	✓
	[(G-R)_N]	✓	—	✓
	[(G-R)_P]	✓	—	✓
	[(G-B)_N]	✓	—	✓
	[(G-B)_P]	✓	—	✓
	[(B-R)_N]	✓	—	✓
	[(B-R)_P]	✓	—	✓
	[(B-G)_N]	✓	—	✓
	[(B-G)_P]	✓	—	✓
[COLOR CORRECTION]	[SW]	✓	—	✓
	[R (SAT)]	✓	—	✓
	[R (PHASE)]	✓	—	✓
	[P1(SAT)]	✓	—	✓
	[P1(PHASE)]	✓	—	✓
	[P2(SAT)]	✓	—	✓
	[P2(PHASE)]	✓	—	✓
	[P3(SAT)]	✓	—	✓
	[P3(PHASE)]	✓	—	✓
	[YI (SAT)]	✓	—	✓
	[YI (PHASE)]	✓	—	✓
	[P4(SAT)]	✓	—	✓
	[P4(PHASE)]	✓	—	✓
	[P5(SAT)]	✓	—	✓
	[P5(PHASE)]	✓	—	✓
	[P6(SAT)]	✓	—	✓
	[P6(PHASE)]	✓	—	✓
	[G (SAT)]	✓	—	✓
	[G (PHASE)]	✓	—	✓
	[P7(SAT)]	✓	—	✓
	[P7(PHASE)]	✓	—	✓
	[P8(SAT)]	✓	—	✓
	[P8(PHASE)]	✓	—	✓
	[P9(SAT)]	✓	—	✓
	[P9(PHASE)]	✓	—	✓
	[Cy (SAT)]	✓	—	✓
	[Cy (PHASE)]	✓	—	✓
	[P10(SAT)]	✓	—	✓
	[P10(PHASE)]	✓	—	✓
	[P11(SAT)]	✓	—	✓
	[P11(PHASE)]	✓	—	✓
	[P12(SAT)]	✓	—	✓
	[P12(PHASE)]	✓	—	✓
	[B (SAT)]	✓	—	✓
	[B (PHASE)]	✓	—	✓
	[P13(SAT)]	✓	—	✓
	[P13(PHASE)]	✓	—	✓
	[P14(SAT)]	✓	—	✓
	[P14(PHASE)]	✓	—	✓
	[P15(SAT)]	✓	—	✓

Item		SCENE	SETUP	INITIALIZE
[P15(PHASE)]		✓	—	✓
[Mg (SAT)]		✓	—	✓
[Mg (PHASE)]		✓	—	✓
[P16(SAT)]		✓	—	✓
[P16(PHASE)]		✓	—	✓
[P17(SAT)]		✓	—	✓
[P17(PHASE)]		✓	—	✓
[P18(SAT)]		✓	—	✓
[P18(PHASE)]		✓	—	✓

[REC SETTINGS]

Item		SCENE	SETUP	INITIALIZE
[FILE NAME STYLE]		—	✓	✓
[REC FUNCTION]	[REC MODE]	—	✓	✓
	[REC TIME]	—	✓	✓
	[INTERVAL TIME]	—	✓	✓
	[START DELAY]	—	✓	✓
	[PRE REC MODE]	—	✓	✓
[TC]	[SET TC]	—	—	—
	[SET UB]	—	—	—
	[TC/UB/Dur.]	—	—	✓
	[FREE/REC RUN]	—	✓	✓
	[DF/NDF]	—	✓	✓
	[UB MODE]	—	✓	✓
	[TC IN/OUT SEL]	—	✓	✓
	[TC OUT]	—	✓	✓
	[TC OUT REF]	—	✓	✓
[REC META DATA]	[LOAD]	—	—	—
	[RECORD]	—	✓	✓
	[USER CLIP NAME]	—	✓	✓
	[CAM INDEX]	—	—	✓
	[NEXT REEL COUNT]	—	—	✓
	[COUNTER RESET]	—	—	—
	[PROPERTY]	—	—	—
[REC BEEP SOUND]	[MODE]	—	✓	✓
	[VOLUME]	—	✓	✓
[DAILIES PREVIEW]		—	—	—
[WINDOW BURN SW]		—	✓	✓
[WINDOW BURN SETTINGS]	[UPPER LEFT]	—	✓	✓
	[UPPER CENTER]	—	✓	✓
	[UPPER RIGHT]	—	✓	✓
	[LOWER LEFT]	—	✓	✓
	[LOWER CENTER]	—	✓	✓
	[LOWER RIGHT]	—	✓	✓
	[CUSTOM BURN DATA1]	—	✓	✓
	[CUSTOM BURN DATA2]	—	✓	✓
	[CUSTOM BURN DATA3]	—	✓	✓
[WATER MARK SW]		—	✓	✓
[WATER MARK SETTINGS]	[MARK POSITION]	—	✓	✓
	[MARK LEVEL]	—	✓	✓
	[CHAR EDIT]	—	✓	✓
	[CHAR SIZE]	—	✓	✓
[FRAME MARK SW]		—	✓	✓
[FRAME MARK SETTINGS]	[FRAME ASPECT]	—	✓	✓
	[FRAME LEVEL]	—	✓	✓

[AUDIO SETTINGS]

Item		SCENE	SETUP	INITIALIZE
[AUDIO RECORD]		—	✓	✓
[AUDIO INPUT]	[INPUT 3 LINE/MIC SEL]	—	✓	✓
	[INPUT 4 LINE/MIC SEL]	—	✓	✓
	[INPUT 1/2 MIC POWER]	—	✓	✓
	[INPUT 1/2 MIC LEVEL]	—	✓	✓
	[INPUT3 MIC POWER]	—	✓	✓
	[INPUT4 MIC POWER]	—	✓	✓
	[INPUT3 MIC LEVEL]	—	✓	✓
	[INPUT4 MIC LEVEL]	—	✓	✓
	[INPUT3/4 LINE LEVEL]	—	✓	✓
	[CH1 IN SEL]	—	✓	✓
	[CH2 IN SEL]	—	✓	✓
	[CH3 IN SEL]	—	✓	✓
	[CH4 IN SEL]	—	✓	✓
	[CH1 MIC LOWCUT]	—	✓	✓
	[CH2 MIC LOWCUT]	—	✓	✓
	[CH3 MIC LOWCUT]	—	✓	✓
	[CH4 MIC LOWCUT]	—	✓	✓
	[TEST TONE]	—	✓	✓
[AUDIO LEVEL]	[CH1 LEVEL]	—	✓	✓
	[CH2 LEVEL]	—	✓	✓
	[CH3 LEVEL]	—	✓	✓
	[CH4 LEVEL]	—	✓	✓
	[CH1 VOL]	—	✓	✓
	[CH2 VOL]	—	✓	✓
	[CH3 VOL]	—	✓	✓
	[CH4 VOL]	—	✓	✓
	[CH1 LIMITER]	—	✓	✓
	[CH2 LIMITER]	—	✓	✓
	[CH3 LIMITER]	—	✓	✓
	[CH4 LIMITER]	—	✓	✓
	[HEADROOM]	—	✓	✓
[AUDIO OUTPUT]	[MONITOR CH]	—	✓	✓
	[MONITOR SEL]	—	✓	✓
	[MONITOR DELAY]	—	✓	✓
	[MONITOR VR]	—	✓	✓
	[ALARM]	—	✓	✓

[OUTPUT SETTINGS]

Item		SCENE	SETUP	INITIALIZE
[SDI OUT]	[RAW OUTPUT]	—	✓	✓
	[SDI REC REMOTE]	—	✓	✓
	[SDI OUT FORMAT]	—	✓	✓
	[3G-SDI OUT]	—	✓	✓
	[SDI OUT 2 SIGNAL SEL]	—	✓	✓
	[SDI OUT 1 CLEAN VIEW]	—	✓	✓
	[SDI OUT 2 CLEAN VIEW]	—	✓	✓
	[MENU DISP]	—	✓	✓
	[PLAY DISP & CTRL]	—	✓	✓
	[SURROUND VIEW SW]	—	✓	✓
	[SURROUND VIEW AREA]	—	✓	✓
	[SURROUND VIEW LINE SW]	—	✓	✓
	[SURROUND VIEW COLOR]	—	✓	✓
	[SURROUND VIEW LEVEL]	—	✓	✓
[VF SDI OUT]	[VF SDI OUT FORMAT]	—	✓	✓
	[3G-SDI OUT]	—	✓	✓
	[VF SDI CLEAN VIEW]	—	✓	✓

Item		SCENE	SETUP	INITIALIZE
[SDI OUT INDICATOR]	[SDI OUT 1 SW]	—	✓	✓
	[SDI OUT 2 SW]	—	✓	✓
	[SYSTEM PIXEL]	—	✓	✓
	[REC FORMAT]	—	✓	✓
	[REC MODE]	—	✓	✓
	[VFR]	—	✓	✓
	[FPS]	—	✓	✓
	[SHUTTER]	—	✓	✓
	[EI]	—	✓	✓
	[WHITE]	—	✓	✓
	[IRIS]	—	✓	✓
	[FOCUS]	—	✓	✓
	[ZOOM]	—	✓	✓
	[FILTER]	—	✓	✓
	[EXTENDER]	—	✓	✓
	[Y GET]	—	✓	✓
	[TC]	—	✓	✓
	[P2 CARD REMAIN]	—	✓	✓
	[BATTERY REMAIN]	—	✓	✓
	[GPS]	—	✓	✓
	[CLIP NAME]	—	✓	✓
	[USER CLIP NAME (TYPE3)]	—	✓	✓
	[AUDIO LEVEL METER]	—	✓	✓
	[REMOTE CTRL]	—	✓	✓
[SDI OUT MARKER]	[SDI OUT 1 SW]	—	✓	✓
	[SDI OUT 2 SW]	—	✓	✓
	[PB MARKER SW]	—	✓	✓
	[MARKER & CHAR LEVEL]	—	✓	✓
	[CENTER MARKER]	—	✓	✓
	[SAFETY MARKER]	—	✓	✓
	[SAFETY AREA]	—	✓	✓
	[FRAME MARK]	—	✓	✓
	[FRAME COLOR]	—	✓	✓
	[FRAME SIG]	—	✓	✓
	[FRAME LEVEL]	—	✓	✓
	[USER BOX]	—	✓	✓
	[USER BOX WIDTH]	—	✓	✓
	[USER BOX HEIGHT]	—	✓	✓
	[USER BOX H POS]	—	✓	✓
	[USER BOX V POS]	—	✓	✓
[VF SDI INDICATOR]	[VF SDI SW]	—	✓	✓
	[SYSTEM PIXEL]	—	✓	✓
	[REC FORMAT]	—	✓	✓
	[REC MODE]	—	✓	✓
	[VFR]	—	✓	✓
	[FPS]	—	✓	✓
	[SHUTTER]	—	✓	✓
	[EI]	—	✓	✓
	[WHITE]	—	✓	✓
	[IRIS]	—	✓	✓
	[FOCUS]	—	✓	✓
	[ZOOM]	—	✓	✓
	[FILTER]	—	✓	✓
	[EXTENDER]	—	✓	✓
	[Y GET]	—	✓	✓
	[TC]	—	✓	✓
	[P2 CARD REMAIN]	—	✓	✓
	[BATTERY REMAIN]	—	✓	✓
	[GPS]	—	✓	✓
	[REC TALLY]	—	✓	✓

Item		SCENE	SETUP	INITIALIZE
	[CLIP NAME]	—	✓	✓
	[USER CLIP NAME (TYPE3)]	—	✓	✓
	[AUDIO LEVEL METER]	—	✓	✓
	[REMOTE CTRL]	—	✓	✓
[VF SDI MARKER]	[VF SDI SW]	—	✓	✓
	[PB MARKER SW]	—	✓	✓
	[MARKER & CHAR LVL]	—	✓	✓
	[CENTER MARKER]	—	✓	✓
	[SAFETY MARKER]	—	✓	✓
	[SAFETY AREA]	—	✓	✓
	[FRAME MARK]	—	✓	✓
	[FRAME SIG]	—	✓	✓
	[FRAME LEVEL]	—	✓	✓
	[FRAME COLOR]	—	✓	✓
	[USER BOX]	—	✓	✓
	[USER BOX WIDTH]	—	✓	✓
	[USER BOX HEIGHT]	—	✓	✓
	[USER BOX H POS]	—	✓	✓
	[USER BOX V POS]	—	✓	✓
[VF SDI FOCUS ASSIST]	[EXPAND MODE]	—	✓	✓
	[EXPAND1 SW]	—	—	✓
	[- POS1]	—	✓	✓
	[- VALUE1]	—	✓	✓
	[EXPAND2 SW]	—	—	✓
	[- POS2]	—	✓	✓
	[- VALUE2]	—	✓	✓
	[FOCUS IN COLOR SW]	—	✓	✓
	[- PEAKING VALUE]	—	—	—
	[- COLOR SEL]	—	—	—
	[- MONO]	—	—	—
	[FOCUS SQUARES SW]	—	✓	✓
	[MONO SW]	—	✓	✓
	[FOCUS DISP]	—	✓	✓
[OPEN IRIS FOCUS ASSIST]	[OPEN IRIS FOCUS SW]	—	✓	✓
	[VALUE]	—	✓	✓
[VF SDI EI ASSIST]	[ZEBRA SW]	—	✓	✓
	[- ZEBRA1 DETECT]	—	✓	✓
	[- ZEBRA2 DETECT]	—	✓	✓
	[- ZEBRA2]	—	✓	✓
	[WFM SW]	—	✓	✓
	[- TYPE]	—	✓	✓
	[- TRANSPARENCE]	—	✓	✓
	[Y GET SW]	—	✓	✓
	[- UNIT]	—	✓	✓
	[- AREA SIZE]	—	✓	✓
	[FALSE COLOR SW]	—	✓	✓
[SMOOTH MODE]		—	✓	✓
[TEST SIG]	[TEST SIG SEL]	—	✓	✓
	[COLOR BARS TYPE]	—	✓	✓

[FILE]

Item		SCENE	SETUP	INITIALIZE
[SCENE FILE]	[LOAD(SD CARD)]	—	—	—
	[SAVE(SD CARD)]	—	—	—
	[SAVE AS(SD CARD)]	—	—	—
[SETUP FILE]	[LOAD(SD CARD)]	—	—	—
	[SAVE(SD CARD)]	—	—	—
	[SAVE AS(SD CARD)]	—	—	—

[PERIPHERAL]

Item		SCENE	SETUP	INITIALIZE
[GPS]		—	✓	✓
[NETWORK SEL]		—	✓	✓
[NETWORK FUNC]	[USER ACCOUNT]	—	—	✓
	[ACCOUNT LIST]	—	—	✓
[FTP CLIENT SERVICE]	[SERVER URL]	—	✓	—
	[LOGIN USER]	—	—	—
	[LOGIN PASSWORD]	—	—	—
	[SSH]	—	✓	✓
	[SSH PORT]	—	✓	✓
[LAN PROPERTY]	[MAC ADDRESS]	—	—	—
	[DHCP]	—	✓	✓
	[IP ADDRESS]	—	✓	✓
	[SUBNET MASK]	—	✓	✓
	[DEFAULT GATEWAY]	—	✓	✓
	[PRIMARY DNS]	—	✓	✓
	[SECONDARY DNS]	—	✓	✓
	[DHCP SERVER]	—	✓	✓
[WIRELESS PROPERTY]	[MAC ADDRESS]	—	—	—
	[TYPE]	—	✓	✓
	[SSID INPUT MODE]	—	✓	✓
	[SSID]	—	✓	✓
	[BAND]	—	✓	✓
	[CHANNEL(2.4GHz)]	—	✓	✓
	[CHANNEL(5GHz)]	—	✓	✓
	[ENCRYPTION]	—	✓	✓
	[ENCRYPT KEY]	—	—	✓
	[DHCP]	—	✓	✓
	[IP ADDRESS]	—	✓	✓
	[SUBNET MASK]	—	✓	✓
	[DEFAULT GATEWAY]	—	✓	✓
	[PRIMARY DNS]	—	✓	✓
	[SECONDARY DNS]	—	✓	✓
	[DHCP SERVER]	—	✓	✓
[4G/LTE PROPERTY]	[APN]	—	✓	✓
	[USER]	—	✓	✓
	[PASSWORD]	—	—	✓
	[DIAL NO.]	—	✓	✓
[NETWORK TOOLS]	[LOG DISPLAY]	—	—	—
	[STATUS DISPLAY]	—	—	—
	[INITIALIZE]	—	—	—
	[PING]	—	—	—

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Chapter 11   Network Connection

This chapter describes how to use the camera by connecting to network.

Network connection

The camera can be connected to the network via wireless LAN, wired LAN, or 4G/LTE.

For details on wireless modules that can be connected, visit the support desk at the following website:

http://pro-av.panasonic.net/

To use wireless LAN, attach AJ-WM30/AJ-WM50 (optional) to the <USB HOST> terminal.

To use wired LAN, connect a LAN cable to the <LAN> terminal on the right side.

To use 4G/LTE, connect a USB modem that is compliant with the <USB HOST> terminal.
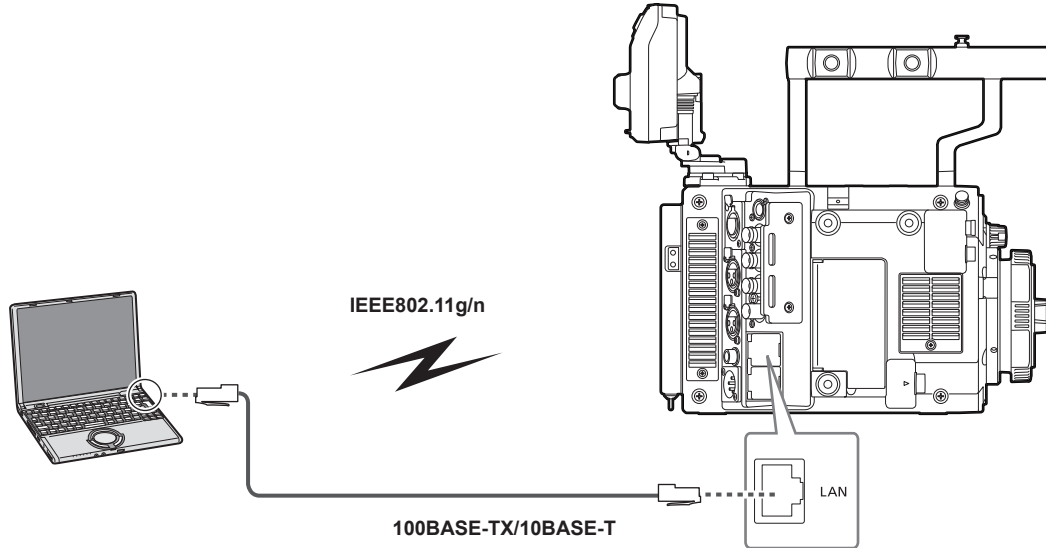
Available functions

When the camera is connected to network, the following functions are available.

● Color setting from the color grading application

● Uploading the proxy file

 Access such as displaying the thumbnail image of the proxy clip at the destination, etc., is not possible.

● Remote control with the remote operation panel AK-HRP200G (optional)

📝 NOTE

・ For the latest information, visit the following website:

 http://pro-av.panasonic.net/

Preparing for connection

For wireless module AJ-WM30/AJ-WM50

Attach the wireless module AJ-WM30/AJ-WM50 (optional) to the camera.

Wireless module fixing part

Fig. 1　　　　**Fig. 2**
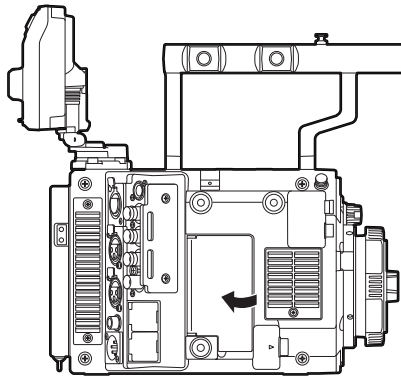
Fig. 3
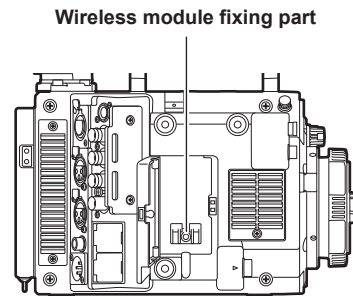
Wireless module fixing part
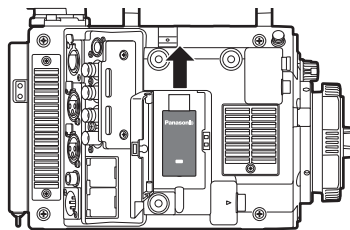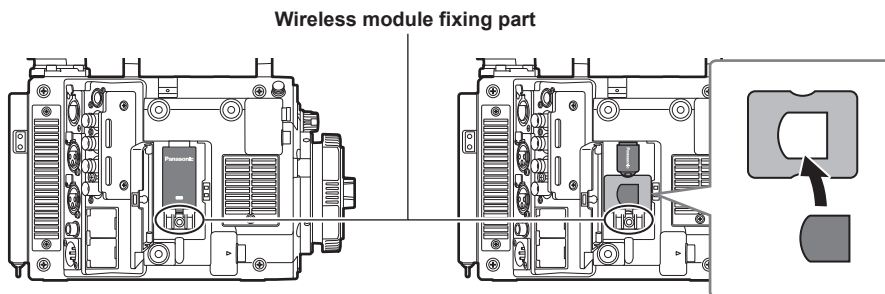
Fig. 4

1 **Open the cover. (Fig. 1)**

2 **Remove the wireless module fixing part from the camera. (Fig. 2)**

The wireless module fixing part is fixed with one screw.

3 **Securely attach the wireless module to the <USB HOST> terminal (sub host). (Fig. 3)**

4 **(AJ-WM50 only) Place the module holder under the wireless module. (Fig. 4)**

Attach the cap for the wireless module on the hole of the module holder.

5 **Fix the wireless module fixing part removed in Step 2 with a screw. (Fig. 4)**

6 **Close the cover.**

✑ NOTE

・ When removing the wireless module, pull it down straight.
・ When connected with the wireless LAN, attach the wireless module securely and close the cover.
・ When using a wireless module other than AJ-WM30/AJ-WM50, refer to "For wireless module other than AJ-WM30/AJ-WM50" (page 183).

Cautions when using wireless module AJ-WM30/AJ-WM50

Read the operating manual of the wireless module thoroughly and understand it before using.

For the latest information, visit the following website:

http://pro-av.panasonic.net/

For wireless module other than AJ-WM30/AJ-WM50

Attach the wireless module other than AJ-WM30/AJ-WM50 (optional) to the camera.

Turn off the power of the camera before connecting or disconnecting the wireless module.

<USB HOST> terminal
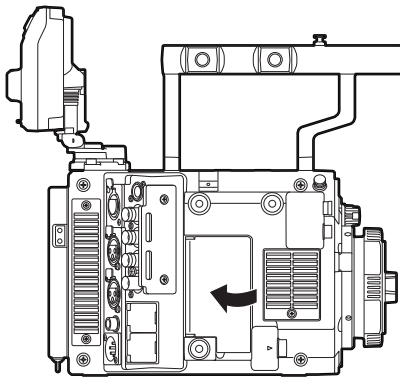
Fig. 1
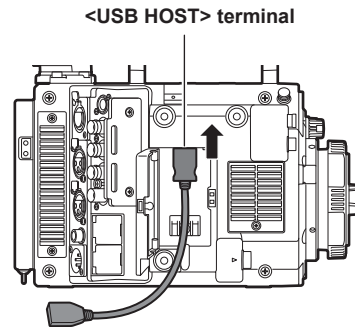
Fig. 2
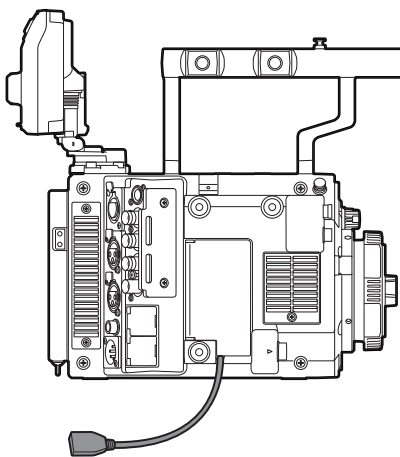
Wireless module
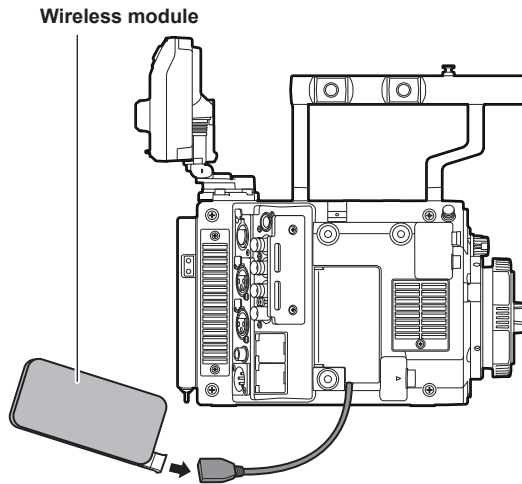
Fig. 3

Fig. 4

1 **Open the cover. (Fig. 1)**

2 **Attach the USB 2.0 extension cable to the <USB HOST> terminal. (Fig. 2)**

3 **Close the cover while the USB 2.0 extension cable runs through the groove in the cover. (Fig. 3)**

4 **Connect the wireless module. (Fig. 4)**

NOTE

· For the USB 2.0 extension cable (optional), using a cable of A type male/female, 0.5 m or shorter, and with double shielding process for noise suppression is recommended.

· For details on wireless modules that can be connected, refer to the support desk at the following website:
http://pro-av.panasonic.net/en/sales_o/p2/server/4glte.html
http://pro-av.panasonic.net/en/sales_o/p2/server/wireless_module.html

For wired LAN

Connect a LAN cable (optional).

LAN cable (cross cable) (optional)

LAN
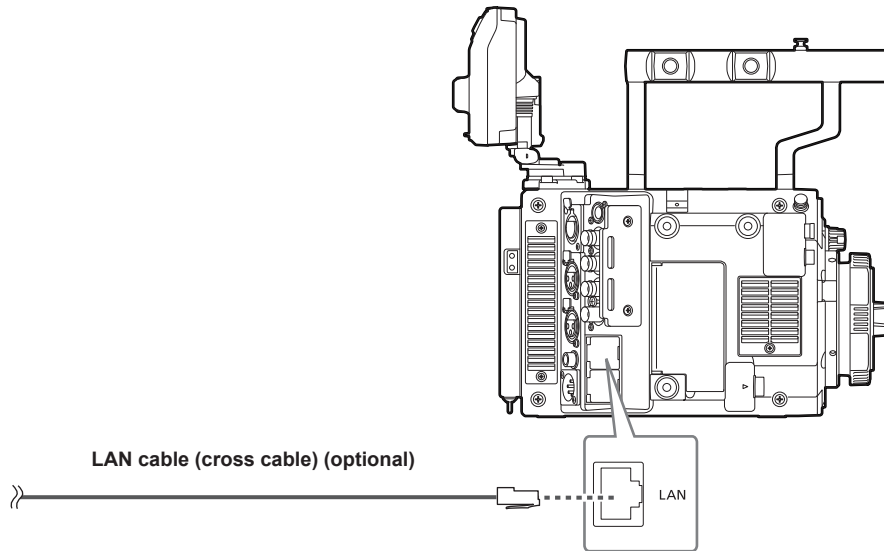
1 **Connect the LAN cable to the <LAN> terminal on the right side.**

Network settings

Configuration of various settings are required to use the wireless LAN or the wired LAN. Configure the settings according to the function to use.

Wireless LAN settings

This section describes the settings to connect the camera to mobile devices (iPad/iPhone), computers, or wireless access point via wireless LAN.

[DIRECT] mode

Use the following procedures when accessing to the network function of the camera directly from a smartphone, tablet, or computer.
The camera may restart as necessary when the setting is changed.

1 Select [DIRECT] in [MENU] → [PERIPHERAL] → [WIRELESS PROPERTY] → [TYPE].

2 Set each item in [MENU] → [PERIPHERAL] → [WIRELESS PROPERTY] as necessary.

[MAC ADDRESS]: MAC address of wireless LAN (cannot be changed)
[SSID]: Network name of the camera (SSID) ([AU-V35LT1])
[BAND]: Setting for switching between two transmission methods (2.4 GHz or 5 GHz) (Factory setting: [2.4GHz]) (for AJ-WM30: [2.4GHz], for AJ-WM50: [2.4GHz] or [5GHz])
[CHANNEL(2.4GHz)]: Channel used when set to 2.4 GHz (Factory setting: [AUTO])
[CHANNEL(5GHz)]: Channel used when set to 5 GHz (Factory setting: [AUTO])
[ENCRYPTION]: Encryption to be used (Factory setting: [WPA2-AES]) (cannot be set)
[ENCRYPT KEY]: WPA2 encryption key (Factory setting: [01234567890123456789abcdef])
[DHCP]: Setting whether to use automatic acquisition via DHCP (**[ENABLE]:** Use automatic acquisition/**[DISABLE]:** Does not use automatic acquisition) (Factory setting: [ENABLE]) (cannot be set)
[IP ADDRESS]: IP address of the camera (Factory setting: [192.168.0.1]).
[SUBNET MASK]: Subnet mask (Factory setting: [255.255.255.0])
[DEFAULT GATEWAY]: Default gateway (Factory setting: [192.168.0.254]) (cannot be set)
[PRIMARY DNS]: Primary DNS server setting (Factory setting: [0.0.0.0]) (cannot be set)
[SECONDARY DNS]: Secondary DNS server setting (Factory setting: [0.0.0.0]) (cannot be set)
[DHCP SERVER]: Setting to use the DHCP SERVER function (**[ENABLE]:** Use the DHCP SERVER function/**[DISABLE]:** Does not use the DHCP SERVER function) (Factory setting: [ENABLE])

3 Select [WLAN] in [MENU] → [PERIPHERAL] → [NETWORK SEL].

The changed setting will be valid after rebooting the camera.

4 Select SSID from the list of the access points for mobile devices or computers and enter the password (encryption key).

Display the access point list screen in wireless setting and select [SSID] of the camera.
● Factory setting: [AU-V35LT1]
When the password confirmation screen appears, enter the password (encryption key).
● Factory setting: [01234567890123456789abcdef]

5 Check the network connection.

When the setting is completed, confirm that network connection of mobile devices (iPad/iPhone) or computers is made properly.
The application using the network can be used when it is correctly connected to the network.

📝 *NOTE*

· AJ-WM30 can only operate when the communication method is 2.4 GHz. It will operate after automatically setting to CH1 of 2.4 GHz when [BAND] is set to [5GHz].
· The startup time after turning on the power may be longer due to starting of the network.
· When you change the settings of [NETWORK SEL], the changes will not be reflected until the camera is restarted. After the settings have been changed, the setting screen termination may take time due to the restart of the network service.
· All of the IP address, subnet mask, and default gateway must be correctly set.
  If a warning [CANNOT ACCESS GATEWAY!] appears at the termination of the setting screen, contact the administrator of the network you use.
· If you do not use default gateway and DNS, set them to [0.0.0.0].
· DHCP and DNS may not function properly depending on the network environment.

[INFRA] mode (when SSID is manually entered)

This is the setting to manually connecting to the wireless access point.

1 Select [INFRA] in [MENU] → [PERIPHERAL] → [WIRELESS PROPERTY] → [TYPE].

2 Set each item in [MENU] → [PERIPHERAL] → [WIRELESS PROPERTY] as necessary.

[MAC ADDRESS]: MAC address of the wireless LAN (cannot be changed)
[BAND]: Setting for switching between two transmission methods (2.4 GHz or 5 GHz) (Factory setting: [2.4GHz]) (cannot be set)
[CHANNEL(2.4GHz)]: Channel used when set to 2.4 GHz (Factory setting: [AUTO]) (cannot be set)
[CHANNEL(5GHz)]: Channel used when set to 5 GHz (Factory setting: [AUTO]) (cannot be set)
[DHCP]: Setting whether to use automatic acquisition via DHCP (**[ENABLE]:** Use automatic acquisition/**[DISABLE]:** Does not use automatic acquisition) (Factory setting: [ENABLE])
[IP ADDRESS]: IP address of the camera (Factory setting: [192.168.0.1])
[SUBNET MASK]: Subnet mask (Factory setting: [255.255.255.0])
[DEFAULT GATEWAY]: Default gateway (Factory setting: [192.168.0.254])
[PRIMARY DNS]: Primary DNS server setting (Factory setting: [0.0.0.0]) (When [DHCP] is set to [ENABLE] and can be acquired from the DNS server, the DNS server value which is acquired externally is overwritten. When the value is [0.0.0.0], the server is not set.)

[SECONDARY DNS]: Secondary DNS server setting (Factory setting: [0.0.0.0]) (When [DHCP] is set to [ENABLE] and can be acquired from the DNS server, the DNS server value which is acquired externally is overwritten. When the value is [0.0.0.0], the server is not set.)

3 Select [WLAN] in [MENU] → [PERIPHERAL] → [NETWORK SEL].

If the setting is changed, the camera will restart as necessary.

4 Enter the information of the destination wireless access point in [MENU] → [PERIPHERAL] → [WIRELESS PROPERTY].

Select [MANUAL] in [SSID INPUT MODE].
Enter SSID of the wireless access point for destination in [SSID] of the camera.
Select the encryption method to be used from the camera's [ENCRYPTION].
● Factory setting: [WPA2-AES]
Enter a password of the wireless access point for destination in [ENCRYPT KEY] of the camera.

5 Check the network connection.

When the setting is completed, confirm that network connection between the camera and the wireless access point is made properly.
The network status icon at the top right of the thumbnail screen turns yellow when it is correctly connected to the network, and application that uses the network (FTP client function) can be used.

📝 *NOTE*

· The startup time after turning on the power may be longer due to starting of the network.
· When you change the settings of [NETWORK SEL], the changes will not be reflected until the camera is restarted. After the settings have been changed, the setting screen termination may take time due to the restart of the network service.
· All of the IP address, subnet mask, and default gateway must be correctly set.
  If a warning [CANNOT ACCESS GATEWAY!] appears at the termination of the setting screen, contact the administrator of the network you use.
· If you do not use default gateway and DNS, set them to [0.0.0.0].
· DHCP and DNS may not function properly depending on the network environment.

[INFRA] mode (when SSID is selected from the list)

Use the following procedures when the wireless access point to connect to is selected from a list.

1 Select [INFRA] in [MENU] → [PERIPHERAL] → [WIRELESS PROPERTY] → [TYPE].

2 Set each item in [MENU] → [PERIPHERAL] → [WIRELESS PROPERTY] as necessary.

[MAC ADDRESS]: MAC address of the wireless LAN (cannot be changed)
[BAND]: Setting for switching between two transmission methods (2.4 GHz or 5 GHz) (Factory setting: [2.4GHz]) (cannot be set)
[CHANNEL(2.4GHz)]: Channel used when set to 2.4 GHz (Factory setting: [AUTO]) (cannot be set)
[CHANNEL(5GHz)]: Channel used when set to 5 GHz (Factory setting: [AUTO]) (cannot be set)
[DHCP]: Setting whether to use automatic acquisition via DHCP ([ENABLE]: Use automatic acquisition/[DISABLE]: Does not use automatic acquisition) (Factory setting: [ENABLE])
[IP ADDRESS]: IP address of the camera (Factory setting: [192.168.0.1])
[SUBNET MASK]: Subnet mask (Factory setting: [255.255.255.0])
[DEFAULT GATEWAY]: Default gateway (Factory setting: [192.168.0.254])
[PRIMARY DNS]: Primary DNS server setting (Factory setting: [0.0.0.0]) (When [DHCP] is set to [ENABLE] and can be acquired from the DNS server, the DNS server value which is acquired externally is overwritten. When the value is [0.0.0.0], the server is not set.)
[SECONDARY DNS]: Secondary DNS server setting (Factory setting: [0.0.0.0]) (When [DHCP] is set to [ENABLE] and can be acquired from the DNS server, the DNS server value which is acquired externally is overwritten. When the value is [0.0.0.0], the server is not set.)
[DHCP SERVER]: Setting to use the DHCP SERVER function (**[ENABLE]:** Use the DHCP SERVER function/**[DISABLE]:** Does not use the DHCP SERVER function) (Factory setting: [ENABLE]) (cannot be set)

3 Select [WLAN] in [MENU] → [PERIPHERAL] → [NETWORK SEL].

If the setting is changed, the camera will restart as necessary.

4 Enter the information of the destination wireless access point in [MENU] → [PERIPHERAL] → [WIRELESS PROPERTY].

1) Select [SELECT] in [SSID INPUT MODE].

2) Select SSID with the jog dial button and press the jog dial button.
   ● "SSID connection destination list screen" (page 187) is displayed.
   ● The delete list is displayed when the SSID is selected and the jog dial button is pressed and held, which allows to delete the selected SSID or all the connection history from the connection history.
   ● The selected SSID connection history can be deleted by selecting [DELETE HISTORY] and pressing the jog dial button.
   ● All the SSID connection history can be deleted by selecting [DELETE ALL HISTORY] and pressing the jog dial button.

3) Enter the password of the wireless access point to connect to the camera's [ENCRYPT KEY].

5 Check the network connection.

When the setting is completed, confirm that network connection between the camera and the wireless access point is made properly.
If it is correctly connected to the network, the network status display in the camera status display in the HOME screen is displayed in yellow, and the application using the network (FTP client function) can be used.

📝 *NOTE*

· The startup time after turning on the power may be longer due to starting of the network.
· When you change the settings of [NETWORK SEL], the changes will not be reflected until the camera is restarted. After the settings have been changed, the setting screen termination may take time due to the restart of the network service.

- All of the IP address, subnet mask, and default gateway must be correctly set.
  If a warning [CANNOT ACCESS GATEWAY!] appears at the termination of the setting screen, contact the administrator of the network you use.
- If you do not use default gateway and DNS, set them to [0.0.0.0].
- DHCP and DNS may not function properly depending on the network environment.
- A maximum of 20 connections is saved in the connection history. When this number is exceeded, the oldest entries are deleted.
- The status of SSID connection destination list is current at the time the list was displayed and is not automatically refreshed.
- Connections to all routers are not guaranteed. For the routers that the connection was verified, visit the following website:
  http://pro-av.panasonic.net/

■ SSID connection destination list screen
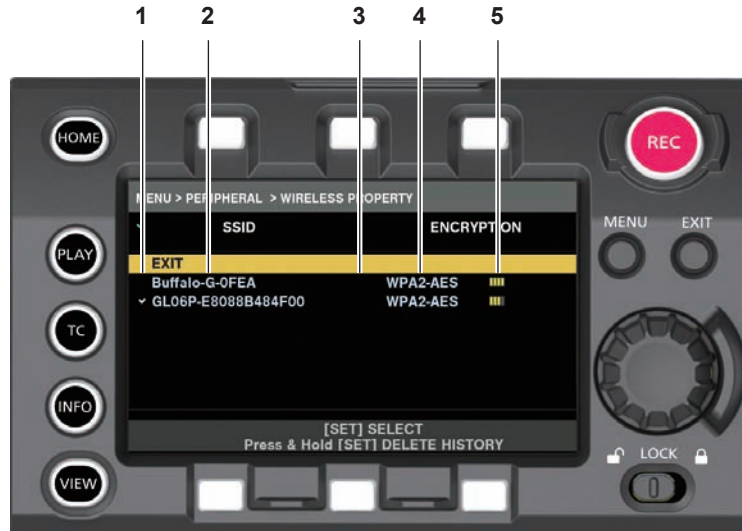
1 Selection status

A checkmark [✓] is displayed on the currently selected SSID. (This does not show the connection status).

2 SSID

The SSID list registered in the detected SSID and the connection history is displayed. SSIDs are displayed in order from the one with the strongest signal.

3 Whether there is connection history

[H] is displayed in the SSID that has a past connection history. SSID with past connection histories are displayed even if the camera is outside the service area.

4 Encryption format

This is the encryption method used by the access point.

5 Radio wave strength

This shows the signal strength of the access point.

4G/LTE setting

[4G/LTE] mode

Use the following procedure when you connect the camera with the 4G/LTE USB modem.

1 Select [4G/LTE] in [MENU] → [PERIPHERAL] → [NETWORK SEL].

2 Select [4G/LTE PROPERTY] and set each item as necessary when [MENU] → [PERIPHERAL] → [4G/LTE PROPERTY] is enabled.

When following settings are required, enter the information provided from the provider accurately.
[APN]: Sets the APN (access point name) provided from the provider.
[USER ID]: Sets the user name provided from the provider.
[PASSWORD]: Sets the password provided from the provider.
[DIAL NO.]: Sets the phone number. For details, refer to the manual of the provider you have contracted.

3 Check the network connection.

Check whether to connect the camera to the network with 4G/LTE.
[4G/LTE.▮▮] is displayed in the screen when network connection is correct. The network status icon on top right of the thumbnail screen will be displayed in yellow, and the application using the network (FTP client function) can also be used.

NOTE

- The startup time after turning on the power may be longer due to starting of the network.
- When you change the settings of [NETWORK SEL], the changes will not be reflected until the camera is restarted. After the settings have been changed, the setting screen termination may take time due to the restart of the network service.

Wired LAN settings

The settings to connect to computers using the wired LAN are as follows.

1 Set each item in [MENU] → [PERIPHERAL] → [LAN PROPERTY] as necessary.

[DHCP] and [DHCP SERVER] are mutually exclusive.

[MAC ADDRESS]: MAC address of wired LAN (cannot be changed)

[DHCP]: Setting whether to use automatic acquisition via DHCP (**[ENABLE]:** Use automatic acquisition/**[DISABLE]:** Does not use automatic acquisition (Factory setting: [ENABLE])

[IP ADDRESS]: IP address (Factory setting: [192.168.0.1]) (cannot be set when [DHCP] is set to [ENABLE])

[SUBNET MASK]: Subnet mask (Factory setting: [255.255.255.0]) (cannot set when [DHCP] is set to [ENABLE])

[DEFAULT GATEWAY]: Default gateway (Factory setting: [192.168.0.254]) (cannot be set when [DHCP] is set to [ENABLE])

[PRIMARY DNS]: Primary DNS server setting (Factory setting: [0.0.0.0])

[SECONDARY DNS]: Secondary DNS server setting (Factory setting: [0.0.0.0])

[DHCP SERVER]: DHCP SERVERSetting whether to use the function (**[ENABLE]:** Use the DHCP SERVER function/**[DISABLE]:** Do not use the DHCP SERVER function) (Factory setting: [DISABLE]) (cannot set when [DHCP] is set to [ENABLE])

2 Select [LAN] in [MENU] → [PERIPHERAL] → [NETWORK SEL].

3 Configure the settings of wired LAN of your computer.

(For Windows)

Display [Properties] in [Internet Protocol Version 4 (TCP/IPv4)] and configure the settings. For details on how to display the screen, refer to [Start] → [Help and Support].

● When [DHCP SERVER] is set to [ENABLE] on the camera

Select [Obtain an IP address automatically] and [Obtain DNS server address automatically] in the [General] tab. Select [Automatic private IP address] in the [Alternate Configuration] tab.

● When [DHCP SERVER] is set to [DISABLE] on the camera

Select [Use the following IP address] in the [General] tab.

- [IP address]: Enter a separate IP address in the same network with the camera.
- [Subnet mask]: Enter the same value as that of the camera.
- [Default gateway]: Enter the same address as that of the camera.
- [Preferred DNS server]/[Alternate DNS server]: Not necessarily to be entered.

(For Mac OS)

● When [DHCP SERVER] is set to [ENABLE] on the camera

[Configure IPv4]: Select [Using DHCP].

[Configure IPv6]: Select [Automatically].

● When [DHCP SERVER] is set to [DISABLE] on the camera

[Configure IPv4]: Select [Manually] and enter the following items.

- [IP Address]
- [Subnet Mask]
- Entering [Router] is not required. Leave it blank.

[Configure IPv6]: Select [Automatically].

📝 *NOTE*

・ The startup time after turning on the power may be longer due to starting of the network.

・ When you change the settings of [NETWORK SEL], the changes will not be reflected until the camera is restarted. After the settings have been changed, the setting screen termination may take time due to the restart of the network service.

・ All of the IP address, subnet mask, and default gateway must be correctly set.

If a warning [CANNOT ACCESS GATEWAY!] appears at the termination of the setting screen, contact the administrator of the network you use.

・ If you do not use default gateway and DNS, set them to [0.0.0.0].

・ DHCP and DNS may not function properly depending on the network environment.

Checking network setting

Check in the MENU screen

Fig. 1

1 **Select [STATUS DISPLAY] in [MENU] → [PERIPHERAL] → [NETWORK TOOLS].**

Displays the current status of the network device. (Fig. 1)

Check in the INFO screen

Fig. 1

1 **Press the <INFO> button to display the INFO screen.**

2 **Select [PERIPHERAL].**

Displays the current status of the network device. (Fig. 1)

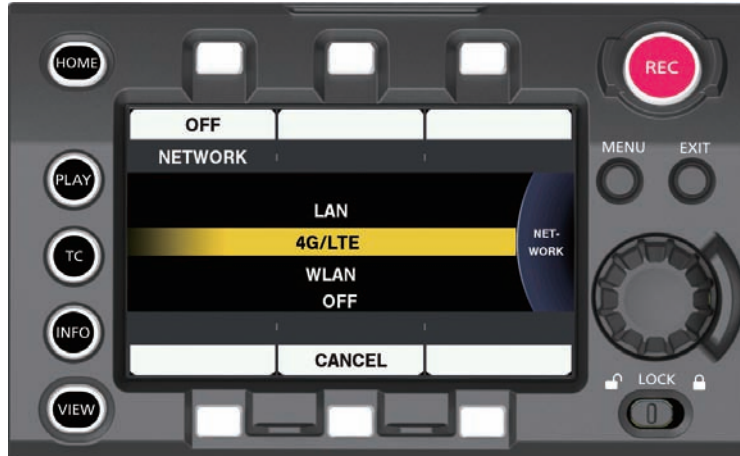## Changing network setting

Switching network

Switches wireless LAN and wired LAN.

Fig. 1

1 **Press the <INFO> button to display the INFO screen.**

2 **Select [PERIPHERAL] and press the jog dial button.**

3 **Select [NETWORK] and select from [LAN], [WLAN], [4G/LTE], and [OFF].**

The setting is switched. (Fig. 1)
[LAN]: Wired LAN
[4G/LTE]: 4G/LTE
[WLAN]: Wireless LAN
[OFF]: The network function is not used.

Operating user account

The account registration of the user can be performed when operating the camera via network.

■ **Setting user account**

1 **Select [MENU] → [PERIPHERAL] → [NETWORK FUNC] → [USER ACCOUNT].**

■ **Checking user account**

1 **Select [MENU] → [PERIPHERAL] → [NETWORK FUNC] → [ACCOUNT LIST].**

Checking and deleting of the user account list can be performed.
To delete, select the user account to delete by turning the jog dial button, and press the jog dial button.

NOTE

・ [guest] for [USER NAME] and [p2guest] for [PASSWORD] are the factory setting values.
・ Password cannot be changed. To change, delete the account once and perform new register again.
・ The upper limit for user account registration is 3.

■ **Initializing network settings**

Initialize items excluding [GPS]

1 **Select [INITIALIZE] in [MENU] → [PERIPHERAL] → [NETWORK TOOLS].**

Initialize is completed.

Connecting the remote operation panel (AK-HRP200G)

Part of the function can be remotely controlled by connecting the remote operation panel AK-HRP200G (optional) via IP connection.
Playback operation is not possible from the remote operation panel AK-HRP200G. Playback can only be performed from the camera.

LAN cable (cross cable) (optional)

LAN
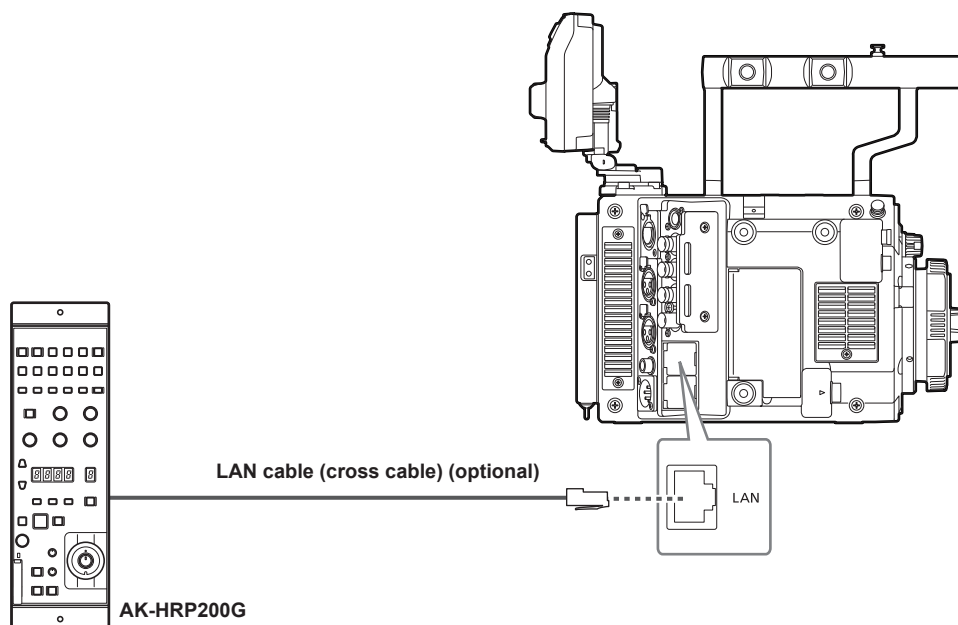
AK-HRP200G

Setting for connection with the remote operation panel (AK-HRP200G)

To connect AK-HRP200G via network to set the camera to the remote control mode, configure the settings in the following procedure.

1 Configure the network settings of the camera.

Set [MENU] → [PERIPHERAL] → [LAN PROPERTY] → [DHCP] to [DISABLE], and set following the Steps **1** to **2** in "Wired LAN settings" (page 188).

2 Set each item in [MENU] → [PERIPHERAL] → [NETWORK FUNC] → [USER ACCOUNT] in the camera.

[USER NAME]: Sets the user account name. (Factory setting: [guest])
[PASSWORD]: Sets the password. (Factory setting: [p2guest])
Enter up to 31 characters for a user account, and characters between 6 and 15 for a password.

3 Configure the network settings of AK-HRP200G.

For the network settings, use the ROP setup software application supplied with AK-HRP200G.

📝 **NOTE**

・ The following information is required to connect to AK-HRP200G.
  - User account name
  - Password
  - IP address
  - Port number: 49152
・ Use versions above Ver.3.00.00 for AK-HRP200G.
・ For details on operating the ROP setup software, refer to AK-HRP200G operation manaul.
・ Use versions above Ver.3.00.00 for ROP setup software.

Using the FTP client function

To use the FTP client function, network configuration (wireless LAN, wired LAN) and FTP client settings are necessary in advance.

FTP client function setting

The proxy clip can be transferred to the server equipment on the network by connecting the camera to the network using a wireless LAN (wireless access point connection), 4G/LTE, or wired LAN.

Client settings

It is necessary to set the destination, etc., in advance to transfer proxy clip with the FTP client function.

1 **Set each item in [MENU] → [PERIPHERAL] → [FTP CLIENT SERVICE].**

[SERVER URL]: Sets the destination server name and folder for the proxy clip to be transferred. (Up to 500 characters)
- Transfers to the login folder of the server if only server name or address is entered.
- Transfers to the specified folder of the server if entered in server name or address/folder format.
- Do not include "ftp://" in URL when entering.

[LOGIN USER]: Sets the user ID to connect to. (Up to 31 characters)
[LOGIN PASSWORD]: Sets the password to connect to. (Up to 15 characters) The set password cannot be displayed on the camera.
[SSH]: Sets this when transferring files using SSH.
- [ENABLE]: Uses SSH.
- [DISABLE]: Does not use SSH.

[SSH PORT]: Sets the port number when the SSH is used. Set the same number as the server.

Operation check tools and status indication

You can check the network connection status of the FTP client as follows.

■ **Checking connection (PING)**

1 **Select [PING] in [MENU] → [PERIPHERAL] → [NETWORK TOOLS].**

2 **Perform status check of the connection with the address that has been set.**

When a connection is confirmed, [PING SUCCESSFUL!] appears.
If a connection cannot be established within approximately 30 seconds, [PING FAILED!] appears. The log may indicate the cause of the failure.
Review the network or FTP client setting, or the network connection status when it has failed.

■ **Displaying the connection log (LOG)**

1 **Select [LOG DISPLAY] in [MENU] → [PERIPHERAL] → [NETWORK TOOLS].**

The log appears.

2 **After checking the log, press the <EXIT> button.**

The setting menu screen returns.

📝 *NOTE*

· Some operations may not generate any information in the log.
· The password is indicated as [∗] in the log.

■ **Displaying the status**

1 **Select [STATUS DISPLAY] in [MENU] → [PERIPHERAL] → [NETWORK TOOLS].**

The connection status is displayed.

2 **After checking the status, press the <EXIT> button.**

The setting menu screen returns.

📝 *NOTE*

· The status information is not updated in real-time. To view the most recent data, perform the procedure again.
· The necessary information such as the IP address is automatically assigned when [MENU] → [PERIPHERAL] → [LAN PROPERTY] → [DHCP] or [MENU] → [PERIPHERAL] → [WIRELESS PROPERTY] → [DHCP] is set to [ENABLE]. However, the status information is not displayed correctly while the address information is being obtained.
· The default gateway is displayed as status information only when correctly set up.
· If only [SECONDARY DNS] is set without setting [PRIMARY DNS] for the network setting (wireless LAN, wired LAN), [DNS1] is displayed.

Transferring (copying) from the main slot to the FTP server

The proxy clip in the P2 card can be transferred to the FTP server.
The destination folder is set in [MENU] → [PERIPHERAL] → [FTP CLIENT SERVICE].

1 **Press the <PLAY> button in the HOME screen.**

The PLAY screen is displayed.

2 **Press the control panel operation button above the [PROXY FTP] display.**

3 **Select a clip to be transferred.**

4 Press the control panel operation button under the [EXEC FTP] display.

Copying starts.

📝 *NOTE*

・ Specify up to folder name for the destination folder.
・ The proxy clip in the sub slot cannot be transferred.
・ The proxy clip recorded for long time may not be able to transfer depending on the environment of the destination. Contact the network administrator.
・ The clip without proxy recording cannot be selected as the source.

Chapter 12 Maintenance

This chapter describes the maintenance method and warning system of the camera.

Warning system

If an error is detected immediately after the camera is turned on or during operation, the viewfinder and warning lamp indicate the error. Deal with the error by following the indications.

Cases indicated by error codes

Error code	Viewfinder status display	Description	Behavior and cause
[E-30]	[TURN POWER OFF]	An error occurred in the camera built-in memory because the P2 card being accessed was ejected. • Warning lamp flashes four times per second. Alarm will sound four times in one second.	• Cannot operate. • Follow the message to turn off the power once and turn on the power again. • Ensure that there is no error in the clips on the ejected card, and restore the clips as necessary.
[E-31]	[TURN POWER OFF]	System mode error occurred. • Warning lamp flashes four times per second. Alarm will sound four times in one second.	• Cannot operate. • Follow the message to turn off the power once, turn on the power again, and check that there is no error display.
[E-35]	[SYSTEM ERROR]	Codec control error occurred. • Warning lamp flashes four times per second. Alarm will sound four times in one second.	• The operation stops. • Contact your dealer.
[E-36]	[SYSTEM ERROR]	P2 system error occurred. • Warning lamp flashes four times per second. Alarm will sound four times in one second.	• The operation stops. • Contact your dealer.
[E-37]	[SYSTEM ERROR]	P2CS microcomputer error occurred. • Warning lamp flashes four times per second. Alarm will sound four times in one second.	• The operation stops. • Contact your dealer.
[E-39]	[SYSTEM ERROR]	Video initialization error occurred. • Warning lamp flashes four times per second. Alarm will sound four times in one second.	• The operation stops. • Contact your dealer.
[E-64]	[SYSTEM ERROR] (or no display)	Reference signal error occurred. • Warning lamp flashes four times per second. Alarm will sound four times in one second.	• The operation stops. • Contact your dealer.

Cases indicated by error messages

During recording/playback

Viewfinder status display	Description	Behavior and cause
[AUTH NG CARD]	The CPS authentication of the memory card has failed. The memory card that has failed CPS authentication cannot be recorded or played back.	• The current operation will continue.
[BACKUP BATT EMPTY]	Displays any reduced voltage detected on the backup battery in the internal clock when the power is turned on.	• The current operation will continue. • Charge the built-in battery. • Set the time.
[CARD ERROR]	Displayed when an data error caused by the P2 card occurs during recording. Displayed after recording stops until the next operation. Also displayed for three seconds during playback when a P2 card error causes playback to stop. • If the error occurs during recording, the warning lamp flashes four times per second for approx. three seconds after recording stops. Alarm will sound four times in one second. • Warning lamp does not light up when an error occurs during playback.	• The operation will stop. • After it stops, the P2 card on which the error occurred is write-protected. Replace the P2 card of the slot where the error occurred.
[DIR NG CARD]	The directory position is not correct.	• The current operation will continue. • Make a card backup immediately and format the card to use it again.
[FAN STOPPED]	Displayed when the fan motor is stopped.	• The current operation will continue. • If the fan has stopped with error, stop using the camera immediately and consult your dealer. • If the fan has stopped, temperature of the camera will rise. Therefore, do not use the camera for a long period of time.
[HIGH TEMPERATURE]	The temperature inside the camera is higher than that of the normal conditions.	• Power is automatically turned off after approximately five seconds after abnormal temeperature is detected. • Turn on the power again and check recording and playback operations. If the problem persists, consult your dealer.

Viewfinder status display	Description	Behavior and cause
[REC IMPOSSIBLE]	A card that cannot record is inserted in the main slot or sub slot.	• The current operation will continue. • Insert a card that can be recorded. expressP2 memory card for the main slot, and Class10 or higher SDXC memory card for the sub slot is recommended.
[REC WARNING]	Displayed when attempting to record in excess of the maximum total number of clips allowed for one P2 card. • Warning lamp flashes four times per second during continuous recording. Alarm will sound four times in one second.	• The operation will stop. • [REC WARNING!] [OVER MAX# CLIPS] will be displayed on the warning display when opening the [DIAGNOSTICS] screen from the INFO screen. • Replace the P2 card or delete unnecessary clips.
[REC WARNING]	Displayed when an error occurs in recorded data during recording. • Warning lamp flashes four times per second during continuous recording. Alarm will sound four times in one second.	• The operation will continue or stop. • [REC WARNING!][REC DATA] will be displayed on the warning display when opening the [DIAGNOSTICS] screen from the INFO screen. • Turn off the power and on before using it again.
[REC WARNING]	Displayed when the recording is cancelled due to error in the reference signal in case such as error has occurred in the video or audio due to disruption of the reference signal during the interval recording. • The warning lamp will flash four times in one second. Alarm will sound four times in one second.	• Recording will be stopped. • [REC WARNING!] [FRAME SIGNAL] is displayed in the warning display field when the [DIAGNOSTICS] screen is opened from the INFO screen. • Confirm if the signal input to the <GENLOCK IN> terminal is not disrupted.
[RUN DOWN CARD]	The maximum number of overwrites has been exceeded.	• The current operation will continue. • Replacement of the P2 card is recommended.
[TEMPORARY PAUSE]	Recording is temporary suspended due to correct recording not possible because of the disruption of input signal from the <GENLOCK IN> terminal. The clip will be divided. • Warning lamp flashes four times per second during continuous recording. Alarm will sound four times in one second.	• The operation will pause. • Recording will resume when the signal returns to normal.
[CINE STYLE DISABLED!]	CAM INDEX/REEL number cannot be recorded as a file name.	• Use the expressP2 memory card or Class10 or higher SDXC memory card.
[SUB SLOT REC DISABLED!]	Recording is not possible because there is no media in the sub slot.	• Insert a medium in the sub slot or change the recording destination of the proxy file to the main slot only.

When noticing with dedicated display or lamp

Attaching the electronic HD color view finder AU-VCVF10G (optional) will indicate warnings for battery and media with the lamp on the viewfinder.

Viewfinder status display	Description	Behavior and cause

Battery lamp and warning lamp flashes [EMP] is displayed on either or both remaining battery level information.	Battery is consumed.	• Recording and playback operation will be stopped.
		• Alarm will continue to be output.
		• Replace the battery.
		  When remaing battery connected to the <DC IN> terminal has run out, attach a battery with sufficient level to the battery holder.
		  It will automatically switch to the battery holder and warning will stop. It will be same for the opposite case.

Battey lamp and warning lamp flashes once per second. Either or both remaining battery level information will flash.	Battery is almost consumed.	• Recording and playback will continue. • Refer to the instructions when battery is consumed.
Warning lamp flashes [END] is displayed on either or both remaining media space information.	There is no more space on the recording media in the main slot or the sub slot.	• Recording will be stopped. • Alarm will continue to be output. • Delete clips in the recording media or insert a new recording media.
Warning lamp will flash once per second during recording. Either or both remaining media space information will flash.	The remaining space on the recording media in the main slot or the sub slot is low.	• Recording will continue. • Replace the media if required.

During thumbnail and menu operation

Display	Description	Behavior and cause
[CANNOT ACCESS!]	Data cannot be accessed due to a content defect or some other reason.	Ensure the health of the media and the clips.
[CANNOT DELETE!]	The content versions do not match. Cannot delete.	Match the device and contents version.
[CANNOT FORMAT!]	A P2 card problem or some other reason prevents formatting.	Check the P2 card.
[CANNOT REPAIR!]	Content that cannot be repaired is selected.	Check the selected content.
[CANNOT SAVE! FILE NAME IN USE]	A settings file of the same name exists on the SD memory card.	Use another name to save the file.

Display	Description	Behavior and cause
[CARD FULL!]	The P2 card or SD memory card is full.	Insert a card with free space available.
[INVALID VALUE!]	The data value you entered is invalid.	Enter data within the normal range.
[MISSING CLIP!]	Shot marks cannot be attached to the clips unless all clips recorded over multiple P2 cards are present.	The camera cannot handle a clip recorded over multiple cards.
[NO CARD!]	No P2 or SD memory card is inserted.	Insert the relevant media.
[NO FILE!]	The specified file does not exist.	Check the file.
[NO INPUT!]	No data is entered.	Enter data and then set.
[NO SD CARD!]	No SD memory card.	Insert an SD memory card.
[UNKNOWN CONTENTS FORMAT!]	This is a warning of the contents for the version that is not supported by the camera.	Match the device and content versions.
[UNKNOWN DATA!]	The metadata character code is invalid.	The metadata character code is UTF-8. Enter valid characters using a viewer.
	There is a problem with data in the file.	Create the file again.
[USER CLIP NAME MODIFIED!]	When adding a counter value to the clip name, characters must be deleted.	For the counter addition setting, the user clip name plus the counter value can only contain up to 100 bytes. Characters in the clip name are automatically deleted when the total number of characters exceeds this limit.
[WRITE PROTECTED!]	The P2 card or SD memory card is write-protected.	Insert write-accessible media.

During soft keyboard operation

Display	Description	Behavior and cause
[CANNOT SET!] [INVALID VALUE!]	The entered value is invalid.	Change the input value.
[CANNOT SET!] [NO INPUT!]	There is not input to the software keyboard.	Enter the password.
[CANNOT SET!] [RETRY PASSWORD IS DIFFERENT!]	The re-entered password is different.	Enter the correct reference password.

Network

Message	Description	Measure
[CANNOT CONNECT!]	A connection to the network cannot be established.	Check that the LAN settings are correct. Make sure that the LAN cable is connected correctly and the network you use is running.
[CANNOT FIND FTP-SERVER!]	The connection destination FTP server cannot be found.	Check that [MENU] → [SERVER URL] → [FTP CLIENT SERVICE] → [SERVER URL] is correct.
[LOGIN FAILED!]	Logging in to the connection destination FTP server failed.	Check that [MENU] → [PERIPHERAL] → [FTP CLIENT SERVICE] → [LOGIN USER] and [LOGIN PASSWORD] are correct.
[PING FAILED!]	The [PING] failed.	Check that the LAN setting and [MENU] → [PERIPHERAL] → [FTP CLIENT SERVICE] → [SERVER URL] are correct. Check that the LAN cable is connected correctly or the network is operating.
[CANNOT ACCESS GATEWAY!]	The gateway server cannot be accessed.	Check that the LAN settings are correct.
[CHECK LAN SETTING]	The gateway server cannot be accessed.	Check that the LAN settings are correct.
[IP ADDRESS IS USED!]	The set IP address is being used by another device.	Consult your network administrator and set another IP address.
[INVALID VALUE!]	The entered data value is invalid.	Enter data in a valid range.

Updating the camera firmware

Updating the firmware

To update the firmware, an SD memory card is required.
Use the camera or P2 Viewer Plus to format the SD memory card.

Fig. 1

1 **Download the firmware from the website.**

http://pro-av.panasonic.net/

2 **Save the downloaded firmware to an SD memory card.**

3 **Insert the SD memory card with the firmware into the sub slot.**

4 **Turn the power on.**

5 **Press the <INFO> button to display the INFO screen. (Fig. 1)**

6 **Select [VERSION].**

7 **Press the jog dial button.**

8 **When [UPDATE] appears, select [UPDATE] → [OK].**

This starts the firmware update. Do not turn the power off until the update is completed.

NOTE

· The time required for update is approximately 30 minutes. It is necessary to supply power without interruption during the update. Use the external DC power supply instead of battery.
· Do not remove the SD memory card during the update (while the card access LED is flashing). The communication with the camera may be discontinued, which may cause malfunction to the camera.
· Update is possible even if the card slot cover is opened.
· Even if [REC IMPOSSIBLE] error is displayed, update is possible when the firmware is saved in the specified folder of the SD memory card.
· Update is also possible from [MENU] → [SYSTEM SETTINGS] → [INFORMATION] → [UPDATE].

Cleaning and storing

Cleaning the camera body

- Either remove the battery or disconnect the DC cable from the power outlet before cleaning.
- Do not use benzene or thinner to clean the camera. Using benzine or thinner may cause deformation or peeling off of the paint of the camera body.
- Wipe with a soft and clean cloth. If there is heavy dirt attached, wipe the camera recorder using a cloth soaked in kitchen detergent diluted with water, and then wipe it with a dry cloth.

Cautions when storing the camera recorder

Remove the battery when storing. Store each in a location with low humidity and that the temperature is relatively constant.

■ Camera body

- Wrap the camera recorder with a soft cloth so that dust does not get into it.

■ Battery

- The battery life shortens where the temperature is extremely high or low.
- Storing in a place where there is heavy oil smoke or dust may lead to malfunctions due to rust on terminal connectors, etc.
- Do not let the battery terminal contact a metal object (such as a necklace or hairpin). Short circuit may occur between terminals and it may lead to heat generation. Touching on a heated part may cause severe burns.
- Store the battery with electrically discharged. When storing the camera for a long period of time, it is recommended to charge it once a year, use up the full capacity of the battery using the camera, and then store it again.

■ P2 card

- If you remove it from the camera recorder, be sure to attach the dedicated cap so that sand and dust do not adhere to the connector part. Also, put it in the dedicated case when storing or carrying it.
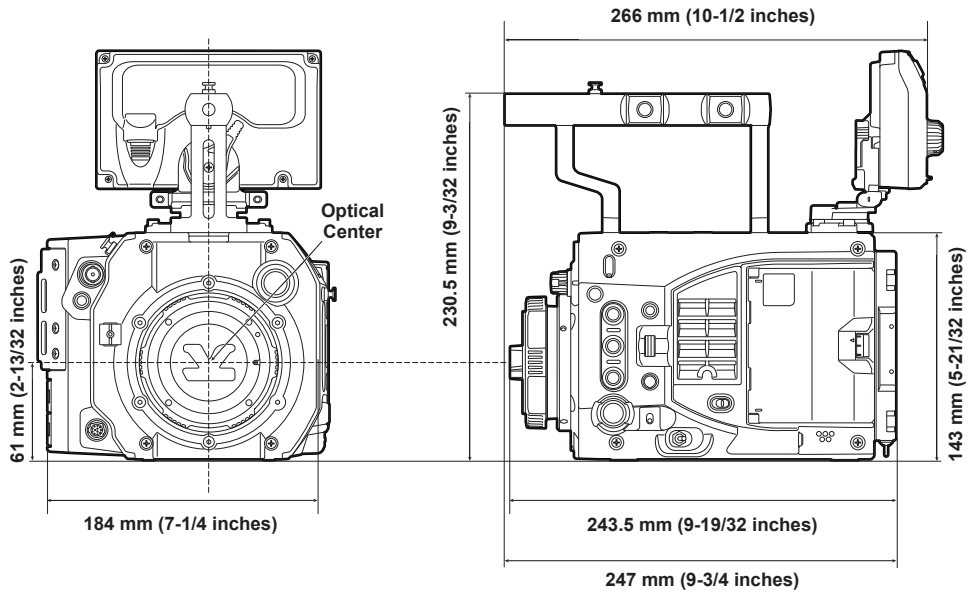- Do not place it in a place where there is corrosive gas.

■ SD memory card

- If you remove it from the camera recorder, be sure to put it in its case.
- Do not place it in a place where there is corrosive gas.
- Do not place it in a place where temperature gets high, such as in a car or under direct sunlight.
- Do not place it in a dusty place or where humidity is high.

Chapter 13   Specification

This chapter describes the specifications of this product.

Specifications

Dimensions

266 mm (10-1/2 inches)

230.5 mm (9-3/32 inches)

Optical Center

61 mm (2-13/32 inches)

143 mm (5-21/32 inches)

184 mm (7-1/4 inches)

243.5 mm (9-19/32 inches)

247 mm (9-3/4 inches)

94 mm (3-23/32 inches)

88 mm (3-15/32 inches)

111 mm (4-3/8 inches)

60 mm (2-3/8 inches)

111 mm (4-3/8 inches)

54 mm (2-5/32 inches)

285 mm (11-1/4 inches)

95 mm (3-3/4 inches)

35 mm (1-13/32 inches)

113 mm (4-15/32 inches)

67 mm (2-21/32 inches)

123.5 mm (4-7/8 inches)

92.5 mm (3-21/32 inches)

259 mm (10-7/32 inches)

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Specifications

General

Power
DC === 12 V (11.0 V – 17.0 V)
47 W (body only)
Power consumption
77 W (with all optional accessories connected and maximum power supplied from each output terminal)

□ indicates safety information.

Ambient operating temperature	0 °C - 40 °C (32 °F - 104 °F)
Ambient operating humidity	10% - 85% (relative humidity)
Storage temperature	−20 °C - 60 °C (−4 °F - 140 °F)
Weight	Approx. 2.7 kg (6.0 lbs.) (excluding handle and accessories) Approx. 3.0 kg (6.6 lbs.) (including handle, excluding accessories)
Dimensions (W×H×D)	Body only 184.0 mm × 230.5 mm × 247.0 mm (7-1/4 inches × 9-3/32 inches × 9-3/4 inches) (excluding protrusions and accessories)

- Ensure that the total current taken from the <DC OUT> terminal, <LENS/GRIP> terminal, <DC OUT/RS> terminal, and <USB HOST> terminal does not exceed 30 W.

Camera unit

Pickup device	Super 35 mm, MOS sensor

Number of pixels	• Total number of pixels
	  Approx. 10.3 million pixels
	• Number of effective pixels
	  Approx. 8.9 million pixels

Lens mount	EF mount
Optical filter	• ND filter <1>: <CLEAR>, <2>: <0.6ND>, <3>: <1.2ND>, <4>: <1.8ND>

Gain setting	• [ISO] mode
	  ISO200 - ISO12800
	• [dB] mode
	  −12 dB - 14 dB (2 dB step)

Shutter speed	• [deg] mode
	  1.0 deg - 358 deg (0.1 deg step)
	• [sec] mode
	  1/24 seconds - 1/250 seconds (for 24p)

Sensitivity	([GAIN MODE] = [NORMAL], [GAMMA] = [VIDEO45]) F7 (2000 lx, 3200 K, 89.9% reflection, 1080/59.94p) ([GAIN MODE] = [NORMAL], [GAMMA] = [VIDEO45]) F8 (2000 lx, 3200 K, 89.9% reflection, 1080/50p)

Memory card recorder

Recording media	Main slot × 1: expressP2 memory card, P2 memory card Sub slot × 1: SD memory card
Number of recording pixels	4096×2160 (4K), 3840×2160 (UHD), 2048×1080 (2K), 1920×1080 (HD)

Recording frame rate (max)	• 4K/UHD
	  60fps or 50fps
	• 2K/HD
	  240fps or 200fps

System frequency	59.94p, 50p, 29.97p, 25p, 24p, 23.98p, 59.94i, 50i
Recording format (main recorder)	AVC-Intra 4K 422/AVC-Intra 4K-LT/AVC-Intra 2K 444/AVC-Intra 2K 422/AVC-Intra2K-LT/AVC-Intra 444/ AVC-Intra 422/AVC-Intra-LT/AVC-Intra 100/AVC-LongG50/AVC-LongG25/ProRes 4444 XQ/ProRes 4444/ ProRes 422 HQ/ProRes 422/ProRes 422 LT
Recording format (sub recorder)	AVC-LongG 6
Recording video signal	4096×2160/59.94p, 50p, 29.97p, 25p, 24p, 23.98p 3840×2160/59.94p, 50p, 29.97p, 25p, 23.98p 2048×1080/59.94p, 50p, 29.97p, 25p, 24p, 23.98p 1920×1080/59.94p, 50p, 29.97p, 25p, 23.98p, 59.94i, 50i

Recording and playback time ([MAIN CODEC])	When using expressP2 memory card 256 GB, when [FREQUENCY]=[23.98p]
	• AVC-Intra 4K 422, 23.98 fps
	Approx. 90 minutes
	• AVC-Intra 4K 422, [VFR]: [ON], 30 fps
	Approx. 73 minutes
	• AVC-Intra 4K-LT, [VFR]: [ON], 60 fps
	Approx. 64 minutes
	• AVC-Intra 422, [VFR]: [ON], 60 fps
	Approx. 130 minutes
	• ProRes 422 HQ, [VFR]: [ON], 60 fps
	Approx. 67 minutes
	Figures are for continuous recording as one clip. Depending on the number of clips, the overall recording time may be shorter than the above.
Recording time ([SUB CODEC])	• AVC-LongG 6
	When using a 64 GB SDXC memory card
	Approx. 655 minutes
	Figures are for continuous recording as one clip. Depending on the number of clips, the overall recording time may be shorter than the above.

Digital video

Number of quantizing bits	12 bit (AVC-Intra 2K 444, AVC-Intra 444), 10 bits (other)
Video compression format	• AVC-Intra 4K 422/AVC-Intra 4K-LT/AVC-Intra 2K 444/AVC-Intra 2K 422/AVC-Intra2K-LT/AVC-Intra 444/AVC-Intra 422/AVC-Intra-LT/AVC-Intra 100
	MPEG-4 AVC/H.264 Intra Profile
	• AVC-LongG50/AVC-LongG25
	MPEG-4 AVC/H.264
	• ProRes 4444 XQ/ProRes 4444/ProRes 422 HQ/ProRes 422/ProRes 422 LT
	Apple ProRes

Digital audio

Recording audio signal	48 kHz/24 bits, 4CH
Headroom	18 dB/20 dB switchable menu

AVC proxy

File format	MOV
Video compression format	MPEG-4 AVC/H.264 Intra Profile
Audio compression format	AAC
Approximate recording time	When using a 64 GB SDXC memory card
	Approx. 655 minutes
	Reference value for continuous recording.
	The recording time may differ depending on the scene or the number of clips.

Video output

<SDI OUT 1>/<SDI OUT 2> terminal	HD(1.5G)/3G-SDI: 0.8 V [p-p], 75 Ω
<VF SDI> terminal	HD (1.5G)/3G-SDI: 0.8 V [p-p], 75 Ω

Audio input/output

<INPUT 1/2> terminal	XLR×1, 5-pin
<INPUT 3>/<INPUT 4> terminal	XLR×2, 3-pin
	Supports menu switching to select [LINE]/[MIC] or enable/disable the power supply of the microphone.
<PHONES> terminal	Stereo mini jack
Speaker	20 mm diameter, round ×1

Other input/output

<GENLOCK IN> terminal	HD (1.5G)/3G-SDI: 0.8 V [p-p], 75 Ω
<TC IN/OUT> terminal	BNC×1
	Input/output switching
	• Input: 0.5 V - 8 V [p-p], 10 kΩ
	• Output: 2.0 V ± 0.5 V [p-p], low impedance
<DC IN> terminal	XLR×1, 4-pin, DC 12 V (DC 11.0 V - 17.0 V)
<DC OUT/RS> terminal	4-pin, DC 12 V (DC 11.0 V - 17.0 V), maximum output current 1.0 A
<DC OUT> terminal	4-pin, DC 12 V (DC 11.0 V - 17.0 V), maximum output current 1.0 A

<LENS/GRIP> terminal	12-pin
<LAN> terminal	100BASE-TX/10BASE-T
<USB DEVICE> terminal	USB 2.0 devices, type B connector, 4-pin
<USB HOST> terminal	USB 2.0 host, type A connector, 4-pin
<CONTROL PANEL> terminal	20-pin, control panel contact terminals
EF mounting contact	8-pin
Control panel (LCD)	3.5-type QHD color monitor (approx. 1.56 million dots)

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