

Solid-State Memory Camcorder

PMW-F55

PMW-F5

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

**SxS****HDMI****XAVC****MPEG HD422**

Table of Contents

Overview

Features	6
System Configuration	9
Location and Function of Parts	10
On-Screen Indications	16
Sub Display Screen	16
Viewfinder Screen	19

Preparations

Power Supply	22
Using a Battery Pack	22
Using AC Power (DC IN Power)	23
Setting the Clock	23
Attaching Optional Devices	24
Attaching a Lens	24
Attaching a Viewfinder	25
Setting the Basic Action	26
System Frequency	26
Shooting Mode	26
Main Recorded Signal	26
Color Space	27
Imager Scan Mode	27
Recording Format	27
Using SxS Memory Cards	28
About SxS Memory Cards	28
Inserting an SxS Memory Card	28
Removing an SxS memory card	28
Switching Between SxS Memory Cards	29
Formatting an SxS Memory Card	29
Checking the Remaining Time Available for Recording	29
Restoring an SxS Memory Card	29
Using an SD Card	30
Usable SD Cards	30
Inserting an SD Card	30
Removing an SD memory card	30
Formatting an SD Memory Card	31

Checking the Remaining Time	31
Using an AXS-R5	31
Attaching the AXS-R5	31
Removing the AXS-R5	32
Inserting an AXS Memory Card	32
Removing an AXS Memory Card	32
Recording to an AXS Memory Card	32
Formatting an AXS Memory Card	32
Checking the Remaining Time Available for Recording	33
Restoring the AXS Memory Card	33
Using a USB Wireless LAN Module	34
Attaching the IFU-WLM3	34
Making a Wi-Fi Connection	34
Using the Wi-Fi Remote Commander	35

Recording

Basic Operation Procedure	39
Changing Basic Settings	41
Electronic Shutter	41
Sensitivity/Gain/Color Temperature/White Balance ...	41
Audio	42
Time Data	42
Useful Functions	42
Assignable Buttons	42
Slow & Quick Motion	43
Starting to Record from Pre-stored Video (Picture Cache Function)	43
Simultaneously Recording	44
Rec Review	44
Focus Magnifier	44
False Color Display	45
Viewfinder Double Speed Drive Function	45

Thumbnail Screens

Thumbnail Screens	46
Configuration of the Screen	46
Playing Clips	47
Playing the Selected and Subsequent Clips in Sequence	47
Clip Operations	47
Operations of the Thumbnail Menu	47
Displaying the Detailed Information of a Clip	48
Copying MPEG2 Proxy Data (PMW-F55 only)	48
Deleting Clips	49
Changing Information on the Thumbnail Screen	49

Settings

Sub Display Operation	50
Sub Display Setting Items	51
CAMERA Screen	51
FILE Screen	52
AU/TC (audio/timecode) Screen	52
Setup Menu Operations	54
User Menu	55
Setup Menu List	57
Camera Menu	57
Paint Menu	64
Audio Menu	69
Video Menu	70
VF Menu	73
TC/UB Menu	76
Recording Menu	77
Media Menu	78
File Menu	79
Maintenance Menu	82
System Menu	82

External Devices Connection

Connecting External Monitors and Recording Devices	87
Operating Clips With a Computer	88
External Synchronization	89

- Important Notes on Operation 90**
- Formats and Limitations of Outputs 92**
 - Video Formats and Output Signals 92
- Error/Warning Indications 99**
 - Error Indications 99
 - Warning Indications 99
 - Caution and Operation Confirmation Indications 100
- Licenses 102**
 - MPEG-2 Video Patent Portfolio License 102
 - MPEG-4 Visual Patent Portfolio License 102
 - On accessing software to which the GPL/
 LGPL applies 102
 - Open software licenses 103
- Specifications 103**
 - General 103
 - Camera Section 105
 - Input/Output 105
 - Media 106
 - Package Configuration 106
 - Optional Accessories 107
- Index 110**

Overview

Features

The PMW-F55/F5 is a highly compact, lightweight and high-performance CineAlta 4K camera with a 4K Super 35mm equivalent Single-chip CMOS image sensor.

The PMW-F55's CMOS image sensor with frame image scan function allows you to shoot clear 4K images without rolling shutter distortion or flash band phenomenon, for perfect HD recording performance.

The PMW-F5's 4K image sensor allows you to record high quality HD pictures.

You can record in SR SStP/MPEG2 HD video format, in addition to the new 4K-compatible format, XAVC, by using an SxS memory card. 4K RAW data can be recorded by using the portable memory recorder, AXS-R5, which adopts the newly developed access memory card (AXSM).

The camcorder adopts the same native FZ mount used by the PMW-F3. You can use a variety of cine lenses (PL mount) so that the PL/FZ conversion adaptor comes standard.

By using the optional LA-FZB1/LA-FZB2 mount adapter, the B4 lens that is widely used for broadcasting can be attached. You can use your lens libraries with this camcorder.

Compatible with multi format

The camcorder is compatible with the new format, XAVC (official name: MPEG4 AVC/H.264 Hi422 Profiles/Level 5.2), and can record 4K: 4096 × 2160, QFHD: 3840 × 2160, 2K: 2048 × 1080, HD: 1920 × 1080.

The camcorder is also compatible with frame rates from 23.98P to 59.94P. For high-speed shooting, you can record 1 fps to 60 fps for XAVC recording in the S & Q mode. The recommended media for XAVC recording is the newly developed SxS PRO+ memory card. The camcorder is also compatible with SStP SR-SQ 444, SR-SQ 422, and SR-Lite 422 that are adopted for HDCAM-SR, or MPEG2 HD 422 that is adopted for XDCAM. Your workflow can be used.

High frame rate (HFR) recording with up to 240 FPS

Using the camcorder with the AXS-R5 allows you to perform 2K RAW recording with up to 240 FPS.

You can use 2K/HD to record up to 180 FPS to the SxS memory card on the camcorder without the AXS-R5.

The camcorder has two scan modes for high frame rate. In the first mode, you can shoot with the full angle of the CMOS image sensor equivalent to the Super 35 mm size, and use the lens with the focal length set for normal shooting of high frame rate recording.

In the second mode, you can shoot with the center area of the CMOS image sensor equivalent to the Super 35 mm size (cut to Super 16 mm size).

Modular structure

The camcorder is a modular design that allows you to configure the camcorder according to shooting circumstances, whether for cinema production, drama, commercials, 3D shooting, documentary filming, interviews, etc. The handle, viewfinder, audio connector panel, and portable memory recorder can be removed according to shooting requirements.

The body and handle of the camcorder have multiple 1/4" and 3/8" mount points, to which you can attach standard accessories.

Other features

4K Super 35mm equivalent CMOS image sensor

The camcorder has a 4K Super 35mm equivalent Single-chip CMOS image sensor of 11,600,000 pixels, with effective pixels count of 8,900,000, for 4K/HD recording.

The CMOS image sensor of the PMW-F55 includes a frame image scan function that allows you to shoot clear images without rolling shutter distortion or flash band phenomenon that occurs with a traditional film camera. The camcorder adopts a color filter that emphasizes color reproduction compatible with wide color area

(exceeding that of color film), allowing for near human vision image representation capability.

Wide latitude, low noise

The camcorder has a 14-stop latitude that can reproduce images captured by the CMOS sensor with smooth gradation of black to white.

Exmor Super35 CMOS technology provides low noise levels, even with 4K resolution and 14-stop latitude maintained.

Video signal processing

4K/HD simultaneous recording and high-speed recording with unlimited recording time is possible with single LSI chip processing of both camera signals and baseband video signals.

Single-chip design provides stable, high-speed 4K 59.94P baseband video processing, low power consumption, and compact design.

Gamma curves corresponding to various situations

The camcorder has a variety of gamma curves corresponding to various situations.

S-Log2 and S-Log3 are equipped to cover wide latitude of the camcorder.

The camcorder also has user gamma and hyper gamma.

The user gamma can install and use the gamma curve that is made by CvpFileEditorTM V4.2.

The hyper gamma can display the wide dynamic range images in smooth contrast without using the knee function. The PMW-F55/F5 provides the following six hyper gamma choices:

Available hyper gamma choices

No.	Name*	Dynamic range	White limit	Video output with 18% gray card (video input 20%)
1	HG3250G36	325%	100%	36%
2	HG4600G30	460%	100%	30%
3	HG3259G40	325%	109%	40%
4	HG4609G33	460%	109%	33%
7	HG8009G40	800%	109%	40%
8	HG8009G33	800%	109%	33%

* Name format: "HG" + 3 digits of dynamic range value + the unit digit of white limit + "G" + video output value with 18% gray card

You can select dynamic range from among 325%, 460%, and 800%. You can select 109% or 100% for the maximum value of video output (White Limit). You can select the video output value with 18% gray card from two values.

Monitor LUT on/off function for each output

By dividing the video output signal (including the internal recorded signal) into 3 types, you can set Monitor LUT to on/off for each type independently.

The camcorder has 5 types of gamma curve and 4 types of Look Profile for Monitor LUT preset.

You can also use any user LUT file that is created by RAW Viewer.

Intuitive user interface

This camcorder has the color LCD panel on the inside panel, and direct access menu that assigns the commonly-used settings to 6 buttons.

Displaying the setting information large, makes visibility better.

By switching four screens (CAMERA, FILE, AU/TC, VIEW), you can perform setting speedy. A LOCK switch allows you to prevent changing settings by accident.

By using the supplied IFU-WLM3 USB wireless LAN module, you can operate the camcorder from a Wi-Fi compatible device such as a tablet, with the wireless transmission.

Assignable buttons

The inside panel has three assignable buttons, while the outside panel has one assignable button.

You can operate the camcorder easily by assigning commonly-used functions to these buttons.

Built-in ND filter

A rotary ND filter is built into the camcorder, and supports three types of filter: Clear, 0.9 (1/8), and 1.8 (1/64). This allows light adjustment without the need for external matte box.

When using a B4 lens by attaching an optional LA-FZB2 mount adapter to the camcorder, you can use the power optical filter (neutral density filter and color temperature conversion filter) of the LA-FZB2 by setting the built-in ND filter of the camcorder to "Clear."

Various input/output connectors

Four types of SDI output

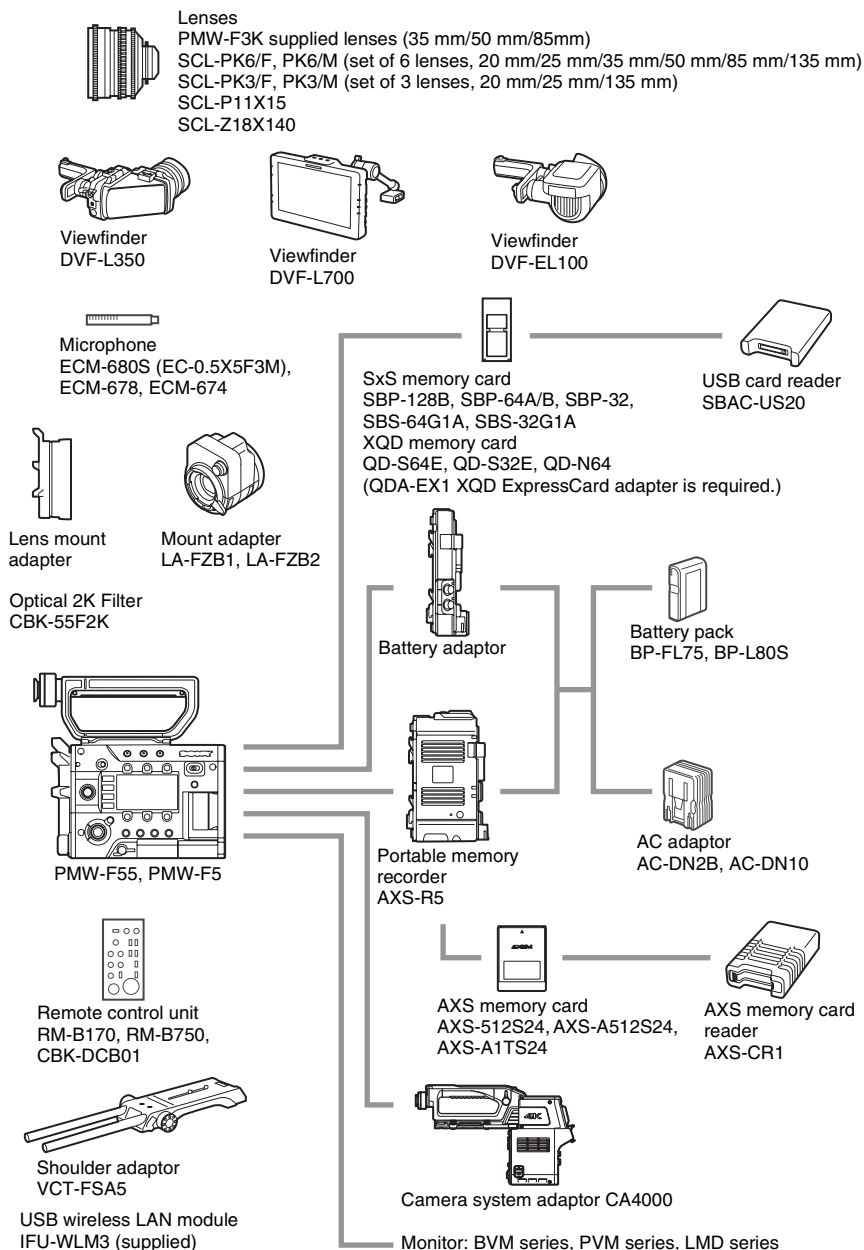
The camcorder has four types of SDI output that allows you to output 4K 59.94P signal as four 3G-SDI.

The SDI-1/2 and SDI-3/4 outputs are assignable as SDI-1/2 OUT to Main, and SDI-3/4 OUT to Sub.

The camcorder also includes connections for Genlock IN, Timecode IN/OUT, HDMI OUT, Remote.

System Configuration

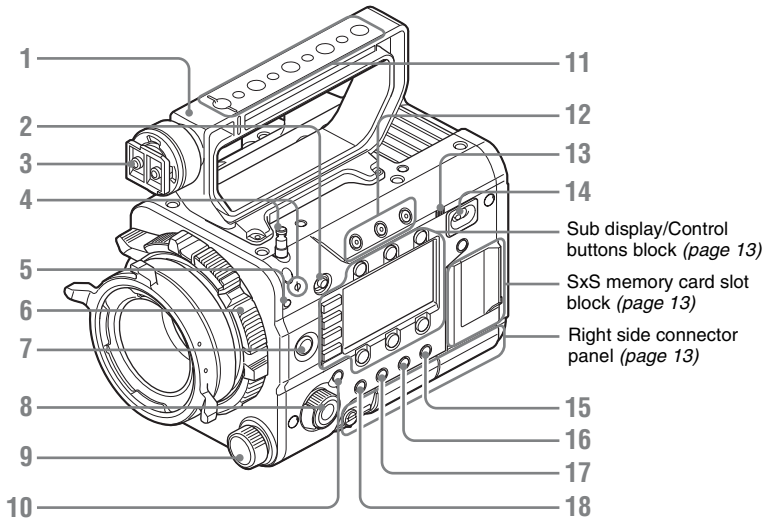
This section shows examples of the camera system configuration.



Location and Function of Parts

For functions and usage, see the pages in parentheses.

The following illustrations are with the battery adaptor (page 15) removed.
For removing the battery adaptor, see “Removing a battery pack” (page 22).



1. Handle

2. LOCK switch

Disables operations on the side operating panel.

3. Viewfinder shoe

4. Tape measure hook/Image sensor position index

The Φ mark and tape measure hook are on a plane with the image sensor. To measure the precise distance between the camcorder and the subject, use this mark or tape measure hook as a reference.

You can attach the end of a tape measure to the hook, and measure the distance from the subject.

5. Flange focal length adjustment screw (page 25)

6. Lens mount (page 24)

7. REC (recording start/stop) button/lamp (page 39)

8. SEL/SET (select/set) dial (MENU dial) (pages 50, 54)

Selects the item in the menu or changes the setting value.

9. ND FILTER select switch

ND filters are available for keeping the aperture in a proper range.

Select the ND filter by turning the ND FILTER select switch while pulling it.

Clear: ND filter not used

0.9: $\frac{1}{8}$ ND

1.8: $\frac{1}{64}$ ND

10. CANCEL/BACK button (pages 50, 54)

11. Accessory mounting screw holes

Type of screw: 1/4-20UNC (× 4)

Type of screw: 3/8-16UNC (× 5)

Length of engagement: 9 mm ($\frac{3}{8}$ inch) or less

Note

Do not apply excessive force to the mounted accessory. It may damage the screw thread.

12. ASSIGN (assignable) 1/2/3 buttons (page 42)

13. Built-in speaker (page 39)

14. Power switch

Set to the ON position (I) to turn the power on.
Set to the OFF position (⏻) to turn the power off.

Notes

- This camcorder uses a small amount of standby power even when the power switch is set to OFF. Remove the battery pack if the camcorder will not be used for a prolonged period.
- When removing the battery pack or the DC IN power, be sure to first set the power switch to the OFF position. Removing the battery pack or the DC IN power while the camcorder is ON may cause damage to the camcorder or the memory card.

15. BRIGHTNESS button

Adjusts brightness of the sub display in 4 steps.

16. STATUS (status display on/off) button

Displays status screens on the viewfinder or external video monitor.

Turn the MENU dial (*page 10*) to switch the screens in sequence.

Camera status screen

Displays the electronic shutter settings or the status of the lens.

Gain	Amount of gain up (dB) or sensitivity (ISO-EI)
Shutter	Electronic shutter settings
Gamma	Gamma category and curve (When "Shooting Mode" is set to "Cine EI," Gamma for MLUT Off is displayed.)
White	White balance mode and setting
Zebra1	On/off and setting level of Zebra1
Zebra2	On/off and setting level of Zebra2
Iris	T value of iris
Focal Length	Focal length (mm)
Focus Distance	Focus distance (m/feet)
Depth Of Field	Depth of field (m/feet)
Optical Filter	Type of optical filter

Audio status screen

Displays the input settings for each channel, audio level meter, and wind filter setting.

Level	Level meter
Source	Input source
Reference	Reference level setting
Wind Filter	Wind filter setting

System status screen

Displays the video signal settings.

System Frequency	System frequency
Rec Format	Recording format that is recorded on the SxS memory card
Picture Size	Picture size that is recorded on an SxS memory card
Rec Function	Special recording that is set to on, and its setting
Gamma	Gamma category that is recorded on the SxS memory card
Imager Scan	Imager reading mode
Picture Cache Rec	On/off setting of Picture Cache Rec
MPEG2 Proxy	On/off setting of MPEG2 proxy (PMW-F55 only)

Video output status screen

Displays the video output settings of SDI 1 to SDI 4, HDMI, and test video output.

Picture size	Output picture size
C.Space	Output form
Freq	Output rate
Gamma	Gamma

Assignable button status screen

Displays the function that is assigned to each ASSIGN button.

1 to 4, Lens RET	Functions that are assigned to the Assign 1 to 4 buttons and RET button on a lens
------------------	---

Battery status screen

Displays information of the battery or DC IN power.

Detected Battery	Battery type
Remaining	Remaining charge level (%)
Charge Count	Number of times that the battery is charged
Capacity	Remaining capacity (Ah)
Voltage	Voltage (V)
Manufacture Date	Manufacture date of the battery
Power Source	Power source
Supplied Voltage	Supplied voltage

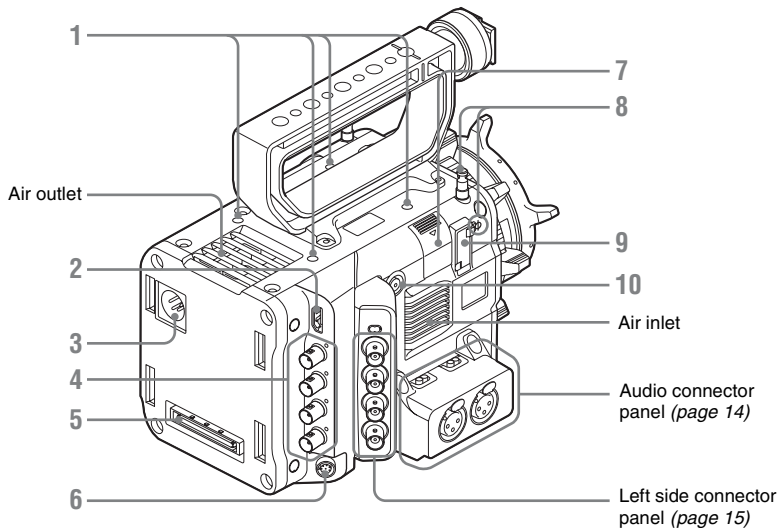
Media status screen

Displays the remaining space, available recording time, and estimated service life of the recording media (SxS memory card A/SxS memory card B/SD card/AXS memory).

Protect information	
Remaining	Remaining space and available recording time
Life	Estimated service life

17. OPTION button (page 47)

18. MENU (menu display on/off) button (page 54)



1. Accessory mounting screw holes

Type of screw: 1/4-20UNC (× 4)
Length of engagement: 9 mm
($\frac{3}{8}$ inch) or less

Notes

- Do not apply excessive force to the mounted accessory. It may damage the screw thread.
- When attaching an accessory, do not cover the air inlet or air outlet.

2. HDMI OUT connector (page 87)

3. DC IN connector (page 23)

4. SDI OUT 1 to 4 (serial digital output) connectors (BNC type) (page 87)

5. Mounting terminal for an expansion unit (pages 22, 31)

6. REMOTE (remote control) connector (8-pin)

Connect an external device such as a remote control unit.

7. USB wireless LAN module retracting part (page 34)

Connecting the supplied IFU-WLM3 USB wireless LAN module allows communication with wireless LAN devices.

8. Tape measure hook/Image sensor position index

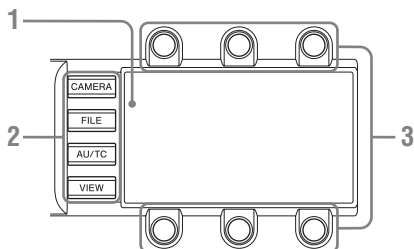
The mark ϕ and tape measure hook are on a plane with the image sensor. To measure the precise distance between the camcorder and the subject, use this mark or tape measure hook as a reference.

You can attach the end of a tape measure to the hook, and measure the distance from the subject.

9. VF (viewfinder output) connector (page 25)

10. ASSIGN 4 (assignable 4) button (page 42)

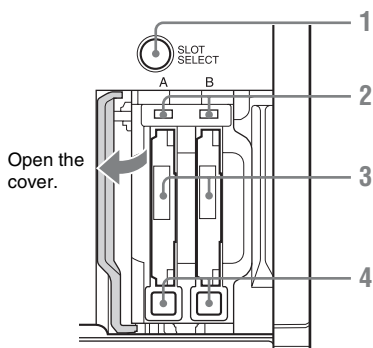
Sub display/Control buttons block (page 50)



1. Sub display
2. Function buttons
 - CAMERA button
 - FILE button
 - AU/TC (audio/time code) button
 - VIEW button
3. Item button

SxS memory card slot block (page 28)

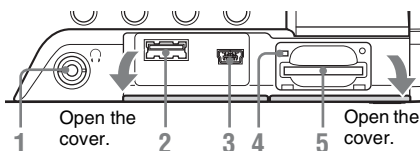
The SxS memory card slots are located behind the cover.



1. SLOT SELECT (SxS memory card select) button
2. ACCESS (SxS memory card access) lamps
3. SxS memory card slots
4. EJECT (SxS memory card eject) buttons

Right side connector panel

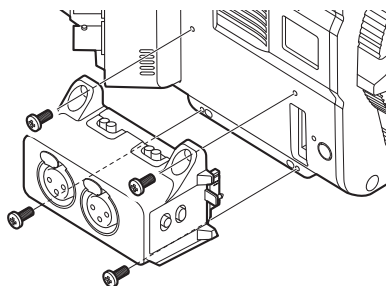
The USB connector and SD card slot are located behind the cover.



1. Headphones connector (stereo mini jack) (page 39)
2. USB connector (A)
3. USB connector (Mini B)
4. ACCESS (SD card access) lamp (page 30)
5. SD card slot (page 30)

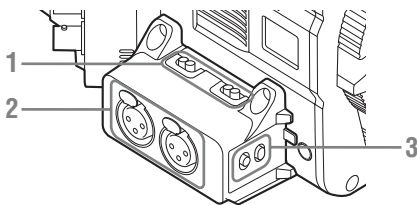
Audio connector panel

Attach the supplied audio connector panel as follows.



Notes

- Attach/remove the audio connector panel while the camcorder is turned off.
- When attaching the audio connector panel, make sure not to catch the cap.
- When removing the audio connector panel, pull it away slowly from the body of the camcorder, as shown in the diagram above.
- Applying excessive force to remove the audio connector panel may damage it.



1. AUDIO IN CH1/AUDIO IN CH2

(external audio input selection) switches
Switch input signal (external microphone, external audio device, etc.).

LINE: Line input audio equipment

AES/EBU: AES/EBU format audio signal

MIC: Microphone input

2. AUDIO IN (CH-1, CH-1/2) /AUDIO IN (CH-2, CH-3/4) connectors

Input external microphone or audio equipment signals.

3. CH1 MIC +48V/OFF, CH2 MIC +48V/OFF (external microphone input selection) switches

Supply phantom power (48 V) to the external microphone when you set this switch to "MIC +48V."

Settings of the AUDIO IN CH1/AUDIO IN CH2 switch and recorded channels are as below.

AUDIO IN CH1/CH2 switch		Recorded channel			
CH-1	CH-2	CH-1	CH-2	CH-3	CH-4
LINE/MIC	LINE/MIC	LINE1/MIC1	LINE2/MIC2	No sound	No sound
AES/EBU	LINE/MIC	AES/EBU1-1	AES/EBU1-2	No sound	No sound
LINE/MIC	AES/EBU	LINE1/MIC1	No sound	AES/EBU2-1	AES/EBU2-2
AES/EBU	AES/EBU	AES/EBU1-1	AES/EBU1-2	AES/EBU2-1	AES/EBU2-2

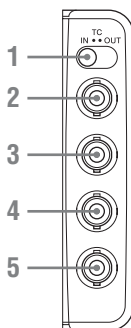
LINE1/MIC1: LINE or MIC signal that is input to CH-1

LINE2/MIC2: LINE or MIC signal that is input to CH-2

AES/EBU1-x: Channel x signal of the AES/EBU signal that is input to CH-1

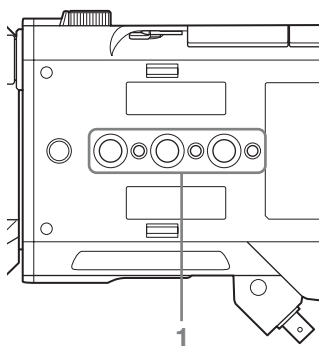
AES/EBU2-x: Channel x signal of the AES/EBU signal that is input to CH-2

Left side connector panel



1. TC IN/OUT (timecode input/output selection) switch (page 89)
2. TC (timecode input/output) connector (BNC type) (page 89)
3. GENLOCK IN connector (BNC type) (page 89)
4. TEST OUT (analog video output) connector (BNC type) (page 87)
5. SHUTTER connector (BNC type)
Not used for this version.

Bottom



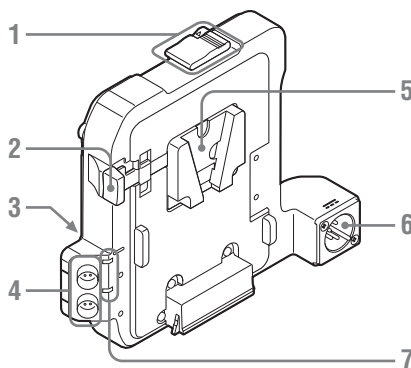
1. Accessory mounting screw holes
Type of screw: 1/4-20UNC (× 3)
Type of screw: 3/8-16UNC (× 3)
Length of engagement: 9 mm
(³/₈ inch) or less

Note

Do not apply excessive force to the mounted accessory. It may damage the screw thread.

Battery adaptor

For attaching/removing the battery adaptor, see “Using a Battery Pack” (page 22).



1. Release button/ejection lever
2. Battery release lever
3. Expansion IF connector
4. DC OUT 1/2 connector

Note

When connecting a device, use one with current consumption of 1.8 A or less.

5. Battery pack attaching part
6. DC IN connector (page 23)
7. DC OUT overcurrent indicator

Lights when the overcurrent protection activates.

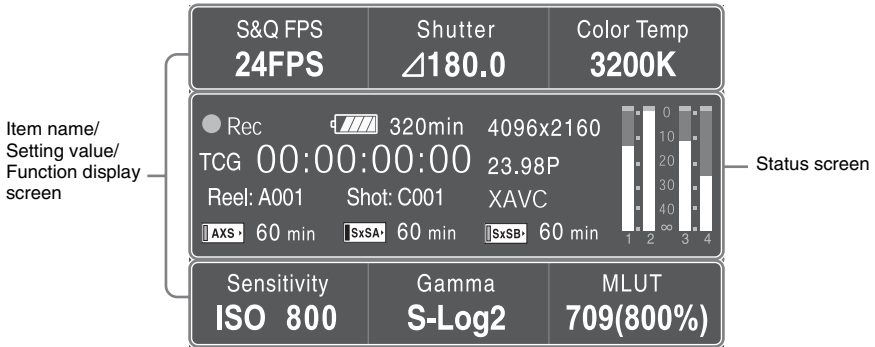
In this case, disconnect any peripheral device from a DC OUT connector whose indicator is lit, then restart the PMW-F55/F5.

On-Screen Indications

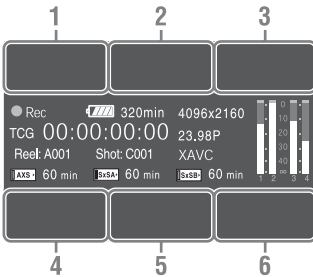
Sub Display Screen

When turning on the camcorder, the sub display appears and you can check the status of the camcorder and set the basic items.

The screen is switched by pressing the function button on the left of the sub display (*page 13*).



Item name/Setting value/Function display screen



CAMERA-1 (*page 51*)

- 1. S&Q FPS**
Displays and sets Slow & Quick Motion/Frame Rate.
- 2. Shutter**
Displays and sets shutter speed/angle.
- 3. Color Temp**
Displays and sets color temperature.
- 4. Sensitivity/Gain/Exposure Index**
Displays and sets sensitivity/gain (ISO/dB/EI).

5. Gamma/High Latitude

Displays and sets gamma category.
(When “Shooting Mode” (*page 82*) is set to “Cine EI,” “High Latitude” is displayed.)

6. MLUT

Displays and sets monitor LUT/Look Profile.
The MLUT indication appears only when “Shooting Mode” (*page 82*) is set to “Cine EI.”

CAMERA-2 (*page 52*)

- 1. Color Bars**
Turns the color bars on/off.
- 2. Auto White**
Performs the auto white balance function.
- 3. Auto Black**
Performs the auto black balance function.
- 4. Sub&HDMI**
Turns the Monitor LUT of SDI (Sub) and HDMI output on/off.
- 5. Viewfinder**
Turns the Monitor LUT of viewfinder output on/off.

6. SDI (Sub) Disp.

Turns the function that outputs the character information to the SDI (Sub) output on/off.

FILE-1 (page 52)**1. to 6. All File Load 1 to 6**

Loads the All file (1 to 6) from the SD card.

FILE-2 (page 52)**1. to 6. Scene Recall 1 to 5/Standard**

Loads the Scene file (1 to 5, or Standard) from the internal memory.

FILE-3 (page 52)**1. to 6. Lens Recall 1 to 6**

Loads the Lens file (1 to 6) from the internal memory.

AU/TC-1 (page 52)**1. MIC CH1 Ref**

Displays/sets the reference input level for MIC CH1.

2. CH1 Input

Sets Auto/Manual for the recording level of CH1, and displays/sets the level for Manual setting.

3. CH1 Select

Displays the input source for CH1.

4. MIC CH2 Ref

Displays/sets the reference input level for MIC CH2.

5. CH2 Input

Sets Auto/Manual for the recording level of CH2, and displays/sets the level for Manual setting.

6. CH2 Select

Displays the input source for CH2.

AU/TC-2 (page 53)**3. Monitor CH**

Displays/sets the audio channel that is output to the headphones and speaker.

5. Monitor Level

Displays/sets the monitor volume that is output to the headphones and speaker.

AU/TC-3 (page 53)**1. Display**

Displays/sets the time data.

2. Reset

Resets the timecode and counter.

3. Set

Sets the timecode.

4. Mode

Sets the timecode mode.

5. Run

Sets the condition for the timecode.

6. TC Source

Displays the external lock status for the timecode.

VIEW-1**1. F Rev ◀◀**

Fast reverse

2. Play/Pause ▶▶

Play/pause

3. F Fwd ▶▶

Fast forward

4. Prev ◀◀

Previous clip jump

5. Stop ■

Stop

6. Next ▶▶

Clip directional jump

VIEW-2**1. Thumbnail **

Displays or cancels the display of the thumbnail screen.

2. Up ↑

Moves the cursor up.

3. Set -⏏-

Confirms the selected item.

4. Left ←

Moves the cursor to the left.

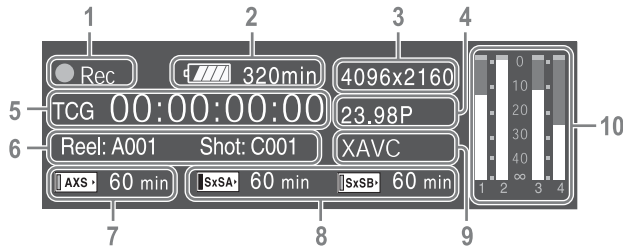
5. Down ↓

Moves the cursor down.

6. Right →

Moves the cursor to the right.

Status screen



1. Special recording/operation status indication

● Rec	Recording in progress
Stby	Standby for recording
● S&Q Rec	Slow & Quick Motion recording in progress
S&Q Stby	Standby for Slow & Quick Motion recording
● HFR Rec	Slow & Quick Motion and Hi Frame Rate mode recording in progress
HFR Stby	Standby for Slow & Quick Motion and Hi Frame Rate mode recording
● Cache	<ul style="list-style-type: none"> ● lights in green: Standby for Picture Cache Rec mode ● lights in red: Recording in progress in Picture Cache Rec mode

2. Battery remaining charge/DC IN voltage indication (page 23)

3. Recording format (picture size) indication (page 27)

Displays the picture size that is recorded on an SxS memory card.

4. System frequency and scan method indication (page 26)

5. Time data indication (page 42)

6. Clip name indication (page 78)

While recording:

Displays “Clip: clip name” when “Mode” in “Clip Naming” of the Media menu is set to “Title,” or “Reel: Camera ID + Reel Number” and “Shot: Camera Position + Shot Number” when “Mode” in “Clip Naming” of the Media menu is set to “Cam ID + Reel#.”

While playing/displaying the thumbnail screen:

Displays “Clip: clip name.”

7. AXS memory status/remaining space indication (page 33)

8. A/B slot media status/remaining space indication (page 29)

9. Recording format (codec) indication (page 27)

Displays the format that is recorded on an SxS memory card.

10. Audio level meter (4CH)

Viewfinder Screen

While recording, standing by to record, or playback, the statuses and settings of this unit are superimposed on the viewfinder screen.

The statuses and settings of this unit can be turned on/off using the setup menu or by the assignable button. The statuses and settings of this unit can be independently turned on/off (page 75).

To turn on/off on the setup menu

Turn on/off the statuses and settings of this unit on “Setting” in “Display On/Off” (page 75) of the VF menu.

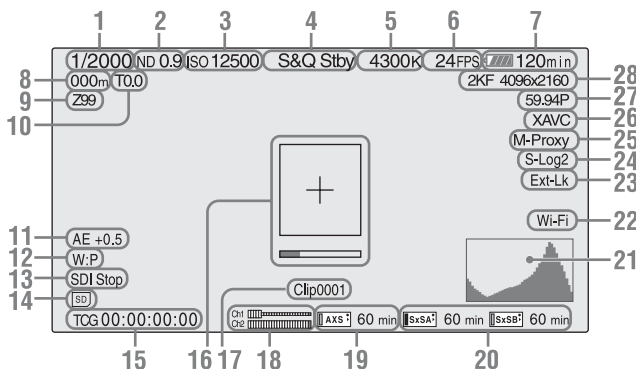
To turn on/off by the assignable button

Assign “Display” to one of the assignable buttons (page 42). You can turn on/off the statuses and settings of this unit by pressing the assignable button.

Tip

When using the 1.3× or 2× anamorphic lens, set “Aspect” in “VF Setting” (page 73) of the VF menu to “Anamo ×1.3” or “Anamo ×2” to display the normal image without distortion on the viewfinder screen.

Information displayed on the screen while recording



1. Shutter mode/shutter speed indication (page 60)

2. ND filter indication (page 10)

3. Gain indication (page 59)

Displayed as the EI value when “Shooting Mode” in “Base Setting” (page 82) of the System menu is set to “Cine EI.”

4. Special recording/operation status indication

● Rec	Recording in progress
Stby	Standby for recording
● S&Q Rec	Slow & Quick Motion recording in progress
S&Q Stby	Standby for Slow & Quick Motion recording

● HFR Rec Slow & Quick Motion and Hi Frame Rate mode recording in progress

HFR Stby Standby for Slow & Quick Motion and Hi Frame Rate mode recording

● Cache ● lights in green: Standby for Picture Cache Rec mode

● lights in red: Recording in progress in Picture Cache Rec mode

5. Color temperature indications (page 57)

6. S&Q motion frame rate indication (page 62)

7. Battery remaining charge/DC IN voltage indication (page 23)

8. Focus position indication

Displays focus position (only when a lens that is compatible with the focus setting display function is attached).

9. Zoom position indication

Displays zoom position in the range of 0 (wide position) to 99 (tele position) (only when a lens that is compatible with the zoom setting display function is attached).

10. Iris position indication

Displays iris position (only when a lens that is compatible with the iris setting display function is attached).

11. Auto iris level indication

Displayed when “Level” in “Auto Exposure” (page 61) of the Camera menu is set to a value other than “±0.”

12. White balance mode indication (page 57)

W:P	Preset mode
W:M	Memory mode

13. Control status of SDI output indication (page 70)**14. SD card indication****15. Time data indication (page 42)****16. Focus assist indication (page 75)**

Displays the area that detects the focus status (“Focus Area Marker”) and level bar that indicates focus status in the area (“Focus Assist Indicator”).

17. Clip name indication (page 40)**18. Audio level meter****19. AXS memory status/remaining space indication (page 33)**

When the left side of the icon is orange, recording is possible.

When the green lamp on the upper right of the icon lights, playback is possible.

20. A/B slot media status/remaining space indication (page 29)

When the left side of the icon is orange, recording is possible.

When the green lamp on the upper right of the icon lights, playback is possible.

21. Video signal indication (page 75)

Displays the waveform, vector scope, and histogram.

22. Wi-Fi connection status indication (page 34)

Appears when “Wi-Fi” (page 86) is set to “Enable.”

23. Timecode external lock indication

When the unit is locked to the timecode of an external device, “Ext-Lk” appears.

24. Gamma/Monitor LUT indication (pages 64, 71)

Displays the gamma setting value. When “Shooting Mode” (page 82) is set to “Cine EI,” gamma for a picture that is recorded on an SxS memory card or the Monitor LUT setting appears.

25. Simultaneous recording status indication (page 44)

M-Proxy: Displayed when the function of simultaneous recording on one memory card is effective.

26. Recording format (codec) indication (page 27)

Displays the format that is recorded on an SxS memory card.

27. System frequency and scan method indication (page 26)**28. Recording format (picture size) indication (page 27)**

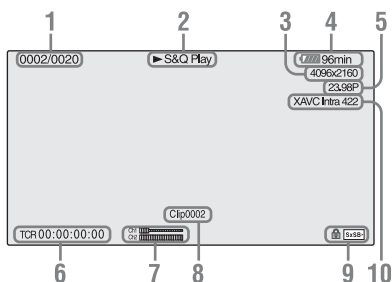
Displays the picture size that is recorded on an SxS memory card.

Displays the imager scan mode (2KF: 2K Full, 2KC: 2K Center) on the left side of the picture size.

Displays imager scan mode only when recording only RAW format.

Information displayed on the playback screen

The following information is superimposed on the playback picture.



1. Clip no./total number of clips

2. Playback mode

3. Playback format (picture size)

4. Battery charge remaining/DC IN voltage

5. Playback format (frame rate)

6. Time data


You can switch between timecode and duration by using “TC Display” (*page 76*) in the TC/UB menu.

7. Audio levels

The audio levels for the recording are displayed.

8. Clip name

9. Media

A  mark appears to the left if the memory card is write-protected.

10. Playback format (codec)

Power Supply

You can use a battery pack or AC power via an AC adaptor.

For safety, use only the Sony battery packs and AC adaptors listed below:

Lithium-ion Battery Pack

BP-FL75

BP-L80S

AC Adaptor

AC-DN2B

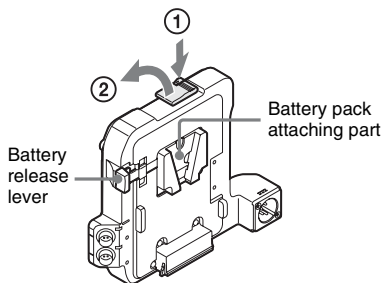
AC-DN10

Using a Battery Pack

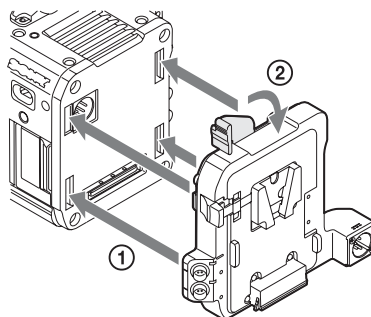
Attaching a battery pack

1 Attach the battery adaptor (supplied) to the camcorder.

Press the release button (①) of the battery adaptor to pop up the ejection lever, then raise the ejection lever (②).



Insert the projection of the battery adaptor into the slot on the rear of the camcorder (①), then lower the ejection lever (②).



Notes

- Before attaching the battery adaptor, make sure that the ejection lever is raised.
- Before lowering the ejection lever, make sure that the four hooks are attached securely. If the four hooks are not attached securely, it may cause the connection to be poor or damage the camcorder and battery adaptor.

2 Attach a battery pack to the battery adaptor.

Insert the battery pack into the battery pack attaching part of the battery adaptor, then slide the battery pack down to lock it in place.

Notes

- Before use, charge the battery pack with the battery charger.
- A warm battery pack immediately after use may not be able to be fully recharged.

Removing a battery pack







Unlock the battery pack by sliding it up while pressing the battery release lever, then remove it. Press the release button and raise the ejection lever, then remove the battery adaptor by pulling it out while sliding upward.

Note

Remove the battery adaptor while supporting the camcorder by hand.

Checking remaining battery charge

When recording or playback is in progress on the battery pack, an icon to show the current battery remaining time and battery voltage are displayed on the sub display screen (*page 16*) and viewfinder screen (*page 19*).

Icon	Remaining charge
	100% to 91%
	90% to 71%
	70% to 51%
	50% to 31%
	30% to 11%
	10% to 0%

The camcorder indicates the remaining usage time in minutes by calculating the available time with the battery pack if operation is continued at the current rate of power consumption.

If the remaining battery charge becomes low

If the remaining battery charge decreases to a certain level during operation, a low-battery message, flashing of the REC lamp, and a beep sound will warn you.

If the remaining charge further decreases to a level at which operation cannot be continued, a battery-empty message appears.

Replace the battery pack with one that is fully charged.

To change the message levels

These settings can be changed with “Battery Alarm” (*page 85*) in the System menu.

Using AC Power (DC IN Power)

The camcorder works with AC power by using the AC adaptor AC-DN2B/AC-DN10 (optional) and DC cable CCDD-X2 (optional).

Setting the Clock

When you turn the camcorder on for the first time after purchasing or replacing the backup battery, the Initial Setting display appears on the viewfinder screen.

Set the date and time of the built-in clock, using this display.

Time Zone

The value shows the time difference from UTC (Coordinated Universal Time).

Change the setting if needed.

Setting the time and date

Turn the MENU dial (*page 10*) to move the cursor, then press the MENU dial to set each menu item. When you press the MENU dial when the cursor is on “Finish,” the setting display disappears, the clock setting is completed.

After the setting display disappears, “Clock Set” (*page 85*) in the System menu can be used to set “Time Zone” and date/time.

Notes

- If the clock setting is cleared because the backup battery fully discharged when no power was supplied (no battery pack and no DC IN connection), the Initial Setting display will be displayed when you next turn the camcorder on.
- While the Initial Setting display is shown, no other operation, except turning the power off, is permitted until you finish the setting for this display.

Attaching Optional Devices

Attaching a Lens

Recommended lenses

PMW-F3K supplied lenses (35 mm/50 mm/85 mm)

SCL-PK6/F, SCL-PK6/M (set of 6 lenses, 20 mm/25 mm/35 mm/50 mm/85 mm/135 mm)

SCL-PK3/F, SCL-PK3/M (set of 3 lenses, 20 mm/25 mm/135 mm)

SCL-P11X15

SCL-Z18X140

For details about available lenses for the camcorder, contact a Sony service representative.

Caution

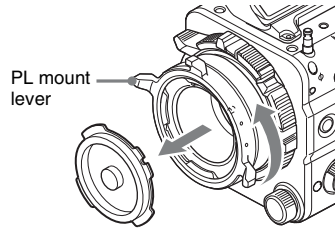
Do not leave the lens facing the sun. Direct sunlight can enter through the lens, be focused in the camcorder, and cause fire.

Notes

- Attach/remove a lens while the camcorder is turned off.
- A lens is a precision part. Do not place the lens directly with the mount part down. Attach the cover supplied with the lens.
- The lens interface of the camcorder is set to “Type C,” to correspond with the lens that is supplied with the PMW-F3K, SCL-P11X15, and lenses with a Cooke-type connector. When using a lens with an ARRI-type connector, set “Lens interface” (page 63) in the Camera menu to “Type A.” Set to “Off” for SCL-PK6, SCL-PK3, or other lenses. If this setting is not correct, an alert message appears when the camcorder is turned on after attaching the lens.

Attaching a PL mount lens

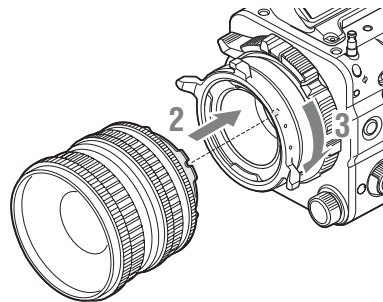
- 1 Remove the mount cover from the lens mount by turning the PL mount lever counterclockwise.



Note

Turn the PL mount lever counterclockwise to the stopper position.

- 2 Insert the lens into the lens mount by matching the concave part of the lens to the locating pin on the upper right of the lens mount.
- 3 Fix the lens by turning the PL mount lever clockwise while holding the lens.



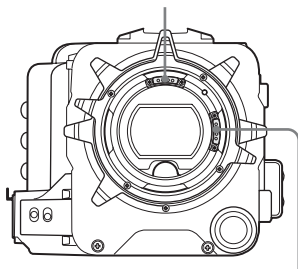
Note

Do not turn the lens when attaching the PL mount lens. It may cause damage to the hot shoe pin.

To attach an ARRI* LDS lens or Cooke/i lens

Match the contact of the lens to the hot shoe of the camcorder.

Hot shoe for the Cooke/i lens



Hot shoe for the ARRI LDS lens

* ARRI Group

Attaching other than a PL mount lens

When using an FZ mount lens or B4 lens by attaching an optional LA-FZB1/FZB2 mount adapter, attach it after removing the mount adapter by turning the lens mount counterclockwise.

Adjusting a flange focal length

You need to adjust the flange focal length (distance from the mounting flange to the film plane) for the following cases.

- When a lens is attached for the first time.
- When a lens is changed.
- When focus is not achieved for either tele or wide angle while using a zoom lens.

You can adjust the flange focal length by turning the screw for the flange focal length (page 10).

Use a hex key (7/64) for adjusting.

When turning the screw to the left, the flange focal length becomes long. When turning the screw to the right, the flange focal length becomes short. Turn the screw slowly.

Notes

- The camcorder will not work if the screw for the flange focal length is turned too much. Stop turning the screw when the amount of the flange focal length no longer changes. Approximate limit for turning the screw is 7 rotations to the right/left.
- Use a hex key of the specified size. Otherwise, the screw head may be damaged and you may be unable to turn the screw.

Removing a lens

Remove a lens with the following steps.

1 Turn the PL mount lever counterclockwise while holding the lens from underneath.

2 Pull the lens forward.

Note

If another lens will not be attached soon, fit the concave part of the mount cover, then fix the mount cover by turning the PL mount lever clockwise.

Selecting the lens file

By storing the adjustment value of the attached lens as a file, you can easily perform adjustment for the lens by loading the file.

Load the file in "Lens File" (page 81) of the File menu.

Controlling zoom and focus from the external device

You can control zoom and focus from the optional CBK-DCB01 by connecting the CBK-DCB01 to the REMOTE connector (page 12) when using Sony lens SCL-Z18X140.

Note

When connecting the CBK-DCB01 to the REMOTE connector independently, set "RM Common Memory" in "Camera Config" (page 82) of the Maintenance menu to "On."

For details regarding CBK-DCB01 that can be used with the camcorder, contact a Sony service representative.

Attaching a Viewfinder

Available viewfinders for the camcorder

- DVF-L350: LCD color viewfinder
- DVF-L700: LCD color viewfinder
- DVF-EL100: OELD color viewfinder

Caution

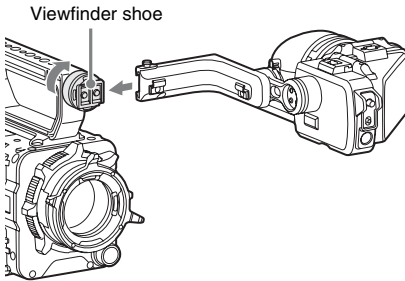
Do not leave the camcorder with the eyepiece of the viewfinder facing the sun. Direct sunlight can enter through the eyepiece, be focused in the viewfinder, and cause fire.

Notes

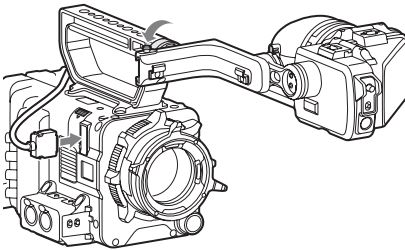
- Attach/remove the viewfinder while the camcorder is turned off.
- When using the camcorder with the DVF-L700 attached, turn the camcorder on while the POWER switch of the DVF-L700 is set to ON.

For details about attaching the viewfinder, refer to the operating instructions of the viewfinder.

- 1 Loosen the fixing ring of the viewfinder shoe, align the slot of the viewfinder, then attach the viewfinder by sliding it horizontally.**



- 2 Tighten the fixing ring after determining the left and right position of the viewfinder, then connect the viewfinder cable to the VF connector of the camcorder.**

**To remove the viewfinder**

Loosen the fixing ring for the viewfinder, raise the stopper, then remove the viewfinder by sliding it in the reverse direction for when attaching.

Setting the Basic Action

Before recording, make the basic settings, as required.

System Frequency

Switch by setting “Frequency” in “System Setting” (page 82) of the System menu. After switching this setting, the camcorder will automatically restart, depending on the setting value.

Note

The system frequency setting cannot be changed during recording or playback.

Shooting Mode

You can switch between the “Cine EI” mode (allows you to use the camcorder as a film camera, where the movie is edited post-production, rather than at the time of shooting), and the “Custom” mode (allows you to edit pictures as you make the movie, by accessing all the setting items).

Switch the mode by using “Shooting Mode” in “Base Setting” (page 82) of the System menu.

Main Recorded Signal

Set the predominant signal format to be used. Set the format by using “Main Operation” in “Base Setting” (page 82) of the System menu. The RAW signal is recorded on the AXR-R5 attached to the camcorder, and the YPbPr or RGB signal is recorded on the SxS memory card in the camcorder. Since the RGB signal is output from the SDI 1/2 connector of the camcorder, record it on an external device such as SR-R1.

Select the format from YPbPr/RGB/RAW when “Shooting Mode” is set to “Cine EI,” and from YPbPr/RGB when “Shooting Mode” is set to “Custom.”

Note

The RAW signal can be selected only when attaching the AXS-R5. If the AXS-R5 is not attached, “Main Operation” is locked to “YPbPr” or “RGB.”

Color Space

Select the color gamut that is to be the basis of the recorded signal and the output signal.

When “Shooting Mode” is set to “Cine EI,” select the color gamut for video output of which MLUT is set to off. When “Shooting Mode” is set to “Custom,” “Color Space” is locked to “Matrix.” Select it by using “Color Space” in “Base Setting” (page 82) of the System menu.

S-Gamut/SLog2: Wider gamut that is comparable with a film camera.

S-Gamut3.Cine/SLog3: Color gamut that is easy to adjust for digital cinema (DCIP3).

S-Gamut3/Slog3: Wide color gamut optimized by Sony’s original image distortion correction technology, and adaptable to the color gamut that will be standardized in the future.

Matrix: Selects the color gamut by Matrix setting as done with traditional cameras (when “Shooting Mode” is set to “Custom”).

Note

Gamma curve is locked to “S-Log2” when “S-Gamut/SLog2” is selected, gamma curve is locked to “S-Log3” when “S-Gamut3.Cine/SLog3” or “S-Gamut3/SLog3” is selected.

Imager Scan Mode

You can set the shooting method for the image sensor.

Select the mode by using “Imager Scan Mode” in “Base Setting” (page 82) of the System menu.

Normal: Uses the full angle of Super 35 mm size as it is, except at the high frame rate mode of the Slow & Quick Motion function.

When “High Frame Rate Mode” in “S&Q Motion” (page 62) of the Camera menu is set to “Full Scan,” the full angle picture of Super 35 mm size that is converted to 2K data is used. When “High Frame Rate Mode” in “S&Q Motion” (page 62) of the Camera menu is set to “Center Scan,” the 2K angle picture that is half of the Super 35 mm size (center area of the picture) is used.

2K Full: Uses the full angle picture of Super 35 mm size that is converted to 2K data.

2K Center: Uses the 2K angle picture that is half of the Super 35 mm size (center area of the picture).

Recording Format

Selectable formats vary, depending on the system frequency and main recorded signal settings.

System frequency	Main recorded signal	Format
59.94/50	YPbPr	XAVC 4096 × 2160P*
		XAVC 3840 × 2160P*
		XAVC 2048 × 1080P
		XAVC 1920 × 1080P
		MPEG 1920 × 1080i
	RGB	MPEG 1280 × 720P
		XAVC 2048 × 1080P
		XAVC 1920 × 1080P
		MPEG 1920 × 1080i
		MPEG 1280 × 720P
29.97/25/ 23.98	YPbPr	XAVC 2048 × 1080P
		XAVC 1920 × 1080P
		MPEG 1920 × 1080i
		XAVC 4096 × 2160P*
		XAVC 3840 × 2160P*
	RGB	XAVC 2048 × 1080P
		XAVC 1920 × 1080P
		MPEG 1920 × 1080i
		SSiP SR-SQ 422
		SSiP SR-Lite 422
24	YPbPr	XAVC 2048 × 1080P
		XAVC 1920 × 1080P
		MPEG 1920 × 1080i
		XAVC 4096 × 2160P*
		XAVC 2048 × 1080P
	RGB	SSiP SR-SQ 422
		SSiP SR-Lite 422
		XAVC 2048 × 1080P
		XAVC 1920 × 1080P
		MPEG 1920 × 1080i
RAW	SSiP SR-SQ 444	
	XAVC 2048 × 1080P	

* PMW-F55 only.

To change the format, use “Format” in “Rec Format” (page 83) of the System menu. Signals from the SDI OUT and HDMI OUT connectors are also output according to the format selected with this menu.

Using SxS Memory Cards

This camcorder records audio and video on SxS memory cards (optional) inserted in the card slots.

About SxS Memory Cards

Use the following Sony SxS memory cards or XQD memory cards*.

* When using an XQD memory card, the XQD ExpressCard adapter (QDA-EX1) is required.

Available memory cards differ depending on the recording format and “On”/“Off” setting of “High Frame Rate Mode.”

SxS PRO+

SBP-128B, SBP-64B: Available for all recording formats, and when “High Frame Rate Mode” is set to “On” or “Off.”

SxS PRO

SBP-64A, SBP-32: SSiP SR-Lite 422, XAVC 1920 × 1080P, 1920 × 1080P (only when “High Frame Rate Mode” is set to “Off”), MPEG 1920 × 1080P/i, 1280 × 720P

SxS-1

SBS-64G1A, SBS-32G1A: MPEG 1920 × 1080P/i, 1280 × 720P

XQD memory card S series

QD-S64E, QD-S32E: Available for all recording formats, and when “High Frame Rate Mode” is set to “On” or “Off.”

XQD memory card N series

QD-N64: MPEG 1920 × 1080P/i, 1280 × 720P

Operations are not guaranteed with other memory cards.

These memory cards comply with the ExpressCard standard.

For details on using SxS memory cards and usage-related precautions, refer to the instruction manual for the SxS memory card.

- SxS, SxS PRO, and SxS-1 are trademarks of Sony Corporation.
- XQD is a trademark of Sony Corporation.

- The ExpressCard word mark and logo are owned by Personal Computer Memory Card International Association (PCMCIA) and are licensed to Sony Corporation. All other trademarks are the property of their respective owners.

Inserting an SxS Memory Card

- 1 **Open the cover of the card slot block (page 13).**
- 2 **Insert the SxS memory card into the slot with the SxS label facing to the right.**
The ACCESS lamp (page 13) lights in red then changes to green once the memory card is ready for use.
- 3 **Close the cover.**

Status indications by the ACCESS lamps

Card slots A and B are accompanied by the respective ACCESS lamps to indicate their status.

Lamp	Slot statuses
Lights in red	Accessing the SxS memory card (writing/reading data)
Lights in green	Standby (ready for recording or playback using the SxS memory card)
Off	<ul style="list-style-type: none"> • No SxS memory card is loaded. • The loaded card is invalid. • An SxS memory card is loaded, but another slot is active.

Removing an SxS memory card

- 1 **Open the cover of the card slot block, press the EJECT button (page 13), then pull the button out.**
- 2 **Press the EJECT button again to remove the card.**

Note

Data integrity is not guaranteed if the power is turned off or a memory card is removed while it is being accessed. Data on the card may be destroyed. Be sure that its ACCESS lamp is lit in green or off when you turn off the power or remove a memory card.

Switching Between SxS Memory Cards

When SxS memory cards are loaded in both card slots A and B, press the SLOT SELECT button (page 13) to select the card you wish to use. If a card becomes full, recording continues after automatically switching to the second card.

Note

The SLOT SELECT button is disabled while recording/playback is in progress. Switching is not executed even if you press the button. The button is enabled while the thumbnail screen is displayed (page 46).

Formatting an SxS Memory Card

If an SxS memory card is not formatted, or was formatted with another system, the message “Media Needs to be Formatted” is displayed on the viewfinder screen.

Format the card as instructed follows.

Using “Format Media” (page 78) in the Media menu, specify “Media(A)” (slot A) or “Media(B)” (slot B) then select “Execute.” On a confirmation message, select “Execute” again.

The in-progress message and status bar are displayed, and the ACCESS lamp lights in red. When formatting is complete, a completion message is displayed. Press the MENU dial to hide the message.

Recording/playback during formatting

You can perform recording or playback using the SxS memory card in the other card slot while formatting is in progress.

If formatting fails

A write-protected SxS memory card or memory card that cannot be used with this camcorder will not be formatted.

As a warning message is displayed, replace the card with an appropriate SxS memory card, according to the instructions in the message.

Note


All the data, including recorded pictures and setup files, are erased when a memory card is formatted.

Checking the Remaining Time Available for Recording

While recording (or standing by to record), you can check the remaining space for the SxS memory cards loaded in the card slots on the A/B slot media status/remaining space indication of the sub display (page 16) or viewfinder screen (page 19).

The available time for recording with the current video format (recording bit rate) is calculated according to the remaining space of each card and displayed in time units of minutes.

Note

A  icon appears if the memory card is write-protected.

Replacing an SxS memory card

- If the available time on two cards in total becomes less than 5 minutes, the message “Media Near Full,” flashing the REC lamp, and a beep sound, will warn you. Replace the cards with those that have sufficient space.
- If you continue recording until the total remaining time reaches zero, the message changes to “Media Full,” and recording stops.

Note

Up to approximately 600 clips can be recorded on one SxS memory card.

If the number of recorded clips reaches the limit, the remaining time indication becomes “0,” and the message “Media Full” is displayed.

Restoring an SxS Memory Card

If a data error occurs in a memory card for some reason, the card must be restored.

If an SxS memory card that needs to be restored is loaded, a message prompting you to execute the restore operation is displayed on the viewfinder screen.

Restore the card as instructed follows.

Select “Execute” by turning the MENU dial, then press the MENU dial.

During restoration, the in-progress message and status bar are displayed, and the ACCESS lamp lights in red.

When restoration is completed, the completion message is displayed, then press the MENU dial to disappear the message.

If restoration fails

- A write-protected SxS memory card, or one on which an error occurred, cannot be restored. For such a card, a warning message is displayed. Release the write protection or replace the card, according to the instructions in the message.
- An SxS memory card on which an error occurred may become usable again through repeated formatting.
- In some cases, only parts of clips cannot be restored. Playback of the restored clips becomes possible again.
- The following operation may restore an SxS memory card for which the message “Could not Restore Some Clips” is repeatedly displayed each time you try the restoration process:
 - 1 Copy necessary clips to another SxS memory card, using the dedicated application software (*page 106*).
 - 2 Format the problem SxS memory card, using the format function of this camcorder.
 - 3 Copy the clips back to the SxS memory card.

Recording/playback during restoration

You can perform recording or playback using the SxS memory card in the other card slot while restoration is in progress.

Note

For restoration of media recorded with this unit, be sure to use this unit. Media recorded with a device other than this unit or with another unit of different version (even of the same model) may not be restored using this unit.

To update the managerial file

If clips cannot be played back, updating the managerial file on the card may improve the situation. For this operation, use “Update Media” (*page 78*) of the Media menu.

If you write an XAVC file that is imported by RAW Viewer V2.2 or later to the “XROOT\Clip” directory of an SxS memory card directly, that file can be played by performing “Update Media.”

Using an SD Card

You can store the setting value file of the camera on an SD card (optional). The stored file can be loaded from the SD card.

Usable SD Cards

SDHC memory card* (Speed Class: 4 to 10, UHS is not compatible, Capacity: 2 GB to 32 GB)

SD memory card* (File system: FAT 16, Capacity: up to 2 GB)

* Indicated as “SD card” in these Operating Instructions.

Inserting an SD Card

- 1 **Open the cover of the card slot block** (*page 13*).
- 2 **Insert the SD memory card into the slot with the SD label facing up.**
The ACCESS lamp (*page 13*) lights in red then changes to green once the memory card is ready for use.
- 3 **Close the cover.**

Status indications by the ACCESS lamp

Lamp	Slot statuses
Lights in red	Accessing the SD card (writing/reading data)
Off	<ul style="list-style-type: none"> • No SD card is loaded. • The loaded card is invalid.

Removing an SD memory card

Open the cover of the card slot block, remove the SD card by pressing the SD card once lightly.

Notes

- Data integrity is not guaranteed if the power is turned off or a memory card is removed while it is being accessed. Data on the card may be destroyed. Be sure that its ACCESS lamp is lit in green or off when you turn off the power or remove a memory card.
- Make sure that the card does not pop out when inserting or removing it.

Formatting an SD Memory Card

When you use an SD memory card with this camcorder, it must be formatted using the format function of this camcorder.

It is also necessary to format an SD memory card if a caution message is displayed when you mount it.

For an SD memory card that was formatted with another system unsupported by this camcorder, the message “File System Mismatch” is displayed on the viewfinder screen.

Format the card as instructed follows.

Using “Format Media” (page 78) in the Media menu, specify “SD card” then select “Execute.” On a confirmation message, select “Execute” again.

The in-progress message and status bar are displayed, and the ACCESS lamp lights in red. When formatting is complete, a completion message is displayed. Press the MENU dial to hide the message.


Note

All the data are erased when a memory card is formatted, and the data cannot be restored.

Checking the Remaining Time

The remaining time can be checked on the Media status screen (page 11).

Note

A  icon appears if the memory card is write-protected.

To use media formatted with this camcorder in the slots of other devices

Make a backup of the media, then format it using the other device.

Using an AXS-R5

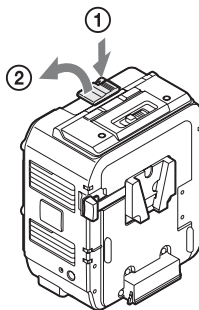
You can record image/audio (RAW format) data to the AXS (Access Memory Card System) recorder AXS-R5 (optional) by connecting the AXS recorder to the camcorder.

Attaching the AXS-R5

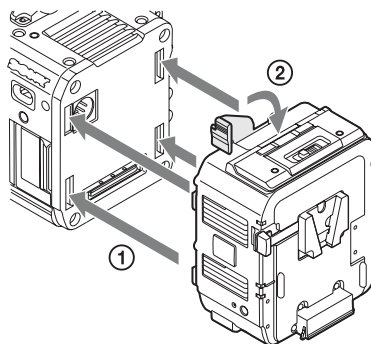
Note

Attach/remove the AXS-R5 while the camcorder is turned off.

- 1 Press the release button of the AXS-R5 (①) to pop up the ejection lever, then raise the ejection lever (②).



- 2 Insert the projection of the AXS-R5 into the slot on the rear of the camcorder (①), then lower the ejection lever (②).



Notes

- Before attaching the AXS-R5, make sure that the ejection lever is raised.

- Before lowering the ejection lever, make sure that the four hooks are attached securely. If the four hooks are not attached securely, it may cause the connection to be poor or damage the camcorder and AXS-R5.

Removing the AXS-R5

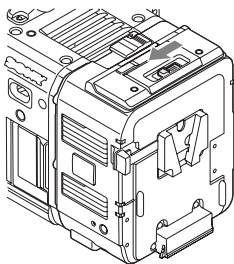
Press the release button and raise the ejection lever, then remove the AXS-R5 by pulling it out while sliding upward.

Note

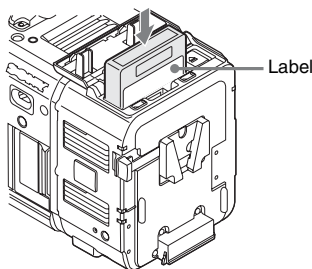
Remove the AXS-R5 while supporting the camcorder by hand.

Inserting an AXS Memory Card

- 1 Open the cover by sliding the memory slot cover open/close button on the top of the AXS-R5.



- 2 Insert the AXS memory card into the card slot with the label facing as indicated below.



- 3 Close the cover.

Removing an AXS Memory Card

Open the cover of the AXS-R5, press the EJECT button and remove the AXS memory card.

Note

Data integrity is not guaranteed if the power is turned off or a memory card is removed while it is being accessed. Data on the card may be destroyed. Be sure that its ACCESS lamp is lit in green or off when you turn off the power or remove a memory card.

Recording to an AXS Memory Card

Set “Shooting Mode” in “Base Setting” (page 82) to “Cine EI,” and “Main Operation” in “Base Setting” (page 82) to “RAW” of the System menu.

For settings of the AXS-R5, see “AXS Recorder” (page 86) of the System menu.

Formatting an AXS Memory Card

When you use an AXS memory card with the AXS-R5 that is attached to the camcorder, it must be formatted using the format function of this camcorder.

It is also necessary to format an AXS memory card if a caution message is displayed when the camcorder is turned on with the AXS recorder attached.

For an AXS memory card that was formatted with another system unsupported by the AXS-R5, the message “Media Needs to be Formatted” is displayed on the viewfinder screen.

Format the AXS memory card as follows.

Using “Format Media” (page 78) in the Media menu, specify “AXS Memory” (slot B), then select “Execute.”

An in-progress message and status bar are displayed, and the ACCESS lamp lights in red. When formatting is complete, a completion message is displayed. Press the MENU dial to hide the message.


Note

When formatting, all data in an AXS memory card are erased and cannot be restored.

Checking the Remaining Time Available for Recording

While recording (or standing by to record), you can check the time remaining for the AXS memory cards on the AXS memory status/remaining space indication of the sub display (page 16) or viewfinder screen (page 19). The available time for recording with the current video format (recording bit rate) is calculated according to the remaining space of each card and displayed in time units of minutes.

Note

A  icon appears if the memory card is write-protected.

Restoring the AXS Memory Card

If a data error occurs on the AXS memory card for some reason, the card must be restored.

If an AXS memory card that needs to be restored is connected, a message prompting you to execute restoration is displayed on the viewfinder screen. Restore the card as instructed follows.

Select “Execute” by turning the MENU dial, then press the MENU dial.

During restoration, the in-progress message and status bar are displayed, and the ACCESS lamp lights in red.

When restoration is completed, the completion message is displayed, then press the MENU dial to disappear the message.

If restoration fails

- A write-protected AXS memory card or one on which an error occurred cannot be restored. For such a card, a warning message is displayed. Release the write protection or replace the card, according to the instructions in the message.
- An AXS memory card on which an error occurred may become usable again through repeated formatting.
- In some cases, only parts of clips cannot be restored. Playback of the restored clips becomes possible again.

Note

For restoration of media recorded with this unit, be sure to use this unit. Media recorded with a device other than this unit or with another unit of different version (even of the same model) may not be restored using this unit.

To update the managerial file

If clips cannot be played back, updating the managerial file on the card may improve the situation. For this operation, use “Update Media” (page 78) of the Media menu.

Using a USB Wireless LAN Module

You can make the Wi-Fi connection between the camcorder and a device such as a smartphone, tablet, etc., by attaching the supplied IFU-WLM3 USB wireless LAN module.

Note

- The IFU-WLM3 USB Wireless LAN Module (supplied) may not be available in some countries/regions.
- Attach/remove the IFU-WLM3 after the camcorder is turned off.
- If you use a wireless device near the camcorder, the camcorder may not work correctly. Turn the wireless device off near the camcorder.
- You cannot use a USB wireless LAN module other than the IFU-WLM3.

Making a Wi-Fi connection between a device and the camcorder enables you to do the following.

- Operate the setup menu
- Record and playback the camcorder
- Display the current status of the camcorder
- Switch between the recording settings and system settings
- Operate the assignable buttons of the camcorder

Attaching the IFU-WLM3

- 1 **Open the cover of the USB wireless LAN module retracting part (page 12).**
- 2 **Insert the IFU-WLM3 to the USB connector.**
- 3 **Close the cover.**

Making a Wi-Fi Connection

Note

Only one Wi-Fi device can be connected at a time.

To make a network setting

Change the “Basic Authentication” settings (page 86) of the System menu as required.

Item	Setting
User Name	User name for log-in (factory default setting: “admin”)
Password	Password for log-in (factory default setting: model name “pmw-f5” or “pmw-f55”)

For details about the menu settings and entering a character string, see “Setup Menu Operations” (page 54).

To make a connection

- 1 **Set “Wi-Fi” in “Wi-Fi” (page 86) of the System menu to “Enable.”**
- 2 **Make a Wi-Fi connection by inputting the SSID and Password onto the device, or by using the Wi-Fi direct connection function.**

You can check the SSID and password of the camcorder on “SSID & Password” in “Wi-Fi” (page 86) of the System menu.

When using the Wi-Fi direct connection function, proceed to the following step.

- 3 **Select “Execute” for “Wi-Fi Direct Connection” in “Wi-Fi” of the System menu.**

The setup menu disappears, and the connection wait message for the Wi-Fi direct connection function appears.

Using the Push-Button method

When you perform the Push-Button method on the device, the message for connection permission appears on the connection wait screen. Select “Execute.”

Using the PIN code method

When you perform the PIN code method on the device, the device name and PIN code appears on the connection wait screen.

Complete the connecting process by inputting the PIN code to the device.

Using the Wi-Fi Remote Commander

When a Wi-Fi connection is established between a device such as smartphone, tablet, etc., and the camcorder, the Wi-Fi remote commander appears on the device screen and the device can be used as a remote commander.

You can start/stop recording and adjust the recording settings with a Wi-Fi connected device. This function is useful for setting the camcorder in a remote place, such as the top of a crane, etc.

Note

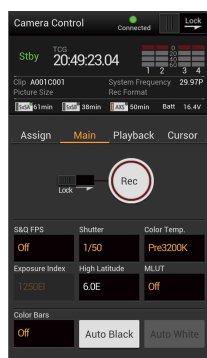
The Wi-Fi remote commander is not capable of the following functions.

- Zoom, Focus, and Iris control.
- Displaying the thumbnail screen.

Wi-Fi remote commander displays

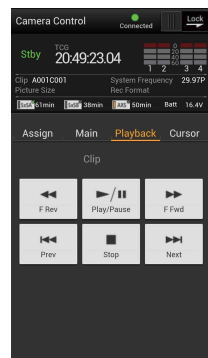
Smartphone

Main screen



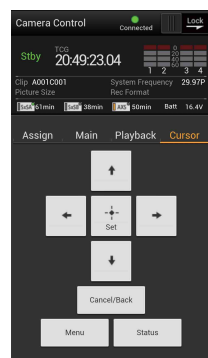
- Wi-Fi connecting status (Connected/Disconnected)
- Status indication: operating status, time data, audio level meter, clip name, recording format, media status/remaining space, battery remaining charge/DC IN voltage
- Recording settings indication: S&Q FPS, Shutter, Color Temp., Sensitivity/Gain/Exposure Index, Gamma, MLUT, Color Bars, Auto Black, Auto White

Playback screen



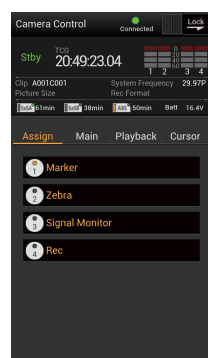
- Wi-Fi connecting status (Connected/Disconnected)
- Status indication
- Playback operation button: F Rev, Play/Pause, F Fwd, Prev, Stop, Next

Cursor screen



- Wi-Fi connecting status (Connected/Disconnected)
- Status indication
- Cursor operation button, menu/status indication: Up, Left, Set, Right, Down, Cancel/Back, Menu, Status

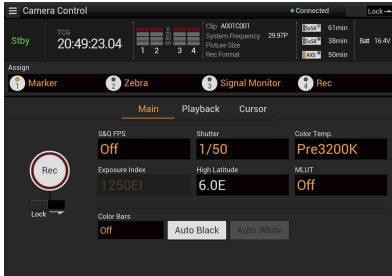
Assign screen



- Wi-Fi connecting status (Connected/Disconnected)
- Status indication
- Assignable button indication: Assignable buttons 1 to 4

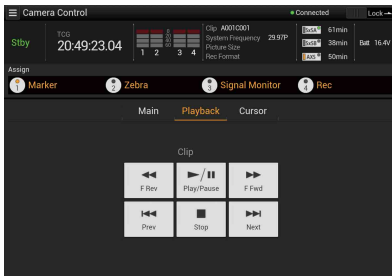
Tablet

Main screen



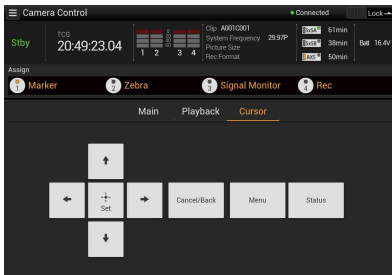
- Wi-Fi connecting status (Connected/Disconnected)
- Status indication: operating status, time data, audio level meter, clip name, recording format, media status/remaining space, battery remaining charge/DC IN voltage
- Assignable button indication: Assignable buttons 1 to 4
- Recording settings indication: S&Q FPS, Shutter, Color Temp., Sensitivity/Gain/Exposure Index, Gamma, MLUT, Color Bars, Auto Black, Auto White

Playback screen



- Wi-Fi connecting status (Connected/Disconnected)
- Status indication
- Assignable button indication
- Playback operation button: F Rev, Play/Pause, F Fwd, Prev, Stop, Next

Cursor screen



- Wi-Fi connecting status (Connected/Disconnected)
- Status indication
- Assignable button indication
- Cursor operation button, menu/status indication: Up, Left, Set, Right, Down, Cancel/Back, Menu, Status

To display the Wi-Fi remote commander

The display size of the Wi-Fi remote commander changes according to the device screen size automatically.

- 1 **Make a Wi-Fi connection between the device and camcorder (page 34).**
- 2 **Launch the browser and input `http://<camcorder's IP address>` (“System menu” > “Wi-Fi” > “IP Address”)/`rm.html` in the address bar.**
Example: When the IP address is 10.0.0.1, input `http://10.0.0.1/` in the address bar.
- 3 **Input the user name and password (“System menu” > “Basic Authentication” > “User Name” or “Password”) on the browser.**

When completing the connection, the display of the Wi-Fi remote commander appears on the device.

Operate the Wi-Fi remote commander by following the display.

The REC button becomes unavailable when the Lock switch is dragged to the right.

Notes

- Depending on the device, the Wi-Fi remote commander may not appear properly on the device's screen even though you input `http://<camcorder's IP address>/rm.html` in the address bar. In this case, input `“rms.html”` for a smartphone or `“rmt.html”` for a tablet instead of `“rm.html”` at the end of the address to display the Wi-Fi remote commander properly.
- The Wi-Fi remote commander on the device's screen may no longer match the actual status of the camcorder in the following cases. When this happens, refresh the browser on the device.
 - when the camcorder is restarted while the Wi-Fi connection is established
 - when the camcorder is controlled directly while the Wi-Fi connection is established
 - when the device is reconnected
 - when you operate forward/backward on the device's browser.
- If the Wi-Fi signal is poor, the Wi-Fi remote commander may not work properly.

Compatible devices

The following devices, using the specified versions or higher, can be used as Wi-Fi remote commanders.

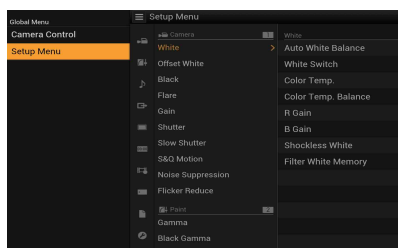
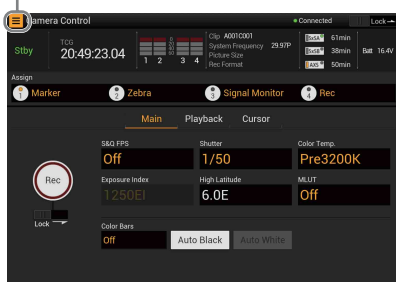
Device	OS	Browser
Smartphone	Android 4.3/4.4	Chrome V31
	iOS 7	Safari 6
Tablet	Android 4.3/4.4	Chrome V31
	iOS 7	Safari 6

Operate the setup menu from the Wi-Fi remote commander (Tablet only)

To display the setup menu on the tablet, select “Setup Menu” on the global menu that is displayed by touching the Menu icon (☰) on the upper left of the Wi-Fi remote display of the tablet.

To return to the camera control screen, select “Camera Control” on the global menu.

Menu icon



You can set/display the following items of the setup menu on the Wi-Fi remote display (tablet) (○: compatible, –: not compatible).

Camera menu	
White	○
Offset White	○
Black	○
Flare	○
Gain	○
Shutter	○
Slow Shutter	○
Auto Exposure	–
S&Q Motion	○
Color Bars	–
Noise Suppression	○
Flicker Reduce	○
Image Inversion	–
Lens Interface	–
Paint menu	
Gamma	○
Black Gamma	○
Knee	○
White Clip	○
Detail	○
Aperture	○
Skin Detail	○
Matrix	○
Multi Matrix	○
Audio menu	
Audio Input	–
Audio Level	–
Audio Output	○
Video menu	
Output On/Off	○
Output Format	○
Output Setting	○
Monitor LUT	○
Output Display	○
VF menu	
VF Setting	–
Peaking	–
Marker	○
Zebra	–
Display On/Off	–
TC menu	
Timecode	○
TC Display	○

Recording menu	
Picture Cache Rec	<input type="radio"/>
MPEG2 Proxy	<input type="radio"/>
Rec Control	<input type="radio"/>
SDI Rec Control	<input type="radio"/>
Media menu	
Update Media	-
Format Media	<input type="radio"/>
Clip Naming	<input type="radio"/>
File menu	
All File	<input type="radio"/>
Scene File	<input type="radio"/>
User Menu Item	-
User Gamma	<input type="radio"/>
Monitor LUT	<input type="radio"/>
Monitor 3D LUT	<input type="radio"/>
Lens File	<input type="radio"/>
Maintenance menu	
APR	-
Test Saw	-
Camera Config	-
System menu	
System Setting	<input type="radio"/>
Base Setting	<input type="radio"/>
Rec Format	<input type="radio"/>
Genlock	-
Assignable Button	-
Switch / Lamp	-
Fan Control	<input type="radio"/>
Battery Alarm	-
DC Voltage Alarm	-
Language	-
Clock Set	-
Hours Meter	-
AXS Recorder	-
Basic Authentication	-
Wi-Fi	-
All Reset	-
Version	<input type="radio"/>

Notes

- When the setup menu is displayed on the Wi-Fi remote commander, you cannot set the setup menu items other than “Basic Authentication” and “Wi-Fi” of the System menu on the camcorder.
- When the setup menu is displayed on the Wi-Fi remote commander, you cannot change the settings on the sub display.

Basic Operation Procedure

Basic recording can be performed with the following procedures.

- 1 Make sure that the necessary devices are attached to the camcorder and power is supplied to them.**
- 2 Load the memory card(s).**
If you load two cards, recording is continued by automatically switching to the second card when the first card becomes full.
- 3 Set the power switch (*page 11*) to the ON position.**
The recording screen is displayed on the viewfinder screen.
- 4 Press the REC button (*page 10*).**
The REC lamp lights and recording begins.

Note

If the camcorder cannot start recording immediately after the pressing the REC button, the REC lamp flashes. The REC lamp lights when recording starts.

- 5 To stop recording, press the REC button again.**
Recording stops and the camcorder enters STBY (recording standby) mode.

Playing a recorded clip

You can play the recorded clip while the camcorder is in standby mode.

- 1 Insert the SxS memory card.**
- 2 Press the VIEW button in the function button (*page 13*) once to display the VIEW-1 screen.**
- 3 Search the desired clip by pressing Prev or F Rev button on the sub display.**
- 4 Press the Play/Pause button on the sub display.**
The playback image appears on the viewfinder.

Playback operation is performed by the buttons on the sub display.

Play/Pause button: Pauses playback. To resume playback, press this button again.

F Fwd button/F Rev button: Plays fast. To return to normal playback, press the Play/Pause button.

Stop button: Stops playback or recording.

Monitoring audio

In normal playback mode, you can monitor the recorded audio signals through the built-in speaker (*page 10*) or connected headphones. When connecting the headphones to the headphones connector (*page 13*), the built-in speaker is turned off.

You can select audio channel to be monitored and adjust the sound volume with “Audio Output” (*page 69*) in the Audio menu.

Cueing Up

To start playback from the top of the clip

Press the Prev button or Next button on the sub display (*page 16*). You can cue to the top of the desired clip by pressing the button repeatedly.

Switching the SxS memory cards

When two memory cards are loaded, press the SLOT SELECT button (*page 13*) to switch memory cards.

Note

You cannot switch SxS memory cards during playback. Continuous playback of cards in slots A and B is not possible.

Switching to the AXS memory card

You can play the picture that is recorded on the AXS memory card in the AXS-R5 by developing simply. To switch to the AXS memory card, press the SELECT button of the AXS-R5. The playback signal is output from the output connector of the camcorder.

Note

When connecting the camcorder and AXS-R5, only EE* is output from the AUX OUT connector of the AXS-R5. Playback picture is not output. Playback picture is output from the camcorder.

* EE is not output while in the Slow & Quick Motion mode.

Clip (recording data)

When you stop recording, video, audio and subsidiary data from the start to end of the recording are recorded as a single clip on an SxS memory card.

Clip name

For each clip recorded with this camcorder, a clip is named by the naming mode that is set in “Clip Naming” (page 78) of the Media menu. The Shot Number and clip number are automatically incremented.

When storing the clip name by the “Cam ID + Reel#” naming mode (page 78), the clip name is created as follows:

- When there is already a clip name that is stored by the “Cam ID + Reel#” naming mode on the inserted AXS memory card, the new file inherits its information.

Examples:

When “B002C003_XXXXXXXX” is on the AXS memory card, the next created clip name is “B002C004_XXXXXXXX.” The Camera ID of “AXS Recorder” in the System menu is changed to “B,” and Reel Number is changed to “002.” The clip name on the information that is displayed during shooting flashes until the camera starts recording.

- When the inserted AXS memory card has no file, “1” is added to the Reel Number of the clip that was recorded last.

Examples:

When you record on empty card “2” after recording up to “D001CXXX_XXXXXXXX” on card “1,” the next created clip name is “D002C001_XXXXXXXX.” The clip name on the information that is displayed during shooting flashes until the camera starts recording.

- When you set the Camera ID and Reel Number of “Clip Naming” in the Media menu, that information is applied.

Examples:

When you change the Camera ID to “F” and Reel Number to “001” of the AXS memory card that is recorded up to “E003CXXX_XXXXXXXX,” the next clip name is “F001CXXX_XXXXXXXX.” When you change the Camera ID only, the Reel Number is changed to “001.”

When storing the clip name by the “Title” naming mode (page 78), the clip name is created from characters that are set in “Title Prefix” (1 to 46 characters) + clip number that is set in “Number Set” (0001 to 9999).

Maximum duration of a clip

The maximum clip length is 6 hours.

If you exceed the maximum clip length, a new clip will be automatically created. You can check the new clip on the thumbnail screen.

Changing Basic Settings

You can make changes to the settings based on the intended usage of the recorded video or recording conditions.

Electronic Shutter

Set the shutter speed (cache time).

When you set “Setting” in “Shutter” (*page 60*) of the Camera menu to “On,” the shutter speed that you specified with “Shutter” is turned on.

Note

When the viewfinder double speed drive function (*page 45*) is activated, the electronic shutter function is locked to on, and the shutter angle is limited up to 180 degrees.

Setting the shutter mode and speed

Select “Mode” and “Select” in “Shutter” (*page 60*) of the Camera menu, then set the speed in “Shutter Value.”

Shooting in slow shutter

The shutter speed is specified in the number of accumulated frames. This function allows you to obtain low-noise clear pictures in low light levels or surreal pictures with afterimages.

Set “Setting” in “Slow Shutter” (*page 61*) of the Camera menu to “On,” and specify the number of accumulated frames with “Number of Frames.”

Sensitivity/Gain/Color Temperature/White Balance

The setting items differ, depending on the shooting mode setting.

These items can be set on the setup menu and sub display.

While in “Cine EI” mode: Selecting the sensitivity (EI value) and color temperature

Set the sensitivity by using “Exposure Index” in “Gain” (*page 59*) of the Camera menu.

For the Cine EI mode, it is assumed that the RAW signal or output picture, for which MLUT is set to

off, is recorded as the main recorded signal.

Sensitivity for the main recorded signal is locked to standard sensitivity, and the picture brightness is changed in accordance with the EI value only for the output picture, for which MLUT is set to on.

You can check the processing result of sensitizing or desensitizing on post-production while shooting by using the picture, for which MLUT is set on.

You can set the following values for the sensitivity (EI value)

PMW-F5: 500EI, 640EI, 800EI, 1000EI, 1250EI, 1600EI, 2000EI, 2500EI, 3200EI, 4000EI, 5000EI, 6400EI, 8000EI

PMW-F55: 320EI, 400EI, 500EI, 640EI, 800EI, 1000EI, 1250EI, 1600EI, 2000EI, 2500EI, 3200EI, 4000EI, 5000EI

Select the color temperature from among “Preset 3200K” (tungsten), “4300K” (tungsten), and “5500K” (daylight), in “White” (*page 57*) of the Camera menu.

While in “Custom” mode: Selecting the sensitivity or gain, and color temperature or white balance

Select the sensitivity (ISO) or gain (dB) in “Gain” (*page 59*) of the Camera menu.

Select the color temperature or white balance in “White” of the Camera menu.

For the color temperature, select it from among “Preset 3200K” (tungsten), “4300K” (tungsten), and “5500K” (daylight), in “White” (*page 57*) of the Camera menu, and you can select any color temperature by using “Color Temp.” in “White” (*page 57*) of the Camera menu.

For the white balance, adjust automatically by using “Auto White Balance,” or adjust manually by using “Color Temp. Balance,” “R Gain,” or “B Gain,” in “White” of the Camera menu.

Audio

To adjust the audio levels

When “CH-1 Audio Select/CH-2 Audio Select” in “Audio Level” (*page 69*) of the Audio menu is set to “Auto,” the audio recording levels are automatically adjusted.

To adjust the audio recording levels manually, set to “Manual.” Adjust the audio recording levels on “CH-1 Audio Level/CH-2 Audio Level” in “Audio Level” of the Audio menu.

Note

The recording level is locked for channels with AES/EBU signals selected for audio input.

Time Data

Setting the Timecode

Specify the timecode to be recorded with “Timecode” in the TC/UB menu (*page 76*).

Useful Functions

Assignable Buttons

The camcorder has four assignable buttons (*pages 10, 12*) to which you can assign various functions for convenience.

You can also assign the function to the RET button on the lens.

Changing functions

Use “Assignable Button” (*page 84*) in the System menu.

The assigned functions can be viewed on the Assignable button status screen (*page 11*).

Assigned functions

Function name	Function
Marker	Turning on/off the Center Marker, Safety Zone, Aspect Marker.
Zebra	Turning on/off the Zebra function.
Peaking	Turning on/off the Peaking function.
Display	Turning on/off the monitor display of status/setting value.
Video Signal Monitor	Switching the waveform indication for the output signal from SDI (Sub).
VF Mode	Switching viewfinder screen between color and mono.
Rec	Starting/stopping recording.
S&Q Motion	Turning on/off the Slow & Quick Motion.
Picture Cache Rec	Turning on/off the Picture Cache Rec function.
Rec Review	Performing the Rec Review function.
High/Low Key	Switching between High Key (monitoring display for high key blown-out highlights), Low Key (monitoring display for low key clipped blacks), and Off (normal display).
VF High Contrast	Enhancing the contrast of the pictures on the viewfinder.

Slow & Quick Motion

When “Main Operation” is set to “RAW” or “YPbPr,” and the system frequency and video format (*page 82*) are set as follows, you can set the recording frame rate and playback frame rate to different values.

Main Operation	Recording format	System frequency	Frame rate ¹⁾
RAW	– (When recording on an AXS only)	23.98P/24P/ 25P/29.97P/ 50P/59.94P	1 to 240P ²⁾
YPbPr	XAVC 4096 × 2160P	23.98P/24P/ 25P/29.97P/ 50P/59.94P	1 to 60P
	XAVC 3840 × 2160P	23.98P/25P/ 29.97P/50P/ 59.94P	1 to 60P
	XAVC 2048 × 1080P	23.98P/24P/ 29.97P/ 59.94P	1 to 180P
		25P/50P	1 to 150P
	XAVC 1920 × 1080P	23.98P/ 29.97P/ 59.94P	1 to 180P
		25P/50P	1 to 150P

1) Setting value is 1 to 60 when “High Frame Rate Mode” is set to “Off.”

2) When recording on AXS and SxS simultaneously, the setting value is for SxS.

Notes

- Slow & Quick Motion mode cannot be used while recording, playing, or displaying thumbnail.
- Slow & Quick Motion mode cannot be used while the Slow Shutter mode.
- Audio cannot be recorded while in the Slow & Quick Motion mode.
- When “High Frame Rate Mode” is set to “Full Scan” and the frame rate is set to more than 61P, moiré may occur in high resolution areas of the picture. In this case, you can reduce moiré by attaching an optional CBK-55F2K Optical 2K Filter.
- When “High Frame Rate Mode” is set to other than “Off,” the camcorder cannot switch to the second card automatically even if a card becomes full.
- Slow & Quick Motion function is not possible in Picture Cache mode. The camcorder exits Picture Cache mode whenever you select Slow & Quick Motion mode. The camcorder exits Slow & Quick Motion mode automatically whenever you select Picture Cache mode.

Starting to Record from Pre-stored Video (Picture Cache Function)

You can begin recording a specified number of seconds in advance by storing up to 15 seconds of video and audio data in the internal memory of the camcorder when you start recording. When you start recording after setting “Setting” in “Picture Cache Rec” (*page 77*) of the Recording menu to “On,” the camcorder records in advance of the specified time (Cache Rec Time).

The Picture Cache function is available for either of the following settings.

- The system frequency is set to 29.97/25/24/23.98, and the recording format is set to XAVC 4096 × 2160P/XAVC 3840 × 2160P/XAVC 2048 × 1080P/XAVC 1920 × 1080P.
- The recording format is set to MPEG 1920 × 1080P/MPEG 1920 × 1080i/MPEG 1280 × 720P.

The selected Picture Cache mode is retained until the setting is changed.

Notes

- If the system frequency is set to 29.97, 25, 24, or 23.98, the “Cache Rec Time” setting is limited depending on the recording format.
 - For XAVC 4096 × 2160P, XAVC 3840 × 2160P: Locked to “0-2sec.”
 - For XAVC 2048 × 1080P, XAVC 1920 × 1080P: “8-10sec” and “13-15sec” cannot be selected.
- Picture cache recording is not possible in Slow & Quick Motion mode. The camcorder exits Slow & Quick Motion mode whenever you select Picture Cache mode. The camcorder exits Picture Cache mode automatically whenever you select Slow & Quick Motion mode.
- The data stored in picture cache memory is cleared when you change system settings, such as the recording format. Picture data from before the change is not recorded even if you start recording immediately after the change. The camcorder exits Picture Cache mode automatically.
- The simultaneously recording function is not available in Picture Cache mode.
- It is not possible to change the picture cache setting during recording.
- It is not possible to change the setting of the viewfinder double speed drive function during recording.

Simultaneously Recording

You can record the two sizes of pictures simultaneously on an SxS memory card in one slot. You can also record HD signal on the SxS memory card in the camcorder while recording picture and audio of RAW format on the AXS-R5.

Note

While simultaneously recording, the camcorder cannot switch to the second card automatically even if a card becomes full.

Recording simultaneously on one memory card – MPEG2 Proxy function (PMW-F55 only)

Set “Setting” in “MPEG2 Proxy” (*page 77*) of the Recording menu to “On” while the recording format is set to XAVC 4096 × 2160/XAVC 3840 × 2160 29.97P/25P/23.98P, or SStP SR-SQ 444/SSiP SR-SQ 422 29.97P.

The picture of XAVC 4096 × 2160/XAVC 3840 × 2160 or SStP SR-SQ 444/SSiP SR-SQ 422, and the picture signal of MPEG2 1920 × 1080 are recorded simultaneously on one SxS memory card.

The clip of XAVC 4096 × 2160/XAVC 3840 × 2160 or SStP SR-SQ 444/SSiP SR-SQ 422 is recorded under the XDROOT/Clip directory on the SxS memory card, but the clip of MPEG2 1920 × 1080 is recorded under the XDROOT/Sub directory on the SxS memory card, and the suffix “S02” is added to the end of the clip name.

Notes

- This function cannot be used while in the Slow & Quick Motion or Picture Cache Rec mode.
- The MLUT setting is locked to “MLUT On” for the MPEG2 Proxy video that is recorded simultaneously when in the Cine EI mode.

Recording on the AXS and SxS memory simultaneously

Set “Setting” in “Rec Control” (*page 77*) of the Recording menu to “SxS & AXS,” while “Main Operation” in “Base Setting” (*page 82*) of the System menu is set to “RAW.”

You can simultaneously record pictures of RAW format and pictures with formats set by “Rec Format.”

Rec Review

You can review the last recorded clip on the screen (Rec Review) by assigning the Rec Review function to an assignable button (*page 42*).

When you stop recording and press the assigned button, the last 2 seconds of the clip are played. When you press and hold the button for more than 1 second, the camcorder starts to rewind from two seconds before of the last frame of the clip at 4x speed. When you release the button, the camcorder starts playback at that point.

Rec Review stops at the end of the clip, then resumes STBY (recording standby) status.

Note

The Setup menus cannot be operated during Rec Review.

Focus Magnifier

By pressing the FOCUS MAG button of the viewfinder (DVF-L350, DVF-EL100, DVF-L700) that is attached to the camcorder, you can expand the center part of the viewfinder, and it is easy to adjust the focus. After adjusting the focus, press the button again to returns to the normal (recording) screen.

It does not affect the recorded image or output signal in the focus magnifier mode.

False Color Display

You can perform the false color display on the viewfinder by pressing the SPARE button of the viewfinder (DVF-EL100, DVF-L700) that is attached to the camcorder.

For details about the false color display, refer to the operating instructions of the DVF-EL100 or DVF-L700.

Note

The false color display is available only when the “Gamma” setting for the video signal that is output to the viewfinder is set to “S-Log2.”

Viewfinder Double Speed Drive Function

If the system frequency is 23.98P, 24P, 25P, or 29.97P, the image may be blurred and hard to see because of low frame frequency when you shoot while swaying the camcorder to the right and the left.

In this case, you can decrease image blur and make it easier to see by activating the viewfinder double speed drive function.

To activate, set “Double Speed Drive” in “VF Setting” (*page 73*) of the VF menu to “On.”

Notes

- This function is not effective on the following settings.
 - System frequency is 59.94/50.
 - Recording format is SStP SR-SQ 444/SStP SR-Lite 422/SStP SR-SQ 422.
 - “Setting” in “Slow Shutter” of the Camera menu is set to “On.”
 - “Setting” in “S&Q Motion” of the Camera menu is set to “On,” and the “Frame Rate” setting is 1 to 60P.
- When this function is effective and “Setting” in “S&Q Motion” of the Camera menu is set to “Off,” the electronic shutter function is locked to on, and the shutter angle is limited to 180 degrees.

Thumbnail Screens

When you press the Thumbnail button of the sub display (*page 16*), clips recorded on the SxS memory card are displayed as thumbnails on the screen.

You can start playback from the clip selected on the thumbnail screen. The playback picture can be seen on the viewfinder screen and external monitors.

Press the Thumbnail button of the sub display to exit the thumbnail screen and return to the recording screen.

Configuration of the Screen

Information for the clip selected with the cursor are displayed at the bottom of the screen.

The icon of the current SxS memory card is highlighted, shading the nonselected one. (If the card is write-protected, a lock icon is displayed to the left.)



1. Thumbnail

The thumbnail image for each clip is an index frame from the clip. When recording, the first frame of a clip is automatically set as the index frame.

Below each thumbnail, the clip/frame information is displayed. You can change the displayed item on “Thumbnail Caption” in “Customize View” (*page 47*) of the thumbnail menu.

2. Clip name/title

The clip name or title of the selected clip is displayed.

3. File format

The file format of the selected clip is displayed.

4. Recording video format

5. Special recording information

If the selected clip was recorded in a special recording mode, the mode is displayed.

Clips recorded in Slow & Quick Motion display the frame rate to the right.

6. Duration of the clip

7. Creation date and time

Playing Clips

Playing the Selected and Subsequent Clips in Sequence

- 1 Turn the MENU dial (*page 10*) to move the cursor to the thumbnail image of the clip with which you wish to start playback.
- 2 Press the MENU dial.
Playback starts from the beginning of the selected clip.

Notes

- To start playback by pressing the MENU dial, set “Set Key on Thumbnail” in “Switch/Lamp” (*page 84*) of the System menu to “Play.”
- The playback picture may be momentarily distorted or frozen between clips. You cannot operate the camcorder during this condition.
- When you select a clip on the thumbnail screen and start playback, the playback picture at the beginning of the clip may be distorted. To start playback without distortion, pause playback once after starting it, press the Prev button on the sub display (VIEW-1) to return to the top of the clip, then restart playback.

Clip Operations

On the thumbnail screen, you can operate the clips or confirm the subsidiary data for clips using the thumbnail menu. The thumbnail menu appears when you press the OPTION button (*page 12*) on the thumbnail menu.

Operations of the Thumbnail Menu

Turn the MENU dial (*page 10*) to select a menu item, then press the MENU dial. Pressing the CANCEL/BACK button (*page 10*) restores to the previous condition. Pressing the OPTION button while the thumbnail menu is displayed turns the thumbnail menu off.

Notes

- When the SxS memory card is write-protected, some operations are unavailable.
- There may be items that cannot be selected, depending on the status when the menu is displayed.

Clip operation menu

Display Clip Properties

Displays the detailed information of a clip screen (*page 48*).

Copy MPEG2 Proxy (PMW-F55 only)

Copy All Clips: Copies all the MPEG2 Proxy data to the destination media as a clip (*page 48*).

Delete Clip

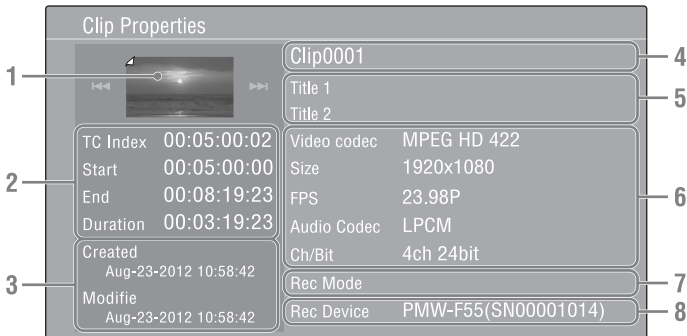
Select Clip: Deletes the selected clip (*page 49*).

Customize View

Thumbnail Caption: Changes the items that are displayed under the thumbnail screen. (*page 49*)

Displaying the Detailed Information of a Clip

Select "Display Clip Properties" from the thumbnail menu.



1. Image of the current clip

2. Timecode

TC Index: Timecode of the displayed frame
Start: Timecode at the recording starting point
End: Timecode at the recording ending point
Duration: Duration of the clip

3. Date of recording/modifying

4. Clip name

5. Clip title 1/2

6. Recording format

Video Codec: Video codec
Size: Picture size
FPS: Frame rate
Audio Codec: Audio codec
Ch/Bit: Number of the recorded audio channel/
audio recording bit

7. Special recording information

8. Recording device name

Copying MPEG2 Proxy Data (PMW-F55 only)

You can copy all the MPEG2 Proxy data recorded on the clip to another SxS memory card as a clip. Each clip is copied to the destination SxS memory card and given the same name as the MPEG2 Proxy data with its suffix "S02" deleted.

Notes

- If there is another clip having the same name on the destination SxS memory card, the clip is copied under a name adding a single-digit number in parentheses to the end of the original clip name. The parenthetical number is the minimum value that does not exist in the destination memory card.
Examples:
ABCD0002(1) if ABCD0002 exists
ABCD0002(2) if ABCD0002(1) exists
ABCD0005(4) if ABCD0005(3) exists
- You cannot copy a file 1000 times or more if clips with the same clip name followed by parenthetical numbers (1) to (999) already exist on the card.
- A warning message is displayed if there is not sufficient space on the destination SxS memory card. Replace the SxS memory card with one with sufficient space.

Deleting Clips

You can delete clips from the SxS memory card. Select “Select Clip” from “Delete Clip” on the thumbnail menu.

You can select multiple clips to be deleted. Press the OPTION button (*page 12*) after selecting the clip to be deleted.

Changing Information on the Thumbnail Screen

You can change information of the clip/frame that is displayed under thumbnail.

Select the displayed item from “Thumbnail Caption” in “Customize View” on the thumbnail menu.

Date Time: Creation date or modified time

Time Code: Timecode

Duration: Duration

Sequential Number: Thumbnail number

Sub Display Operation

You can check the status of the camcorder, set basic settings for the camcorder, and operate playback on the sub display.

- CAMERA screen: Basic settings of the camcorder
- FILE screen: Loading the file
- AU/TC screen: Settings for audio or timecode
- VIEW screen: Playback and operation on the thumbnail screen

For details about the screen of the sub display, see “Sub Display Screen” (page 16) in “On-Screen Indications.”

Controls

Function buttons (page 13)

Switches the screen of the sub display.

If there are multiple screens for a function, press the function button repeatedly.

- CAMERA button
- FILE button
- AU/TC (audio/timecode) button
- VIEW button

Item button (page 13)

Selects the item of the sub display.

SEL/SET dial (MENU dial) (page 10)

When you turn it, the cursor moves in the corresponding direction, permitting you to select menu items or setting values.

Press the MENU dial to select the item.

CANCEL/BACK button (page 10)

To return to the previous layer of the menu. An uncompleted change is canceled.

Note

When the setup menu is being displayed by pressing the MENU button (page 12), or the status display is being displayed by pressing the STATUS button (page 11), you cannot operate other than the VIEW screen.

Setting the basic items

- 1 Press the function button to select the screen of the function to be set.
- 2 Press the item button to select the item to be set.
Setting value of the item that can be set is orange.
- 3 Turn the MENU dial to move the cursor to the item to be set.

S&Q FPS 24FPS	Shutter 1/180.0	Color Temp 3200K
On >	320min	4096x2160
Off	00:00	23.98P
Reel: A001	Shot: C001	XAVC
AXS 60 min	SxSA 60 min	SxSB 60 min
Sensitivity ISO 800	Gamma S-Log2	

- 4 Press the MENU dial to enter the selected item.

Using the sub display as the operation button

Press the VIEW button (page 13) to display the VIEW-1/VIEW-2 screen (page 17), then operate the displayed function with the item button. The cursor operation on the sub display is used on the setup menu (page 54) and the clip operation (page 47).

Sub Display Setting Items

The item names and its settings are listed below.

CAMERA Screen

CAMERA-1

Item name	Setting
S&Q FPS	On: Turns the Slow & Quick motion mode on, and sets the frame rate. (See <i>page 62</i> for the selectable item.) Off: Turns the Slow & Quick motion mode off.
Shutter	Sets the electronic shutter speed and shutter angle. Select from following 11 types of items. Off: Turns the electronic shutter function off. Value of Step Shutter: Selects from 8 types of presets that are registered as Step Shutter. (You can change the preset value after selecting.) Continuous: Selects the available speed/angle. (See <i>page 60</i> for the selectable item.) SLS: Selects the slow shutter function. (Set the number of frames to accumulate after selecting.)
Color Temp	Sets the color temperature of the white balance. Preset 3200K/4300K/5500K: Sets the white balance to the preset value of color temperature 3200K/4300K/5500K. Memory: Sets the color temperature of the white balance that is stored on the white memory. Note “Memory” cannot be selected when “Shooting Mode” (<i>page 82</i>) is set to “Cine EI.”
Sensitivity/Gain/ Exposure Index	Sets the sensitivity/gain. The item name (Sensitivity/Gain) and setting value differ, depending on the “Mode” setting in “Gain” (<i>page 59</i>). (See <i>page 59</i> for the selectable item.) The item name becomes “Exposure Index” and sets the EI value when “Shooting Mode” (<i>page 82</i>) is set to “Cine EI.” (See <i>page 59</i> for the selectable item.)
Gamma/High Latitude	Sets the gamma category and gamma table. STD: Selects the standard gamma. STD1 DVW / STD2 $\times 4.5$ / STD3 $\times 3.5$ / STD4 240M / STD5 R709 / STD6 $\times 5.0$ HG: Selects the hyper gamma. HG1 3250G36 / HG2 4600G30 / HG3 3259G40 / HG4 4609G33 / HG7 8009G40 / HG8 8009G33 S-Log2: Selects S-Log2. S-Log3: Selects S-Log3. Note “High Latitude” is displayed when “Shooting Mode” (<i>page 82</i>) is set to “Cine EI.”
MLUT	Selects and sets LUT/Look Profile. (See <i>page 71</i> for the selectable item.)

CAMERA-2

Item name	Setting
Color Bars	Turns the color bars on/off.
Auto White	Performs the auto white balance function. (This setting is available only when “White Switch” is set to “Memory.”)
Auto Black	Performs the auto black balance function.
Sub&HDMI	Selects whether to apply monitor LUT for the output image from SDI (Sub) and HDMI when “Shooting Mode” (<i>page 82</i>) is set to “Cine EI.”
Viewfinder	Selects whether to apply monitor LUT for the viewfinder image when “Shooting Mode” (<i>page 82</i>) is set to “Cine EI.”
SDI (Sub) Disp.	Select whether to output the character information and marker to the SDI (Sub) output.

FILE Screen

FILE-1

Item name	Setting
All File Load 1 to 6	Loads the All file (1 to 6) from the SD card that is inserted into the SD card slot.

FILE-2

Item name	Setting
Scene Recall 1 to 5/ Standard	Loads the Scene file (1 to 5, or Standard) from the internal memory.

FILE-3

Item name	Setting
Lens Recall 1 to 6	Loads the Lens file (1 to 6) from the internal memory.

AU/TC (audio/timecode) Screen

AU/TC-1

Item name	Setting
MIC CH1 Ref	Select the reference input level when the AUDIO IN CH1 switch is set to MIC from –60 dB/–50 dB/–40 dB.
CH1 Input	Auto: Adjusts the recording level automatically. Manual: Adjust the recording level manually from –99 to +99.
	Note If the AES/EBU signal is selected for the audio input signal, the recording level is locked.
CH1 Select	Displays the input source for AUDIO IN CH1.
MIC CH2 Ref	Select the reference input level when the AUDIO IN CH2 switch is set to MIC from –60 dB/–50 dB/–40 dB.
CH2 Input	Auto: Adjusts the recording level automatically. Manual: Adjust the recording level manually from –99 to +99.
	Note If the AES/EBU signal is selected for the audio input signal, the recording level is locked.

Item name	Setting
CH2 Select	Displays the input source for AUDIO IN CH2.

AU/TC-2

Item name	Setting
Monitor CH	Selects the audio channel that is output to the headphones and speaker. (See page 69 for the selectable item.)
Monitor Level	Adjusts the monitor volume from 0 to 99.

AU/TC-3

Item name	Setting
Display	Switches the indication for the time data (Timecode/Duration).
Reset	Resets the timecode and counter to 00:00:00:00.
Set	Sets the timecode to the desired value.
Mode	Sets the timecode mode. Preset (Ext): Starts the timecode from the specified value. Int. Regen (regeneration): Starts the timecode from that of the previous clip.
Run	Sets the condition for the timecode. Rec Run: Advances the timecode during recording only. Free Run: Keeps advancing regardless of the state of recording.
TC Source	Displays the external lock status for the timecode. Internal: The timecode is not locked when "S&Q Motion" is set to "Off" and timecode is set to "Preset (Ext-Lk)" and "Free Run." External: The timecode is locked when "S&Q Motion" is set to "Off" and timecode is set to "Preset (Ext-Lk)" and "Free Run." No indication: Other than above.

Setup Menu Operations

The Setup menu allowing you to perform various settings that are needed for recording and playing, appears on the viewfinder screen by pressing the MENU button. (You can display the Setup menu on the external video monitor or sub display.)

Menu controls

MENU button (page 12)

To turn the menu mode to use the setup menus on/off.

SEL/SET dial (MENU dial) (page 10)

When you turn the dial, the cursor moves up or down, permitting you to select menu items or setting values.

Press the MENU dial to select the highlighted item.

CANCEL/BACK button (page 10)

To return to the previous menu. An uncompleted change is canceled.

Up/Down/Left/Right buttons, SET button (page 17)

When you press the up/down/left/right buttons on the sub display (VIEW-2), the cursor moves in the corresponding direction, permitting you to select menu items or setting values.

Press the SET button to enter the highlighted item.

Note

In the focus magnifier mode (page 44), the setup menu cannot be used.

Setting the Setup menus

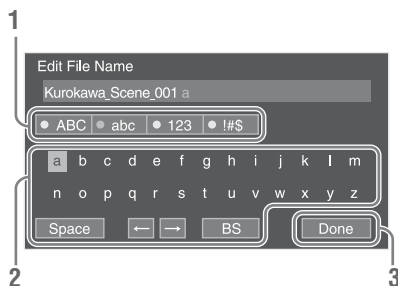
Turn the MENU dial to set the cursor to the item of the menu you wish to set, then press the MENU dial to select that item.

- The menu item selection area can show 9 lines at maximum. When all the selectable items cannot be displayed at one time, you can scroll the display up or down by moving the cursor.
- For items having a wide range of available values (example: -99 to +99), the available value area is not displayed. The current setting is highlighted instead, indicating that the setting is ready for change.

- When you select “Execute” for an execution item, the corresponding function is executed.
- When you select an item that you must confirm before execution, the menu display temporarily disappears, and a confirmation message is displayed. Follow the instructions of the message, and specify whether to execute or cancel.

Entering a character string

When you select an item for which a character string, such as a filename, is to be specified, the character input screen appears.



1 Select character type by turning the MENU dial, then press the MENU dial to enter.

ABC: Uppercase alphabetical
abc: Lowercase alphabetical
123: Numerical
!#\$: Special

2 Select a character from the selected character type.

The cursor moves to the next column.
Space: Inputs space on the position of the cursor.
←/→: Moves the cursor.
BS: Deletes a character on the left of the cursor.

3 Select “Done” after inputting characters.

The input characters are entered and the character input screen disappears.

User Menu

The User Menu consists of the items that are copied from the Camera, Paint, Audio, Video, VF, TC/UB, Recording, Media, File, Maintenance, and System menu. By registering the highly-used items in advance, you can easily recall the desired item.

You can register up to 20 items for the User Menu.

The following 10 items are registered for the default setting.

- System Setting (System menu)
- Base Setting (System menu)
- Rec Format (System menu)
- Rec Control (Recording menu)
- Output Format (Video menu)
- Monitor LUT (Video menu)
- Clip Naming (Media menu)
- VF Setting (VF menu)
- Assignable Button (System menu)
- Format Media (Media menu)

The User Menu consists of the following hierarchies.

First hierarchy	Second hierarchy	Third hierarchy	List of edit functions	Contents
User Menu	Registered item			Sets the item.
	Edit User Menu	Registered item	Delete	Deletes the item.
			Move	Moves the item.
			Edit Subitem	Edits the subitem.
		Add Item		Adds the item.
		Customize Reset		Returns the registration to the default.

The customized User Menu items can be stored on an SD Card as the User Menu Item file. You can load the User Menu items from the SD Card.

Note

You cannot register double items/subitems and change the name of items/subitems.

Editing the registered item

- 1 Display the User Menu of the setup menu.**

The registered items are displayed.
- 2 Select “Edit User Menu” from the User Menu.**
- 3 Select the item for editing.**

The list for edit functions is displayed.
- 4 Select the edit item.**

Delete: Deletes the selected item.
Move: Moves the selected item. Move the ► mark to the desired position.
Edit Subitem: Edits the subitem of the selected item. Select the subitem and decide registering/unregistering of the subitem by

performing the decision operation (selection/deselection of the checkbox). Select “OK” after setting.

Adding items

- 1 Select the User Menu > “Edit User Menu” > “Add Item.”**

Items that can be registered to the User Menu are displayed.
- 2 Select the item that you want to register.**

The subitem editing display of the selected item is displayed.
- 3 Select registering/unregistering of the subitem.**

Select the subitem and decide registering/unregistering of the subitem by performing the decision operation (selection/deselection of the checkbox).
- 4 Select “OK.”**

The added item is displayed on the User Menu.

Return the User Menu registration to the default setting

- 1** Select the User Menu > “Edit User Menu” > “Customize Reset.”
- 2** Select “Reset” > “Execute.”

Setup Menu List

The functions and available settings of menus are listed below.

The default settings set at the factory are shown in bold face (example: **Preset 3200K**).

Camera Menu

Camera		
Menu items	Sub items and setting values	Contents
White Setting for white balance	Auto White Balance Execute / Cancel	Performs the auto white balance function. Execute: Executes this function. (This setting is available only when “White Switch” is set to “Memory.”)
	White Switch Preset 3200K / Preset 4300K / Preset 5500K / Memory	Sets the operation mode for “White.” Preset 3200K/4300K/5500K: Set the white balance to the preset value of the color temperature 3200K/4300K/5500K. Memory: Adjusts the white balance manually. Perform the auto white balance function (one push). (“Memory” is available only when “Shooting Mode” in “Base Setting” of the System menu is set to “Custom.”)
	Color Temp. 1500K to 50000K (3200K)	Displays and sets the color temperature of white balance that is stored in the white memory. (This setting is available only when “White Switch” is set to “Memory.”)
	Color Temp. Balance -99 to +99 (±0)	Sets the color temperature more precisely, if the result is not as you desire, even though you set “Color Temp.” (This setting is available only when “White Switch” is set to “Memory.”)
	R Gain -99 to +99 (±0)	Sets the R gain value of white balance that is stored in the memory. (This setting is available only when “White Switch” is set to “Memory.”)
	B Gain -99 to +99 (±0)	Sets the B gain value of white balance that is stored in the memory. (This setting is available only when “White Switch” is set to “Memory.”)
	Shockless White Off / 1 / 2 / 3	Sets the speed of change in white balance when the white balance mode is switched. Off: Changes instantly. 1 to 3: Select a larger number to change the white balance more slowly through interpolation.
	Filter White Memory On / Off	Turns on/off “Filter White Memory” that sets the memory area of the white balance for each position number of the ND filter.

Camera		
Menu items	Sub items and setting values	Contents
Offset White Setting for the offset white balance	Setting On / Off	Turns on/off "Offset White" that is for the auto white balance function (one push). (This setting is available only when "White Switch" is set to "Memory.")
	Offset <Memory> -99 to +99 (± 0)	Adjusts the volume of the offset white for the auto white balance function (one push). (This setting is available only when "White Switch" is set to "Memory.")
Black Setting for the black	Auto Black Balance Execute / Cancel	Performs the auto black balance function. Execute: Executes this function.
	Master Black -99 to +99 (± 0)	Sets the master black level. (This setting is available only when "Shooting Mode" in "Base Setting" of the System menu is set to "Custom.")
	R Black -99 to +99 (± 0)	Sets the R black level. (This setting is available only when "Shooting Mode" in "Base Setting" of the System menu is set to "Custom.")
	B Black -99 to +99 (± 0)	Sets the B black level. (This setting is available only when "Shooting Mode" in "Base Setting" of the System menu is set to "Custom.")
Flare Setting the flare correction	Setting On / Off	Turns the flare correction function on/off. (This setting is available only when "Shooting Mode" in "Base Setting" of the System menu is set to "Custom," and this setting is locked to "Off" when "Shooting Mode" is set to "Cine EL.")
	Master Flare -99 to +99 (± 0)	Sets the user adjustment value for master flare of the flare correction that is caused by the camcorder.
	R Flare -99 to +99 (± 0)	Sets the user adjustment value for R flare of the flare correction that is caused by the camcorder.
	G Flare -99 to +99 (± 0)	Sets the user adjustment value for G flare of the flare correction that is caused by the camcorder.
	B Flare -99 to +99 (± 0)	Sets the user adjustment value for B flare of the flare correction that is caused by the camcorder.

Camera		
Menu items	Sub items and setting values	Contents
Gain Setting for the Gain	Mode ISO / dB	Selects the gain setting mode. (This setting is available only when “Shooting Mode” in “Base Setting” of the System menu is set to “Custom.”)
	Gain • PMW-F5 When “Mode” in “Gain” is set to “ISO,” and “Gamma Category” is set to “STD” or “HG (HG1/HG2/HG3/HG4)” ISO 800 to ISO 6400 When “Mode” in “Gain” is set to “ISO,” and “Gamma Category” is set to “HG (HG7/HG8)” ISO 1600 to ISO 12500 When “Mode” in “Gain” is set to “ISO,” and “Gamma Category” is set to “S-Log2” or “S-Log3” ISO 2000 to ISO 16000 • PMW-F55 When “Mode” in “Gain” is set to “ISO,” and “Gamma Category” is set to “STD” or “HG (HG1/HG2/HG3/HG4)” ISO 500 to ISO 4000 When “Mode” in “Gain” is set to “ISO,” and “Gamma Category” is set to “HG (HG7/HG8)” ISO 1000 to ISO 8000 When “Mode” in “Gain” is set to “ISO,” and “Gamma Category” is set to “S-Log2” or “S-Log3” ISO 1250 to ISO 10000 When “Mode” in “Gain” is set to “dB” –3dB / 0dB / 3dB / 6dB / 9dB / 12dB / 18dB	Sets the gain. (This setting is available only when “Shooting Mode” in “Base Setting” of the System menu is set to “Custom.”)
	Exposure Index • PMW-F5 500EI to 8000EI (2000EI) • PMW-F55 320EI to 5000EI (1250EI)	Sets the EI value. (This setting is available only when “Shooting Mode” in “Base Setting” of the System menu is set to “Cine EI.”) Note The Highlight Latitude values for each EI value are follows: • PMW-F5 500EI: 4.0E / 640EI: 4.3E / 800EI: 4.7E / 1000EI: 5.0E / 1250EI: 5.3E / 1600EI: 5.7E / 2000EI: 6.0E / 2500EI: 6.3E / 3200EI: 6.7E / 4000EI: 7.0E / 5000EI: 7.3E / 6400EI: 7.7E / 8000EI: 8.0E • PMW-F55 320EI: 4.0E / 400EI: 4.3E / 500EI: 4.7E / 640EI: 5.0E / 800EI: 5.3E / 1000EI: 5.7E / 1250EI: 6.0E / 1600EI: 6.3E / 2000EI: 6.7E / 2500EI: 7.0E / 3200EI: 7.3E / 4000EI: 7.7E / 5000EI: 8.0E
	Highlight Latitude 4.0E to 8.0E (6.0E)	Displays the Highlight Latitude value according to the “Exposure Index” setting.

Camera

Menu items	Sub items and setting values	Contents
	Remote Gain L -3dB / 0dB / 3dB / 6dB / 9dB / 12dB / 18dB	Sets the gain switch L level for RM (such as RM-B150, etc.). (This setting is available only when “Shooting Mode” in “Base Setting” of the System menu is set to “Custom.”)
	Remote Gain M -3dB / 0dB / 3dB / 6dB / 9dB / 12dB / 18dB	Sets the gain switch M level for RM (such as RM-B150, etc.). (This setting is available only when “Shooting Mode” in “Base Setting” of the System menu is set to “Custom.”)
	Remote Gain H -3dB / 0dB / 3dB / 6dB / 9dB / 12dB / 18dB	Sets the gain switch H level for RM (such as RM-B150, etc.). (This setting is available only when “Shooting Mode” in “Base Setting” of the System menu is set to “Custom.”)
	Shockless Gain On / Off	Turns the shockless gain function on/off.

Shutter Specifying operating conditions of the electronic shutter	Setting On / Off	Turns the electronic shutter function on/off.
	Mode Speed / Angle	Selects modes of the electronic shutter.
	Select Step / Continuous	Selects the setting method for the electronic shutter speed.
	Shutter Value	Sets the shutter speed/angle. Speed mode: Shutter speed Angle mode: Shutter angle. Setting value differs depending on the format setting and the “Select” setting in “Shutter.”

When “Mode” is set to “Speed”

Format setting	Step	Continuous
59.94P	1/100 / 1/120 / 1/125 / 1/250 / 1/500 /	1/60 to 1/8000
59.94i	1/1000 / 1/2000 / 1/4000	1/60 to 1/7000
50P	1/60 / 1/100 / 1/120 / 1/125 / 1/250 /	1/50 to 1/7000
50i	1/500 / 1/1000 / 1/2000	
29.97P	1/50 / 1/60 / 1/120 / 1/125 / 1/250 / 1/500 / 1/1000 / 1/2000	1/30 to 1/8000
25P	1/30 / 1/50 / 1/60 / 1/100 / 1/250 / 1/500 / 1/1000 / 1/2000	1/25.02 to 1/7000 When “S&Q Motion” is set to “On” 1/30 to 1/7000
24P	1/48 / 1/50 / 1/60 / 1/120 / 1/250 / 1/500 / 1/1000 / 1/2000	1/24.02 to 1/6000 When “S&Q Motion” is set to “On” 1/30.02 to 1/6000
23.98P	1/48 / 1/50 / 1/60 / 1/120 / 1/250 / 1/500 / 1/1000 / 1/2000	1/23.99 to 1/6000 When “S&Q Motion” is set to “On” 1/30.03 to 1/6000

When “Mode” is set to “Angle”

Format setting	Step	Continuous
59.94P	216.0 / 180.0 / 120.0 / 90.0 / 45.0 / 22.5 / 11.2 / 5.6	359.7 to 4.2
59.94i		
50P	300.0 / 180.0 / 150.0 / 90.0 / 45.0 / 22.5 / 11.2 / 5.6	
50i		
29.97P	216.0 / 180.0 / 120.0 / 90.0 / 45.0 / 22.5 / 11.2 / 5.6	
25P	300.0 / 180.0 / 150.0 / 90.0 / 45.0 / 22.5 / 11.2 / 5.6	
24P	180.0 / 172.8 / 144.0 / 90.0 / 45.0 / 22.5 / 11.2 / 5.6	
23.98P		

Camera		
Menu items	Sub items and setting values	Contents
	Step Select Execute / Cancel	Changes the preset value for “Shutter Value” (8 types) of the “Step” setting in “Select.” Add: Adds a step shutter value. When 8 steps are already registered, delete a step shutter value by using “Delete” to make the space for adding the new step shutter value. Delete: Deletes a registered step shutter value. Step 1~8: Displays a registered step shutter value.
Slow Shutter Setting the slow shutter	Setting On / Off	Turns the slow shutter function on/off. (You cannot change the on/off setting while recording.)
	Number of Frames 2 / 3 / 4 / 5 / 6 / 7 / 8	Sets the number of frames to accumulate for the slow shutter.
Auto Exposure Setting the auto adjusting for the video level (This setting is available only for a lens that is compatible with the iris control function.)	Level +2.0 to -2.0 (±0)	Sets the desired control level (bright/dark) for auto iris.
	Speed -99 to +99 (±0)	Sets the control speed for auto iris.
	Clip High light On / Off	Turns on/off the function that makes dull the response for high luminance by ignoring the detection of high luminance area.
	Detect Window 1 to 6 (1)	Selects the type of the detect window.
	Detect Window Indication On / Off	Turns on/off the function that displays the frame of the detect window as a marker.

Camera

Menu items	Sub items and setting values	Contents
S&Q Motion Setting the Slow & Quick Motion function	Setting On / Off	Turns the Slow & Quick Motion function on/off. This setting is not available when “Rec Format” of the System menu is set to the following settings. <ul style="list-style-type: none"> • MPEG 1920 × 1080/1280 × 720 • SStP SR-SQ 444/422 • SStP SR-Lite 422 (This setting is not available when “Main Operation” in “Base Setting” of the System menu is set to “RGB.”)
	High Frame Rate Mode Off / Full Scan / Center Scan	Sets the high speed shooting method more than 60P. Off : High speed shooting is not performed. Full Scan : Performs high speed shooting with the picture angle of Super 35 mm size. Center Scan : Performs high speed shooting with half size of picture angle of Super 35 mm size on the center area of a picture.
<div style="background-color: #333; color: white; padding: 2px;">Note</div> <p>When “Imager Scan Mode” in “Base Setting” of the System menu is set to “2K Full,” this setting is locked to “Full Scan.” When “Imager Scan Mode” in “Base Setting” of the System menu is set to “2K Center,” this setting is locked to “Center Scan.”</p>		
Frame Rate 1 to 240 (24)		Sets the frame rate for the Slow & Quick Motion recording.
		<div style="background-color: #333; color: white; padding: 2px;">Note</div> <p>Available settings are follows. When “High Frame Rate Mode” is set to “Off” 1 to 60 (24) When “High Frame Rate Mode” is set to “Full Scan” or “Center Scan”</p> <ul style="list-style-type: none"> • When “Main Operation” in “Base Setting” of the System menu is set to “RAW,” and “Rec Control” of the Recording menu is set to “AXS” —72, 75, 80, 90, 96, 100, 110, 120, 125, 135, 144, 150, 160, 168, 175, 180, 240 • When “Main Operation” in “Base Setting” of the System menu is set to “RAW,” and “Rec Control” of the Recording menu is set to “SxS&AXS” —72, 75, 80, 90, 96, 100, 110, 120, 125, 135, 144, 150, 160, 168, 175, 180 (system frequency: 23.98/24/29.97/59.94) —72, 75, 80, 90, 96, 100, 110, 120, 125, 135, 144, 150 (system frequency: 25/50) • When “Main Operation” in “Base Setting” of the System menu is set to “YPbPr” —72, 75, 80, 90, 96, 100, 110, 120, 125, 135, 144, 150, 160, 168, 175, 180 (system frequency: 23.98/24/29.97/59.94) —72, 75, 80, 90, 96, 100, 110, 120, 125, 135, 144, 150 (system frequency: 25/50) <p>(This setting is not available when “Main Operation” in “Base Setting” of the System menu is set to “RGB.”)</p>

Camera		
Menu items	Sub items and setting values	Contents
Color Bars Setting the Color Bars	Setting On / Off	Turns the color bars on/off.
	Type ARIB / SMPTE / 75% / 100%	Selects the type of color bar.
Noise Suppression Setting the noise suppression	Setting On / Off	Turns the noise suppression function on/off. (This setting is available only when “Shooting Mode” in “Base Setting” of the System menu is set to “Custom.”)
	Level Low / Mid / High	Sets the noise suppression level.
Flicker Reduce Compensation	Mode Auto / On / Off	Set the operation of the Flicker-Reduction function.
	Frequency 50 Hz / 60 Hz	Set to the power supply frequency of the light source causing flicker.
Image Inversion Setting the image inversion function	Setting Normal / V Inv	Sets the image inversion.
Lens Interface Setting the lens interface	Setting Type C / Type A / Type C+12P / Type A+12P / Off	Selects the lens interface according to the connected lens type. When using an optional LA-FZB1/FZB2 mount adapter, select “Type C.” When using the lens mount adapter with Lens 12 pin (service parts), select “Type C+12P” or “Type A+12P.”
	Zoom Limit Off / Zoom Range 1 / Zoom Range 2	<p>Note</p> <p>If changing this setting while the lens attached to the camcorder, turn the camcorder off, then turn it on.</p> <p>Sets the limit for the zoom operation range of the power zoom.</p>

Paint Menu

The Paint menu settings are available only when “Shooting Mode” in “Base Setting” (page 82) of the System menu is set to “Custom.”

Paint		
Menu items	Sub items and setting values	Contents
Gamma Adjusting the gamma compensation	Setting On / Off	Turns the gamma compensation function on/off.
	Step Gamma 0.35 to 0.90 (0.45)	Sets the gamma compensation value in 0.05 steps.
	Master Gamma -99 to +99 (±0)	Adjusts the master gamma level.
	R Gamma -99 to +99 (±0)	Adjusts the R gamma level.
	G Gamma -99 to +99 (±0)	Adjusts the G gamma level.
	B Gamma -99 to +99 (±0)	Adjusts the B gamma level.
	Gamma Category STD / HG / User / S-Log2 / S-Log3	Select from among “STD” (standard gamma), “HG” (hyper gamma), “User” (user gamma), “S-Log2,” or “S-Log3.”
	Gamma Select	Selects the gamma table that is used for the gamma compensation.
	When “Gamma Category” is set to “STD” STD1 DVW / STD2 ×4.5 / STD3 ×3.5 / STD4 240M / STD5 R709 / STD6 ×5.0	
	When “Gamma Category” is set to “HG” HG1 3250G36 / HG2 4600G30 / HG3 3259G40 / HG4 4609G33 / HG7 8009G40 / HG8 8009G33	
When “Gamma Category” is set to “User” User 1 / User 2 / User 3 / User 4 / User 5		
When “Gamma Category” is set to “S-Log2” S-Log2		
When “Gamma Category” is set to “S-Log3” S-Log3		
Black Gamma Adjusting the black gamma compensation	Setting On / Off	Turns the black gamma compensation function on/off. (This setting is available only when “Gamma Category” in “Gamma” of the Paint menu is set to “STD.”)
	Range LOW / HIGH	Selects the black gamma correction effective range. LOW: 0 to 3.6% HIGH: 0 to 28.8%
	Master Black Gamma -2 to +2 (±0)	Sets the master black gamma level.

Paint		
Menu items	Sub items and setting values	Contents
Knee Adjusting the knee compensation	Setting On / Off	Turns the knee compensation function on/off. (This setting is available only when “Gamma Category” in “Gamma” is set to “STD.”)
	Point 75% to 109% (90%)	Sets the knee point.
	Slope -99 to +99 (±0)	Sets the knee slope.
	Knee Saturation On / Off	Turns the knee saturation function on/off.
	Knee Saturation Level -99 to +99 (±0)	Adjusts the knee saturation level.
	White Clip Adjusting the white clipping	Setting On / Off
Level		Sets the white clip level.
When the system frequency setting is 59.94, 29.97, or 23.98. 90.0% to 109.0% (108.0%) When the system frequency setting is 50, 25, or 24. 90.0% to 109.0% (105.0%)		

Paint		
Menu items	Sub items and setting values	Contents
Detail Setting the detail adjusting	Setting On / Off	Turns the detail adjusting function on/off.
	Level -99 to +99 (± 0)	Adjusts the detail level.
	H/V Ratio -99 to +99 (± 0)	Adjusts the ratio between the H detail level and V detail level.
	Crispening -99 to +99 (± 0)	Adjusts the crispening level.
	Level Depend On / Off	Turns the level depend adjustment function on/off.
	Level Depend Level -99 to +99 (± 0)	Adjusts the level depend level.
	Frequency -99 to +99 (± 0)	Sets the center frequency of the H details signal. (Setting the center frequency higher decreases the details.)
	Knee Aperture On / Off	Turns the knee aperture compensation function on/off.
	Knee Aperture Level -99 to +99 (± 0)	Adjusts the knee aperture level.
	Limit -99 to +99 (± 0)	Adjusts both the white and black detail limiter.
	White Limit -99 to +99 (± 0)	Adjusts the white detail limiter.
	Black Limit -99 to +99 (± 0)	Adjusts the black detail limiter.
	V Black Limit -99 to +99 (± 0)	Adjusts the black V detail limiter.
	V Detail Creation NAM / Y / G / G+R	Selects the source signal to generate the V detail signal. NAM: Highest level signal of V detail signal that is generated by R signal, G signal, or B signal. Y: Y signal G: G signal G+R: Synthesized signal from G and R signal with a same ratio.
Aperture Setting the aperture compensation	Setting On / Off	Turns the aperture compensation function on/off.
	Level -99 to +99 (± 0)	Adjusts the aperture level.

Paint		
Menu items	Sub items and setting values	Contents
Skin Detail Adjusting the skin detail compensation	Setting On / Off	Turns the skin detail compensation function on/off.
	Area Detection Execute/Cancel	Detects the color for the skin detail compensation. Execute: Executes this function.
	Area Indication On / Off	Turn on/off the function that displays the zebra pattern in the target area for the skin detail compensation.
	Level -99 to +99 (± 0)	Adjusts the skin detail level.
	Saturation -99 to +99 (± 0)	Adjusts the color (saturation) level for the skin detail compensation.
	Hue 0 to 359	Adjusts the color hue for the skin detail compensation.
	Width 0 to 90 (40)	Adjusts the width of the color hue for the skin detail compensation.
	Matrix Setting of the Matrix correction	Setting On / Off
Preset Matrix On / Off		Turns the preset matrix function on/off.
Preset Select		Selects the preset matrix.
• PMW-F5: Standard / High Saturation / FL Light / Cinema / F55 709 Like		
• PMW-F55: 1: SMPTE240M / 2: ITU-709 / 3: SMPTE Wide / 4: NTSC / 5: EBU / 10: S-Gamut3.Cine Like / 11: S-Gamut3 Like		
User Matrix On / Off		Turns the user matrix correction function on/off.
Level -99 to +99 (± 0)		Adjusts the color saturation for the entire picture area.
Phase -99 to +99 (± 0)		Adjusts the color phase for the entire picture area.
User Matrix R-G -99 to +99 (± 0)		Finely adjusts the color phase for the entire picture area by independently setting each of the factors.
User Matrix R-B -99 to +99 (± 0)		
User Matrix G-R -99 to +99 (± 0)		
User Matrix G-B -99 to +99 (± 0)		
User Matrix B-R -99 to +99 (± 0)		
User Matrix B-G -99 to +99 (± 0)		

Paint

Menu items	Sub items and setting values	Contents
Multi Matrix Settings for the multi-matrix correction	Setting On / Off	Turns on/off the multi-matrix correction, which allows specific colors to be selected for saturation correction in a 16-axis hue space.
	Area Indication On / Off	Displays a zebra pattern in the areas of the specified color for multi-matrix correction.
	Color Detection Execute/Cancel	Detects the target color on the screen for multi-matrix correction. Execute: Executes this function.
	Axis B / B+ / MG- / MG / MG+ / R / R+ / YL- / YL / YL+ / G- / G / G+ / CY / CY+ / B-	Specifies a color targeted by multi-matrix correction (16-axis mode).
	Hue -99 to +99 (±0)	Sets the color hue of the color targeted by multi-matrix correction for each 16-axis mode.
	Saturation -99 to +99 (±0)	Sets the saturation of the color targeted by multi-matrix correction for each 16-axis mode.

Audio Menu

Audio		
Menu items	Sub items and setting values	Contents
Audio Input Setting for audio inputs Note This item cannot be selected when removing the audio connector panel.	MIC CH1 Ref -60dB / -50dB / -40dB	Selects the reference input level for when the AUDIO IN CH1 switch is set to MIC.
	MIC CH2 Ref -60dB / -50dB / -40dB	Selects the reference input level for when the AUDIO IN CH2 switch is set to MIC.
	Limiter Mode Off / -6dB / -9dB / -12dB / -15dB / -17dB	Selects the limiter level when a loud signal is input while setting audio input level manually. When you do not use the limiter, select "Off."
	1KHz Tone on Color Bars On / Off	Turn the 1-kHz reference tone signal on/off.
	CH-1 Wind Filter On / Off	Turn the wind filter for the channel 1 on/off.
	CH-2 Wind Filter On / Off	Turn the wind filter for the channel 2 on/off.
	Audio Level Setting for audio recording level Notes <ul style="list-style-type: none"> This item cannot be selected when removing the audio connector panel. The recording level for the channel that the AES/EBU signal is selected is locked. 	CH-1 Audio Select Auto / Manual
CH-2 Audio Select Auto / Manual		The audio recording level is adjusted automatically when you set to "Auto."
CH-1 Audio Level -99 to +99 (± 0)		Adjusts the audio recording level when "CH-1 Audio Select" is set to "Manual."
CH-2 Audio Level -99 to +99 (± 0)		Adjusts the audio recording level when "CH-2 Audio Select" is set to "Manual."
AGC Spec -6dB / -9dB / -12dB / -15dB / -17dB		Selects the AGC level.
AGC Mode Mono / Stereo		Selects auto adjusting method for the input level of an analog audio signal recorded to CH-1/CH-2 from "Mono" (performs for each channel) and "Stereo" (performs in stereo mode).
Audio Output Setting for audio outputs	Output CH CH-1/CH-2 CH-3/CH-4	Selects audio output channels from either channels 1 and 2 or channels 3 and 4.
	Monitor CH	Selects the audio channel(s) to be fed to the headphones and the built-in speaker.
	When "Output CH" is set to "CH1/CH2" CH-1/CH-2 CH-1 CH-2	CH-1/CH-2 (CH-3/CH-4): Stereo CH-1 (CH-3): CH-1 (CH-3) only CH-2 (CH-4): CH-2 (CH-4) only
	When "Output CH" is set to "CH3/CH4" CH-3/CH-4 CH-3 CH-4	
	Headphone Out Mono / Stereo	Selects the headphones output, "Mono" or "Stereo."
	Monitor Level 0 to 99	Adjusts the monitor level.

Video Menu

Video		
Menu items	Sub items and setting values	Contents
Output On/Off Setting the video output	SDI (Sub) On / Off	Turns the SDI (Sub) output on/off.
	HDMI On / Off	Turns the HDMI output on/off.
Output Format Setting for the output format	SDI (Main)	Selects the SDI (Main) output format. The setting value differs, depending on the settings of “Frequency” in “System Setting” and “Rec Format” of the System menu (<i>page 92</i>).
	SDI (Sub)	Selects the SDI (sub) output format. The setting value differs, depending on the settings of “Frequency” in “System Setting” of the System menu and “SDI (Main)” in “Output Format” of the Video menu (<i>page 92</i>).
	HDMI	Selects the HDMI output format. The setting value differs, depending on the settings of “Frequency” in “System Setting” and “Rec Format” of the System menu (<i>page 96</i>).
	EXT IF	Displays the extend IF output signal.
	Test	Displays the video output signal.
Output Setting Setting for the output conversion mode	4K/2K to HD Conv. Letter Box / Edge Crop / Anamo ×1.3 / Anamo ×2	Sets the picture frame for YPbPr format video signal. Letter Box / Edge Crop: Sets the output conversion mode for 17:9 → 16:9 signal. (This setting is available only when “Format” in “Rec Format” of the System menu is set to “XAVC 4096 × 2160P” or “XAVC 2048 × 1080P.”) Anamo ×1.3 / Anamo ×2: Corrects the distortion of the images that are output from the video output when using an anamorphic lens. (This setting is available only when “Main Operation” in “Base Setting” of the System menu is set to “RAW.”)
	SD Mode Letter Box / Edge Crop / Squeeze	Sets the output mode (aspect) for the SD signal.

Note

The HD output signal when “Main Operation” in “Base Setting” of the System menu is set to “RAW,” or the internal recorded signal when “Setting” in “Rec Control” of the Recording menu is set to “SxS & AXS,” is “Letter Box”-equivalent signal.

Video		
Menu items	Sub items and setting values	Contents
Monitor LUT Setting for the monitor LUT	Category	Selects the type of Look for Monitor LUT.
	LUT / Look Profile / User 3D LUT	LUT: Outputs images using Preset LUT or User LUT. Look Profile: Outputs images that are suited for the start point of color grading or images that are close to print quality by selecting the Look number. User 3D LUT: Outputs images using User 3D LUT. (This setting is available only when “Color Space” in “Base Setting” of the System menu is set to “S-Gamut3.Cine/SLog3” or “S-Gamut3/SLog3.”)
	LUT Select	Selects the type of LUT when “Category” in “Monitor LUT” is set to “LUT.”
	P1: 709 (800%) P2: HG8009G40 P3: HG8009G33 P4: S-Log2 P5: S-Log3 U1 U2 U3 U4 U5 U6	709 (800%): Signals, for which the dynamic range is expanded up to 800%, by using ITU-R709 as a standard. HG8009G40: Signals, for which the dynamic range is 800%, white limit is 109%, and use hyper gamma, for which video output with 18% gray card is 40%. HG8009G33: Signals, for which the dynamic range is 800%, white limit is 109%, and use hyper gamma, for which video output with 18% gray card is 33%. S-Log2: Log signal with 1300% dynamic range, for which the post production process should be performed, and visibility for Video Monitor is considered. (This setting is available only when “Color Space” in “Base Setting” of the System menu is set to “S-Gamut/SLog2.” The color space is set to S-Gamut.) S-Log3: Log signal with 1300% dynamic range, which is close to Cineon Log curve, and the characteristics of film. (This setting is available only when “Color Space” in “Base Setting” of the System menu is set to “S-Gamut3.Cine/SLog3” or “S-Gamut3/SLog3.” The color space is set to S-Gamut3.) U1 to U6: Any LUT signal that is imported from an SD card.
	Look Profile Select	Selects the type of Look Profile when “Category” in “Monitor LUT” is set to “Look Profile.”
	1: LC-709 2: LC-709typeA 3: SLog2-709 4: Cine+709	
	User 3D LUT Select	Selects the 3D LUT signal that is imported from an SD Card.
	User 3D-1 / User 3D-2 / User 3D-3 / User 3D-4	
	SDI (Main) & Internal Rec MLUT On / MLUT Off	Selects whether to apply Monitor LUT to the image that is output from SDI (Main) and recorded on an SxS memory card. (When “Main Operation” is set to “RGB,” this setting is locked to “MLUT Off.”)

Video

Menu items	Sub items and setting values	Contents
	SDI (Sub) & HDMI MLUT On / MLUT Off	Selects whether to apply Monitor LUT to the image that is output from SDI (Sub) and HDMI. (This setting is in accord with the “SDI (Main) & Internal Rec” setting, while the S&Q Motion or viewfinder double speed drive function is activated, or during RAW playback.)* * This setting for the HDMI output follows the “SDI (Main) & Internal Rec” setting when the SDI output format is set to 4K/QFHD and the HDMI output is set to 2K/HD. This setting is locked to “MLUT On” when the HDMI output is set to 2K/HD.
	Viewfinder MLUT On / MLUT Off	Selects whether to apply Monitor LUT to the viewfinder image. (This setting is in accord with the “SDI (Main) & Internal Rec” setting, while the S&Q Motion or viewfinder double speed drive function is activated, or during RAW playback.)* * This setting is locked to “MLUT On” when the SDI output format is set to 4K/QFHD.
Output Display Setting for the output signal	VF Out On / Off	Selects whether to overlaps characters and markers on the viewfinder output signal.
	4K/QFHD SDI/HDMI Out (PMW-F55 only) On / Off	Selects whether to overlaps characters and markers on the SDI or HDMI output signal when the picture size of SDI or HDMI output is 4K/QFHD.
	HD/SD SDI (Sub) Out On / Off	Selects whether to overlaps characters and markers on the SDI (Sub) output signal when the SDI (Sub) output picture quality is less than HD.
	HD/SD HDMI Out On / Off	Selects whether to overlaps characters and markers on the HDMI output signal when the HDMI output picture quality is less than HD.
	Forced Menu Disp VF / SDI/HDMI / Sub Display	Selects the output that displays the menu by pressing MENU even if the Output Display setting for each output is set to off. VF: Viewfinder that is connected to the VF (viewfinder output) connector. SDI/HDMI: Monitor that is connected to the SDI OUT3, SDI OUT4 (Sub), or HDMI OUT connector. Sub Display: Sub display screen.
		Note The menu is not displayed on the sub display when this item is set to “VF” or “SDI/HDMI.”

VF Menu

When there is a button or dial that corresponds to the menu item on the attached viewfinder, that item is not available.

VF		
Menu items	Sub items and setting values	Contents
VF Setting Setting the viewfinder	Color -99 to +99 (± 0)	Adjusts the color of pictures on the viewfinder.
	Contrast -99 to +99 (± 0)	Adjusts the contrast of pictures on the viewfinder.
	Brightness -99 to +99 (± 0)	Adjusts the brightness of pictures on the viewfinder.
	Color Mode Color / B&W	Selects the display mode of the viewfinder while E-E display/recording.
	Aspect Auto / Full / Anamo $\times 1.3$ / Anamo $\times 2$	Selects the displayed area of pictures for the viewfinder. Anamo $\times 1.3$ / Anamo $\times 2$: Corrects the distortion of the images on the viewfinder screen when using an anamorphic lens. (This setting is available only when "Main Operation" in "Base Setting" of the System menu is set to "RAW.")
	Double Speed Drive On / Off	Turns on/off the function that doubles the frame rate for the viewfinder display when the system frequency is 23.98, 24, 25, or 29.97. (When this function is set to "On," the settable range for "Shutter Value" in "Shutter" of the Camera menu is limited to 180 degrees for the shutter angle.)
	Notes	
This function is not available on the following settings.		
<ul style="list-style-type: none"> • System frequency is 50 or 59.94. • "Setting" in "S&Q Motion" of the Camera menu is set to "On." • "Setting" in "Slow Shutter" of the Camera menu is set to "On." • Recording format is set to SStP SR-SQ 444/SStP SR-Lite 422/SStP SR-SQ 422. • During playback or displaying thumbnail. 		
Peaking Setting the peaking function	Setting On / Off	Turns the peaking function on/off.
	Peaking Type Normal / Color	Selects the peaking type. Normal: Normal peaking. Color: Color peaking.
	Frequency Normal / High	Selects the peaking frequency from "Normal" (normal frequency) or "High" (high frequency).
	Normal Peaking Level 0 to 99 (50)	Sets the normal peaking level.
	Color B&W / Red / Yellow / Blue	Selects the color of the peaking signal when "Peaking Type" is set to "Color."
	Color Peaking Level 0 to 99 (50)	Sets the color peaking level.

Menu items	Sub items and setting values	Contents
Marker Setting the marker indications	Setting All / VF / SDI/HDMI / Off	Turns all marker indications on the viewfinder on/off.
	Color White / Yellow / Cyan / Green / Magenta / Red / Blue	Sets the marker color.
	Center Marker 1 / 2 / 3 / 4 / Off	Selects the center marker type when displaying the center marker. Select "Off" to turn off the center marker.
	Safety Zone On / Off	Turns the safety zone marker on/off.
	Safety Area 80% / 90% / 92.5% / 95%	Selects the size (ratio to the entire screen) of the safety zone marker.
	Aspect Marker Line / Mask / Off	Selects the aspect marker. Line: To show white lines Mask: To lower the video signal level of areas outside the marker range. Off: To not display.
	Aspect Select 4:3 / 13:9 / 14:9 / 15:9 / 16:9 / 17:9 / 1.66:1 / 1.85:1 / 2.35:1 / 2.4:1	Select the ratio of the aspect marker.
	Aspect Mask 0 to 15 (12)	When "Aspect Marker" is set to "Mask," select the brightness of images outside the aspect marker.
	Aspect Safety Zone On / Off	Turns the aspect safety zone marker on/off.
	Aspect Safety Area 80% / 90% / 92.5% / 95%	Selects the size (ratio to the entire screen) of the aspect safety zone marker.
	User Box On / Off	Turns the box cursor indication on/off.
	User Box Width 3 to 479 (240)	Sets the width of the rectangle for the user box.
	User Box Height 3 to 269 (135)	Sets the height of the rectangle for the user box.
	User Box H Position -476 to 476 (0)	Sets the horizontal position of the user box.
	User Box V Position -266 to 266 (0)	Sets the vertical position of the user box.
	100% Marker On / Off	Turns 100% marker on/off.
Zebra Setting the zebra pattern	Setting On / Off	Turns the zebra function on/off.
	Zebra Select 1 / 2 / Both	Select the zebra pattern(s) (Zebra 1, Zebra 2, or both of Zebra 1 and Zebra 2) to be displayed.
	Zebra1 Level 50% to 107% (70%)	Sets the display level of zebra 1.
	Zebra1 Aperture Level 1% to 20% (10%)	Sets the aperture level of zebra 1.
	Zebra2 Level 52% to 109% (100%)	Sets the display level of zebra 2.

Menu items	Sub items and setting values	Contents
Display On/Off	Setting	Turns all the indications of the viewfinder GUI on/off.
Selecting the items to be displayed	On / Off	
	Shutter Setting	Selects the item to be displayed on the viewfinder.
	On / Off	
	ND Filter Position	<div style="background-color: #333; color: white; padding: 2px; display: inline-block;">Notes</div> <ul style="list-style-type: none"> • “Video Signal Monitor” is available only when the HD signal can be output from SDI (Sub), “4K/2K to HD Conv.” in “Output Setting” of the Video menu is set to “Letter Box,” and “Aspect” in “VF Setting” of the VF menu is set to “Auto” or “Full.” • For the Waveform display of Video Signal Monitor, there is the scale at 0%, 25%, 50%, 75%, and 100% of the video level. • Video Signal Monitor is not displayed on the viewfinder when outputting a video signal that is different from the signal of SDI (Sub) to the viewfinder.
	On / Off	
	Gain Setting	
	On / Off	
	Rec/Play Status	
	On / Off	
	Color Temp.	
	On / Off	
	Frame Rate	
	On / Off	
	Battery Remain	
	On / Off	
	Timecode	
	On / Off	
	Audio Level Meter	
	On / Off	
	Media Status	
	On / Off	
	Focus Position	
	Meter / Feet / Off	
	Iris Position	
	On / Off	
	Zoom Position	
	On / Off	
	AE Mode	
	On / Off	
	White Balance Mode	
	On / Off	
	SDI Rec Control	
	On / Off	
	Rec Format	
	On / Off	
	Gamma	
	On / Off	
	Timecode Lock	
	On / Off	
	Wi-Fi Condition	
	On / Off	
	Video Signal Monitor	
	Off / Waveform / Vector / Histogram	
	Clip Name	
	On / Off	
	Focus Assist Indicator	
	On / Off	

VF**Menu items Sub items and setting values Contents**

Focus Area Marker

On / **Off**

Clip Number

On / Off

Notice Message

On / Off**TC/UB Menu****TC/UB****Menu items Sub items and setting values Contents****Timecode**

Setting the timecode

Mode

Preset (Ext-Lk) / Int Regen

Selects the timecode mode.

Preset: To start the timecode from the specified value

Regen (regeneration): To start the timecode by continuing the timecode of the previous clip.

Run

Rec Run / Free Run

Rec Run: To advance the timecode during recording only.

Free Run: The timecode keeps advancing regardless of the state of recording.

Setting

Sets the timecode to a desired value.

SET: Sets the value.

Reset

Execute / Cancel

Resets the timecode to 00:00:00:00.

Execute: Execute this function.

TC Format

DF / NDF

Selects the timecode format.

DF: Drop frame

NDF: Non drop frame

TC Display

Setting the time data indication

Display Select

Timecode / Duration

Switches the time data indication.

Recording Menu

Recording

Menu items	Sub items and setting values	Contents
Picture Cache Rec Setting the Picture Cache Rec function	Setting On / Off Cache Rec Time 0-2sec / 2-4sec / 4-6sec / 6-8sec / 8-10sec / 13-15sec	Turns the Picture Cache Rec function on/off. (This setting is available only when "Main Operation" in "Base Setting" of the System menu is set to "YPbPr" or "RGB.") Sets the accumulated time to the picture cache memory (going back time when starting cache rec). (This setting is locked to "0-2sec" when "Format" in "Rec Format" of the System menu is set to "XAVC 4096 × 2160P"/"XAVC 3840 × 2160P"/"8-10sec" and "13-15sec" cannot be selected when "Format" in "Rec Format" of the System menu is set to "XAVC 2048 × 1080P"/"XAVC 1920 × 1080P".)
MPEG2 Proxy Setting the MPEG2 proxy function (PMW-F55 only)	Setting On / Off	Turns the MPEG2 proxy function on/off. (This setting is available only when "Frequency" in "System Setting" of the System menu is set to "29.97"/"25"/"23.98" and "Format" in "Rec Format" of the System menu is set to "XAVC 4096 × 2160P"/"XAVC 3840 × 2160P" or "Frequency" in "System Setting" of the System menu is set to "29.97" and "Format" in "Rec Format" of the System menu is set to "SSiP SR-SQ 444"/"SSiP SR-SQ 422".)
Rec Control Setting the recording control function	Setting SxS & AXS / AXS	Selects the recording target (only external recording (AXS memory), or both external recording (AXS memory) and recording to an SxS memory card in the camcorder) when "Main Operation" in "Base Setting" of the System menu is set to "RAW."
		Note Recording is not performed if the AXS memory disables recording even if "SxS & AXS" is set.
SDI Rec Control Setting the SDI recording control function	Setting Off / On	Turns on/off this function that controls recording/stop recording of the external device by the SDI output signal.

Media Menu

This menu is not available when the media is not loaded.

Media		
Menu items	Sub items and setting values	Contents
Update Media Updating a memory	Media (A) Execute / Cancel	Updates the managerial file on the SxS memory card in the slot A. Execute: Updates the file.
	Media (B) Execute / Cancel	Updates the managerial file on the SxS memory card in the slot B. Execute: Updates the file.
	AXS Memory Execute / Cancel	Updates the managerial file on the AXS memory card. Execute: Updates the file.
Format Media Formatting a memory	Media (A) Execute / Cancel	Formats the SxS memory card in the slot A. Execute: Executes format.
	Media (B) Execute / Cancel	Formats the SxS memory card in the slot B. Execute: Executes format.
	SD card Execute / Cancel	Formats the SD card. Execute: Executes format.
	AXS Memory Execute / Cancel	Formats the AXS memory card. Execute: Executes format.
Clip Naming Setting for the clip name	Mode Cam ID + Reel# / Title	Sets the naming mode for the clip name. Cam ID + Reel#: Camera ID + Reel Number + Shot Number + date + random string Title: Any string that is set in "Title Prefix" + clip number
	Camera ID A to Z	Sets the camera ID when "Mode" is set to "Cam ID + Reel#."
	Reel Number 001 to 999	Sets the numeric portion of the Reel Number when "Mode" is set to "Cam ID + Reel#."
	Camera Position C / L / R	Sets the first character part of the Shot Number when "Mode" is set to "Cam ID + Reel#."
	Title Prefix	Sets the title part of the clip name when "Mode" is set to "Title." (Default setting is the unique ID for the model. Unique ID for the model: Lower three digits of the serial number.) (Input characters on the character input screen (page 54).)
	Number Set 0001 to 9999	Sets the number part of the clip name when "Mode" is set to "Title."

File Menu

File		
Menu items	Sub items and setting values	Contents
All File Setting for the All file	Load SD Card	Loads the All file from the SD card that is inserted into the SD card slot.
	Save SD card	Stores the All file onto the SD card that is inserted into the SD card slot.
	File ID	Names the All file.
Scene File Setting for the Scene file (This setting is available only when “Shooting Mode” in “Base Setting” of the System menu is set to “Custom.”)	Recall Internal Memory	Loads the Scene file from the internal memory.
	Store Internal Memory	Stores the Scene file on the internal memory.
	Load SD Card	Loads the file from the sub memory card.
	Save SD Card	Stores the file on the sub memory card.
	File ID	Names the Scene file.
User Menu Item Setting for the User Menu Item file	Load SD Card	Loads the User Menu Item file from the SD card that is inserted into the SD card slot.
	Save SD Card	Stores the User Menu Item file onto the SD card that is inserted into the SD card slot.
	File ID	Names the User Menu Item file.
User Gamma Setting for user gamma file	Current Settings	Displays the name of the current user gamma file on the internal memory.
	Load SD Card	Loads the gamma table data (user gamma file) on an SD card that is made by user, to the internal memory. When using the user gamma file that is created on CvpFileEditorTM V4.2, store the file on the following directory of an SD card. PRIVATE\SONY\PROCAMERA\AHD_CAM
	Reset 1 / 2 / 3 / 4 / 5 / All Default value 1: 709 (800%) 2: S-Log2 3: 709 (800%) 4: 709 (800%) 5: 709 (800%)	Resets the user gamma file on the internal memory to the default value. 1 to 5: Selected file All: All files
Monitor LUT Setting for monitor LUT file	Current Settings	Displays 6 user LUT names that are registered in the internal memory.
	Load SD card 1 / 2 / 3 / 4 / 5 / 6	Loads the LUT data that is created by user on an SD card (user LUT file) to the internal memory. The user LUT file that is created on RAW Viewer is stored on the following directory of an SD card. PRIVATE\SONY\PROCAMERA\PMWF55_F5
	Reset 1 / 2 / 3 / 4 / 5 / 6 / All	Resets the user LUT data in the internal memory to the default value of “709(800%).” 1 to 6: Selected file All: All data

File		
Menu items	Sub items and setting values	Contents
Monitor 3D LUT	Current Settings	Displays the current user Monitor 3D LUT name in the internal memory.
	Setting for monitor 3D LUT file	<p>Load SD card 1 / 2 / 3 / 4</p> <p>Loads the 3D LUT data that is created by the user on an SD card (user 3D LUT file) to the internal memory. The camcorder can import the CUBE file (*.cube) of 17 or 33 lattices that is created by RAW Viewer or BMD's Da Vinci Resolve*. * Checked on Resolve V9.0 and V10.0.</p> <p>When creating the CUBE file, set "Input" to "S-Gamut3.Cine/S-Log3" and "Format" to "Resolve" (when creating by RAW Viewer). Store the created user 3D LUT file on the following directory of an SD card. PRIVATE\SONY\PRO\CAMERA\PMWF55_F5</p> <hr/> <p>Reset 1 / 2 / 3 / 4 / All</p> <p>Resets the user 3D LUT data in the internal memory to the default value of "LC-709." 1 to 4: Selected file All: All data</p>

File		
Menu items	Sub items and setting values	Contents
Lens File Setting for the lens file (This setting is available only when “Shooting Mode” in “Base Setting” of the System menu is set to “Custom.”)	Recall Internal Memory	Loads the lens file from the internal memory.
	Store Internal Memory	Stores the lens file on the internal memory.
	Load SD Card	Loads the lens file from the sub memory card.
	Save SD Card	Stores the lens file on the sub memory card.
	File ID	Names the lens file.
	File Source	Displays the selected file number.
	Clear Lens Offset Execute / Cancel	Clear the lens file. Execute: Execute clearing.
	Lens Auto Recall Off / On (Lens Name) / On (Serial Number)	Sets whether to load the corresponding lens file automatically when the lens can be specified by lens communication.
		<div style="background-color: #cccccc; padding: 2px;">Note</div> This function is available only when supplying power to the lens. (This function is not available after attaching/detaching the lens during supplying power to the lens.)
	Lens Serial Number	Displays the serial number of the lens that is attached to the camcorder, for lenses compatible with lens communication.
	Lens Name	Displays the lens model name when it can be obtained by lens communication.
	Lens Manufacturer	Displays the lens manufacturer name when it can be obtained by lens communication.
	Lens Center H -40 to +40 (± 0)	Sets the horizontal position of the center marker to the lens file.
	Lens Center V -40 to +40 (± 0)	Sets the vertical position of the center marker to the lens file.
	Flare R -99 to +99 (± 0)	Sets the user adjusting value of the R flare correction that is caused by the lens to the lens file.
	Flare G -99 to +99 (± 0)	Sets the user adjusting value of the G flare correction that is caused by the lens to the lens file.
	Flare B -99 to +99 (± 0)	Sets the user adjusting value of the B flare correction that is caused by the lens to the lens file.
	White Offset R -99 to +99 (± 0)	Sets the R ch correction value of the white balance offset by lens to the lens file.
	White Offset B -99 to +99 (± 0)	Sets the B ch correction value of the white balance offset by lens to the lens file.
	Shading Ch Select Red / Green / Blue	Selects the channel for the white shading correction that is caused by the lens.
	Shading H SAW -99 to +99 (± 0)	Sets the Saw white shading correction value (caused by the lens) of the selected channel by “Shading Ch Select” and horizontal direction to the lens file.
	Shading H PARA -99 to +99 (± 0)	Sets the Para white shading correction value (caused by the lens) of the selected channel by “Shading Ch Select” and horizontal direction to the lens file.
	Shading V SAW -99 to +99 (± 0)	Sets the Saw white shading correction value (caused by the lens) of the selected channel by “Shading Ch Select” and vertical direction to the lens file.
Shading V PARA -99 to +99 (± 0)	Sets the Para white shading correction value (caused by the lens) of the selected channel by “Shading Ch Select” and vertical direction to the lens file.	

Maintenance Menu

Maintenance

Menu items	Sub items and setting values	Contents
APR Executing APR	APR Execute / Cancel	Executes APR (Auto Pixel Restoration: auto adjusting of the image sensor).
Test Saw Setting the test signal output	Setting On / Off	Turns the test signal on/off.
Camera Config Detail settings for the camera	RM Common Memory On / Off	Sets whether to share the settings of when connecting the remote control unit and using the camcorder alone. Note This item cannot be selected when connecting the remote control unit.
	HD/2K Modulation High / Low	Sets the video resolution of the HD/2K signal that is converted from the 4K/QFHD signal. High: High resolution that focuses details Low: Resolution equivalent to a conventional HD camera (such as F35, PMW-F3, etc.) Note This setting is for the HD/2K recording signal or HD/2K output signal when shooting while “Imager Scan Mode” is set to “Normal,” or the HD/2K output signal when playing the clip of XAVC 4096 × 2160/XAVC 3840 × 2160 or AXS memory (this setting is also applied to the viewfinder output signal).

System Menu

System

Menu items	Sub items and setting values	Contents
System Setting	Frequency 59.94 / 50 / 29.97 / 25 / 24 / 23.98	Selects the system frequency.
Base Setting	Shooting Mode Custom / Cine EI	Selects the shooting mode.
	Main Operation YPbPr / RGB / RAW	Sets the operation mode for recording mainly. (When “Shooting Mode” in “Base Setting” of the System menu is set to “Custom,” “YPbPr” or “RGB” can be selected.)
	Color Space S-Gamut/SLog2 / S-Gamut3.Cine/SLog3 / S-Gamut3/SLog3 / Matrix	Sets the color space. (When “Shooting Mode” in “Base Setting” of the System menu is set to “Custom,” “Matrix” can be selected. When “Shooting Mode” in “Base Setting” of the System menu is set to “Cine EI,” “S-Gamut/SLog2,” “S-Gamut3.Cine/SLog3,” or “S-Gamut3/SLog3” can be selected.)
	Imager Scan Mode Normal / 2K Full / 2K Center	Sets the reading mode of the imager. Normal: Shoots with 4K Super 35 mm size for normal recording. Shoots with 2K size for frame rate that is faster than 60P. 2K Full: Shoots with 2K Super 35 mm size. 2K Center: Shoots with the size equivalent to the Super 16 mm (center area of Super 35 mm).

System																																									
Menu items	Sub items and setting values	Contents																																							
Rec Format Setting the recording format	Format	Sets the video format to be recorded on the SxS memory card.																																							
	XAVC 4096 × 2160P (PMW-F55 only)	The setttable format for recording differs depending on the setting of “Frequency” in “System Setting” of the System menu and “Main Operation” in “Base Setting” of the System menu.																																							
	XAVC 3840 × 2160P (PMW-F55 only)																																								
	XAVC 2048 × 1080P																																								
	XAVC 1920 × 1080P	When system frequency is set to 59.94 or 50																																							
	MPEG 1920 × 1080i																																								
	MPEG 1280 × 720P																																								
	SStP SR-SQ 444																																								
	SStP SR-SQ 422																																								
	SStP SR-Lite 422																																								
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	YPbPr	RGB	RAW*																																						
XAVC 4096 × 2160P	○	–	–																																						
XAVC 2048 × 1080P	○	○	○																																						
SStP SR-SQ 444	–	○	–																																						
SStP SR-SQ 422	○	–	–																																						
SStP SR-Lite 422	○	–	–																																						
		* “Rec Control” of the Recording menu needs to be set to “SxS&AXS.”																																							
Genlock	Reference																																								
Setting Genlock operation	Internal / External (HD) / External (SD)	Displays the genlock status. When genlocked, the signal type is displayed. Internal: Not genlocked. External (HD): Genlocked by the HD signal. External (SD): Genlocked by the SD signal.																																							

System		
Menu items	Sub items and setting values	Contents
Assignable Button Assigning functions to the assignable buttons	<1> to <4>, Lens RET Off / Marker / Zebra / Peaking / Display / Video Signal Monitor / VF Mode / Rec / S&Q Motion / Picture Cache Rec / Rec Review / High/Low Key / VF High Contrast	Assign a function to the ASSIGN 1/2/3/4 buttons and RET button on the lens. Marker: Turns the center marker, safety zone, aspect marker, and guide frame functions on/off as a group. Zebra: Turns the zebra function on/off. Peaking: Turns the peaking function on/off. Display: Turns the indications of status/setting on the monitor on/off. Video Signal Monitor: Switches the waveform indication (Off/Waveform/Vector/Histogram) for the output signal from SDI (Sub). VF Mode: Switches between color and mono display on the viewfinder. Rec: Executes the start/stop recording. (The lamp of the ASSIGN button lights up while recording.) S&Q Motion: Turns the Slow & Quick motion function on/off. Picture Cache Rec: Turn the Picture Cache Rec function on/off. Rec Review: Performs Rec Review. High/Low Key: Switches between High Key (monitoring display for high key blown-out highlights), Low Key (monitoring display for low key clipped blacks), and Off (normal display). VF High Contrast: Enhances the contrast of the pictures on the viewfinder.
Switch/Lamp Setting for the switch/lamp	Rec Lamp On / Off Lock Switch Setting without Rec Button / with Rec Button Menu Dial Scroll Normal / Loop Menu Dial Direction Normal / Reverse Set Key on Thumbnail Pause / Play	Turns the Rec lamp on/off. Sets whether to include the Rec button on the buttons that are locked by the LOCK switch. (When the Rec function is assigned to the assignable button, the button is treated as the Rec button.) Selects the scroll method for the menu operation. Selects the scroll direction for the menu operation. Sets the behavior when pressing the MENU dial while selecting a thumbnail.
Fan Control Setting the fan control mode	Setting Auto / Minimum / Off in Rec	Sets the fan control mode of the camcorder and AXS recorder that is connected to the camcorder.

System		
Menu items	Sub items and setting values	Contents
Battery Alarm Setting for the battery	Near End:Info Battery 5% to 100% (in steps of 5%)	Sets the battery level at which the low battery warning is generated.
	End:Info Battery 0% to 5%	Sets the battery level at which the battery empty warning is generated.
	Near End:Sony Battery 11.5V to 17V (in steps of 0.1V)	Sets the battery level at which the low battery warning is generated.
	End:Sony Battery 11.0V to 11.5V (in steps of 0.1V)	Sets the battery level at which the battery empty warning is generated.
	Near End:Other Battery 11.5V to 17V (11.8V) (in steps of 0.1V)	Sets the battery level at which the low battery warning is generated.
	End:Other Battery 11.0V to 14V (in steps of 0.1V)	Sets the battery level at which the battery empty warning is generated.
	Detected Battery Sony Info Battery / Sony Battery / Other Battery / DC IN	Displays the type of power supply.
DC Voltage Alarm Setting the warning of the input voltage	DC Low Voltage1 11.5V to 17.0V	Sets the DC IN voltage at which the low input voltage warning is generated.
	DC Low Voltage2 11.0V to 14.0V	Sets the DC IN voltage at which the lack of any input voltage warning is generated.
Language Selecting the language for menus and messages	Select English / 中文(简)	Selects the language for menus and messages.
Clock Set Setting the built-in clock	Time Zone UTC -12:00 Kwajalein to UTC +14:00	Sets the time-zone difference from UTC in steps of 30 minutes.
	Date Mode YYMMDD / MMDDYY / DDMMYY	Selects the display mode of the date. YYMMDD: In sequence of year, month, day MMDDYY: In sequence of month, day, year DDMMYY: In sequence of day, month, year
	12H/24H 12H / 24H	Selects the display mode of time. 12H: 12-hour mode 24H: 24-hour mode
	Date	Sets the current date. SET: Sets the date.
	Time	Sets the current time. SET: Sets the time.
	Hours Meter Displaying the hours meter	Hours(System) Hours(Reset) Reset Execute / Cancel

System		
Menu items	Sub items and setting values	Contents
AXS Recorder Setting for the AXS recorder	Chunk Off / 16GB / 8GB / 4GB	This setting is for dividing the clip to the specified size while recording on the AXS memory card.
	Version	Displays the software version of AXS-R5.
Note This item cannot be selected when the AXS recorder (AXS-R5) is not attached.	Hours Meter (System)	Displays the non-resettable accumulated time of use for AXS-R5.
	Hours Meter (Reset)	Displays the resettable accumulated time of use for AXS-R5.
	Reset Hours Meter Execute / Cancel	Resets the "Hours Meter (Reset)" value to 0. Execute: Executes resetting.
	User Name (admin)	Set a desired user name in 1 to 31 alphanumeric characters.
Basic Authentication Setting for the basic authentication of the network	Password (pmw-f5 or pmw-f55)	Sets a password in 1 to 31 alphanumeric characters.
	Wi-Fi Enable / Disable	Select whether to enable or disable Wi-Fi connection.
Wi-Fi Setting for Wi-Fi connection	SSID & Password	Displays the SSID and password of the camcorder.
	Wi-Fi Direct Connection Execute / Cancel	Starts connecting process by the Wi-Fi Direct function. Execute: Executing.
	Client	Displays the status of the connected client device (device name or Mac address).
	IP Address 10.0.0.1	Displays the IP address.
	Subnet Mask 255.255.0.0	Displays the subnet mask.
	MAC Address	Display the MAC address.
	Regenerate Password Execute / Cancel	Regenerates the password. Execute: Executing.
	All Reset Resetting to the factory status	Reset Execute/Cancel
Version Showing the version of this camcorder	Number Vx.xx	Displays the current software version of the camcorder.
	Version Up Execute / Cancel	Upgrades the camcorder. Execute: Executes.

Connecting External Monitors and Recording Devices

To display recording/playback pictures on an external monitor, select the output signal and use an appropriate cable for the monitor to be connected.

An output signal from the camcorder can be recorded when a recording device is connected. The same status information and menus can be displayed on the external monitor as those on the viewfinder screen.

According to the signal fed to the monitor, set “Output Display” (page 72) in the Video menu to “On.”

SDI OUT connector (BNC type)

Set the on/off setting of the output, and output format in the Video menu (page 70).

Use a commercially available 75-ohm coaxial cable for connection.

Note

Be sure to ground between the camcorder and external device before turning the power on. (We recommend to turn on the camcorder and external device after connecting a 75-ohm coaxial cable.)

When connecting an external device to the camcorder while the camcorder is turned on, connect the external device after connecting a 75-ohm coaxial cable to the external device.

To start synchronized recording on an external device

With SDI signal output selected, synchronized recording is possible by feeding a REC trigger signal to an external recording device connected via the SDI OUT connector. To enable synchronized recording, set “SDI Rec Control” (page 77) in the Recording menu to “On.”

Note

When a connected external device does not correspond to a REC trigger signal, the device cannot be operated.

HDMI OUT connector (Type A connector)

Set the on/off setting of the output, and output format in the Video menu (page 70).

Use a commercially available HDMI cable for connection.

TEST OUT connector (BNC type)

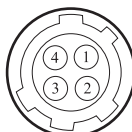
Use a commercially available BNC cable for connection.

DC OUT connector (4-pin)

Supplies DC 12 V power to an accessory when the power switch is set to ON.

You can output the REC Tally signal and input the REC Trigger signal through the DC OUT connector.

4-pin, Female



- External View -

No.	Signal	I/O	Specification
1	UNREG GND	-	GND for UNREG
2	REC TALLY	OUT	Open Collector output (Max. 50 mA) Low: REC
3	REC TRIGGER	IN	Open or +5 V dc: Normal GND: Active (REC)
4	UNREG +12 V OUT	OUT	+11 V to 17 V dc output

Operating Clips With a Computer

To use the ExpressCard slot of a computer

If the computer is equipped with an ExpressCard/34 or ExpressCard/54 slot, you can directly insert the SxS memory card containing clips recorded with this camcorder and access the files.

Notes

- The SxS Device Driver Software must be installed on your computer.
- Operation is not guaranteed with all computers.

For support information for the driver, visit the following URL:

<http://www.sony.net/SxS-Support/>

With a Windows computer, check that a Removable Disk appears in My Computer. This indicates normal status.

With a Macintosh computer, an icon is displayed on the menu bar.

To connect with a USB cable

When you connect the camcorder or the SBAC-US20 SxS Memory Card USB Reader/Writer (optional) using a USB cable, the memory card in the slot is acknowledged as an extended drive by the computer.

When two memory cards are mounted in this camcorder, they are acknowledged as two independent extended drives by the computer.

Note

The camcorder does not work on the bus power from the computer. Supply the operating power.

To check the connection to the camcorder

1 Set the power switch to ON to turn on the camcorder.

A message prompting you to confirm that you wish to enable the USB connection is displayed on the viewfinder screen.

Note

This message will not be displayed while another confirmation message or in-progress message (e.g., for formatting or restoring of an SxS memory card) is shown on the screen. It appears when formatting or restoration has completed. The message is also not displayed while the screen for the detailed information of a clip is shown on the screen. It appears when an operation on the screen for the detailed information of a clip is completed or you return to the thumbnail screen.

2 Select “Execute” by turning the MENU dial.

3 With Windows, check that the memory card is displayed as a removable disk in My Computer.

With Macintosh, check that a “NO NAME” or “Untitled” folder was created on the desktop. (The Macintosh folder name can be changed.)

Notes

- The following operations must be avoided when the ACCESS lamp is lit in red.
 - Turning the power off or disconnecting the power cord
 - Removing the SxS memory card
 - Disconnecting the USB cable
- When removing an SxS memory card from a Macintosh, do not select “Card Power Off” from the SxS memory card icon displayed on the menu bar.
- Operation is not guaranteed with all computers.

Using a nonlinear editing system

For a nonlinear editing system, optional editing software that corresponds to the recording formats used with this camcorder is required.

Store the clips to be edited on the HDD of your computer in advance, using the dedicated application software.

External Synchronization

When multiple units of the camcorder are used in the same shooting location, synchronized recording can be made with a specific reference signal, and the timecode can be matched among all the units.

Aligning the phase of the video signal (Genlock)

Genlock operation is enabled by supplying a reference signal to the GENLOCK IN connector (page 15) of the camcorder.

Valid reference signals depend on the system frequency setting.

System frequency	Valid reference signal
59.94P	1920 × 1080 59.94i 720 × 486 59.94i
59.94i	1920 × 1080 59.94i 720 × 486 59.94i
50P	1920 × 1080 50i 720 × 576 50i
50i	1920 × 1080 50i 720 × 576 50i
29.97P	1920 × 1080 59.94i 720 × 486 59.94i
25P	1920 × 1080 50i 720 × 576 50i
24P	1920 × 1080 48i (24PsF)
23.98P	1920 × 1080 47.95i (23.98PsF)

You can check the genlock status on “Reference” in “Genlock” (page 83) of the System menu.

Notes

- If the reference signal is unstable, genlock is not possible.
- The subcarrier is not synchronized.

Synchronizing the timecode of your camcorder with that of another unit

Set the unit that supplies the timecode to a mode in which the timecode output keeps advancing (Free Run mode).

1 Set “Timecode” in the TC/UB menu as follows:

Mode: Preset (Ext-Lk)

Run: Free Run

2 Confirm that the TC IN/OUT switch (page 15) is set to IN, then supply an HD or SD reference video signal to the GENLOCK IN connector (page 15) and the reference timecode to the TC connector (page 15).

The built-in timecode generator of your camcorder locks to the reference timecode, and the message “Ext-Lk” is displayed on the screen. About 10 seconds after locking, even if the reference timecode from the external device is disconnected, the external lock will be kept.

Notes

- Check that the reference timecode and the reference video signal are in a phase relation that complies with the SMPTE timecode standards.
- When you finish the above procedure, the timecode is immediately synchronized with the external timecode, and the time data indication will show the value of the external timecode. However, wait for a few seconds until the timecode generator stabilizes before recording.
- If the frequency of the reference video signal and the frame frequency are not the same, a lock cannot be acquired, and the camcorder will not operate properly. In such a case, the timecode will not be correctly locked to the external timecode.
- When the connection is removed, the timecode advance may shift one frame per hour with respect to the reference timecode.

To release the external timecode synchronization

Change the “Timecode” setting in the TC/UB menu.

External synchronization is also released when you start recording in a special recording mode.

Important Notes on Operation

Use and Storage

Do not subject the unit to severe shock

The internal mechanism may be damaged or the body warped.

Do not cover the unit while operating

Putting a cloth, for example, over the unit can cause excessive internal heat build-up.

After use

Always set the power switch to OFF.

Before storing the unit for a long period

Remove the battery pack.

Do not leave the camcorder with the lenses facing the sun

Direct sunlight can enter through the lenses, be focused in the camcorder, and cause fire.

Shipping

- Remove the memory cards before transporting the unit.
- If sending the unit by truck, ship, air or other transportation service, pack it in the shipping carton of the unit.

Care of the unit

If the body of the unit is dirty, clean it with a soft, dry cloth. In extreme cases, use a cloth steeped in a little neutral detergent, then wipe dry. Do not use organic solvents such as alcohol or thinner, as these may cause discoloration or other damage to the finish of the unit.

In the event of operating problems

If you should experience problems with the unit, contact your Sony dealer.

Note about the battery terminal

The battery terminal of this unit (the connector for battery packs and AC adaptors) is a consumable part.

Power may not be supplied to the unit properly if the pins of the battery terminal are bent or deformed by shock or vibrations, or if they become corroded due to prolonged outdoor use.

Periodic inspections are recommended to keep the unit working properly and to prolong its usable lifetime.

Contact a Sony service or sales representative for more information about inspections.

Use and storage locations

Store in a level, ventilated place. Avoid using or storing the unit in the following places:

- In excessive heat or cold (operating temperature range: 0°C to 40°C or 32°F to 104°F)
Remember that in summer in warm climates the temperature inside a car with the windows closed can easily exceed 50°C (122°F).
- In damp or dusty locations
- Locations where the unit may be exposed to rain
- Locations subject to violent vibration
- Near strong magnetic fields
- Close to radio or TV transmitters producing strong electromagnetic fields.
- In direct sunlight or close to heaters for extended periods

To prevent electromagnetic interference from portable communications devices

The use of portable telephones and other communications devices near this unit can result in malfunctions and interference with audio and video signals.

It is recommended that the portable communications devices near this unit be powered off.

Note on laser beams

Laser beams may damage the CMOS image sensors. If you shoot a scene that includes a laser beam, be careful not to let the laser beam be directed into the lens of the camcorder.

About the LCD monitor

- Do not leave the LCD monitor facing direct sunlight, as this may damage the LCD monitor.
- Do not press/swipe the LCD monitor forcefully, or leave objects on the LCD monitor, as it may cause a malfunction, such as picture irregularity, etc.
- The LCD monitor may become warm in use. This is not a malfunction.

About the stuck pixels

The LCD panel fitted to this unit is manufactured with high precision technology, giving a functioning pixel ratio of at least 99.99%. Thus a very small proportion of pixels may be “stuck”, either always off (black), always on (red, green, or blue), or flashing. In addition, over a long period of use, because of the physical characteristics of the liquid crystal display, such “stuck” pixels may appear spontaneously. These problems are not a malfunction, and will not be recorded on recording media.

Phenomena specific to CMOS image sensors

The following phenomena that may appear in images are specific to CMOS (Complementary Metal Oxide Semiconductor) image sensors. They do not indicate malfunctions.

White flecks

Although the CMOS image sensors are produced with high-precision technologies, fine white flecks may be generated on the screen in rare cases, caused by cosmic rays, etc. This is related to the principle of CMOS image sensors and is not a malfunction.

The white flecks especially tend to be seen in the following cases:

- when operating at a high environmental temperature
- when you have raised the master gain (sensitivity)
- when operating in Slow-Shutter mode

Aliasing

When fine patterns, stripes, or lines are shot, they may appear jagged or flicker.

Focal plane (PMW-F5 only)

Owing to the characteristics of the pickup elements (CMOS sensors) for reading video signals, subjects that quickly move across the screen may appear slightly skewed.

Flash band (PMW-F5 only)

The luminance at the top and bottom of the screen may change when shooting a flashlight beam or a light source that quickly flashes.

Flicker (PMW-F5 only)

Shooting under the lights of a discharge lamp such as a fluorescent lamp, sodium-vapor lamp, mercury-vapor lamp, etc., may cause flickering, color change, or vertical stripes.

Note on the display

- Pictures on the viewfinder screen may be distorted by the following operations:
 - Changing the video format
 - Starting playback from the Thumbnail screen
- When you change the eye direction in the viewfinder, you may see primary colors red, green, and blue, but this is not a defect of the camcorder. These primary colors are not recorded on any recording media.

Fragmentation

If pictures cannot be recorded/reproduced properly, try formatting the recording medium. While repeating picture recording/playback with a certain recording medium for an extended period, files in the medium may be fragmented, disabling proper recording/storage. In such a case, make a backup of clips in the medium then perform formatting of the medium using “Format Media” (*page 78*) in the Media menu.

Formats and Limitations of Outputs

Video Formats and Output Signals

Tip

When using the 1.3× or 2× anamorphic lens, set “Aspect” in “VF Setting” (page 73) of the VF menu to “Anamo ×1.3” or “Anamo ×2” to output the normal image without distortion from the SDI OUT (Sub), HDMI OUT, and TEST OUT connectors.

Output formats for the SDI OUT connector

Serial digital signals from the SDI OUT connector are output depending on the settings of the setup menu and format of the clip being played.

When outputting one type of SDI output by using the SDI OUT 1 to 4 connectors while “Main Operation” in “Base Setting” is set to “YPbPr” (PMW-F55 only)

The “Frequency” setting in “System Setting” of the System menu	The “Format” setting in “Rec format” of the System menu	Output format		
		SDI (Main)		
59.94/50	XAVC 4096 × 2160P	4096 × 2160 YPbPr Square Division 59.94P/50P 3.0G		
		4096 × 2160 YPbPr 2-Sample Interleave Division 59.94P/50P 3.0G		
		3840 × 2160 YPbPr Square Division 59.94P/50P 3.0G		
		3840 × 2160 YPbPr 2-Sample Interleave Division 59.94P/50P 3.0G		
	XAVC 3840 × 2160P	3840 × 2160 YPbPr Square Division 59.94P/50P 3.0G		
		3840 × 2160 YPbPr 2-Sample Interleave Division 59.94P/50P 3.0G		
		29.97/25/23.98	XAVC 4096 × 2160P	4096 × 2160 YPbPr Square Division 29.97P/25P/23.98P 1.5G
				4096 × 2160 YPbPr 2-Sample Interleave Division 29.97P/25P/23.98P 3.0G (SDI 1/2 only)
3840 × 2160 YPbPr Square Division 29.97P/25P/23.98P 1.5G				
3840 × 2160 YPbPr 2-Sample Interleave Division 29.97P/25P/23.98P 3.0G (SDI 1/2 only)				
XAVC 3840 × 2160P	3840 × 2160 YPbPr Square Division 29.97P/25P/23.98P 1.5G			
	3840 × 2160 YPbPr 2-Sample Interleave Division 29.97P/25P/23.98P 3.0G (SDI 1/2 only)			
	24		XAVC 4096 × 2160P	4096 × 2160 YPbPr Square Division 24P 1.5G
				4096 × 2160 YPbPr 2-Sample Interleave Division 24P 3.0G (SDI 1/2 only)
3840 × 2160 YPbPr Square Division 24P 1.5G				
3840 × 2160 YPbPr 2-Sample Interleave Division 24P 3.0G (SDI 1/2 only)				

When outputting two types of SDI output by using the SDI OUT 1/2 (MAIN) and SDI OUT 3/4 (SUB) connectors while “Main Operation” in “Base Setting” is set to “YPbPr”

The “Frequency” setting in “System Setting” of the System menu	The “Format” setting in “Rec format” of the System menu	Output format	
		SDI (Main)	SDI (Sub)
59.94/50	XAVC 4096 × 2160P (PMW-F55 only)	2048 × 1080 YPbPr 59.94P/50P 3.0G	1920 × 1080 YPbPr 59.94P/50P 3.0G
			1920 × 1080 YPbPr 59.94i/50i 1.5G
		1920 × 1080 YPbPr 59.94P/50P 3.0G	1920 × 1080 YPbPr 59.94P/50P 3.0G
			1920 × 1080 YPbPr 59.94i/50i 1.5G
		1920 × 1080 YPbPr 59.94i/50i 1.5G	1920 × 1080 YPbPr 59.94P/50P 3.0G
			1920 × 1080 YPbPr 59.94i/50i 1.5G
	XAVC 3840 × 2160P (PMW-F55 only)	1920 × 1080 YPbPr 59.94P/50P 3.0G	1920 × 1080 YPbPr 59.94P/50P 3.0G
			1920 × 1080 YPbPr 59.94i/50i 1.5G
		1920 × 1080 YPbPr 59.94i/50i 1.5G	1920 × 1080 YPbPr 59.94P/50P 3.0G
			1920 × 1080 YPbPr 59.94i/50i 1.5G
	XAVC 2048 × 1080P	2048 × 1080 YPbPr 59.94P/50P 3.0G	1920 × 1080 YPbPr 59.94P/50P 3.0G
			1920 × 1080 YPbPr 59.94i/50i 1.5G
720 × 486/576 YPbPr 59.94i/50i 270M*			
720 × 486/576 YPbPr 59.94i/50i 270M*			
1920 × 1080 YPbPr 59.94P/50P 3.0G		1920 × 1080 YPbPr 59.94P/50P 3.0G	
		1920 × 1080 YPbPr 59.94i/50i 1.5G	
		720 × 486/576 YPbPr 59.94i/50i 270M*	
1920 × 1080 YPbPr 59.94i/50i 1.5G		1920 × 1080 YPbPr 59.94P/50P 3.0G	
		1920 × 1080 YPbPr 59.94i/50i 1.5G	
		720 × 486/576 YPbPr 59.94i/50i 270M*	
XAVC 1920 × 1080P MPEG 1920 × 1080i	1920 × 1080 YPbPr 59.94P/50P 3.0G	1920 × 1080 YPbPr 59.94P/50P 3.0G	
		1920 × 1080 YPbPr 59.94i/50i 1.5G	
		720 × 486/576 YPbPr 59.94i/50i 270M*	
	1920 × 1080 YPbPr 59.94i/50i 1.5G	1920 × 1080 YPbPr 59.94P/50P 3.0G	
		1920 × 1080 YPbPr 59.94i/50i 1.5G	
		720 × 486/576 YPbPr 59.94i/50i 270M*	
MPEG 1280 × 720P	1280 × 720 YPbPr 59.94P/50P 1.5G	1280 × 720 YPbPr 59.94P/50P 1.5G	
		720 × 486/576 YPbPr 59.94i/50i 270M*	

The “Frequency” setting in “System Setting” of the System menu	The “Format” setting in “Rec format” of the System menu	Output format		
		SDI (Main)	SDI (Sub)	
29.97/25	XAVC 4096 × 2160P (PMW-F55 only)	2048 × 1080 YPbPr 29.97PsF/25PsF 1.5G	1920 × 1080 YPbPr 29.97PsF/25PsF 1.5G	
		1920 × 1080 YPbPr 29.97PsF/25PsF 1.5G		
	XAVC 3840 × 2160P (PMW-F55 only)	1920 × 1080 YPbPr 29.97PsF/25PsF 1.5G	1920 × 1080 YPbPr 29.97PsF/25PsF 1.5G	
	XAVC 2048 × 1080P	2048 × 1080 YPbPr 29.97PsF/25PsF 1.5G	1920 × 1080 YPbPr 29.97PsF/25PsF 1.5G	1920 × 1080 YPbPr 29.97PsF/25PsF 1.5G
				720 × 486/576 YPbPr 29.97PsF/25PsF 270M
		1920 × 1080 YPbPr 29.97PsF/25PsF 1.5G	1920 × 1080 YPbPr 29.97PsF/25PsF 1.5G	
XAVC 1920 × 1080P MPEG 1920 × 1080i SSiP SR-SQ/Lite 422	1920 × 1080 YPbPr 29.97PsF/25PsF 1.5G	1920 × 1080 YPbPr 29.97PsF/25PsF 1.5G		
		720 × 486/576 YPbPr 29.97PsF/25PsF 270M		
24	XAVC 4096 × 2160P (PMW-F55 only)	2048 × 1080 YPbPr 24PsF 1.5G	1920 × 1080 YPbPr 24PsF 1.5G	
	XAVC 2048 × 1080P	1920 × 1080 YPbPr 24PsF 1.5G		
	SSiP SR-SQ/Lite 422	1920 × 1080 YPbPr 24PsF 1.5G	1920 × 1080 YPbPr 24PsF 1.5G	
23.98	XAVC 4096 × 2160P (PMW-F55 only)	2048 × 1080 YPbPr 23.98PsF 1.5G	1920 × 1080 YPbPr 23.98PsF 1.5G	
		1920 × 1080 YPbPr 23.98PsF 1.5G		
	XAVC 2048 × 1080P			
	XAVC 3840 × 2160P (PMW-F55 only)	1920 × 1080 YPbPr 23.98PsF 1.5G	1920 × 1080 YPbPr 23.98PsF 1.5G	
	XAVC 1920 × 1080P MPEG 1920 × 1080i SSiP SR-SQ/Lite 422	1920 × 1080 YPbPr 23.98PsF 1.5G	1920 × 1080 YPbPr 23.98PsF 1.5G	

* Cannot be selected when “Shooting Mode” in “Base Setting” of the System menu is set to “Cine EI.”

When outputting two types of SDI output by using the SDI OUT 1/2 (MAIN) and SDI OUT 3/4 (SUB) connectors while “Main Operation” in “Base Setting” is set to “RGB”

The “Frequency” setting in “System Setting” of the System menu	The “Format” setting in “Rec format” of the System menu	Output format	
		SDI (Main)	SDI (Sub)
59.94/50	XAVC 2048 × 1080P	2048 × 1080 RGB 59.94P/50P 3.0G	1920 × 1080 YPbPr 59.94P/50P 3.0G
		1920 × 1080 RGB 59.94P/50P 3.0G	1920 × 1080 YPbPr 59.94i/50i 1.5G
	XAVC 1920 × 1080P MPEG 1920 × 1080i	1920 × 1080 RGB 59.94P/50P 3.0G	1920 × 1080 YPbPr 59.94P/50P 3.0G
			1920 × 1080 YPbPr 59.94i/50i 1.5G
29.97/25	XAVC 2048 × 1080P	2048 × 1080 RGB 29.97PsF/25PsF 3.0G	1920 × 1080 YPbPr 29.97PsF/25PsF 1.5G
		1920 × 1080 RGB 29.97PsF/25PsF 3.0G	1920 × 1080 YPbPr 29.97PsF/25PsF 1.5G
	XAVC 1920 × 1080P MPEG 1920 × 1080i SSiP SR-SQ444	1920 × 1080 RGB 29.97PsF/25PsF 3.0G	1920 × 1080 YPbPr 29.97PsF/25PsF 1.5G
24	XAVC 2048 × 1080P	2048 × 1080 RGB 24PsF 3.0G	1920 × 1080 YPbPr 24PsF 1.5G
		1920 × 1080 RGB 24PsF 3.0G	
	SSiP SR-SQ444	1920 × 1080 RGB 24PsF 3.0G	1920 × 1080 YPbPr 24PsF 1.5G
23.98	XAVC 2048 × 1080P	2048 × 1080 RGB 23.98PsF 3.0G	1920 × 1080 YPbPr 23.98PsF 1.5G
		1920 × 1080 RGB 23.98PsF 3.0G	
	XAVC 1920 × 1080P MPEG 1920 × 1080i SSiP SR-SQ444	1920 × 1080 RGB 23.98PsF 3.0G	1920 × 1080 YPbPr 23.98PsF 1.5G

Output formats from the HDMI OUT connector

Serial digital signals from the HDMI OUT connector are output depending on the settings of the setup menu and format of the clip being played.

When the output format of SDI (MAIN) is 4096 × 2160P or 3480 × 2160P (PMW-F55 only)

The “Frequency” setting in “System Setting” of the System menu	The “SDI (Main)” setting in “Output Format” of the Video menu	Output format
59.94/50	4096 × 2160P Square 3840 × 2160P Square	1920 × 1080 59.94P/50P
		1920 × 1080 59.94i/50i
	4096 × 2160P 2SI	4096 × 2160 59.94P/50P
		1920 × 1080 59.94P/50P
		1920 × 1080 59.94i/50i
	3840 × 2160P 2SI	3840 × 2160 59.94P/50P
		1920 × 1080 59.94P/50P
		1920 × 1080 59.94i/50i
29.97/25	4096 × 2160P Square 3840 × 2160P Square	1920 × 1080 29.97PsF/25PsF
	4096 × 2160P 2SI	4096 × 2160 29.97P/25P
		1920 × 1080 29.97PsF/25PsF
	3840 × 2160P 2SI	3840 × 2160 29.97P/25P
		1920 × 1080 29.97PsF/25PsF
24/23.98	4096 × 2160P Square 3840 × 2160P Square	1920 × 1080 24P/23.98P
	4096 × 2160P 2SI	4096 × 2160 24P/23.98P
		1920 × 1080 24P/23.98P
	3840 × 2160P 2SI	3840 × 2160 24P/23.98P
		1920 × 1080 24P/23.98P

When the output format of SDI (MAIN) is less than 2048 × 1080

The “Frequency” setting in “System Setting” of the System menu	The “Format” setting in “Rec format” of the System menu	Output format
59.94/50	XAVC 4096 × 2160P (PMW-F55 only) XAVC 3840 × 2160P (PMW-F55 only)	1920 × 1080 59.94P/50P 1920 × 1080 59.94i/50i
	XAVC 2048 × 1080P	1920 × 1080 59.94P/50P
	XAVC 1920 × 1080P	1920 × 1080 59.94i/50i
	MPEG 1920 × 1080i	720 × 480/576 59.94P/50P
	MPEG 1280 × 720P	1280 × 720 59.94P/50P
		720 × 480/576 59.94P/50P
29.97/25	XAVC 4096 × 2160P (PMW-F55 only) XAVC 3840 × 2160P (PMW-F55 only) XAVC 2048 × 1080P XAVC 1920 × 1080P MPEG 1920 × 1080P SStP SR-SQ 422 SStP SR-Lite 422 SStP SR-SQ 444	1920 × 1080 29.97PsF/25PsF
24	XAVC 4096 × 2160P (PMW-F55 only) XAVC 2048 × 1080P SStP SR-SQ 422 SStP SR-Lite 422 SStP SR-SQ 444	1920 × 1080 24P
23.98	XAVC 4096 × 2160P (PMW-F55 only) XAVC 3840 × 2160P (PMW-F55 only) XAVC 2048 × 1080P XAVC 1920 × 1080P MPEG 1920 × 1080P SStP SR-SQ 422 SStP SR-Lite 422 SStP SR-SQ 444	1920 × 1080 23.98P

Output formats from the TEST OUT connector

Signals output from the TEST OUT connector are either the HD-Y, Composite, or HD SYNC signals output from the SDI OUT connector/HDMI OUT connector.

The output signal differs depending on the setting of setup menu or output format setting of SDI (Main)/SDI (Sub).

The "Frequency" setting in "System Setting" of the System menu	Output format of SDI (Main)	Output format of SDI (Sub)	Output format
59.94/50	4096 × 2160 59.94P/50P (PMW-F55 only) 3840 × 2160 59.94P/50P (PMW-F55 only)	×	HD SYNC 1920 × 1080 59.94i/50i
	2048 × 1080 59.94P/50P 1920 × 1080 59.94P/50P 1920 × 1080 59.94i/50i	1920 × 1080 59.94P/50P	HD SYNC 1920 × 1080 59.94i/50i
		1920 × 1080 59.94i/50i	HD Y 1920 × 1080 59.94i/50i
		720 × 486/576 59.94i/50i	Composite 720 × 486/576 59.94i/50i
29.97/25	4096 × 2160 29.97P/25P (PMW-F55 only) 3840 × 2160 29.97P/25P (PMW-F55 only)	×	HD SYNC 1920 × 1080 29.97PsF/ 25PsF
	2048 × 1080 29.97PsF/ 25PsF 1920 × 1080 29.97PsF/ 25PsF	1920 × 1080 29.97PsF/ 25PsF	HD Y 1920 × 1080 29.97PsF/ 25PsF
		720 × 486/576 29.97PsF/ 25PsF	Composite 720 × 486/576 29.97PsF/ 25PsF
		×	HD SYNC 1920 × 1080 24PsF
24	4096 × 2160 24P (PMW-F55 only)	×	HD SYNC 1920 × 1080 24PsF
	2048 × 1080 24PsF 1920 × 1080 24PsF	1920 × 1080 24PsF	HD Y 1920 × 1080 24PsF
23.98	4096 × 2160 23.98P (PMW-F55 only) 3840 × 2160 23.98P (PMW-F55 only)	×	HD SYNC 1920 × 1080 23.98PsF
	2048 × 1080 23.98PsF 1920 × 1080 23.98PsF	1920 × 1080 23.98PsF	HD Y 1920 × 1080 23.98PsF

Error/Warning Indications

The camcorder informs you of situations where warning, caution, or an operation check is required, through messages on the viewfinder screen, the REC lamp, and a buzzer.

The buzzer is output to the built-in speaker or to the headphones connected via the headphone connector. When the camcorder is turned on, the message for prompting the APR function appears on the viewfinder screen if the auto adjustment for the image sensor (APR) has not performed for a period of time. In this case, perform "APR" (page 82) by following the displayed message.

Error Indications

The camcorder stops operation after the following indications.

Error indication on LCD/viewfinder	Buzzer	REC lamp	Cause and measures
E + Error code	Continuous	Rapidly flashing	The camcorder may be defective. Recording stops even if ●REC is displayed on the viewfinder screen. Turn off the power and check the connected equipment, cables, and media. If they are not defective, turn on the power again. If the error persists, consult Sony service personnel. (If power cannot be turned off by setting the power switch to OFF, remove both the battery pack or the DC IN source.)

Warning Indications

When one of the following indications is generated, follow the message to resolve the problem.

Warning indication on LCD/viewfinder	Buzzer	REC lamp	Cause and measures
Media Near Full	Intermittent	Flashing	Free space on the SxS memory card has become insufficient. Replace it with another at the earliest opportunity.
Media Full	Continuous	Rapidly flashing	No space is left on the SxS memory card. Recording, clip copying and clip division cannot be performed. Replace it with another.
Battery Near End	Intermittent	Flashing	The battery power will be discharged soon. Charge the battery pack at the earliest opportunity.
Battery End	Continuous	Rapidly flashing	The battery pack is discharged. Recording cannot be performed. Stop operation and change the battery pack.
Temperature High	Intermittent	Flashing	The internal temperature has risen above a safe operation limit. Suspend operation, turn off the power, and wait until the temperature falls.
Voltage Low	Intermittent	Flashing	The DC IN voltage has become low (stage 1). Check the power supply.
Insufficient Voltage	Continuous	Rapidly flashing	The DC IN voltage is too low (stage 2). Recording cannot be performed. Connect another power source.
EXT. I/F Signal Error	–	–	An error was detected with the signal in the mounting terminal for an expansion unit. Check the connection to the AXS-R5, etc.

Caution and Operation Confirmation Indications

The following caution and operation confirmation indication may be displayed on the center area of the screen. In this case, please see the following table.

Indication	Cause and measures
Battery Error	An error was detected with the battery pack.
Please Change Battery	Replace the battery pack with a normal one.
Backup Battery End	The remaining power of the backup battery is insufficient.
Please Change	Replace the battery pack.
Unknown Media(A) ¹⁾	A partitioned memory card or one that contains recorded clips exceeding the number permitted with this camcorder is loaded.
Please Change	This card cannot be used with this camcorder. Remove it and load a compatible card.
Cannot Use Media(A) ¹⁾	A card of a different file system or an unformatted card was inserted. It cannot be used with this camcorder.
Unsupported File System	Replace it or format it with this camcorder.
Media Error	An error occurred with the memory card. The card requires restoration.
Media(A) ¹⁾ Needs to be Restored	Restore the card.
Media Error	Recording cannot be done, because the memory card is defective.
Cannot Record to Media(A) ¹⁾	Because playback may be possible, it is recommended to replace it with another card after copying the clips, as required.
Media Error	Neither recording nor playback can be done, because the memory card is defective.
Cannot Use Media(A) ¹⁾	It cannot be operated with this camcorder. Replace it with another card.
Media(A) ¹⁾ Error	Recording or playback stops, because an error occurred with the memory card.
Recording Halted	If this frequently occurs, change the memory card.
Playback Halted	
Media Reached Rewriting Limit	The memory card comes to the end of its service life. Make a backup copy and replace the card with another one as soon as possible. Recording/playback may not be performed properly if you continue to use the card.
Change Media (A) ¹⁾	<i>For details, refer to the operating instructions of the memory card.</i>
Copy All MPEG2 Proxy	Copying of All the MPEG2 Proxy is not completed because of the displayed reason.
NG: Reached Clip Number Limit	• The maximum number of clips is reached.
NG: Same File Already Exists	• There is a file with the same name.
NG: Not Enough Capacity	• There is not enough capacity for copying.
	Replace the Media.
Input AES/EBU is Invalid Emphasis	Emphasis signal that is not compatible with the AES/EBU input is input. The camcorder is compatible with 50u-15u Emphasis only.
Input AES/EBU is not Pro Use	Signal other than Professional Use is input to the AES/EBU input. The camcorder is compatible with Professional Use only.
Fan Stopped	The fan in the camcorder has stopped. Avoid use under high temperature conditions. Turn the camcorder off and contact a Sony service representative.
AXS Recorder Fan Stopped	The fan in the AXS-R5 that is connected to the camcorder has stopped. Avoid use under high temperature conditions. Remove the AXS-R5 from the camcorder and contact a Sony service representative.
Abnormal Lens Communication	The type of the connected lens does not match with the camcorder's setting.
Please Check "Lens IF" Setting	Check the "Lens Interface" setting of the Camera menu.

Indication	Cause and measures
Please Execute APR	The auto adjusting of the image sensor (APR) has not been executed for a certain period. Execute APR by pressing the Menu dial.
Invalid setting value was reset: Media/Clip Naming/Camera Position Please save All File again	The setting value of “Clip Naming” is reset because an incorrect All file is loaded. Save the All file again after setting the desired setting value.

1) “Media(B)” for the card in slot B, “AXS Memory” for the AXS memory card.

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Specifications

General

Power Requirements

DC 12 V (11 V to 17.0 V)

Power Consumption

PMW-F55

Approx. 25 W (body only, while recording XAVC 4K 59.94P, 4K SDI: On)

PMW-F5

Approx. 24 W (body only, while recording XAVC HD 59.94P, HD-SDI: On)

Notes

- When connecting a device to the DC OUT connector, use one with current consumption of 1.8 A or less.
- When using the camcorder with peripheral devices attached, make sure that the total power consumption of the attached devices is 60 W or less.

Operating Temperature

0°C to 40°C (32°F to 104°F)

Storage Temperature

-20°C to +60°C (-4°F to +140°F)

Mass

Approx. 2.2 kg (4 lb 14 oz) (without lens, handle, audio box, and accessories)

Dimensions

See "Dimensions" on page 108.

Battery Operating Time

PMW-F55

Approx. 150 min with BP-FL75

PMW-F5

Approx. 160 min with BP-FL75

Recording Format (Video)

XAVC
 AVC/H.264 High 4:2:2 Intra Profile
 4K/QFHD: VBR, 600 Mbps max.
 2K: VBR, 220 Mbps max.
 HD: SMPTE RP2027 Class100
 compliant
 MPEG HD422
 MPEG-2 Long GOP
 HD 422 mode: CBR, 50 Mbps,
 MPEG-2 422P@HL
 SR SStP
 MPEG-4 Simple Studio Profile
 HD: SR-SQ 444, SR-SQ 422, SR-Lite
 422

Recording Format (Audio)

LPCM 8CH (2CH recording/playback),
 24-bit, 48-kHz

Recording Frame Rate

PMW-F55

XAVC 4K: 4096 × 2160, 23.98P/24P/
 25P/29.97P/50P/59.94P
 XAVC QFHD: 3840 × 2160, 23.98P/
 25P/29.97P/50P/59.94P
 XAVC 2K: 2048 × 1080, 23.98P/24P/
 25P/29.97P/50P/59.94P
 XAVC HD: 1920 × 1080, 23.98P/25P/
 29.97P/50P/59.94P
 MPEG2 HD: 1920 × 1080, 50i/59.94i/
 23.98P/25P/29.97P
 MPEG2 HD: 1280 × 720, 50P/59.94P
 SR-SStP: 1920 × 1080, 23.98P/24P/25P/
 29.97P

PMW-F5

XAVC 2K: 2048 × 1080, 23.98P/24P/
 25P/29.97P/50P/59.94P
 XAVC HD: 1920 × 1080, 23.98P/25P/
 29.97P/50P/59.94P
 MPEG2 HD: 1920 × 1080, 50i/59.94i/
 23.98P/25P/29.97P
 SR-SStP: 1920 × 1080, 23.98P/24P/25P/
 29.97P

Recording/Playback Time

When SBS-32G1A is used
 MPEG2 HD: Approx. 60 min
 When SBS-64G1A is used
 MPEG2 HD: Approx. 120 min
 When SBP-32 is used
 XAVC HD 23.98P: Approx. 36 min
 XAVC HD 25P: Approx. 35 min
 XAVC HD 29.97P: Approx. 30 min
 SR-Lite 422 23.98P: Approx. 18 min
 SR-Lite 422 25P: Approx. 17 min
 SR-Lite 422 29.97P: Approx. 14 min
 When SBP-64A is used
 XAVC HD 23.98P: Approx. 72 min
 XAVC HD 25P: Approx. 70 min
 XAVC HD 29.97P: Approx. 60 min
 SR-Lite 422 23.98P: Approx. 38 min
 SR-Lite 422 25P: Approx. 36 min
 SR-Lite 422 29.97P: Approx. 30 min
 When SBP-64B is used
 XAVC 4K 25P: Approx. 24 min
 XAVC 4K 29.97P: Approx. 20 min
 SR-SQ 422/444 23.98P: Approx. 18
 min
 SR-SQ 422/444 25P: Approx. 17 min
 SR-SQ 422/444 29.97P: Approx. 14
 min
 When SBP-128B is used
 XAVC 4K 23.98P: Approx. 52 min
 XAVC 4K 25P: Approx. 50 min
 XAVC 4K 29.97P: Approx. 40 min
 SR-SQ 422/444 23.98P: Approx. 40
 min
 SR-SQ 422/444 25P: Approx. 38 min
 SR-SQ 422/444 29.97P: Approx. 30
 min

Note

These approximate recording/playback times depend on operating conditions, available memory, etc.

Camera Section

Imaging Device

PMW-F55

Super 35mm equivalent Single-chip CMOS with the frame image scan function

PMW-F5

Super 35mm equivalent Single-chip CMOS

Imaging Device (Pixel Count)

11.6 M (total), 8.9 M (effective)

Built-in Filters

Clear, 0.9 (1/8ND), 1.8 (1/64ND)

Sensitivity (2000 lx, 89.9% reflectance)

PMW-F55

Video Gamma: T12@24p (3200K Light source)

PMW-F5

Video Gamma: T14@24p (3200K Light source)

ISO Sensitivity

PMW-F55

S-Log2 Gamma: ISO 1250 (D55 Light source)

PMW-F5

S-Log2 Gamma: ISO 2000 (D55 Light source)

Lens Mount

PL mount (with supplied lens mount adaptor)

Flange Focal Length

FZ mount (without supplied lens mount adaptor)

Latitude

14-stop

S/N Ratio

57 dB (Video Gamma, Noise Suppression: OFF)

Shutter Speed

1/24s to 1/6,000s (23.98P)

Shutter Angle

4.2° to 359.7° (electronic shutter)

Slow Shutter (SLS)

2, 3, 4, 5, 6, 7, and 8-frame accumulation

Slow & Quick Motion Function

XAVC 4K/QFHD: 1P to 60P

XAVC 2K/HD: 1P to 180P

White Balance

Preset (3200K, 4300K, 5500K), Memory

Gain

-3, 0, 3, 6, 9, 12, 18 dB

Gamma Curve

STD1, STD2, STD3, STD4, STD5,

STD6

HG1, HG2, HG3, HG4, HG7, and HG8

S-Log2, S-Log3

Input/Output

Audio Input

CH-1/CH-2: XLR-type 3-pin (female)

(×2), LINE / AES/EBU / MIC /

MIC+48V selectable

Video Output

TEST OUT: BNC (×1)

DC Input

XLR-type 4-pin (male), 11 V to 17 V

DC

DC Output

4-pin (×2), 11 V to 17 V DC (MAX

1.8 A) w/ battery adaptor

You can output the REC Tally signal and input the REC Trigger signal through the DC OUT connector.

Note

When connecting a device to the DC OUT connector, use one with current consumption of 1.8 A or less.

SDI Output

BNC (×4)

3G-SDI: SMPTE ST424/425 Level-B

HD SDI: SMPTE ST292 compliant

SD SDI: SMPTE-259M compliant

PMW-F55

HD mode:

SDI 1/2: Line Output

SDI 3/4: Monitor Output

4K mode:

SDI 1/2/3/4: Line Output

Display On/Off switchable

PMW-F5

SDI 1/2: Line Output

SDI 3/4: Monitor Output

Timecode Input/Output

TC IN/OUT: BNC (×1) switchable

Genlock Input

BNC (×1)

Remote

8-pin (×1)

HDMI Output

A Type (×1)

USB

USB device, Mini-B (×1)

USB host, type-A (×1)

USB Wireless LAN Module Connector

USB host, type-A (×1)

Headphone Output

Stereo mini jack (×1)

Speaker Output

Monaural

Media

Type

ExpressCard/34 slot (×2)

SD card slot (×1)

Package Configuration

Lens mount adaptor (1)

Battery adaptor (1)

Audio input connector (1)

Screws for the audio input connector (4)

Tape measure hook (1)

USB wireless LAN module IFU-WLM3 (1)

Before Using this Unit (1)

Operating Instructions (CD-ROM) (1)

Software Downloads

When the unit is used with a PC connection, download device drivers, plug-ins, and application software, where applicable, from the Sony Professional products web site.

Sony Professional products web site homepage:

U.S.A. <http://pro.sony.com>

Canada <http://www.sonybiz.ca>

Latin America <http://sonypro-latin.com>

Europe, Middle East and Africa

<http://www.pro.sony.eu>

Japan <http://www.sonybsc.com>

Asia Pacific <http://pro.sony-asia.com>

Korea <http://bp.sony.co.kr>

China <http://pro.sony.com.cn>

Although the data regarding recorded materials are stored over multiple files and folders, you can easily handle the clips without considering its data and directory structure, by using the dedicated application software.

Note

If you perform operations, such as copy, on clips on the SxS memory card by using the Explorer (Windows) or Finder (Macintosh), the subsidiary data contained by the clips may not be maintained.

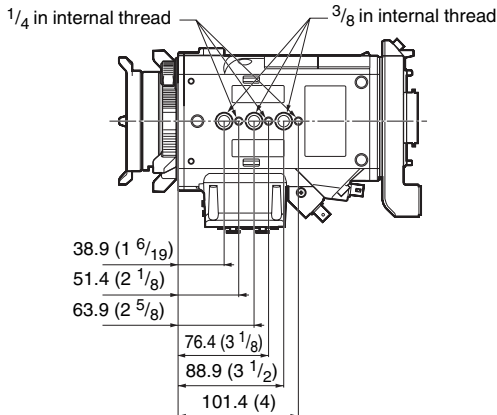
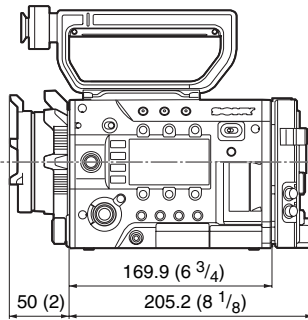
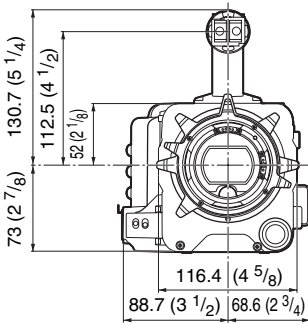
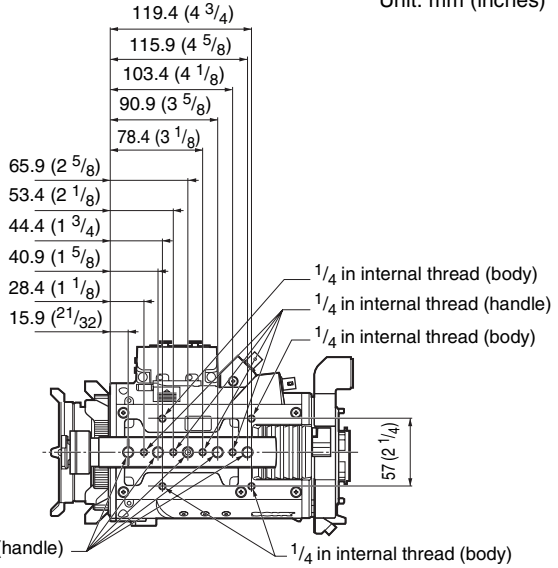
Optional Accessories

- PL mount wide angle zoom lens
 - SCL-P11X15
- PL lens
 - SCL-PK6/F, PK6/M (set of 6 lenses, 20 mm/
25 mm/35 mm/50 mm/85 mm/135 mm)
 - SCL-PK3/F, PK3/M (set of 3 lenses, 20 mm/
25 mm/135 mm)
- FZ mount power zoom lens
 - SCL-Z18X140
- LCD color viewfinder
 - DVF-L350, DVF-L700
- OLED color viewfinder
 - DVF-EL100
- Microphone
 - ECM-680S (EC-0.5X5F3M), ECM-678,
ECM-674
- Shoulder adaptor
 - VCT-FSA5
- Battery pack
 - BP-FL75, BP-L80S
- AC adaptor
 - AC-DN2B, AC-DN10
- SxS memory card
 - SxS PRO+ Series
 - SxS PRO Series
 - SxS-1 Series
- SD card
 - SDHC memory card, SD memory card
- Portable memory recorder
 - AXS-R5
- AXS memory card
 - AXS-512S24, AXS-A512S24, AXS-
A1TS24
- SxS memory card USB reader/writer
 - SBAC-US20
- AXS memory card reader
 - AXS-CR1
- Remote control unit
 - RM-B170, RM-B750, CBK-DCB01
- B4-FZ mount adapter
 - LA-FZB1, LA-FZB2
- Optical 2K Filter
 - CBK-55F2K
- Camera system adaptor
 - CA4000

Design and specifications are subject to change without notice.

Dimensions

Unit: mm (inches)



Notes

- Always make a test recording, and verify that it was recorded successfully.

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- Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.

Index

A

AC Adaptor 22
AC Power 23
ACCESS lamp 28, 30
All File 79
All Reset 86
Aperture 66
APR 82
Assignable Button 42, 84
AU/TC screen 52
Audio 39, 42
Audio Input 69
Audio Level 42, 69
Audio menu 69
Audio Output 69
Auto Exposure 61
AXS memory card 32
AXS Recorder 86
AXS-R5 31

B

Base Setting 82
Basic Authentication 86
Battery Alarm 85
Battery Pack 22
Black 58
Black Gamma 64
Built-in speaker 39

C

Camera Config 82
Camera menu 57
CAMERA screen 51
Caution and Operation Confirmation
 Indications 100
Clip 40, 47, 88
Clip name 40
Clip Naming 78
Clock 23
Clock Set 85
CMOS Image Sensors 91
Color Bars 63
Color space 27
Color temperature 41

Cueing up 39

D

DC IN Power 23
DC Voltage Alarm 85
Detail 66
Display Clip Properties 48
Display On/Off 75

E

Electronic Shutter 41
Error Indications 99
ExpressCard slot 88
External Monitor 87
External Synchronization 89

F

False Color Display 45
Fan Control 84
File menu 79
FILE screen 52
Flange focal length 25
Flare 58
Flicker Reduce 63
Focus Magnifier 44
Format 29, 31, 32
Format Media 78

G

Gain 41, 59
Gamma 64
Genlock 83, 89
GENLOCK IN connector 89

H

HDMI OUT connector 87, 96
Headphones connector 39
Hours Meter 85

I

Image Inversion 63

K

Knee 65

L

Language 85
Lens 24

Lens File 81
Lens Interface 63

M

Main recorded signal 26
Maintenance menu 82
Marker 74
Matrix 67
Media Full 29
Media menu 78
Media Near Full 29
MENU button 54
MENU dial 50, 54
Monitor 3D LUT 80
Monitor LUT 71, 79
MPEG2 Proxy 48, 77
Multi Matrix 68

N

ND Filter 10
Nonlinear editing 88

O

Offset White 58
OPTION button 47
Output Display 72
Output Format 70
Output Setting 70
Output signal 92

P

Paint menu 64
Peaking 73
Picture Cache Function 43
Picture Cache Rec 77

R

REC button 39
Rec Control 77
Rec Format 83
Rec Review 44
Recording menu 77

S

S&Q Motion 62
SBAC-US20 88
Scene File 79
SD memory card 30

SDHC memory card 30
SDI OUT connector 87, 92
SDI Rec Control 77
SEL/SET dial 50, 54
Sensitivity 41
Setting value file 30
Setup menu 54, 57
Shooting mode 26
Shutter 60
Simultaneously recording 44
Skin Detail 67
SLOT SELECT button 29
Slow & Quick Motion 43
Slow Shutter 61
Status screen 11, 18
Sub display 16, 50
Sub display setting items 51
Switch/Lamp 84
SxS Device Driver Software 88
SxS Memory Cards 28
System frequency 26
System menu 82
System Setting 82

T

TC connector 89
TC Display 76
TC/UB menu 76
TEST OUT connector 87, 98
Test Saw 82
Thumbnail menu 47
Thumbnail screen 46
Time and date 23
Time Data 42
Time Zone 23
Timecode 42, 76, 89

U

Update Media 78
USB cable 88
USB wireless LAN module 34
User Gamma 79
User Menu 55
User Menu Item 79
UTC 23

V

- Version 86
- VF menu 73
- VF Setting 73
- Video format 92
- Video menu 70
- Viewfinder 19, 25
- Viewfinder double speed drive function 45

W

- Warning Indications 99
- White 57
- White balance 41
- White Clip 65
- Wi-Fi 86
- Wi-Fi remote commander 35

Z

- Zebra 74

