Interchangeable Lens Digital Camera

ILME-FR7 / ILME-FR7K

This guide describes the configuration and operation of the ILME-FR7 / ILME-FR7K Interchangeable Lens Digital Camera.

Refer to this manual and the operating instructions for related devices as required.

Help Guide recommended topics

By starting to use this product, you are deemed to have agreed to the terms of the software license agreement.

Accessing the Web App from a Web Browser

By connecting the unit to a tablet or computer, you can operate and configure the unit from a web browser.

Initial Setup of the Unit

Initialize the settings of the unit, such as administrator information, display language, and date and time settings from the Web App.

Resetting Unit Settings

You can restore all network and unit settings to the factory default settings.

Connector Block

This topic describes the location and function of parts on the connector block of the unit.

Connecting an RM-IP500 Remote Controller

You can connect an RM-IP500 Remote Controller to the unit.

Specifications

Detailed specifications of the unit.

Troubleshooting

Describes the symptoms, causes, and solutions for problems that may occur when using the unit.

Connecting the Unit to a Network Device Via Wired Connection

You can connect the unit to a network that does not have a DHCP server (fixed IP address mode). See “Connecting to a network without a DHCP server.”

Attaching/Removing a Lens

Connecting a Power Supply

Configuring Before Shooting

Initializing the Unit Using the Web App

Preparing Memory Cards

Shooting

Basic Operation

Adjusting the Framing

Adjusting the Shooting Direction

Adjusting the Zoom

Saving/Restoring the Camera Pan/Tilt/Zoom Position (Preset Position)

Recording/Playing Camera Framing Operations (PTZ Trace)

Automatic Camera Framing (PTZ Auto Framing)

Adjusting the Focus

Adjusting the Focus Manually (Manual Focus)

Adjusting the Focus Automatically (Auto Focus)

Useful Functions

Proxy Recording

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Playing Clips and Other Clip Operations

Camera Menu and Detailed Settings

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User Menu

Edit User Menu

Shooting Menu

Project Menu

Paint/Look Menu

Pan-Tilt Menu

TC/Media Menu

Monitoring Menu

Audio Menu

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Network Menu

Web Menu and Detailed Settings

Monitoring Menu

Audio Menu

Technical Menu

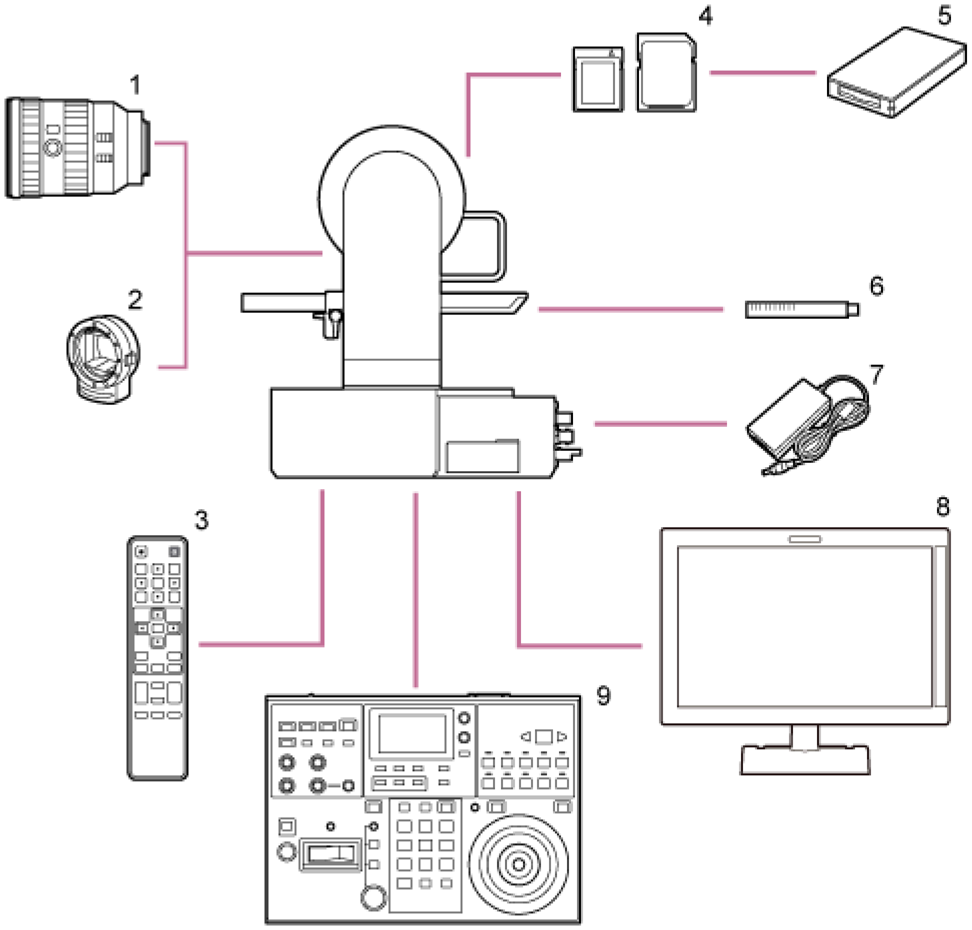
Network Menu

Stream Menu

Appendix

System Configuration Example

This unit can be combined with peripheral devices to form various system configurations.

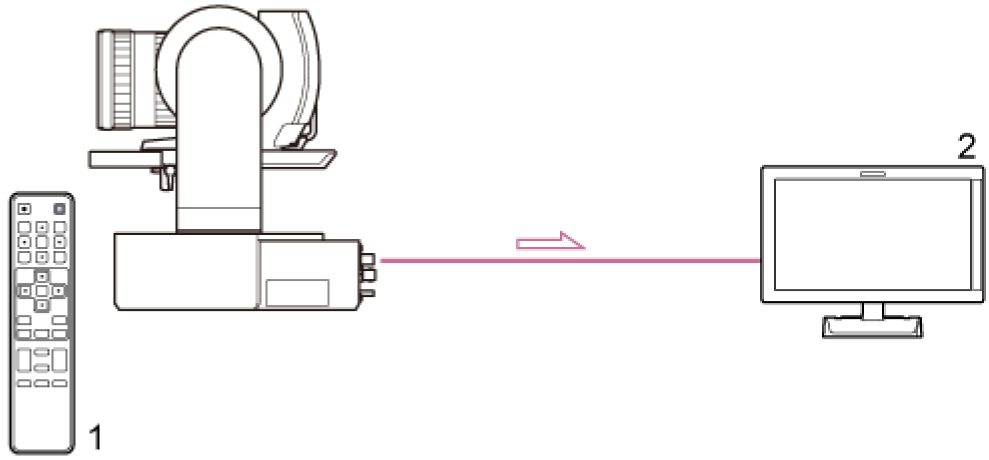


1. **E-mount lens**
2. **LA-EA3 / LA-EA4 A-mount Adaptor**
3. **Infrared remote control (supplied)**
4. **CFexpress Type A memory cards / SDXC memory cards**
5. **CFexpress Type A card reader / SD card reader**
6. **ECM-680S, ECM-678[*], ECM-674[*] Microphone**

   [*] EC-0.5X3F5M 3-pin → 5-pin XLR adaptor cable is required.
7. **AC adaptor (supplied)**
8. **Video monitor**
9. **RM-IP500 Remote Controller**

Controlling a Single Unit Using the Supplied Infrared Remote Control

You can control a single unit remotely using the supplied infrared remote control.

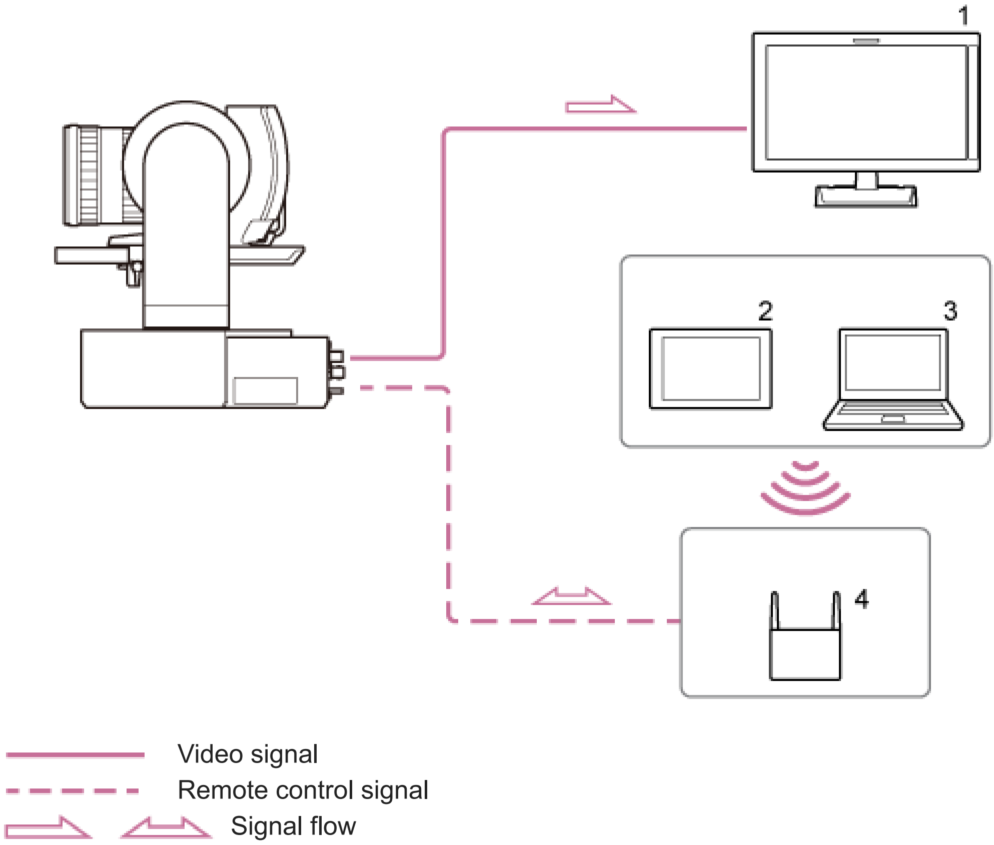


— Video signal
⇨ Signal flow

1. **Infrared remote control (supplied)**
2. **Video monitor**

Controlling a Single Unit Using a Tablet or Computer

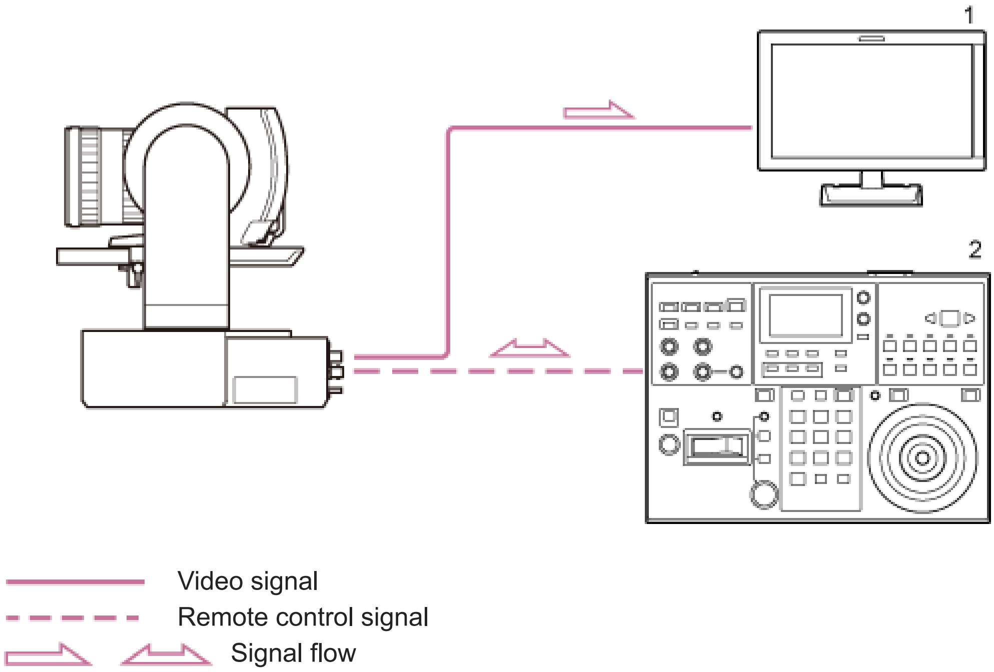
You can connect a tablet or computer to the unit and then control unit using a web browser.



1. **Video monitor**
2. **Tablet**
3. **Computer**
4. **Access point**

Controlling a Single Unit Using an External Remote Controller

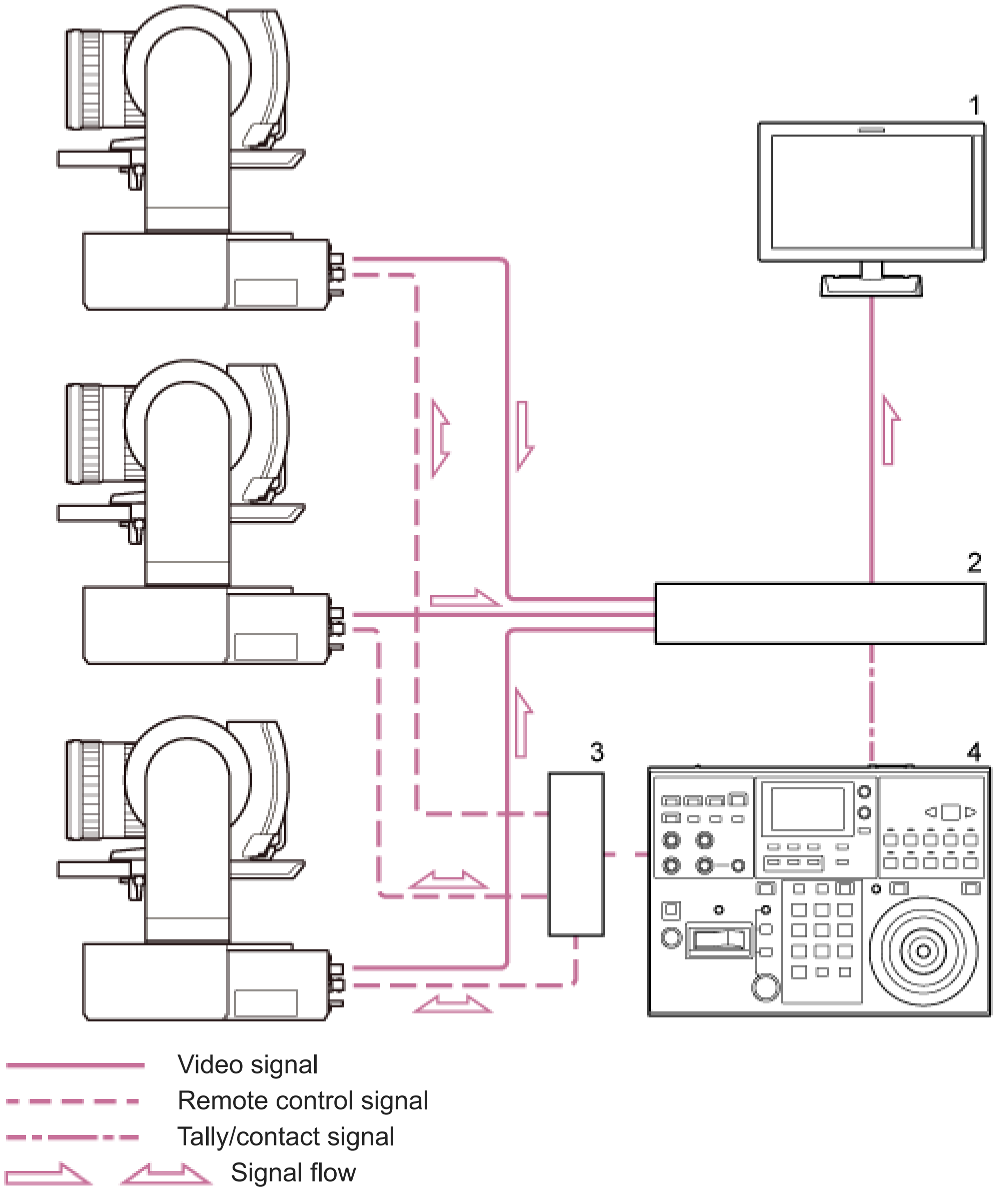
You can control the unit remotely using a remote controller.



1. **Video monitor**
2. **RM-IP500 Remote Controller**

Controlling Multiple Units Using External Remote Controller

You can control up to 100 units remotely using a single remote controller.



1. **Video monitor**
2. **Video switcher**
3. **Ethernet hub**
4. **RM-IP500 Remote Controller**

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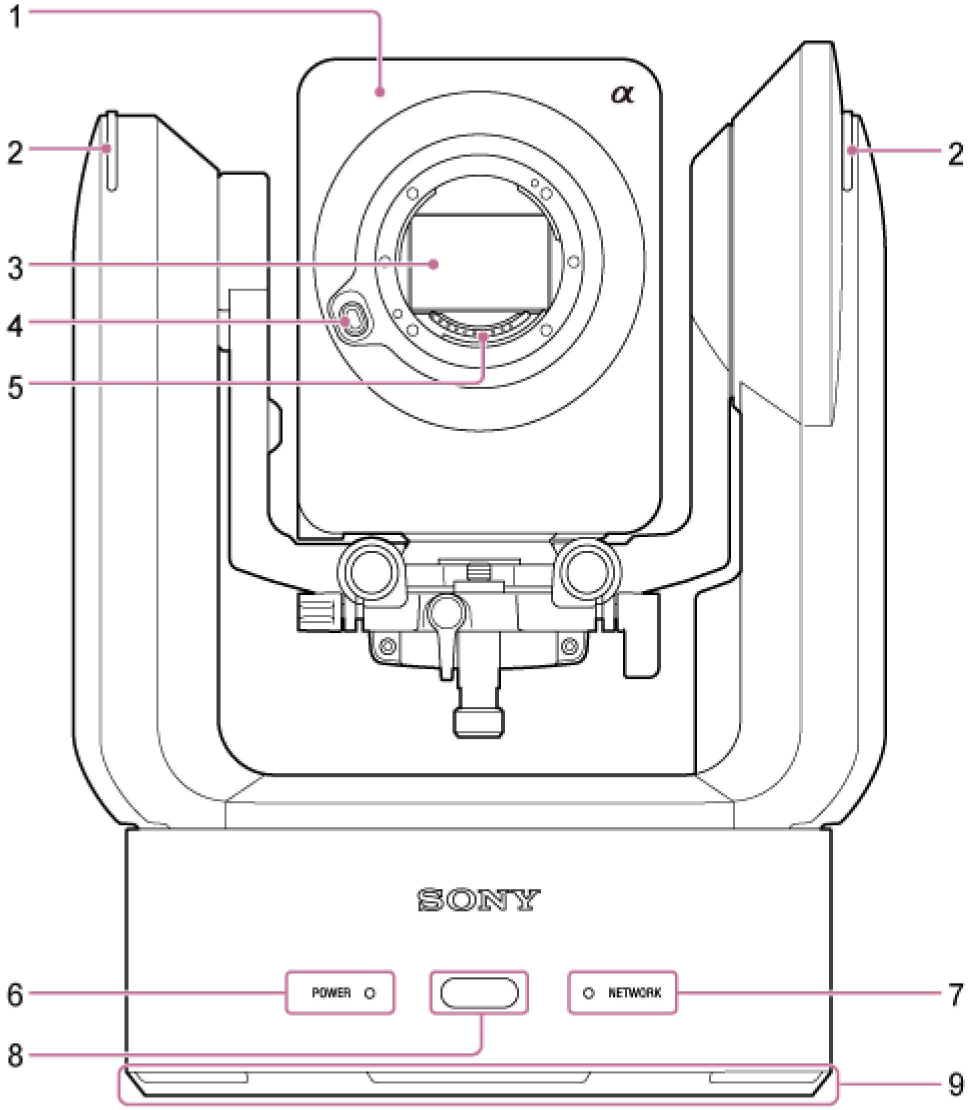
Front View

This topic describes the location and function of parts on the front of the unit.

Hint

- This description refers to the illustration of the unit without an attached lens.



1. **Camera head**

   Note

   - Do not subject the camera head to strong impacts.

2. **Recording/tally lamp**
   When configured as a recording lamp, the lamp lights up red when recording to a memory card. The lamp blinks when the remaining free space on the recording media is low or when an error occurs.

- For details, see “Error/Warning Messages.”

When configured as a tally lamp, the lamp lights up red or green according to the external tally signal.

- For details, see “Connecting a Tally Signal.”

When [Technical] > [Tally] > [Tally Control] is set to [PTZ AFR] in the web menu, it displays the auto framing operation status.

- For details, see “Checking the PTZ Auto Framing Status Remotely.”

3. **Image sensor**

Note

- Do not touch directly with your hands.

4. **Lens release button**
   Press to remove the lens.

- For details, see “Removing a Lens.”

5. **Lens signal contacts**

Note

- Do not touch directly with your hands.

6. **POWER lamp**

7. **NETWORK lamp**
   The state of the unit is indicated by the combination of display color and lit status (lit, blinking, not lit) of the POWER lamp and NETWORK lamp.

POWER lamp	NETWORK lamp	Unit status
Lit green[*1]	Lit green	Power-on (network connected)
	Not lit	Power-on (network not connected)
Blinking green	Not lit	Power-on process in progress
Lit orange	Not lit	Power standby state
Blinking yellow	Not lit	Software update in progress
Blinking orange slowly[*2]	Blinking green slowly[*2]	The unit cannot operate normally. For details, view the system log. If the problem persists even after putting the unit in standby mode or turning the power off and then on again, contact your Sony service representative.
Blinking orange rapidly[*3]	Blinking green rapidly[*3]	A malfunction occurred in the unit. Contact your Sony service representative.

[*1] Blinks green when a command is received from the supplied infrared remote control.
[*2] Blinking slowly: Blinking once per second

[3] Blinking rapidly: Blinking four times per second

8. **Infrared remote control sensor**
   Receives the control signal from the supplied infrared remote control.

9. **Air inlet**

> **Note**
> - Do not block the air flow. Doing so may cause a malfunction.

Related Topic

- Error/Warning Messages
- Connecting a Tally Signal
- Checking the PTZ Auto Framing Status Remotely
- Removing a Lens

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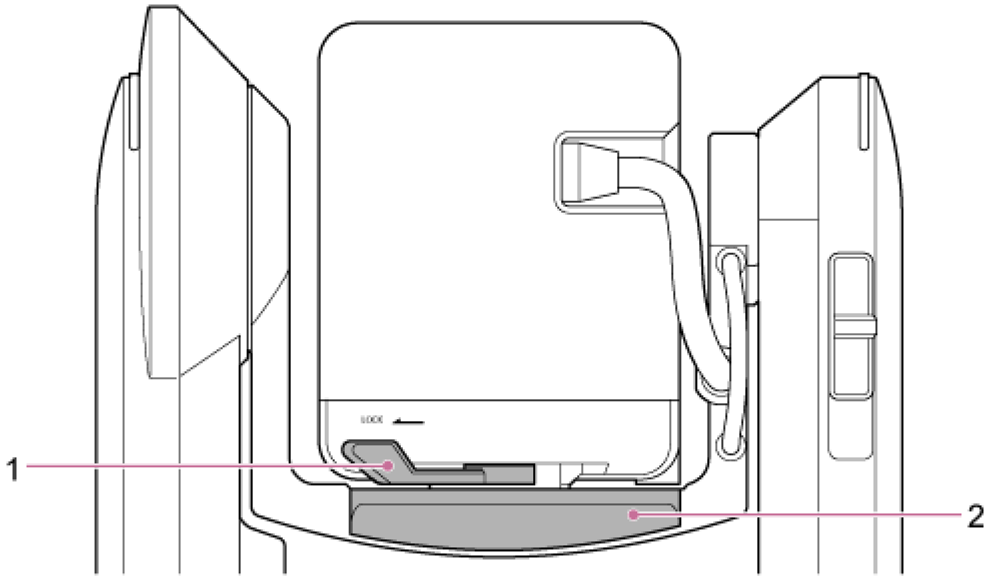
Rear View

This topic describes the location and function of parts on the rear of the unit.



1. **Camera head lock lever**
   Locks the forward/rearward movement of the camera head.

   Note

   - Always set to the lock position when not changing the lens.
   - When transporting the unit, always remove the lens and set to the lock position.
   - Turn off the power of the unit and lock the camera head horizontally using the pan/tilt lock lever before operating the lock lever to avoid injury due to pinched fingers. For details about the pan/tilt lock lever, see “Pan/tilt lock lever” in “Side View.”

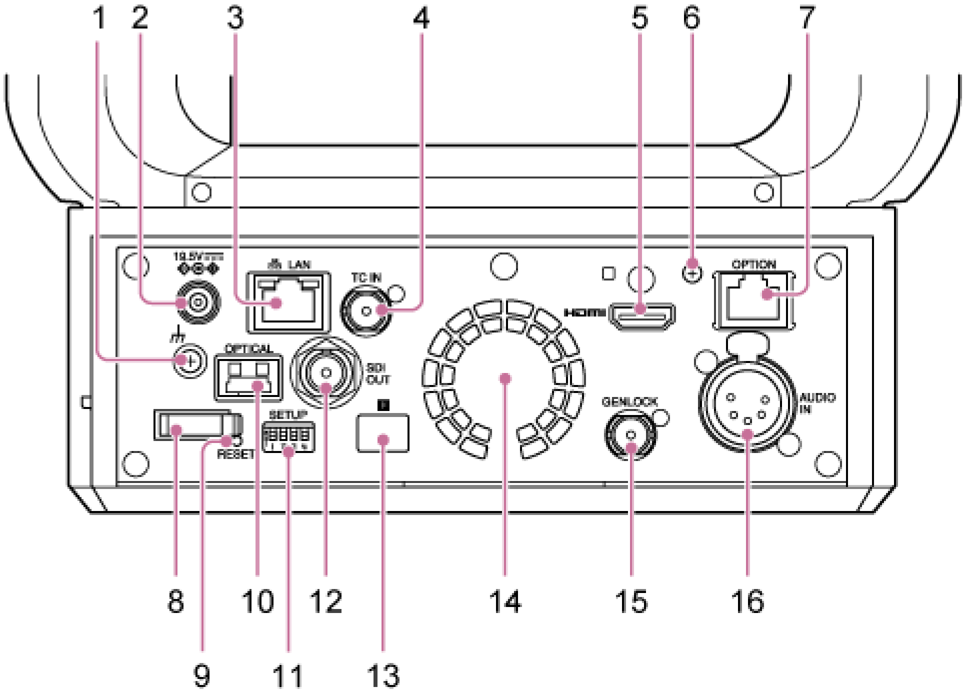
2. **Slide base**

Related Topic

- Side View

Connector Block

This topic describes the location and function of parts on the connector block of the unit.



1. **⏚ (ground) connection**
   Connect to ground by connecting to the ground terminal of a power outlet or to a grounding bar.

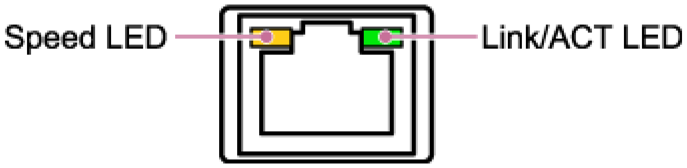
2. **DC IN connector (standard DC jack)**
   Connect to an AC adaptor.

   Note

   - Do not use any AC adaptor other than the one provided. Connecting another adaptor may cause a fire or malfunction.

3. **🖧 LAN (network) connector (RJ-45)**
   Connect a network cable (category 5e or higher) for network communication and PoE++[*] power supply.

   [*] PoE++: Power over Ethernet Plus Plus. Conforms to IEEE802.3bt (Type 4 Class 8). For details about connecting, refer to the operating instructions for the power supply device.



Speed LED display status
Indicates the speed of the network connection.

Display	Connection speed
Not lit	10 Mbps connection
	100 Mbps connection
Lit orange	1000 Mbps connection

Link/ACT LED display status

Indicates the status of the network connection.

Display	Connection status
Not lit	No link
Blinking green	Link established, data active
Lit green	Active link

Note

- When connecting this product to the Internet, connect via a system that provides a protection function, such as a router or firewall. If connected without such protection, security issues may occur.

4. **TC IN connector**

   Input an external reference timecode signal.

   - For details, see “Locking the Timecode to Other Devices.”

5. **HDMI connector**

   Outputs the video from the unit as an HDMI signal.

   - For details, see “HDMI OUT connector (Type A connector)” in “Connecting External Monitors and Recording Devices.”

6. **HDMI cable retaining plate mounting screw**

   To prevent the HDMI cable from being removed, attach the supplied HDMI cable retaining plate using the supplied mounting screw (M2.6×6), and attach the HDMI cable using a commercially available cable tie or band.

   - For details about attaching the HDMI cable retaining plate, see “Connecting Cables.”

7. **OPTION connector**

   Use to connect a tally signal from an external device or a lens controller.

   - For details, see “Connecting a Tally Signal” and “Connecting a Lens Controller.”

8. **Cord clamper**

   Use to secure the AC adaptor cord.

9. **RESET switch**

   Press for at least 5 seconds using the tip of a pen or similar device to reset the settings of the unit to the factory default values.

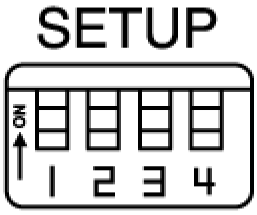
   You can select whether to reset the network connection settings only or all settings using SETUP switch 1.

10. **OPTICAL output connector**

    Outputs an SDI signal converted to optical format when an SFP+ module (option) is connected.

    - For details, see “Outputting an Optical Fiber Signal.”

11. SETUP switches



Configures the following settings.
Switch 1: Sets which settings are reset when the RESET switch is pressed.

Setting	Description
OFF (default)	Resets the network connection settings only. The network settings, security settings, and user information (user name and password) of the unit will be reset.
ON	Resets all settings to factory defaults.

Switch 2: Sets whether the +48 V power supply (phantom power) is turned on/off when an audio input device is connected. The setting is applied immediately.
This function is enabled when [Audio] > [Audio Input] > [AUDIO IN Select] is set to [MIC] in the camera menu.

Setting	Description
OFF (default)	Do not supply +48 V power (phantom power supply). Configure this setting when using an external audio device (such as a mixer), dynamic microphone, or microphone with a built-in battery.
ON	Supply +48 V power (phantom power supply) to a phantom power compatible microphone connected to the AUDIO IN connector (CH-1 or CH-2).

Note

- Setting switch 2 to the ON position and connecting a microphone that is not compatible with a +48 V source may damage the connected device. Check the setting before connecting the device.

Switch 3: Enables/disables VISCA over IP communication. The settings are applied when the camera is turned on. Set to the ON position to use the unit when connected to a remote controller (RM-IP500).

Setting	Description
OFF (default)	Will not respond to VISCA over IP commands.
ON	Accepts VISCA over IP commands.

Note

- If the administrator password has not been configured, VISCA over IP communication is disabled, regardless of the switch setting. For details about configuring the administrator password, see “Initial Setup of the Unit.”

Switch 4: Sets the IP address to a specific value.

Setting	Description
OFF (default)	The user sets the IP address.

Setting	Description
ON	Sets the IP address of the unit to 192.168.0.100 at startup (fixed IP address mode). **Note** - If the IP address is changed after startup in the web menu, set this switch to the OFF position.

Hint

- Switch 4 sets the IP address in software version 3.0 and later.
- If using a software version prior to 3.0, this sets the infrared remote control. For details, see [Technical] > [IR Remote] > [Pan-Tilt Speed] in the web menu.
  OFF: Pan/tilt operates at normal speed.
  ON: Pan/tilt operates at high speed.

12. **SDI OUT connector**
    Outputs the video from the unit as a 12G/6G/3G/HD-SDI signal.
    The unit can also be configured for RAW signal output.

    - For details, see “SDI OUT connector (BNC type)” in “Connecting External Monitors and Recording Devices.”

13. **IR Infrared remote control sensor (rear)**
    Infrared sensor for the supplied infrared remote control.

14. **Fan/air outlet**
    Emits heat from inside the unit.

    Note

    - Do not cover the air outlet. Doing so may cause a malfunction.
    - Note that the area near the air outlet may become hot.

15. **GENLOCK connector**
    Use to input an external sync signal.

    - For details, see “Synchronizing the Phase of the Video Signal (Genlock).”

16. **AUDIO IN connector (XLR type 5-pin connector)**
    Use to input the signal from an external microphone or audio device.
    It functions as an AUDIO IN CH-1 connector or AUDIO IN CH-2 connector.

    - For details, see “Connecting an External Microphone or External Audio Device.”

Related Topic

- Locking the Timecode to Other Devices
- Connecting External Monitors and Recording Devices
- Connecting Cables
- Connecting a Tally Signal
- Connecting a Lens Controller
- Outputting an Optical Fiber Signal
- Initial Setup of the Unit

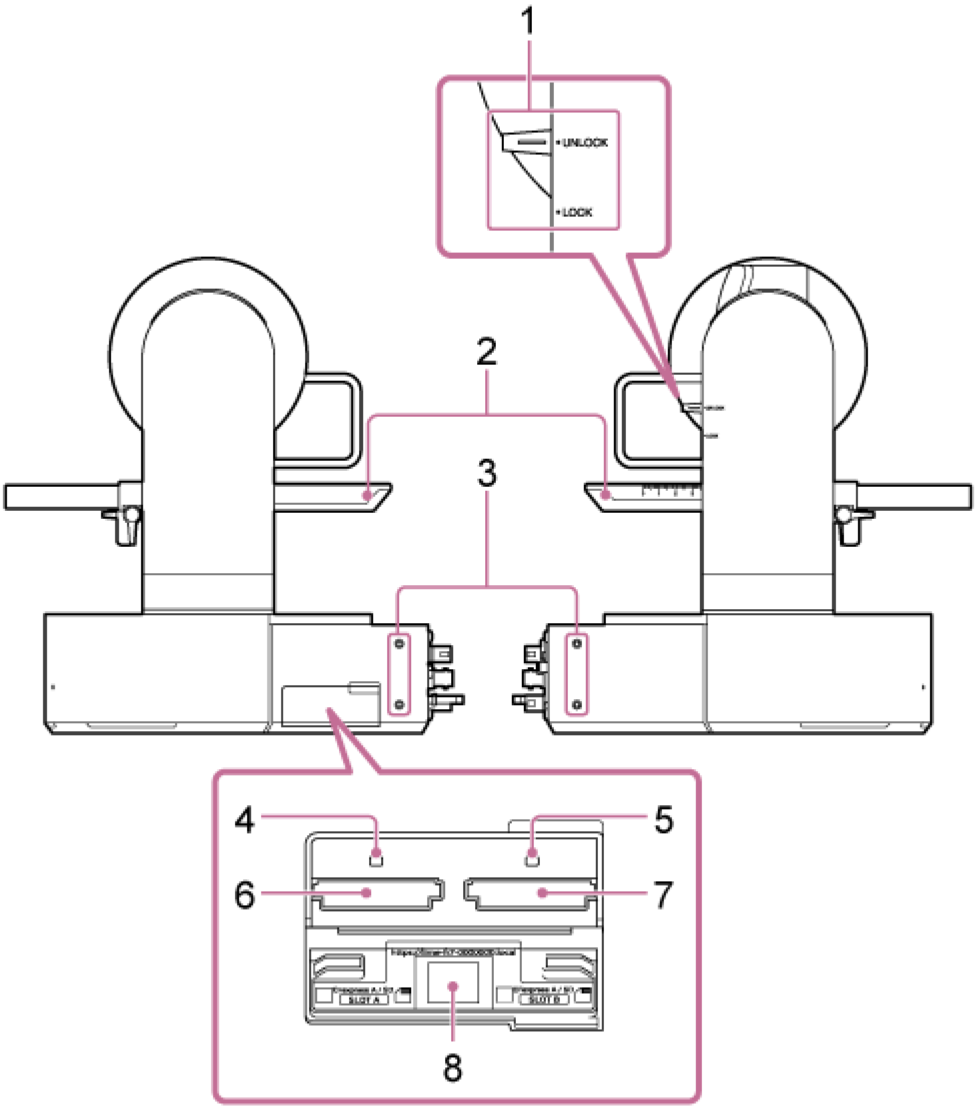
- Synchronizing the Phase of the Video Signal (Genlock)
- IR Remote
- Connecting an External Microphone or External Audio Device

Side View

This topic describes the location and function of parts on the side of the unit.

Hint

- This description refers to the illustration of the unit without an attached lens.

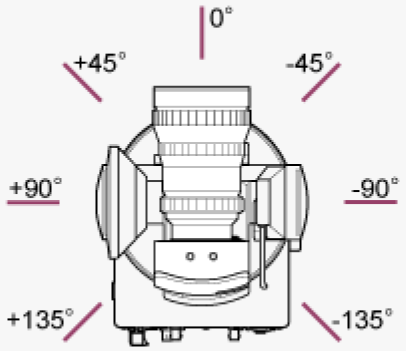


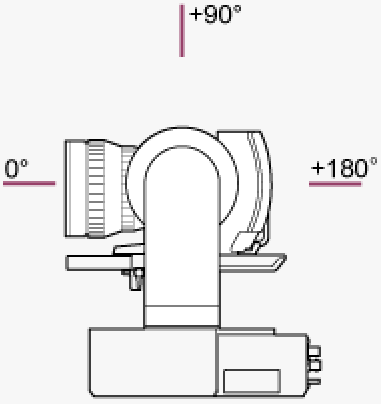
1. **Pan/tilt lock lever**
   Locks the pan/tilt mechanism of the unit. Use in the following cases.

   - When transporting or packing the unit.
   - When attaching or removing a lens. For details, see “Attaching a Lens” or “Removing a Lens.”
   - When using a lens that does not support pan/tilt operation (such as Sony SEL100400GM / SEL200600G / SEL400F28GM / SEL600F40GM lenses).
   - When transporting the unit, always remove the lens and set to the lock position.

   Hint

- The pan/tilt movement can be fixed at the following angles.





2. **Slide base**

3. **Screw holes for external devices (4 places)**
   For M3 screws of up to 6 mm (1/4 inch) length.

   Note

   - Do not use screws longer than 6 mm (1/4 inch). Doing so may cause a malfunction.

4. **Access indicator A**

5. **Access indicator B**
   Indicator is lit or blinks when recording media is inserted.

   - For details, see “Inserting Memory Cards.”

6. **CFexpress Type A / SD card slot (A)**

7. **CFexpress Type A / SD card slot (B)**
   Use for inserting recording media.

   - For details, see “Inserting Memory Cards.”

8. **QR code for network connection**
   Use when configuring initial settings.

   - For details, see “Accessing the Web App from a Web Browser.”

Related Topic

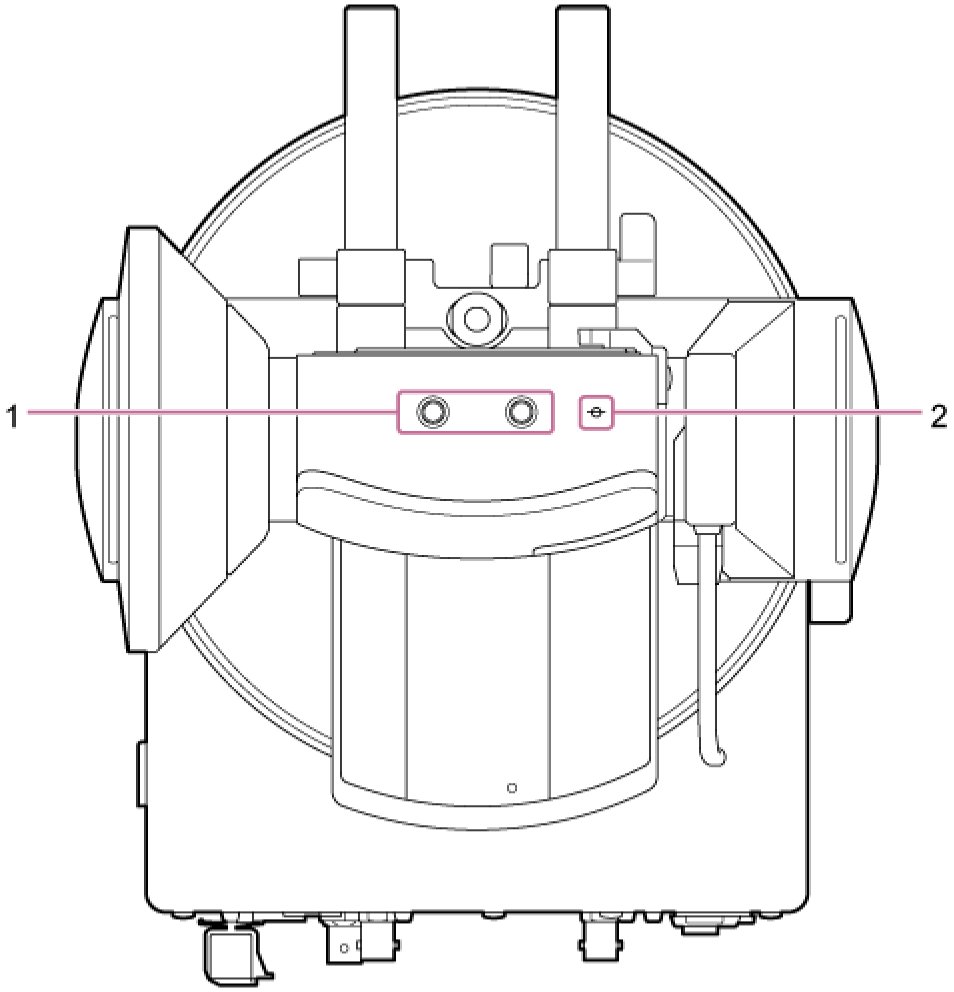
- Attaching a Lens
- Removing a Lens
- Inserting Memory Cards
- Accessing the Web App from a Web Browser

Top View

This topic describes the location and function of parts on the top of the unit.

Hint

- This description refers to the illustration of the unit without an attached lens.



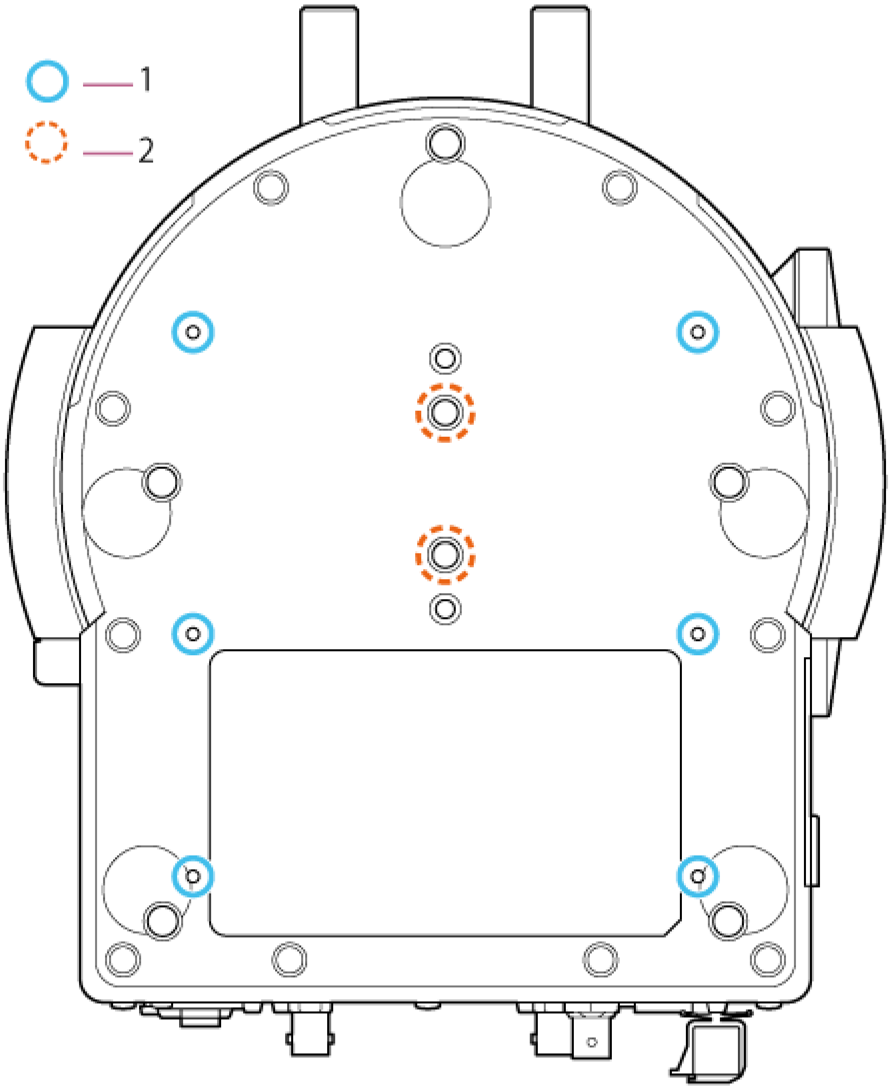
1. **Screw holes for external devices (2 places)**
   Compatible with 1/4-20 UNC screws for a tripod.
   Maximum length of 6 mm (1/4 inch).
2. **ϕ (imager mark)**
   The imager mark is on the same plane as the image sensor.
   To measure the distance between the unit and the subject accurately, use this imager mark as a reference point.

Bottom View

This topic describes the location and function of parts on the bottom of the unit.

Hint

- This description refers to the illustration of the unit without an attached lens.



1. **Ceiling bracket mounting screw holes (6 places, 5.5 mm (7/32 inch) effective thread depth)**
   When mounting the unit on a ceiling or a shelf in a high location, attach the body bracket (option) to the base of the unit using the six body bracket mounting screws in these screw holes.

   - For details about mounting, see "Mounting Upright in a High, Fixed Location" and "Mounting on a Ceiling."

2. **Tripod mounting screws (2 places)**
   Used when mounting the unit on a camera tripod (option, 1/4-20 UNC screws of up to 5.5 mm (7/32 inch) length).

Note

- Do not use screws longer than 5.5 mm (7/32 inch). Doing so may cause a malfunction.

Related Topic

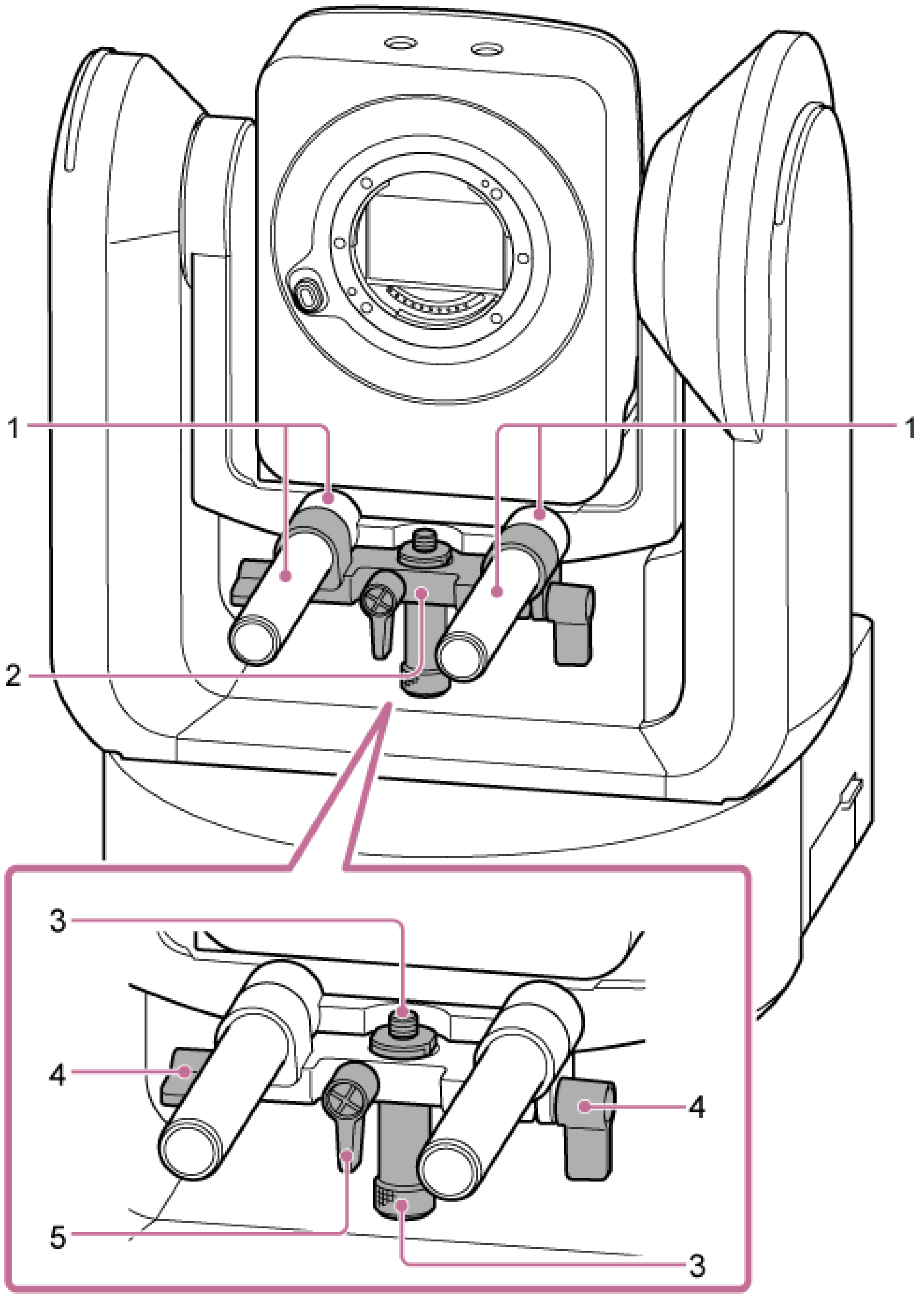
- Mounting Upright in a High, Fixed Location
- Mounting on a Ceiling

Lens Support

This topic describes the location and function of parts of the lens support of the unit.

Hint

- This description refers to the illustration of the unit without an attached lens.



1. **Lens support rod (2)**
   Supports the lens.
   Can also be used for mounting general Ø15 rod accessories.

2. **Lens support unit**
   The lens support can slide forward/rearward according to the lens and then secured.

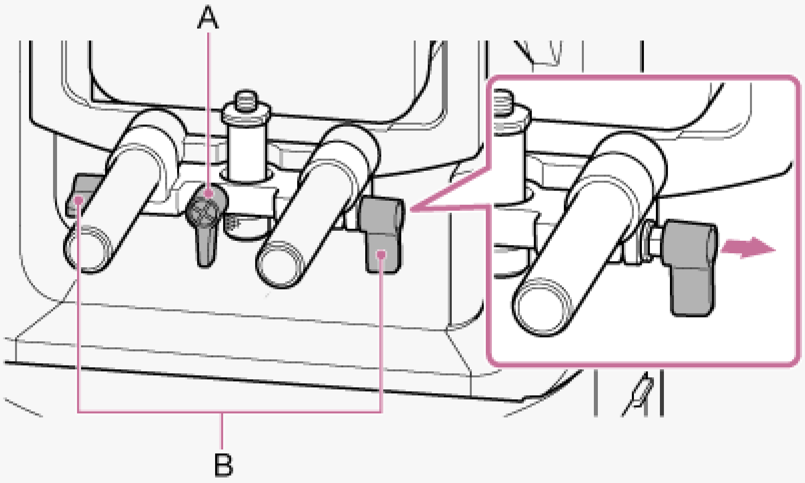
3. **Lens support pedestal attachment screw**
   Attach to the lens support pedestal. You can adjust the screw up/down to match the height of the lens support pedestal.

4. **Lens support rod clamp lever (2 places)**
   Secures the forward/rearward position of the lens support unit.

5. **Lens support pedestal attachment screw clamp lever**
   Secures the vertical position of the lens support pedestal attachment screw.

Hint

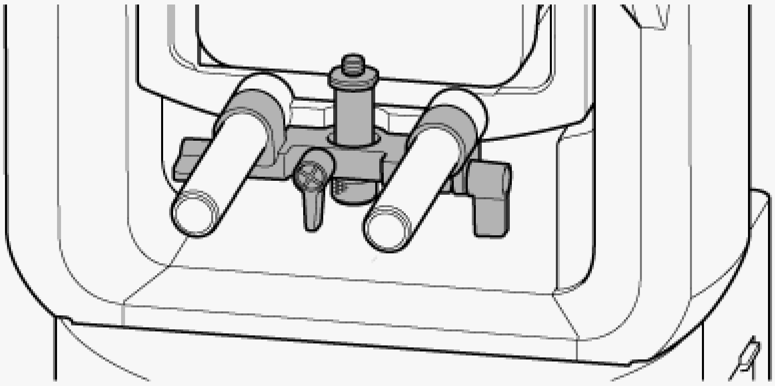
- If a clamp lever is in a position that makes it difficult to turn, release the clamp lever and rotate it to an angle that will make operation easier. When in the desired position, close the clamp lever.



A: Lens support pedestal attachment screw clamp lever
B: Lens support rod clamp lever

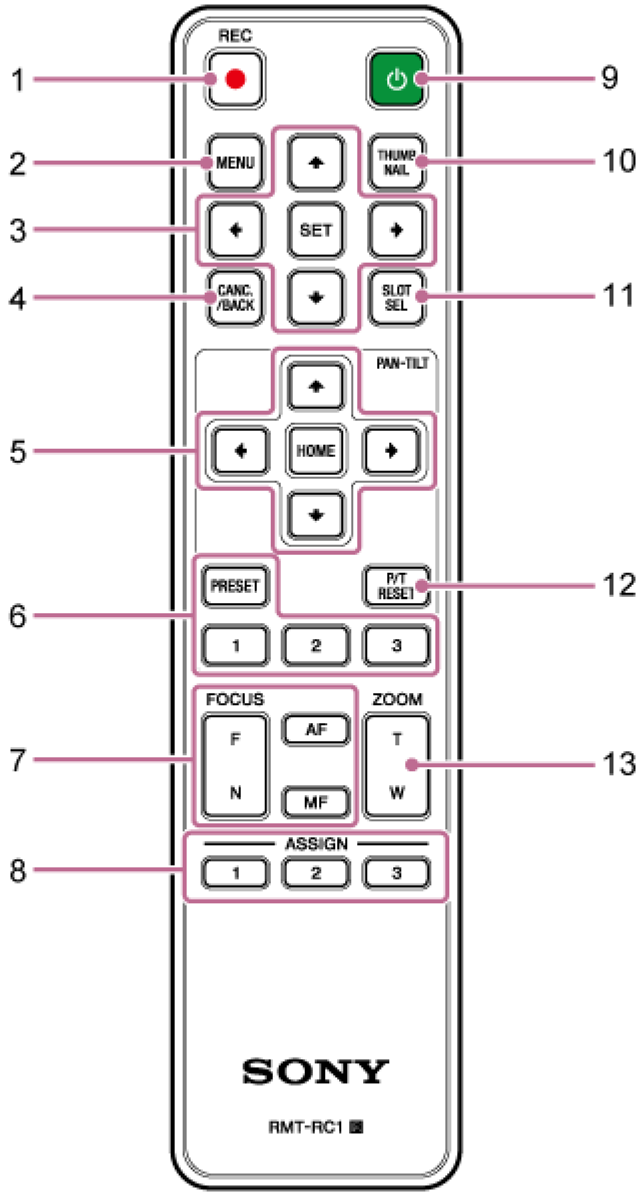
Note

- To prevent the lens support unit from interfering with pan/tilt operation, move the lens support unit up against the camera head when not using the lens support unit, and move the lens support pedestal attachment screw to its highest position (closest to the lens).



Location and Function of Parts of the Infrared Remote Control (supplied)

This topic describes the location and function of pars of the infrared remote control (supplied).



1. **REC● (record START/STOP) button**
   Press to start or stop recording.

2. **MENU button**
   Press to show or hide the camera menu.

3. **GUI control buttons**
   Press to perform operations in the camera menu, in message dialogs that include buttons, and other screen display functions.

4. **CANC./BACK button**
   Press to cancel a setting or to return to the previous screen of the camera menu of the unit.

5. **Pan and tilt control buttons**
   Press the arrow buttons to control the pan/tilt of the camera. Press the HOME button to return the orientation of the camera to face the front.

6. **Preset position control buttons**
   Press and hold the PRESET button and press one of the 1 to 3 buttons to store camera direction, zoom, and focus adjustment status in the pressed number button.
   Press a number button with stored settings to recall the saved state.

7. **Focus control buttons**
   Use to adjust the focus.
   To adjust the focus automatically, press the AF button.
   To adjust the focus manually, press the MF button, then press either the F (Far) button to focus on far subjects or the N (Near) button to focus on near subjects.

8. **Assignable buttons 1 to 3**
   Executes the functions assigned to the assignable buttons using the camera menu.
   If you assign the [Direct Menu] function to an assignable button, you can adjust the exposure, white balance, and other settings using the GUI control buttons.

   - For details about assignment using the camera menu, see “Assignable Buttons.”

   - For details about the direct menu, see “Direct Menu Operation.”

9. **⏻ (power) button**
   Press to turn on the unit or to switch the power supply to standby state.

10. **THUMBNAIL button**
    Displays the thumbnail screen showing the clips recorded on the memory card of the unit.

    - For details about the thumbnail screen, see “Thumbnail Screen.”

    You can select clips and control playback on the thumbnail screen using the GUI control buttons.

    - For details about selecting clips and controlling playback, see “Playing Recorded Clips” and “Operations on Recorded Clips.”

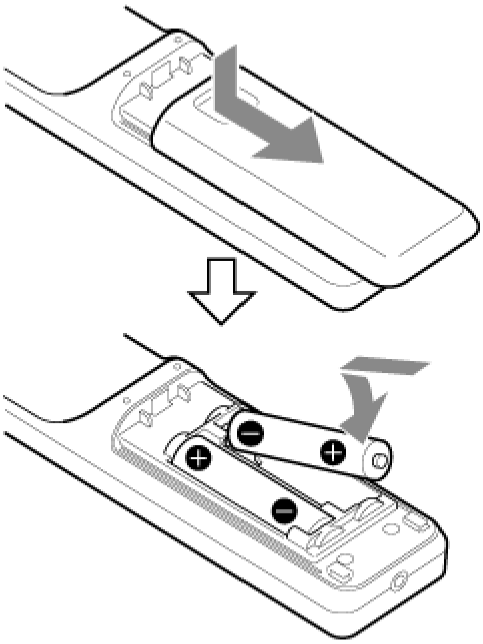
11. **SLOT SEL (memory card slot (A)/(B) select) button**
    When two memory cards are inserted, press the button to switch between the memory cards for recording.
    Press this button while the thumbnail screen is displayed to switch between the memory cards to view.

12. **P/T RESET (pan/tilt reset) button**
    Resets the pan/tilt functions. Press the button when the POWER lamp and NETWORK lamp are blinking simultaneously or when [Execute Pan-Tilt Reset] is displayed in the framing control panel in the Web App.

13. **Zoom control buttons**
    To zoom in, press the T (telephoto) button.
    To zoom out, press the W (wide) button.

Infrared remote control battery

The infrared remote control requires two AA (LR6) batteries.
Insert the batteries into the infrared remote control as shown in the following diagram.



Note

- Do not use any batteries other than manganese or alkaline batteries as they may rupture.
- Dispose of used batteries according to the laws and regulations of the country or region.

Related Topic

- Assignable Buttons
- Direct Menu Operation
- Thumbnail Screen
- Playing Recorded Clips
- Operations on Recorded Clips

Web App Screen Overview

By connecting a tablet or computer, you can pan/tilt, zoom, record, play recorded video, and configure the unit from a web browser (hereinafter, this function is referred to as the “Web App”).

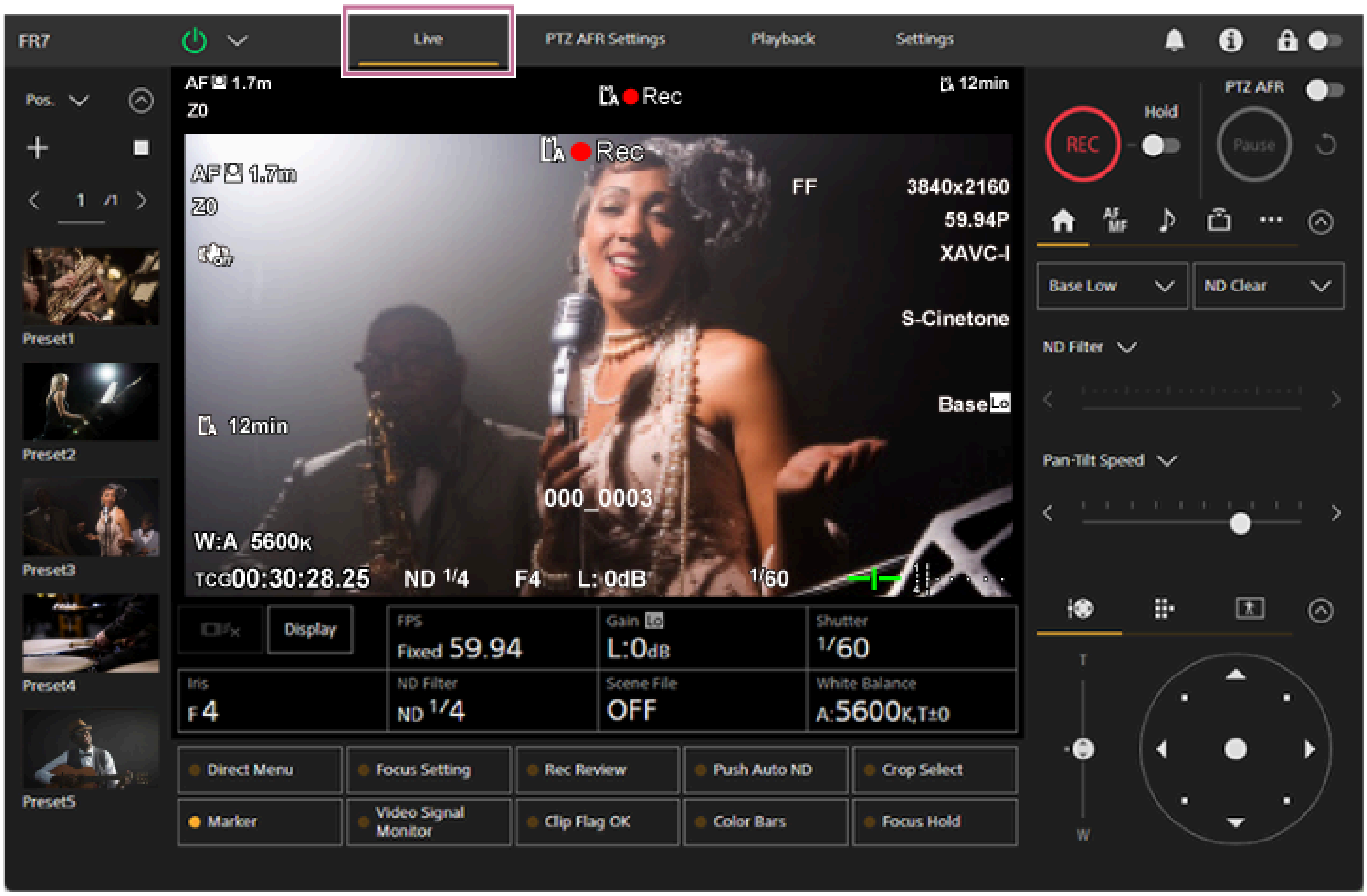
- For details about launching the Web App, see “Accessing the Web App from a Web Browser.”

Note

- The Web App does not support the camera audio output.

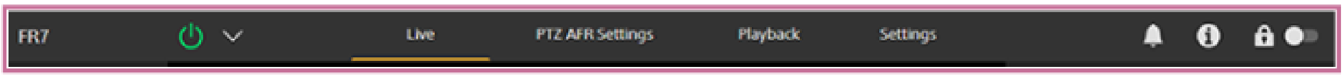
When the Web App launches, the following live operation screen appears.

Live operation screen

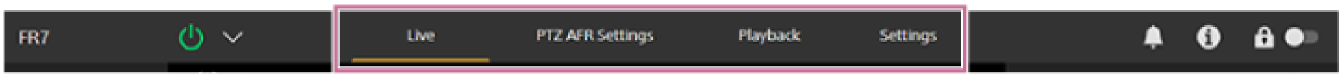


FPS Fixed 59.94
Gain Lo L:0dB
Shutter 1/60
Iris F4
ND Filter ND 1/4
Scene File OFF
White Balance A:5600K,T±0

- For details about the live operation screen, see “Structure of the Live Operation Screen.”
  Buttons and icons common to the live operation screen and playback operation screen are displayed at the top of the screen.

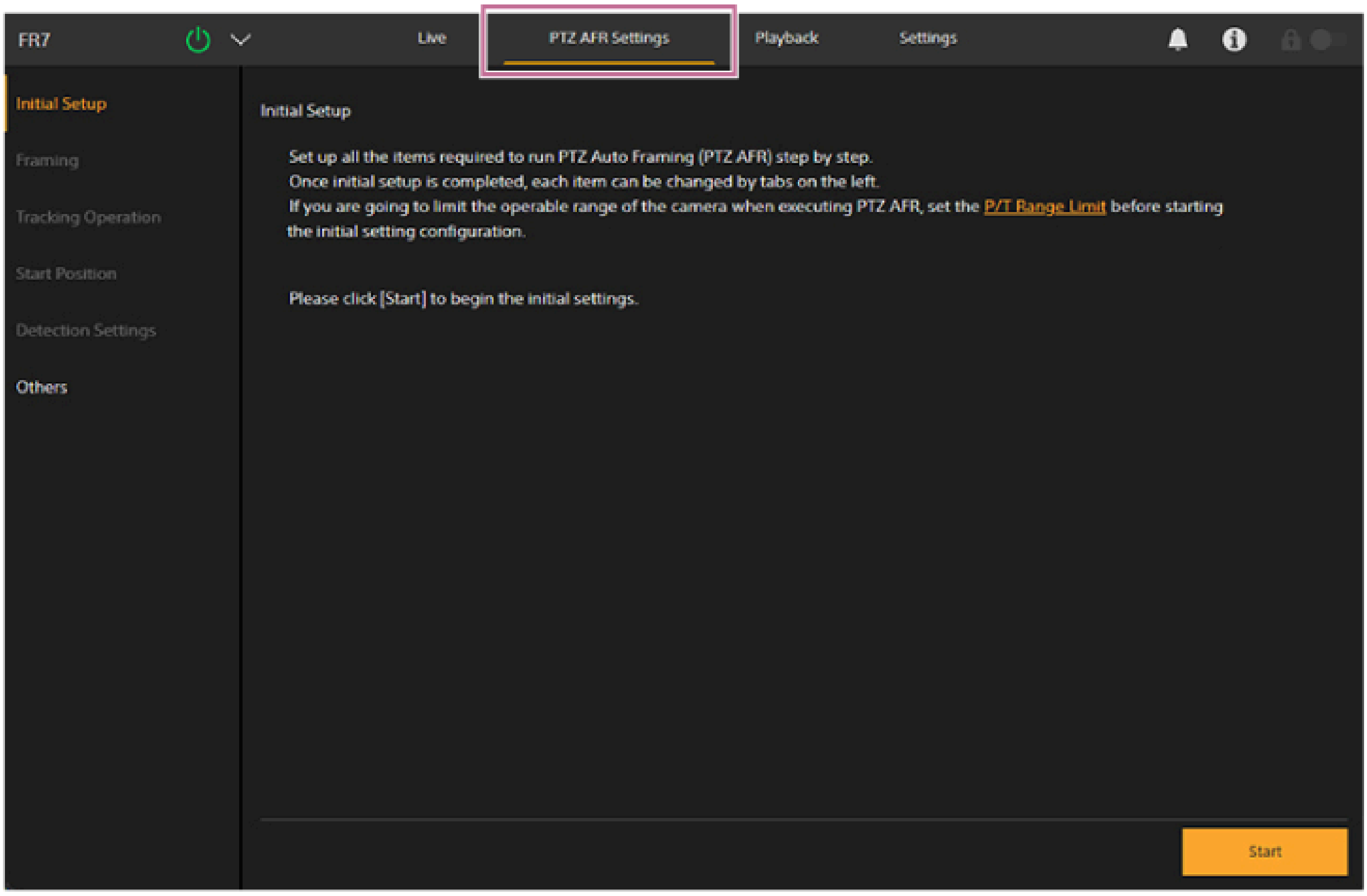


- For details about the common area of the screens, see “Structure of Common Area of Screens.”
  You can switch between screens by pressing the screen switching tabs in the common area.



PTZ AFR settings screen

This screen is used to configure and change the PTZ auto framing initial settings.



Initial Setup

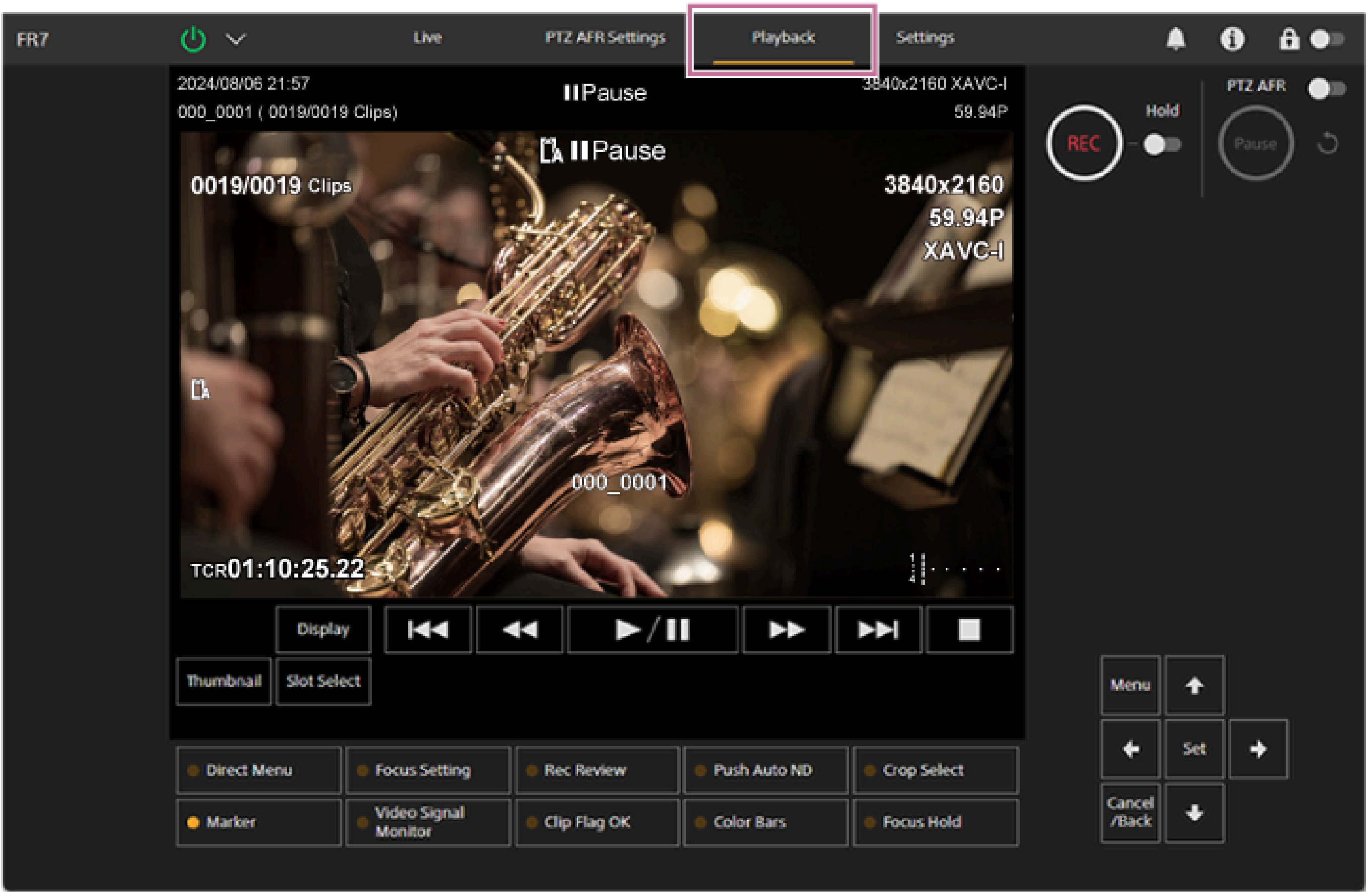
Set up all the items required to run PTZ Auto Framing (PTZ AFR) step by step.
Once initial setup is completed, each item can be changed by tabs on the left.
If you are going to limit the operable range of the camera when executing PTZ AFR, set the P/T Range Limit before starting the initial setting configuration.

Please click [Start] to begin the initial settings.

- For configuration, see “Structure of the PTZ AFR Settings Screen” and “Configuring PTZ Auto Framing Initial Settings.”

Playback operation screen

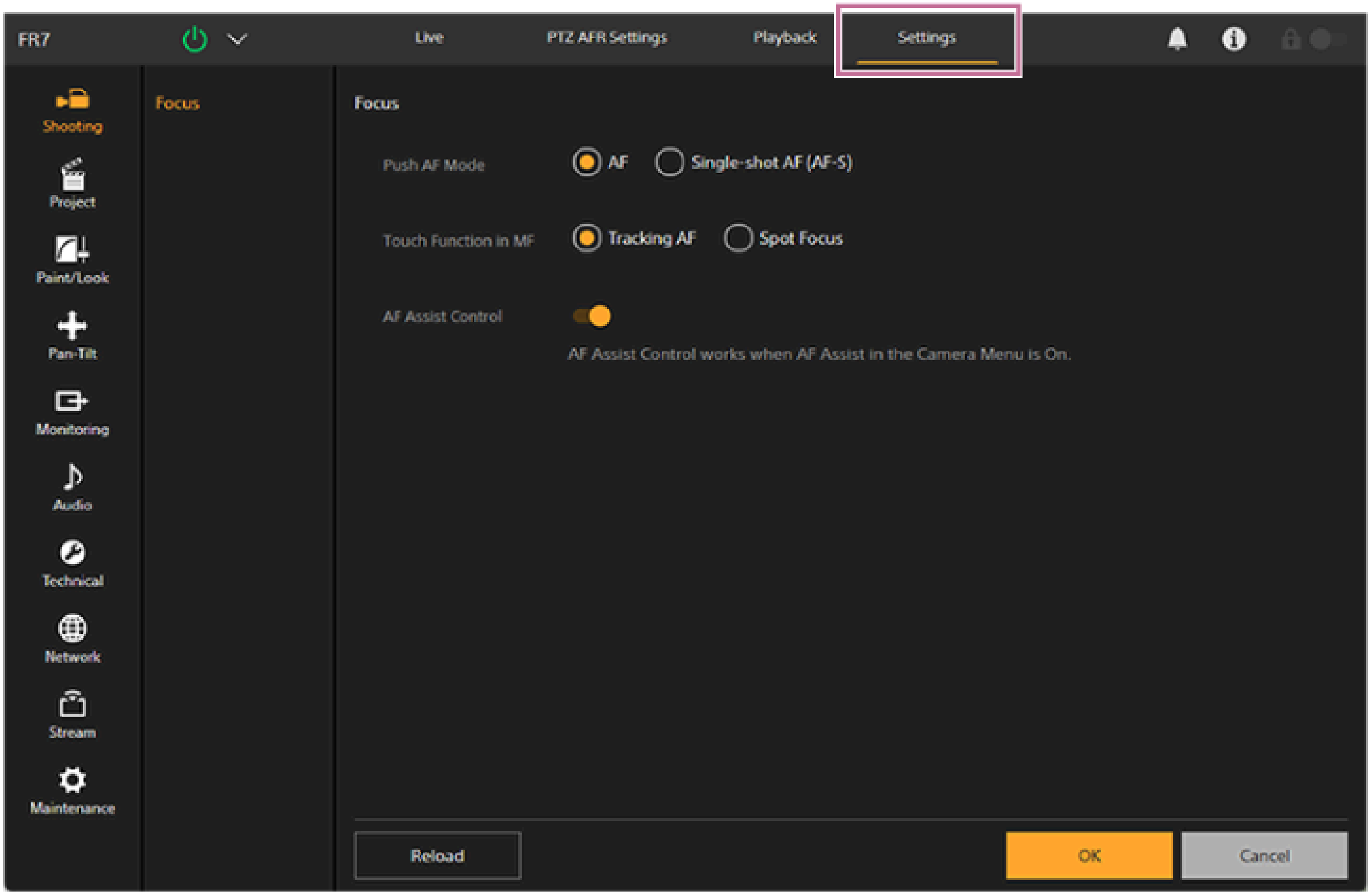
Press the [Playback] tab to display the playback operation screen.



- For details about the playback operation screen, see “Structure of the Playback Operation Screen.”

Settings screen

Press the [Settings] tab to display the settings screen (hereinafter referred to as the web menu).



Push AF Mode ● AF ○ Single-shot AF (AF-S)

Touch Function in MF ● Tracking AF ○ Spot Focus

AF Assist Control ●

AF Assist Control works when AF Assist in the Camera Menu is On.

Note

- In the web menu, settings are not applied until you press the [OK] button. If you change settings on a page that has an [OK] button, be sure to press the [OK] button.

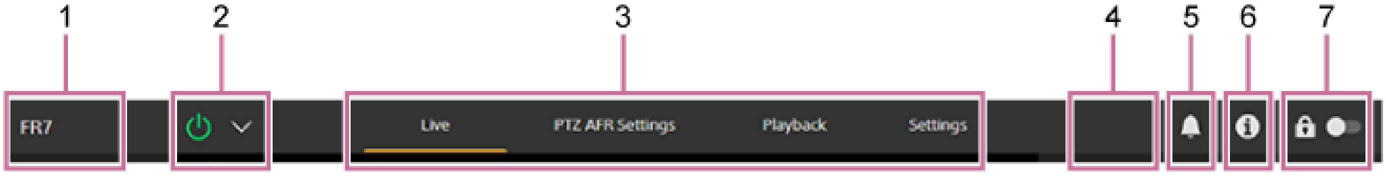
- For details about the settings screen, see “Structure of the Settings Screen.”
- In this Help Guide, the settings screen of the Web App is referred to as the web menu.

Related Topic

- Accessing the Web App from a Web Browser
- Structure of the Live Operation Screen
- Structure of Common Area of Screens
- Structure of the PTZ AFR Settings Screen
- Configuring PTZ Auto Framing Initial Settings
- Structure of the Playback Operation Screen
- Structure of the Settings Screen

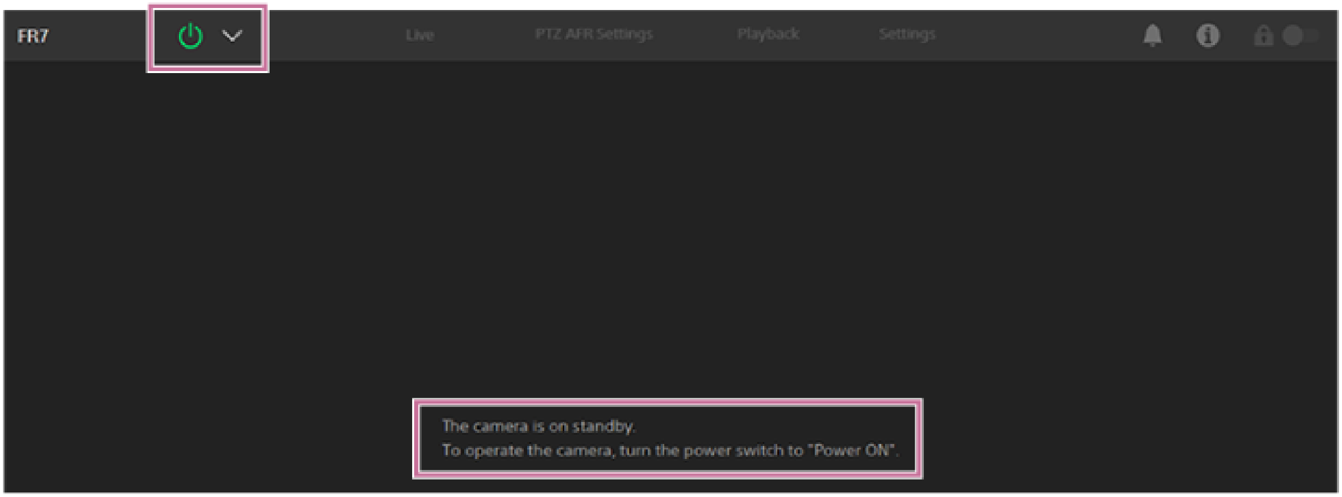
Structure of Common Area of Screens

This topic describes the structure of the common area of screens.



1. **Camera name**
   Displays the name of the camera.
   You can change the name using [Network] > [Camera Name] in the web menu.
   The background color changes according to the external tally signal.

2. **Power switch**
   When the unit is turned on, a check mark is placed in [Power ON] in the switch menu.
   You can press the power switch and select [Power Standby] in the switch menu to set the power supply of the unit to standby state.
   In power standby mode, the following screen appears.



The camera is on standby.
To operate the camera, turn the power switch to "Power ON".

   To turn the power on again, press the power switch and select [Power ON] in the switch menu.

3. **Operation screen switching tabs**
   Press a tab to display the corresponding operation screen.
   [Live] tab: Display the live operation screen.
   [PTZ AFR Settings] tab: Display the PTZ auto framing settings screen.
   [Playback] tab: Display the playback operation screen.
   [Settings] tab: Display the settings screen (web menu).

4. **PoE++ indicator, Abnormal temperature warning**
   PoE++ is displayed when connected to a PoE++ source. If an abnormal temperature condition arises, the 🌡 (Temperature warning) mark appears.

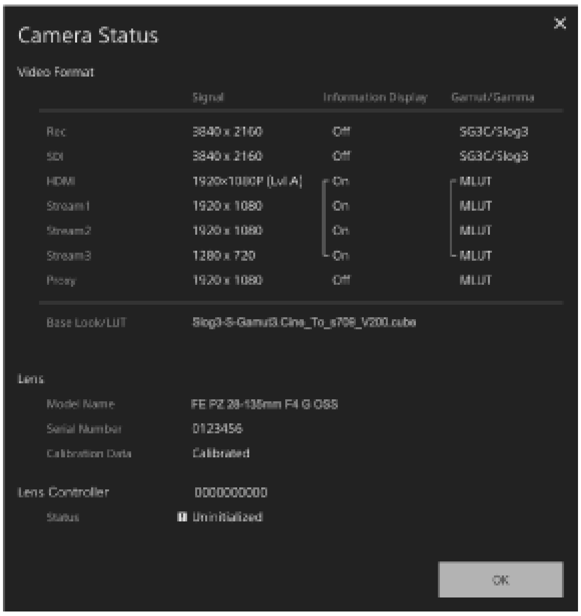
5. **Notifications mark**
   When a message arrives, the mark indication changes as shown below.
   🔔 (Notifications on)

Take the necessary action according to the message displayed in the camera image panel.

Note

- Messages are not displayed when [Monitoring] > [Output Display] > [HDMI/Stream] is set to [Off] in the web menu. Set to [On] to check the contents of messages.

6. **(Camera status) button**
   Press the button to display camera recorded image/output image signal information, lens information, and lens controller (option) status on a separate screen.



Camera Status

Video Format

	Signal	Information Display	Gamut/Gamma
Rec	3840 x 2160	Off	SG3C/Slog3
SDI	3840 x 2160	Off	SG3C/Slog3
HDMI	1920x1080P (Lvl A)	On	MLUT
Stream1	1920 x 1080	On	MLUT
Stream2	1920 x 1080	On	MLUT
Stream3	1280 x 720	On	MLUT
Proxy	1920 x 1080	Off	MLUT

Base Look/LUT: Slog3-S-Gamut3.Cine_To_s709_V200.cube

Lens

Model Name: FE PZ 28-135mm F4 G OSS

Serial Number: 0123456

Calibration Data: Calibrated

Lens Controller: 0000000000

Status: Uninitialized

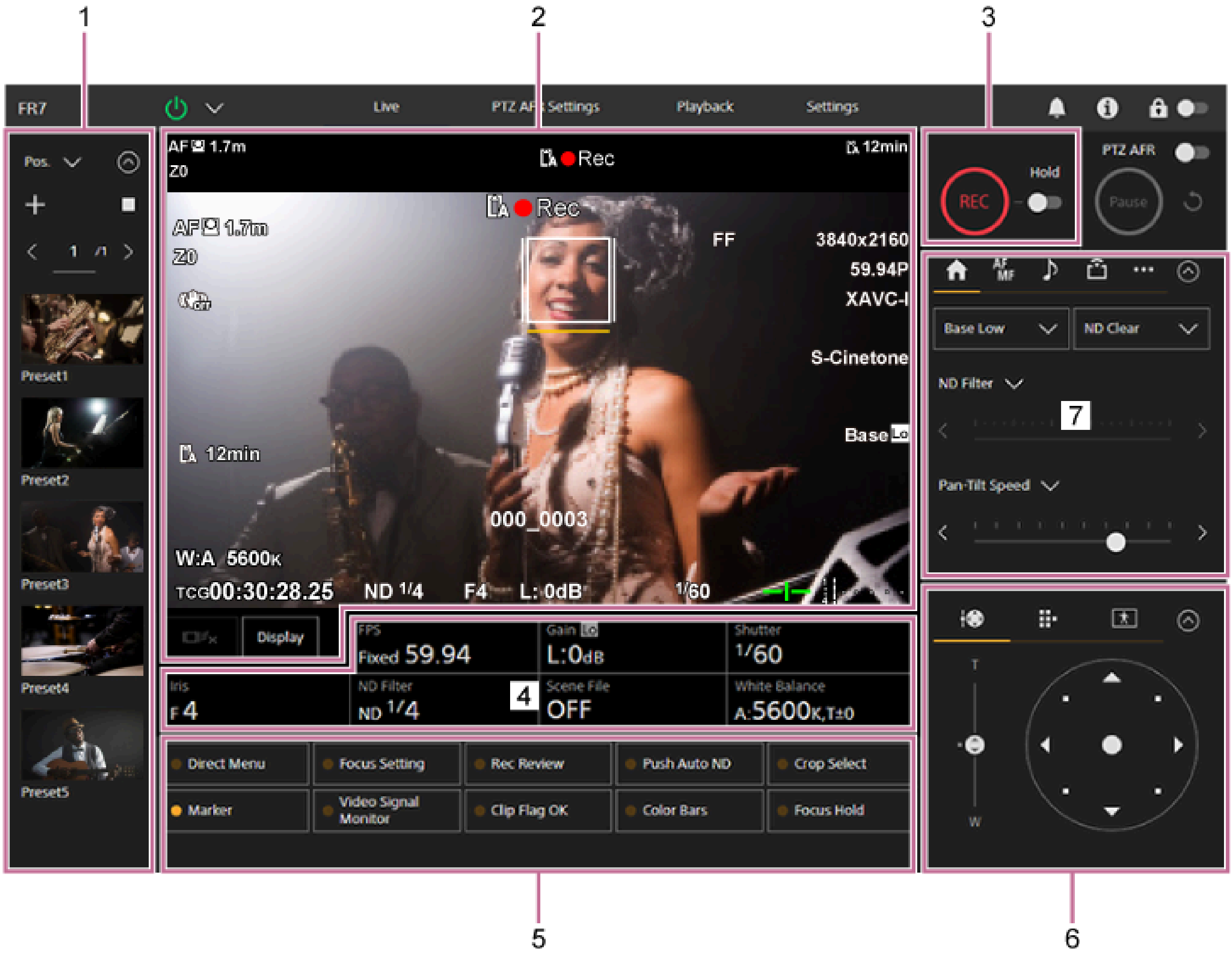
When lens controller (option) related notification occurs, the indication changes as shown below.

7. **Screen operation lock switch**
   (Operation unlock): Set the switch to the left position to control operations on the live operation screen and playback operation screen.
   (Operation lock): Set the switch to the right position to lock operations on the live operation screen and playback operation screen to prevent accidental misoperation.

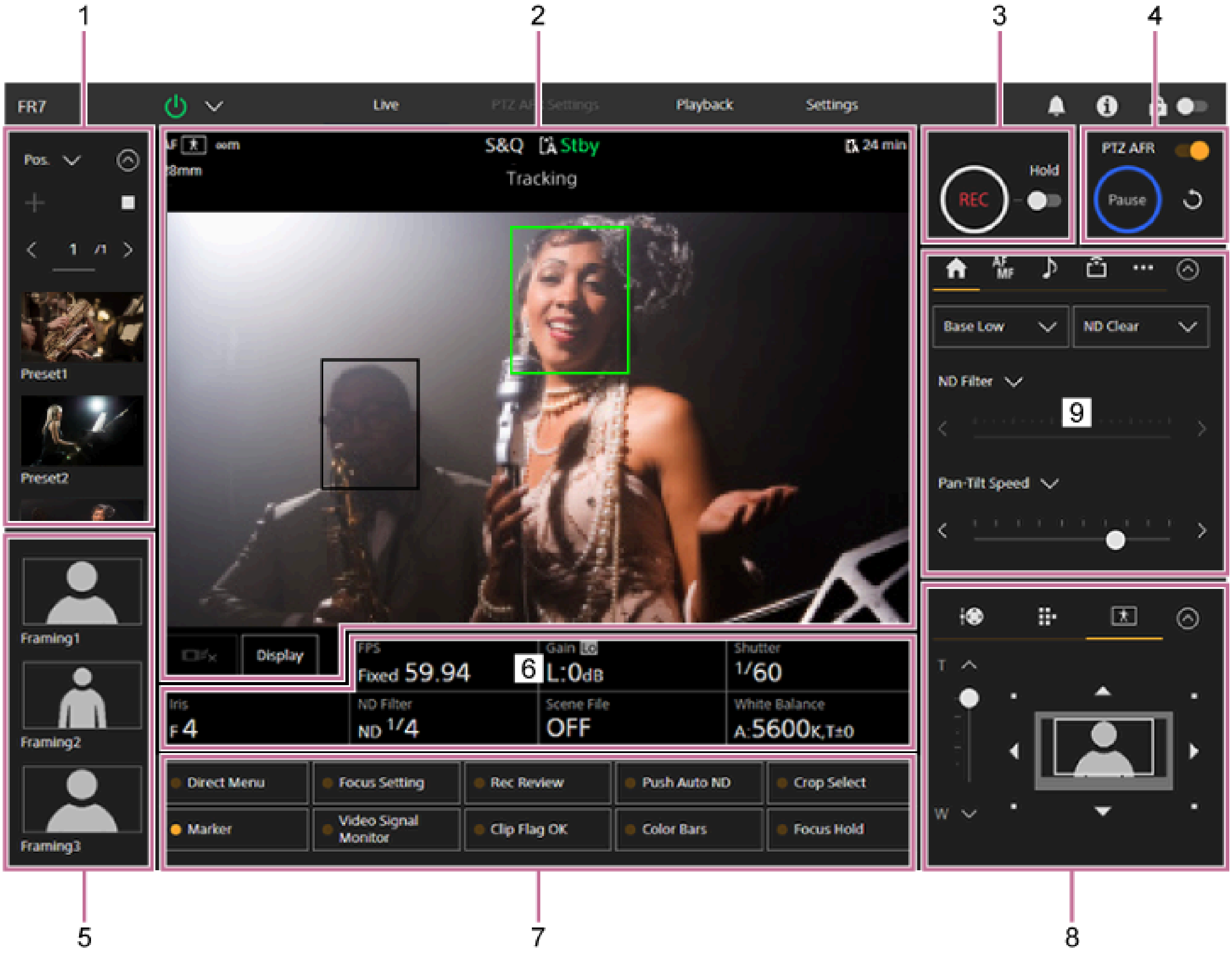
Structure of the Live Operation Screen

This topic describes the structure of the live operation screen.

When PTZ auto framing is off



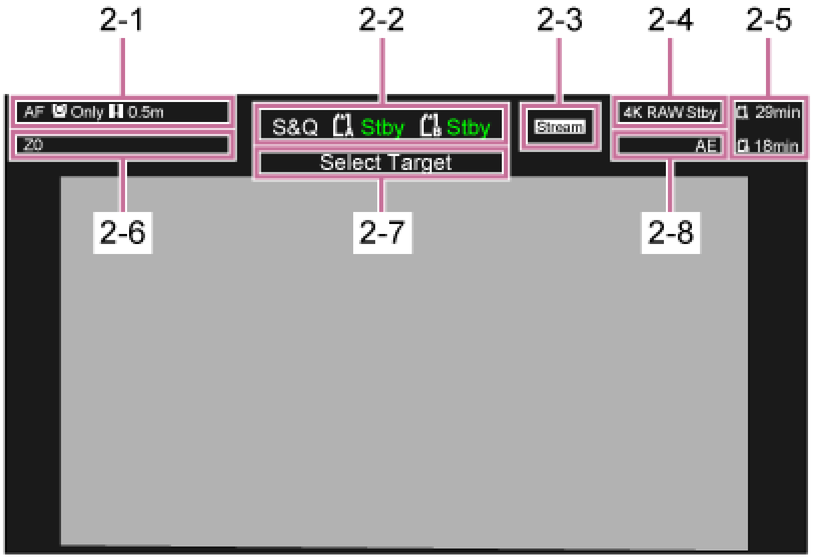
When PTZ auto framing is on



1. **Preset position control panel**
   Displays the registered position of a preset using a thumbnail. Double-tap the thumbnail to return to the position stored in the preset.

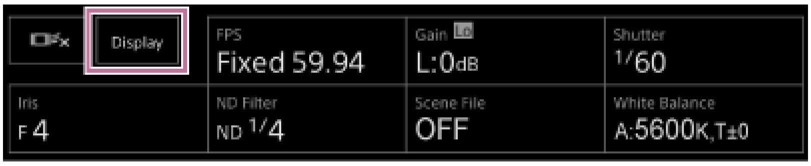
   - For details about preset position, see “Saving/Restoring Pan/Tilt, Zoom Position, and Focus Setting Using the Web App.”
   - For details about PTZ trace, see “Recording Camera Framing Operations Using the Web App.”

2. **Camera image panel**
   Displays the current camera image and the status of the unit.
   It displays the same image as the HDMI output.
   The following status is displayed above the image. A red frame or green frame is also displayed around the image according to the received external tally signal.



No.	Display	Description
2-1	Focus mode indicator	See “Focus mode indicator” in “Camera Screen Display.”
2-2	Recording mode, slot A/B, Interval Rec recording interval indicator	See “Recording mode, slot A/B, Interval Rec recording interval indicator” in “Camera Screen Display.”
2-3	Streaming status indicator	Displayed during streaming (when [Stream Setting] is set to [RTMP] or [SRT-Caller] only).
2-4	RAW output operation status indicator	Displays the output status of the RAW signal. For details about RAW, see “Recording RAW Video.”
2-5	Remaining media capacity indicator	See “Remaining media capacity indicator” in “Camera Screen Display.”
2-6	Zoom position indicator	See “Zoom position indicator” in “Camera Screen Display.” When a lens controller (option) is connected, is displayed. If an error occurs in the lens controller (option), is displayed.
2-7	PTZ trace status indicator PTZ auto framing status indicator	Displayed when PTZ trace or PTZ auto framing is enabled.
2-8	AE mode/AE level indicator	See “AE mode/AE level indicator” in “Camera Screen Display.”

[Display] button
Press this button to display camera information on the image.
Press again while the camera information is displayed to hide the camera information.

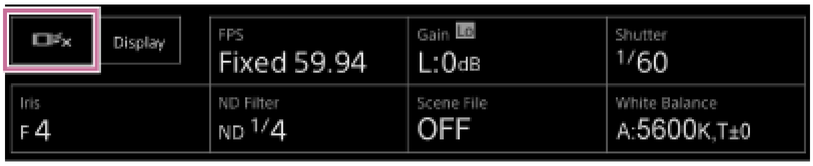


FPS Fixed 59.94
Gain L:0dB
Shutter 1/60
Iris F4
ND Filter ND 1/4
Scene File OFF
White Balance A:5600K,T±0

In addition to markers, some autofocus-related indicators and messages are displayed according to the status, and these cannot be hidden by pressing the [Display] button.

- For details about the displayed camera information, see “Camera Screen Display.”

Realtime tracking AF stop button
Press the button to stop tracking a subject.



FPS Fixed 59.94
Gain L:0dB
Shutter 1/60
Iris F4
ND Filter ND 1/4
Scene File OFF
White Balance A:5600K,T±0

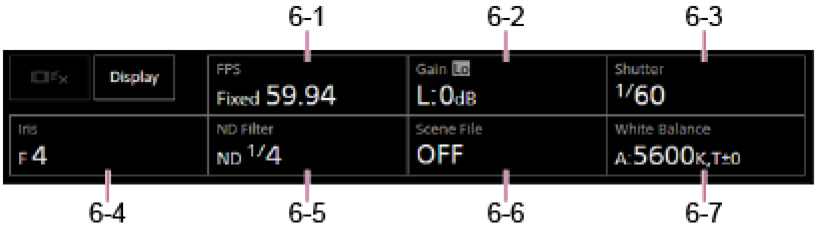
- For details, see “Tracking a Specified Subject (Realtime Tracking AF).”

3. **Record START/STOP button**
   Press the button to start recording. During recording, the record START/STOP button lights up red.
   Press during recording to stop recording.
   You can set the Hold switch to the Hold state to prevent misoperation of the record START/STOP button.

4. **PTZ AFR control panel**
   PTZ auto framing is enabled when the PTZ AFR switch is set to the on position. Tap a person to track in the camera image panel.
   You can also set the camera to automatically track a person who appears in a specific position on the PTZ AFR setup screen beforehand. For details, see “Configuring PTZ Auto Framing Initial Settings.”
   During tracking, the area around the [Pause] button lights up blue.
   A blinking blue light indicates that operator intervention is required. Check the message displayed in the camera control panel and take the required action.

5. **Composition preset control panel**
   Displays the registered framing composition presets as thumbnails. Double-tap a thumbnail to return to the framing stored in the preset.
   Displayed when PTZ auto framing is enabled.

6. **Camera basic configuration panel**
   Displays settings for basic functions required for shooting on buttons. Press a button to display the corresponding setup screen for each function in the camera basic configuration adjustment panel below (5).



FPS Fixed 59.94
Gain L:0dB
Shutter 1/60
Iris F4
ND Filter ND 1/4
Scene File OFF
White Balance A:5600K,T±0

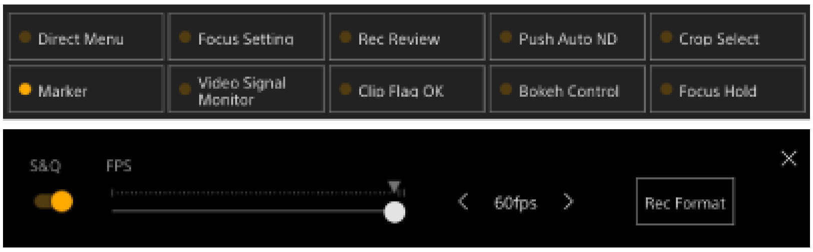
6-1 [FPS]
6-2 [ISO/Gain / Exposure Index]
6-3 [Shutter]
6-4 [Iris]
6-5 [ND Filter]
6-6 [Scene File / Base Look/LUT]
6-7 [White Balance]

- For details, refer to the description of each function.

Function	Reference
FPS	“Slow & Quick Motion”
ISO/Gain	“Setting the Base Sensitivity,” “Adjusting the Gain Automatically,” and “Adjusting the Gain Manually” in “Adjusting the Gain”
Exposure Index	“Setting the Base Sensitivity” and “Changing the Distribution of Dark and Bright Areas in the Recorded Image”
Shutter	“Adjusting the Shutter Automatically” and “Adjusting the Shutter Manually” in “Adjusting the Shutter”

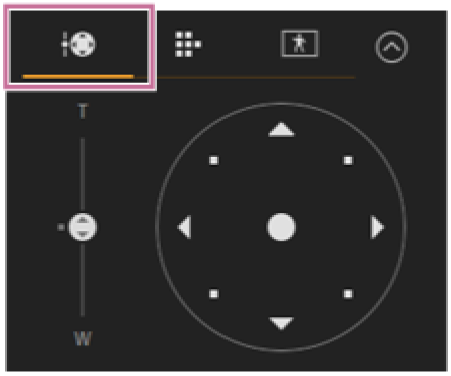
Function	Reference
Iris	“Adjusting the Iris Automatically” and “Adjusting the Iris Manually” in “Adjusting the Iris”
ND Filter	“About the ND Filter” in “Adjusting the Light Level (ND Filter)”
Scene File	“Look Overview” and other topics in “Shooting with the Desired Look”
Base Look/LUT	“Shooting with Look Adjustment in Post-Production”
White Balance	“White Balance Adjustment Screen”

7. **Assignable buttons/Camera basic configuration adjustment panel**
   Displays assignable buttons during normal operation. Press the camera basic configuration panel buttons (item 6) to display the corresponding setup items. Press the [X] button or press the camera setup panel button again to return to the assignable button display.

   - For details about assignable buttons, see “Assignable Buttons.”
   - For details about the camera basic configuration adjustment panel, refer to the description of each function.

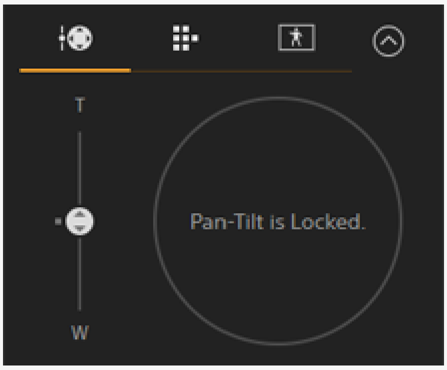
8. **Framing control panel / GUI control panel / AFR composition adjustment panel**
   Switch between the framing control panel / GUI control panel using the tabs at the top.
   You can press the ⌃ (Close) button at the top right of the screen to hide the control panel to prevent inadvertent operation. If the control panel is not displayed, press the ⌄ (Open) button to display it.
   Use the framing control panel to adjust the framing. Press the ✥ (Pan/tilt/zoom) tab to display the framing control panel.

   - For details about operation, see “Adjusting the Framing.”

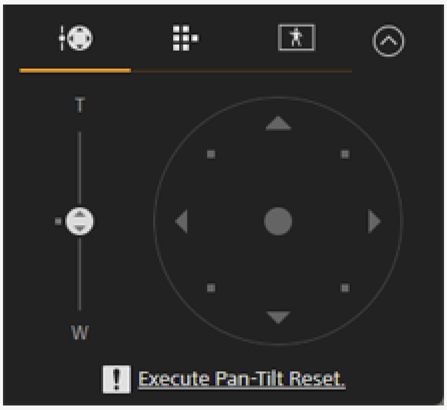
Hint

- The joystick part of the framing control panel is displayed as shown below when pan/tilt operation is disabled, when pan/tilt initialization is required, or when an error occurs in the lens controller.
  - When pan/tilt operation is locked using the pan/tilt lock lever



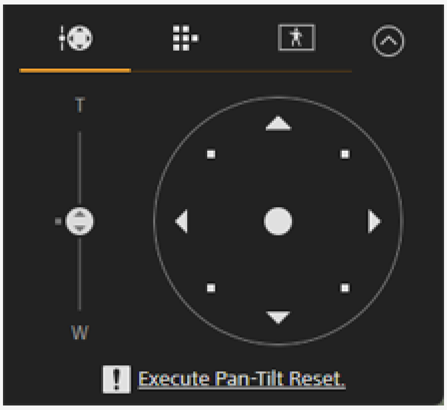
Pan-Tilt is Locked.

- When pan/tilt operation is not initialized



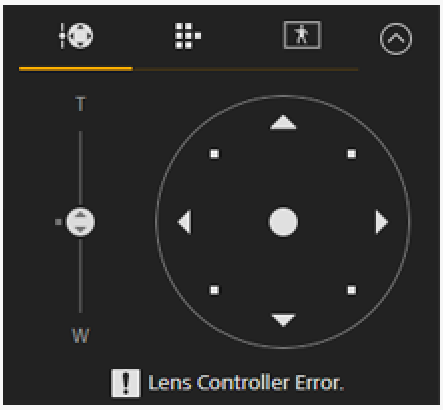
Execute Pan-Tilt Reset.

- When pan/tilt operation needs to be reset



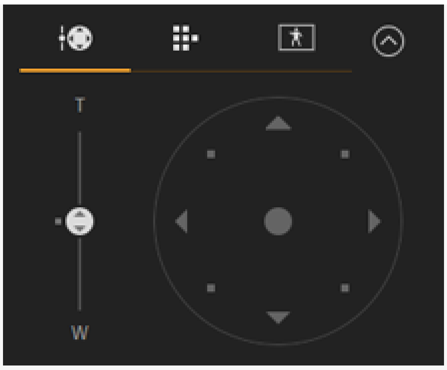
Execute Pan-Tilt Reset.

- When an error occur in the lens controller



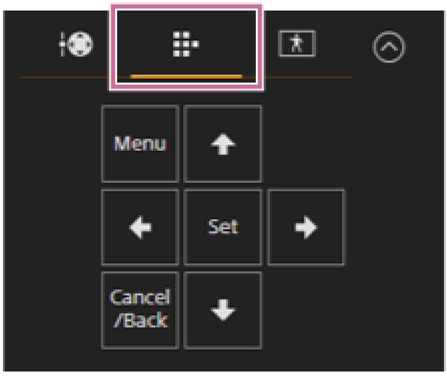
Lens Controller Error.

- When pan/tilt operation is disabled



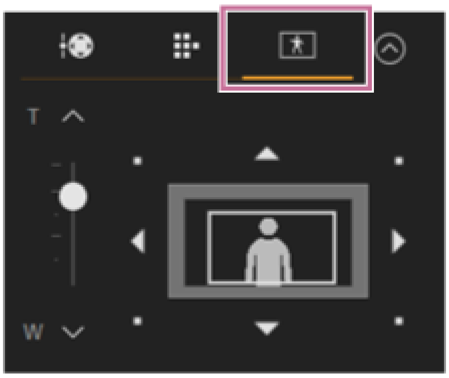
- When pan/tilt operation is not initialized or needs to be reset, you can quickly access the ✚ Reset (Pan/tilt reset) button in the camera control panel by pressing the message displayed below the joystick.

Use the GUI control panel to operate the camera menu, clip playback, and other functions. Press the (Cam GUI) tab to display the GUI control panel.



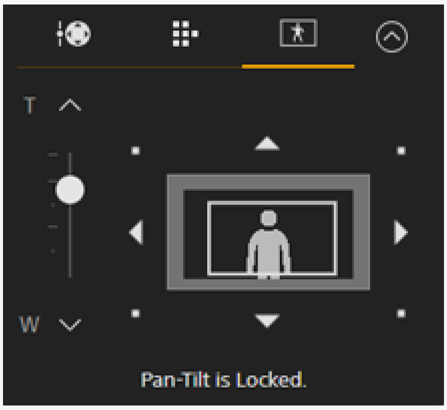
- For details about operation, see “Operating the Camera Menu” and “Playing Recorded Clips.”

Use the AFR composition adjustment panel to adjust the composition for PTZ auto framing. Press the (AFR composition adjustment) tab to display the AFR composition adjustment panel.



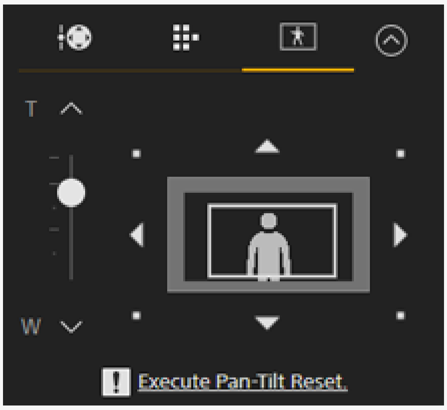
Hint

- The composition adjustment panel part of the AFR composition adjustment panel is displayed as shown below when pan/tilt operation is disabled, when pan/tilt initialization is required, or when an error occurs in the lens controller.
  - When pan/tilt operation is locked using the pan/tilt lock lever



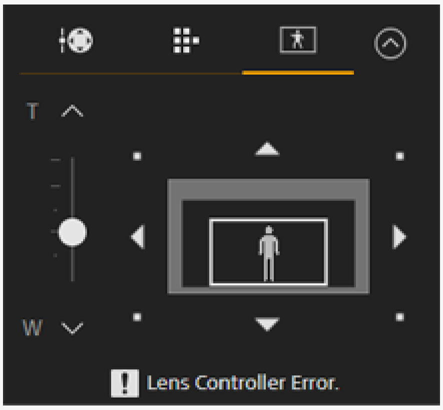
Pan-Tilt is Locked.

- When pan/tilt operation needs to be initialized



Execute Pan-Tilt Reset.

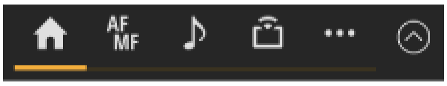
- When an error occur in the lens controller



Lens Controller Error.

For operation, see “Specifying the Subjects for Automatic Tracking (manual tracking start mode).”

9. **Camera control panel**
   Use to configure the functions required to operate the camera.
   Switch between the screens to display using the tabs at the top.
   You can press the ⌃ (Close) button at the top right of the screen to hide the control panel to prevent inadvertent operation. If the control panel is not displayed, press the ⌄ (Open) button to display it.



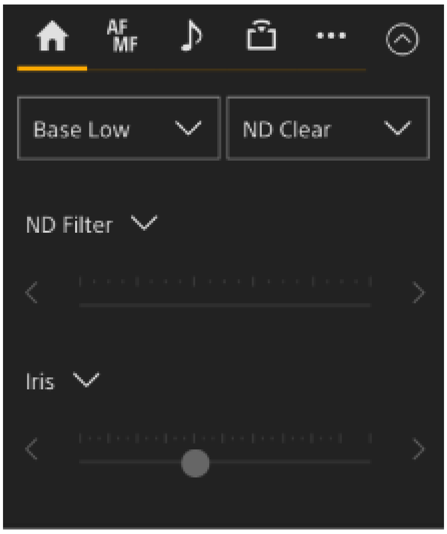
- For details, see the description of each function.

⌂ (Main) tab
Displays the setup items for frequently used functions.
The top and bottom slider functions can be changed by pressing the [▼] button and selecting from the displayed list.
The following functions can be selected.

- ND Filter

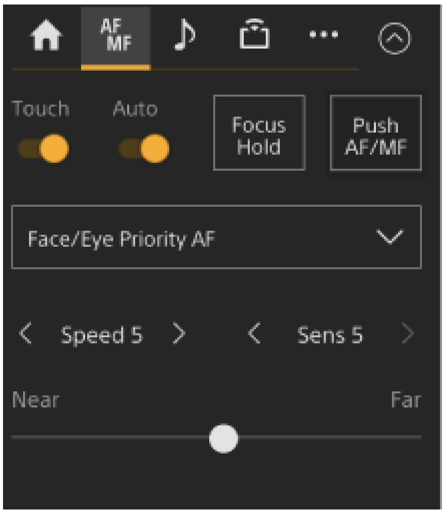
- Iris
- ISO*
- Gain*
- Exposure Index*
- AE Level
- Zoom Speed
- Pan-Tilt Speed

* Displayed according to menu settings.



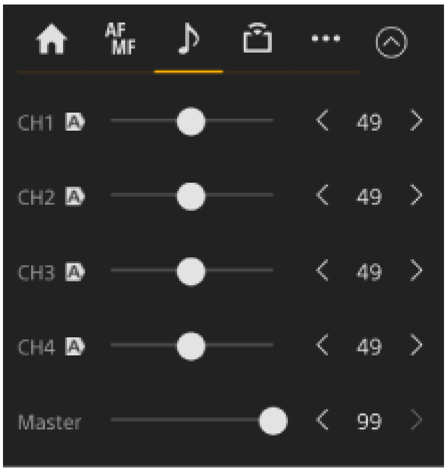
(Focus) tab

Displays the setup items related to focus.



(Audio) tab

Displays the setup items related to audio.



CH1 49

CH2 49

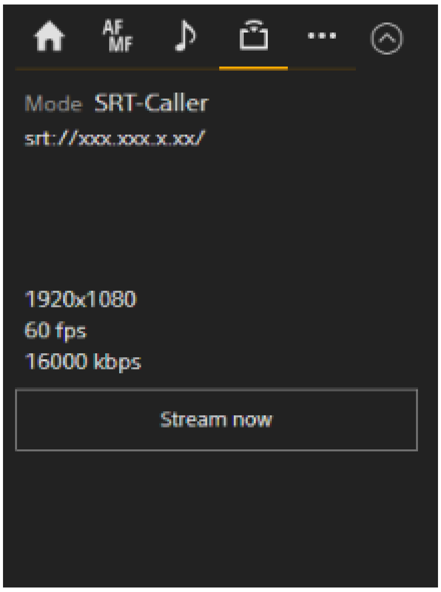
CH3 49

CH4 49

Master 99

(Stream) tab
Displays the setup items related to streaming.
The items displayed will vary depending on the streaming format setting.
When set to [RTMP] or [SRT-Caller], streaming can be started/stopped on this screen.

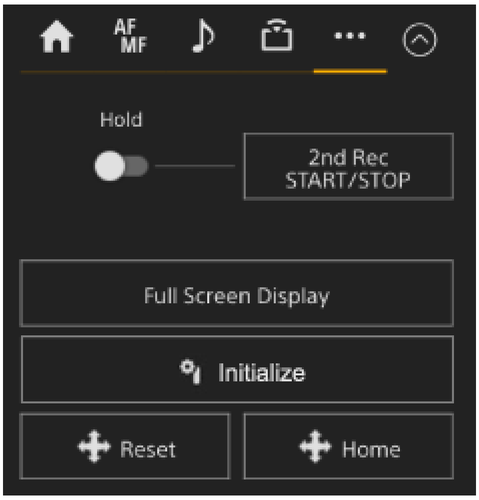
- For details, see “About Streaming” and other topics in “Configuring Streaming.”
- Error information is displayed if a connection failure occurs. For details about error information, see “Error/Warning Messages.”



Mode SRT-Caller
srt://xxx.xxx.x.xx/

1920x1080
60 fps
16000 kbps

(Others) tab
Displays the setup items related to other functions.



Pressing the [Full Screen Display] button opens a new tab in the web browser and displays the camera image panel image in full screen.
Only image display occurs; touch AF and other functions are not available.

Note

- The live operation screen on the original tab continues to function. It is recommended that you close the tab to reduce the number of simultaneous connections if no operation is required.

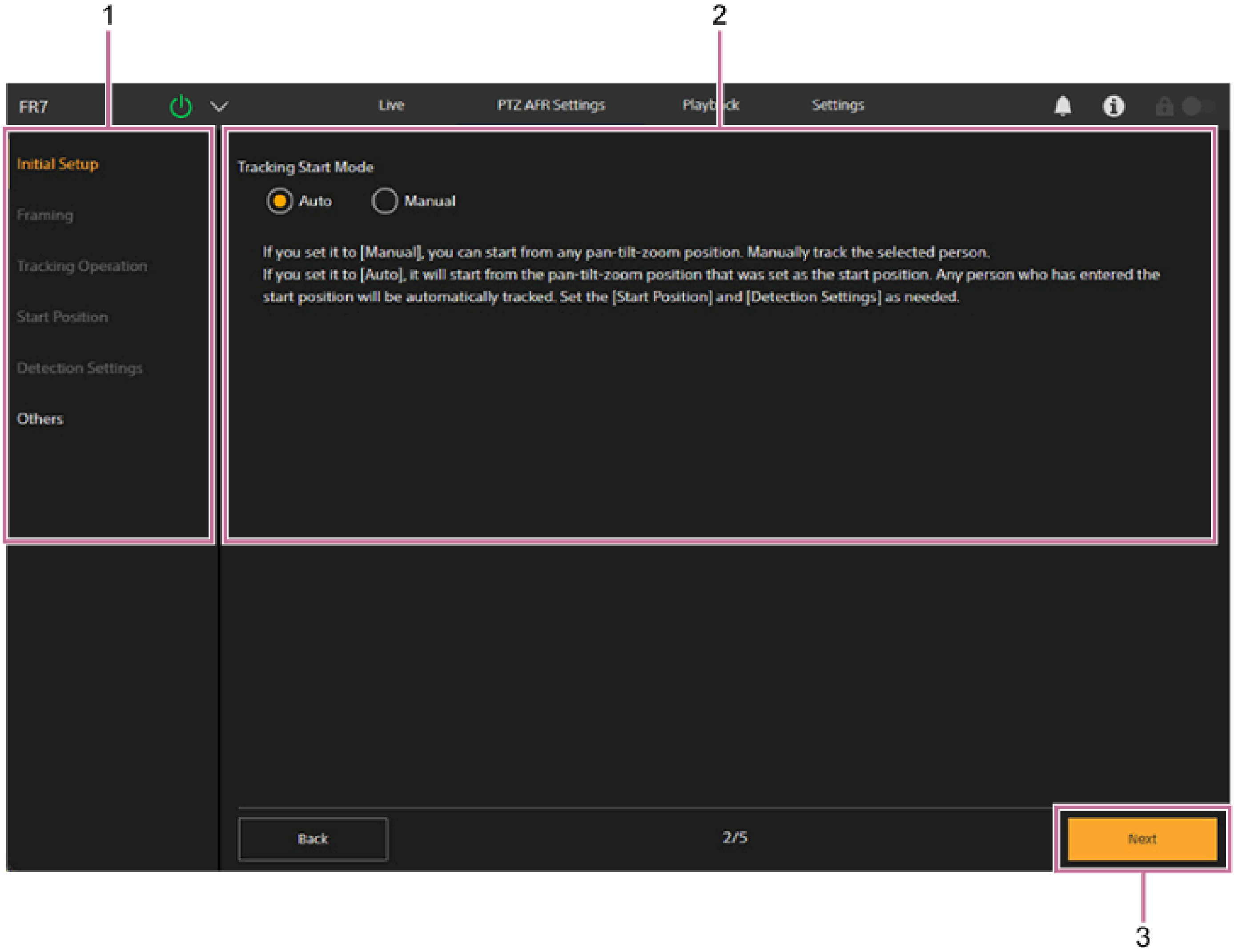
Press the Initialize (Initialize lens controller) button to initialize the lens controller (third-party option). This button is enabled only when [Technical] > [Lens Controller] > [Zoom] > [Setting] is set to [On] in the web menu.

Related Topic

- Saving/Restoring Pan/Tilt, Zoom Position, and Focus Setting Using the Web App
- Recording Camera Framing Operations Using the Web App
- About PTZ Auto Framing
- Camera Screen Display
- Recording RAW Video
- Tracking a Specified Subject (Realtime Tracking AF)
- Slow & Quick Motion
- Setting the Base Sensitivity
- Adjusting the Gain Automatically
- Adjusting the Gain Manually
- Changing the Distribution of Dark and Bright Areas in the Recorded Image
- Adjusting the Shutter Automatically
- Adjusting the Shutter Manually
- Adjusting the Iris Automatically
- Adjusting the Iris Manually
- About the ND Filter
- Look Overview
- Shooting with Look Adjustment in Post-Production
- White Balance Adjustment Screen
- Assignable Buttons
- Playing Recorded Clips
- Operating the Camera Menu
- About Streaming
- Error/Warning Messages

Structure of the PTZ AFR Settings Screen

This topic describes the structure of the PTZ auto framing settings screen.



Tracking Start Mode

● Auto ○ Manual

If you set it to [Manual], you can start from any pan-tilt-zoom position. Manually track the selected person.
If you set it to [Auto], it will start from the pan-tilt-zoom position that was set as the start position. Any person who has entered the start position will be automatically tracked. Set the [Start Position] and [Detection Settings] as needed.

1. **Setup item tabs**
   Displays the setup items.
2. **Settings screen**
   Displays the settings screen and configuration guidance.
3. **[Next] button**
   The next setup screen appears.

Hint

- When changes to the settings are applied, the [OK] button appears.
- When initializing settings, [Start] appears.
- When initializing settings, only the [Initial Setup] and [Others] setup item tabs can be selected. After the initial settings are completed, they can be set individually.

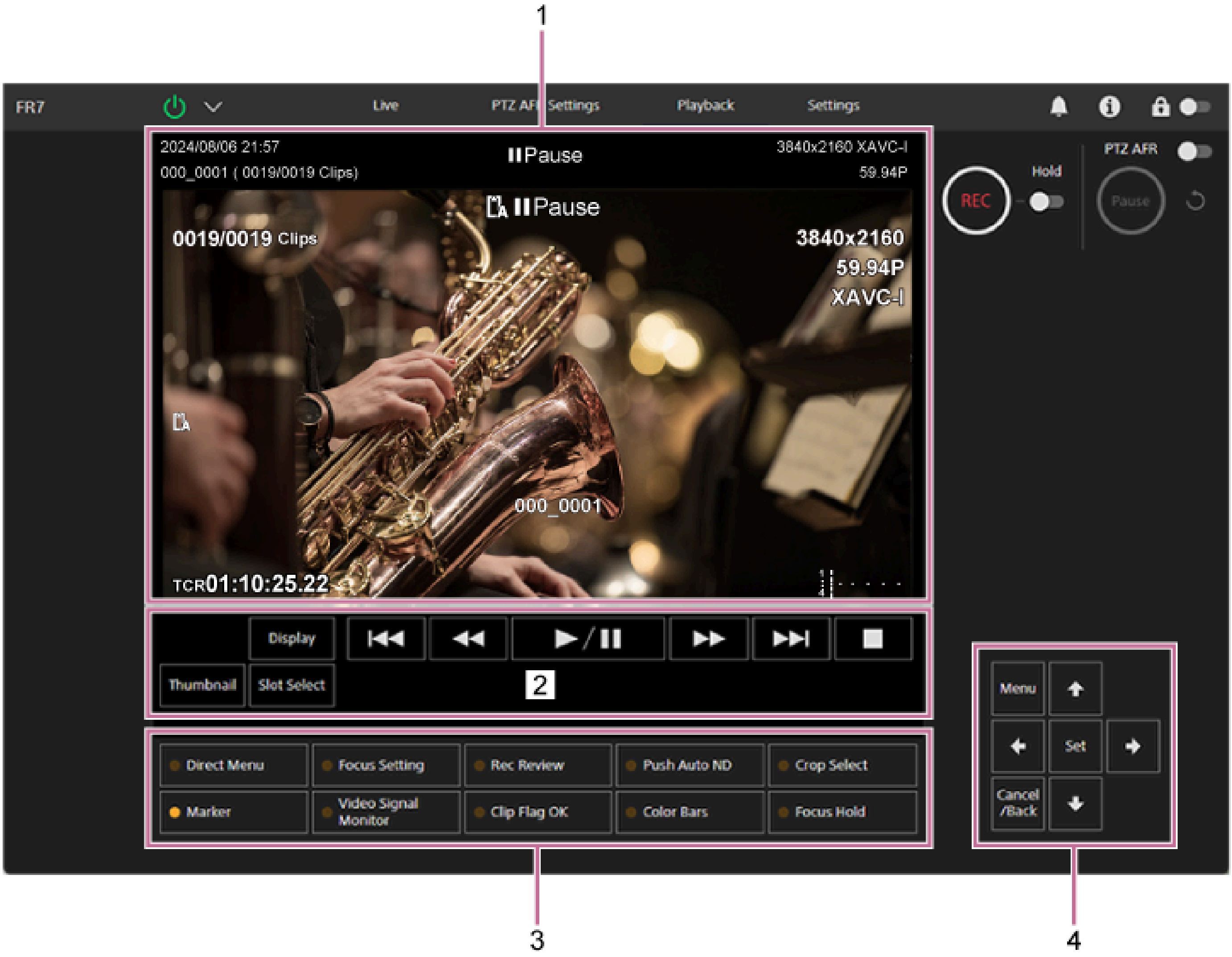
For details, see “Configuring PTZ Auto Framing Initial Settings.”

Related Topic

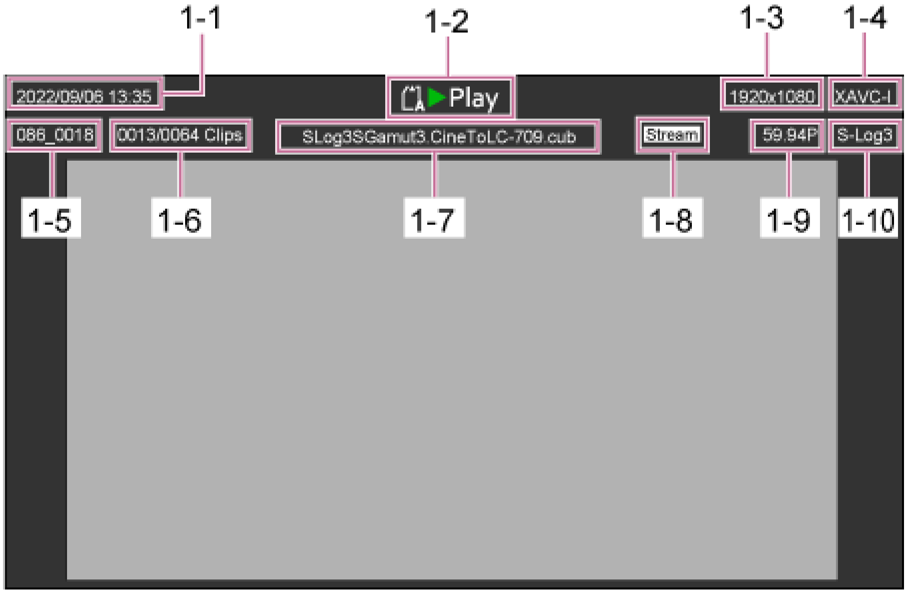
- Configuring PTZ Auto Framing Initial Settings

Structure of the Playback Operation Screen

This topic describes the structure of the playback operation screen.

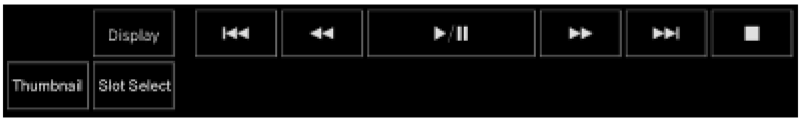


1. **Camera image panel**
   Displays the playback image and related information. When playback is stopped, the camera image screen appears.



1-1 Shooting date and time
1-2 Playback status indicator
1-3 Playback format (picture size) indicator
1-4 Playback format (codec) indicator
1-5 Clip name display
1-6 Clip number/total number of clips
1-7 LUT name display
1-8 Streaming status indicator
1-9 Playback format (frame rate and scan method) indicator
1-10 Recording look indicator

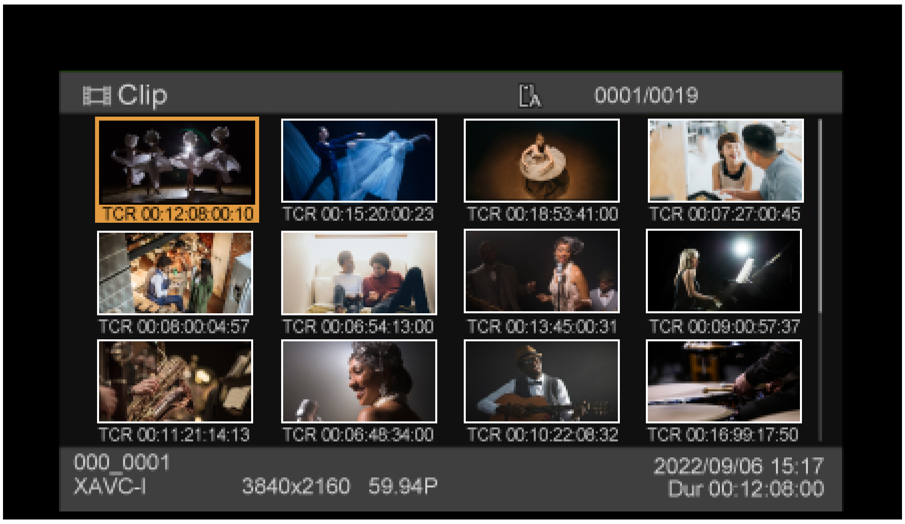
2. **Playback control panel**



Displays the playback control buttons.

Button	Function
▶/II (Play/Pause) button	Plays a clip. During playback, pauses the clip.
▶▶ (Fast Forward) button, ◀◀ (Fast Reverse) button	Plays a clip at high speed. When the button is pressed, the playback speed changes in three steps.
▶▶| (Next) button, |◀◀ (Previous) button	Jumps to start of clip or the previous/next clip.
■ (Stop) button	Stops playback.

[Display] button
Press to switch between the screen display on the image.
[Thumbnail] button
Displays the clips recorded on the memory card on the camera image panel as thumbnails.



Pressing the [Thumbnail] button during thumbnail screen display closes the thumbnail screen and returns to the camera image.

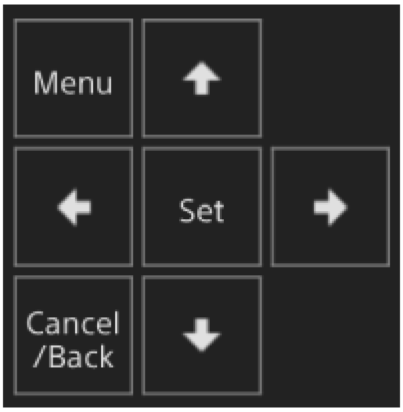
- For details about the thumbnail screen, see “Thumbnail Screen.”

[Slot Select] button
Switches between the target playback media.

3. **Assignable buttons**
   Displays the assignable buttons assigned to functions of the unit.

   - For details about assignable buttons, see “Assignable Buttons.”

4. **GUI control panel**
   Use the GUI control panel to operate the camera menu, clip playback, and other functions.



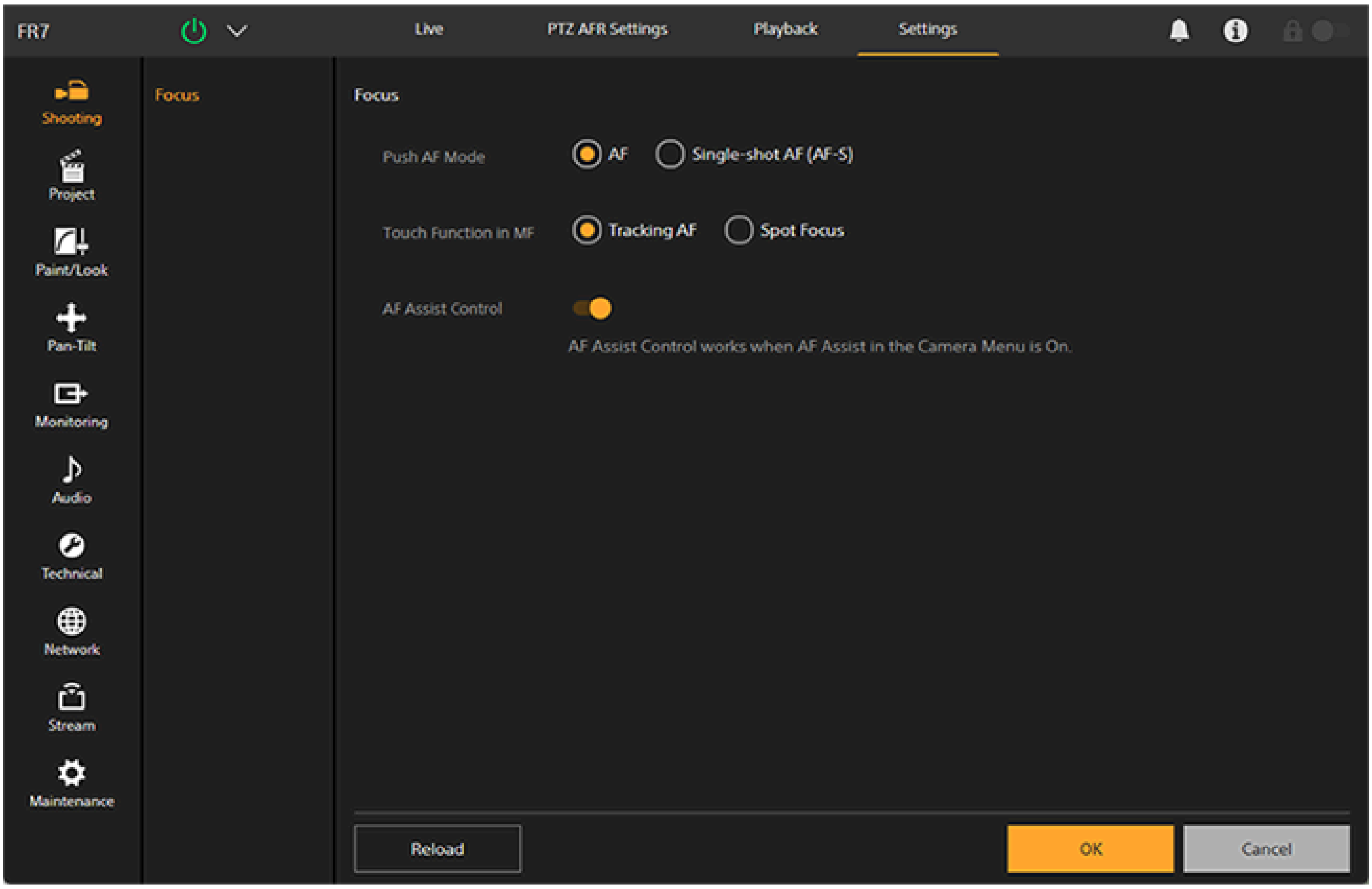
   - For details about operation, see “Operating the Camera Menu” and “Playing Recorded Clips.”

Related Topic

- Thumbnail Screen
- Assignable Buttons
- Playing Recorded Clips

Structure of the Settings Screen

Use the settings screen to configure the various setup items of the unit, including initial settings, network settings, shooting/playback settings using the web menu.



Focus

Push AF Mode ● AF ○ Single-shot AF (AF-S)

Touch Function in MF ● Tracking AF ○ Spot Focus

AF Assist Control

AF Assist Control works when AF Assist in the Camera Menu is On.

Note

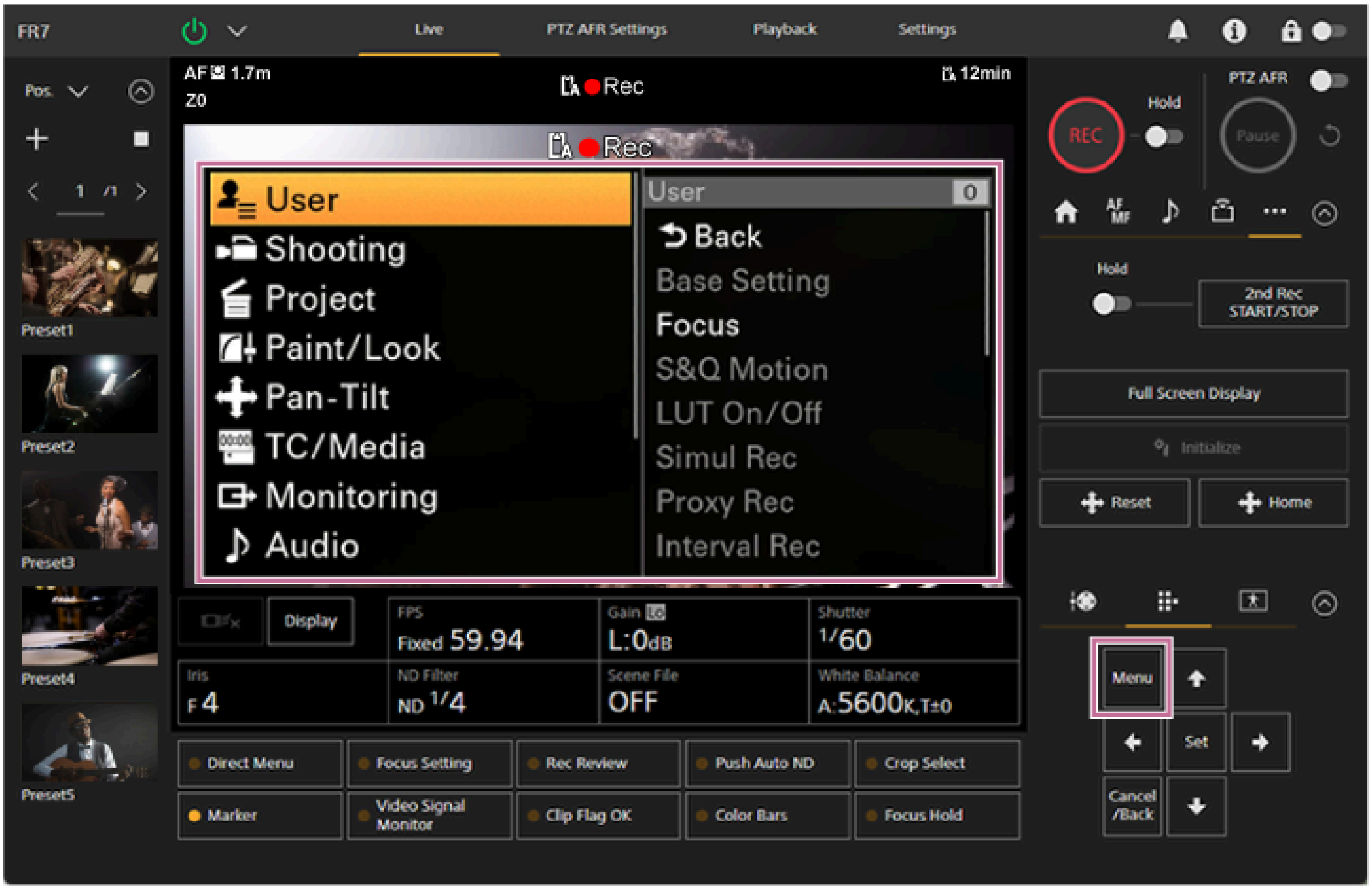
- In the web menu, settings are not applied until you press the [OK] button as a general rule. If you change settings on a page that has an [OK] button, be sure to press the [OK] button.

- For details about the settings screen, see “Web Menu and Detailed Settings.”

Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

Camera Menu

Press the [Menu] button in the GUI control panel of the live operation screen or playback operation screen to display the camera menu in the camera image panel.



You can configure the settings required for shooting and playback using the camera menu.
Press the [Menu] button while the camera menu is displayed to hide the camera menu.
The camera menu is operated using the GUI control panel.

- For details about the camera menu, see “Camera Menu and Detailed Settings.”

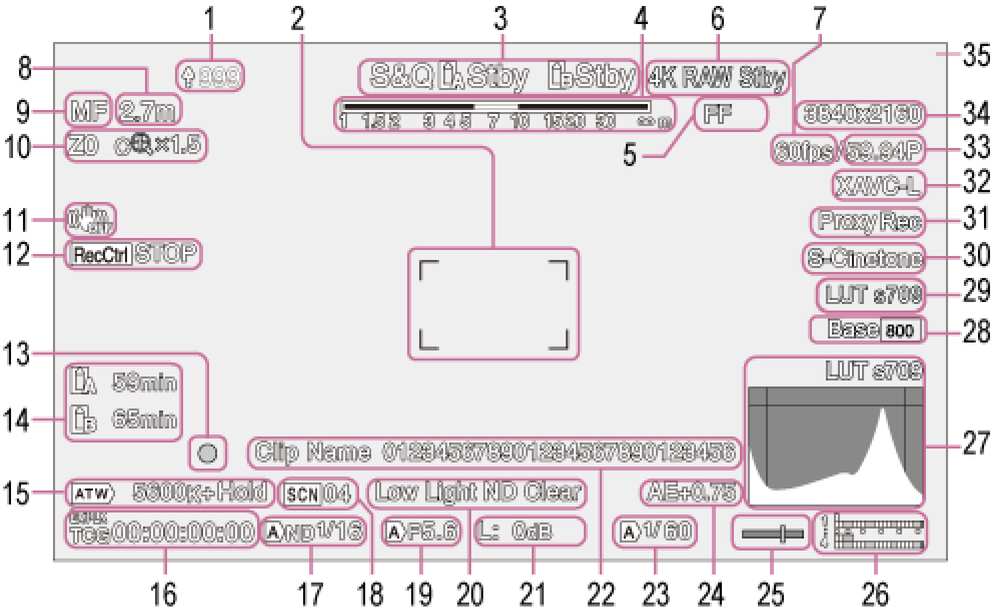
Note

- When [Monitoring] > [Output Display] > [HDMI/Stream] is set to Off in the web menu (disables information overlay on the screen display), the camera menu is no longer displayed in the camera image panel. However, be aware that menu operations in the GUI control panel are still active. To avoid inadvertent operation, take care to not perform any menu operations using the GUI control panel when [HDMI/Stream] is set to Off.

Camera Screen Display

You can displays the status and settings of the unit superimposed on the output image from the camera. You can set the outputs for which screen display is enabled using [Monitoring] > [Output Display] in the web menu.
You can show/hide the information using the [Display] button. Even when hidden, it will appear while performing direct menu operations.
You can show/hide items individually using [Monitoring] > [Display On/Off] in the camera menu.

Information displayed on the screen while shooting



1. **Upload indicator/remaining files indicator**

   - For details about transferring files, see “About File Transfer” and other topics in “Transferring Files.”

2. **Focus area indicator**
   Displays the focus area for auto focus.

   - For details about auto focus, see “Adjusting Automatically Using the Web App” and other topics in “Adjusting the Focus Automatically (Auto Focus).”

3. **Recording mode, slot A/B, Interval Rec recording interval indicator**

Display	Meaning
●Rec	Recording
Stby	Recording standby

   - For details about Interval Rec, see “Recording Video Intermittently (Interval Rec).”

4. **Depth-of-field indicator**

5. **Imager scan mode indicator**

A ! (mismatch) mark is displayed if there is a mismatch between the image circle size of the lens and the effective picture size imager scan mode setting.
When Imager Scan Mode is set to FF, a “C” mark is displayed in modes with narrower angle of view (cropped).
Cropping occurs in the following modes.

- When the recording format is 3840×2160 and S&Q Motion frame rate is 100 fps or 120 fps
- When [Codec] is set to RAW or RAW & XAVC-I and the RAW output format is 3840×2160
- For details about the imager scan mode, see “Setting the imager scan mode” in “Configuring Basic Operation.”

6. **RAW output operation status indicator**
   Displays the output status of the RAW signal.

   - For details about RAW, see “Recording RAW Video.”

7. **Slow & Quick Motion shooting frame rate indicator**

   - For details about Slow & Quick Motion, see “Slow & Quick Motion.”

8. **Focus position indicator**

   - Displays the focus position.

9. **Focus mode indicator**

Display	Meaning
Focus Hold	Focus Hold mode
MF	MF mode
AF	AF mode
▣ (Realtime tracking AF mode)	Realtime tracking AF mode

Face/eye detection AF

Display	Meaning
☺ (Face/eye detection AF)	Indicates face/eye detection AF is active
Only (face/eye only AF)	Indicates face/eye only AF is active
☐ (PTZ AFR AF icon)	Indicates PTZ auto framing is active
✿ (Saved tracking face)	Indicates a tracking face has been saved
! (AF paused)	Indicates that AF was paused*

* Displayed when there is no saved tracking face and a face is not detected, or when there is a saved tracking face but the tracking target face is not detected.

- For details about face/eye detection AF, see “Tracking Using Face and Eye Detection (Face/Eye Detection AF).”

10. **Zoom position indicator**
    Displays the zoom position as a focal length (if a lens that supports zoom position display is attached).
    You can also change the indicator to a bar display or zoom position display using the [Technical] > [Lens] > [Zoom Position Display] setting in the camera menu.
    The following items are added to the display when Clear Image Zoom is enabled.

Display	Meaning
C🔍 (Clear Image Zoom is enabled)	Clear Image Zoom is enabled
Magnification value	When using Clear Image Zoom

- For details about zoom, see “Setting the Zoom Type” and other topics in “Adjusting the Zoom.”

11. **Image stabilization mode indicator**

12. **SDI output/HDMI output Rec Control status indicator**
    Displays the output status of the REC control signal.

    - For details, see “Connecting External Monitors and Recording Devices.”

13. **Focus indicator**

    - For details, see “Using Single-Shot Auto Focus (Push Auto Focus (AF-S))” in “Adjusting the Focus.”

14. **Remaining media capacity indicator**
    A 🔒 (protect) icon appears if the memory card is write-protected.

15. **White balance mode indicator**

Display	Meaning
ATW (ATW)	Auto mode
ATW Hold (ATW Hold)	Auto mode paused
W:P	Preset mode
W:A	Memory A mode

16. **Timecode external lock indicator/time data display**
    Displays “EXT-LK” when locked to the timecode of an external device.

    - For details about timecode, see “Specifying Time Data.”

17. **ND filter indicator**

Display	Meaning
A (A)	Auto mode
B (B)	Bokeh control mode

- For details about ND filters, see “Adjusting the Light Level (ND Filter).”
- For details about bokeh control, see “Adjusting the Bokeh (Bokeh Control Function).”

18. **Scene file indicator**

    - For details about scene files, see “Look Overview” and other topics in “Shooting with the Desired Look.”

19. **Iris indicator**
    Displays the iris position (F-number) (if a lens that supports iris setting display is attached).

- For details about the iris, see “Adjusting the Iris Automatically” and “Adjusting the Iris Manually.”

20. **Video level warning indicator**

21. **Gain indicator**
    Displays the EI value when in Cine EI/Cine EI Quick mode.

Display	Meaning
A (A)	Auto mode
L	Preset L mode
⚙ (Temporary adjustment mode)	Temporary adjustment mode
B (B)	Bokeh control mode

   - For details about the gain, see “Adjusting the Gain Automatically” and “Adjusting the Gain Manually.”
   - For details about Cine EI/Cine EI Quick mode, see “Setting the shooting mode” in “Configuring Basic Operation.”

22. **Clip name display**
    Displays the name of the clip being recorded or to record next.
    If it is blinking, there is a mismatch between the last clip on the recording media and the [Camera ID] or [Reel Number] settings. For details, refer to the [Clip Name Format] > [Auto Naming] description.

23. **Shutter indicator**
    - For details about the shutter, see “Adjusting the Shutter Automatically” and “Adjusting the Shutter Manually.”

24. **AE mode/AE level indicator**
    - For details about auto exposure (AE), see “Setting the Target Level for Automatic Brightness Adjustment.”

25. **Spirit level indicator**
    Displays the horizontal level in ±1° increments up to ±15°.

26. **Audio level meter**
    Displays the audio level of each channel.

27. **Video signal monitor**
    Displays a waveform, vectorscope, and histogram.
    The orange line indicates the set value of the brightness level marker.
    In Log shooting modes, the monitor target LUT type is displayed above the display.
    - For details, see “Video Signal Monitor.”
    - For details about Log shooting modes, see “Setting the shooting mode” in “Configuring Basic Operation.”

28. **Base Sensitivity indicator/Base ISO indicator**
    In Custom mode, it displays the base sensitivity set using the [ISO/Gain / Exposure Index] button in the camera basic configuration panel or [Shooting] > [ISO/Gain/EI] > [Base Sensitivity] in the camera menu.
    In Log shooting modes, it displays the Base ISO sensitivity set using the [ISO/Gain / Exposure Index] button in the camera basic configuration panel or [Shooting] > [ISO/Gain/EI] > [Base ISO] in the camera menu.
    - For details about the base sensitivity, see “Selecting the Base Sensitivity.”
    - For details about Log shooting modes, see “Setting the shooting mode” in “Configuring Basic Operation.”

29. **Monitoring look indicator**
    In Log shooting modes, it displays the monitor LUT setting.

- For details about the LUT setting, see “Shooting with Look Adjustment in Post-Production” and related topics.
- For details about Log shooting modes, see “Setting the shooting mode” in “Configuring Basic Operation.”

30. **Base look/recording look indicator**
    Displays the base look setting.
    In Log shooting modes, it displays the video signal to record on the memory cards.

    - For details about the base look, see “Look Overview” in “Shooting with the Desired Look.”
    - For details about Log shooting modes, see “Setting the shooting mode” in “Configuring Basic Operation.”

31. **Proxy status indicator**

32. **Recording format (codec) indicator**
    Displays the name of the format for recording on the memory cards.
    Set the recording format (codec) using [Project] > [Rec Format] > [Codec] in the web menu or camera menu.

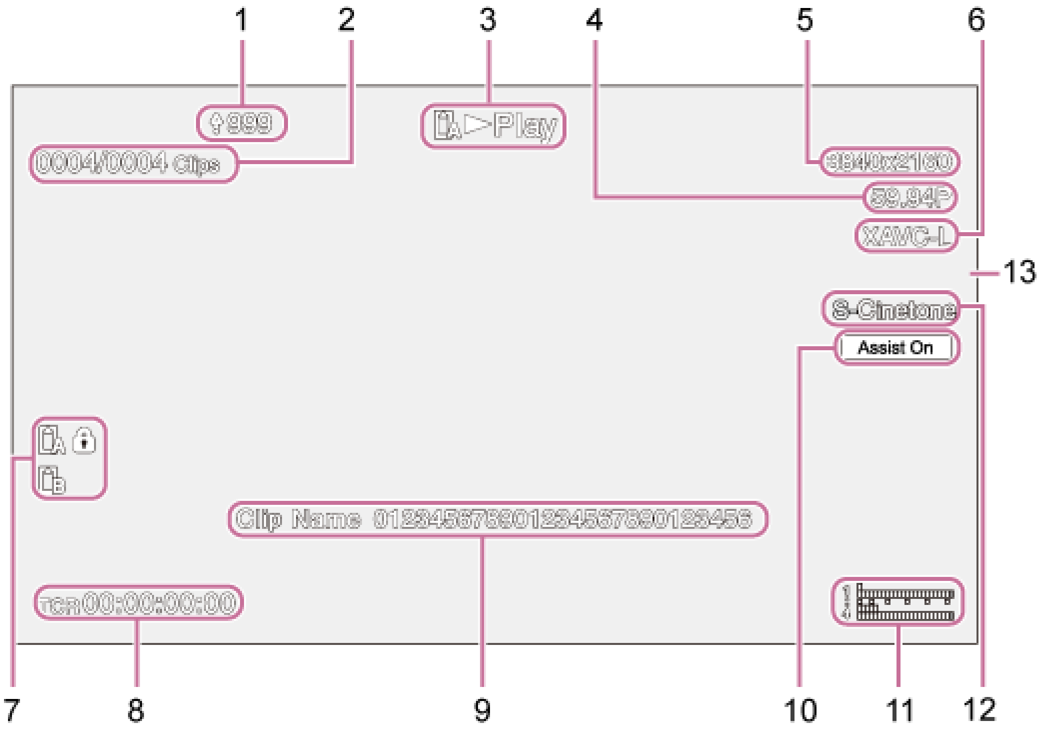
33. **Recording format (frame rate and scan method) indicator**

34. **Recording format (picture size) indicator**
    Displays the picture size for recording on the memory cards.
    Set the recording format (picture size) using [Project] > [Rec Format] > [Codec] in the web menu or camera menu.

35. **Tally indicator**
    Displays a red frame or green frame around the image according to the received external tally signal.

Information displayed on the screen during playback

The following information is superimposed on the playback picture.



1. **Upload indicator/remaining files indicator**

2. **Clip number**

3. **Playback status indicator**

4. **Playback format (frame rate and scan method) indicator**

5. **Playback format (picture size) indicator**

6. **Playback format (codec) indicator**

7. **Media indicator**
   A 🔒 (protect) icon appears if the memory card is write-protected.

8. **Time data display**

9. **Clip name display**

10. **Gamma display assist indicator**

11. **Audio level meter**
    Displays the playback audio level.

12. **Base look/recording look indicator**

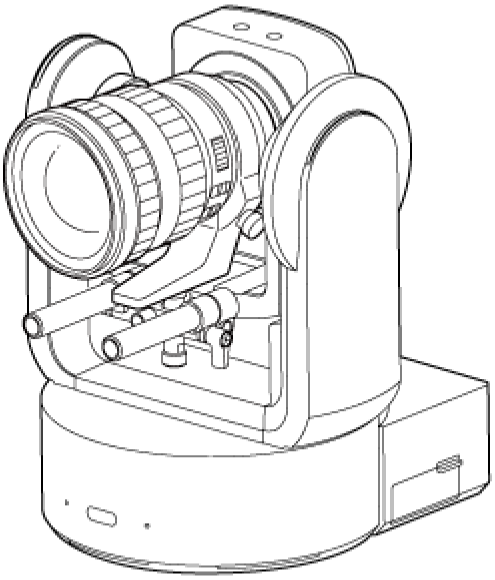
13. **Tally indicator**

Related Topic

- About File Transfer
- Adjusting Automatically Using the Web App
- Recording Video Intermittently (Interval Rec)
- Configuring Basic Operation
- Recording RAW Video
- Slow & Quick Motion
- Tracking Using Face and Eye Detection (Face/Eye Detection AF)
- Setting the Zoom Type
- Connecting External Monitors and Recording Devices
- Using Single-Shot Auto Focus (Push Auto Focus (AF-S))
- Specifying Time Data
- Look Overview
- Adjusting the Iris Automatically
- Adjusting the Iris Manually
- Adjusting the Gain Automatically
- Adjusting the Gain Manually
- Adjusting the Shutter Automatically
- Adjusting the Shutter Manually
- Setting the Target Level for Automatic Brightness Adjustment
- Video Signal Monitor
- Shooting with Look Adjustment in Post-Production
- Clip Name Format

Mounting Upright in a Fixed Location

This topic describes mounting the unit on a desktop or tripod.



Installation note

- To protect the lens and the lens connector block of the unit, keep the cap and cover of the unit attached until you attach the lens.
- To prevent lens failure, do not hold the lens parts while working.
- To prevent unit failure, do not hold the camera head while working.

1. **Check the mounting space.**

When mounting on a desktop

Mount this unit on a flat surface, taking into consideration the space required for turning the lens and the wiring at the rear of the unit.

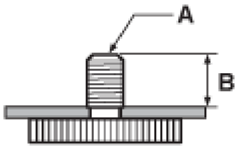
Note

- Mount it in a stable location that is not subject to vibration. Locations subject to vibration may cause vibration in the image.
- If the unit must be mounted on an inclined surface, keep it within ±15° of the horizontal and take measures to prevent the unit from falling.

When mounting on a tripod

Attach the tripod mounting screw hole on the bottom.

Use a tripod mounting screw with the following amount of protrusion from the mounting surface, and tighten it with a hand screwdriver.



A: Tripod mounting screws 1/4-20 UNC, ISO 1222 (6.35 mm)

B: Protrusion (4.5 mm to 5.5 mm)

WARNING

- Do not use tripod screws for mounting the unit in a high location.

Note

- Select a tripod that will not tip over even when the lens turns.

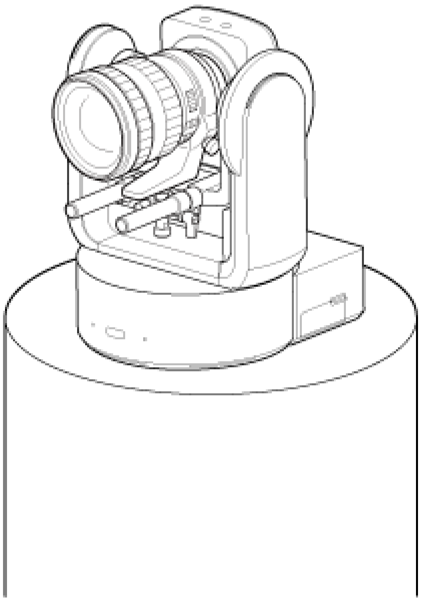
Next, attach the lens. See “Attaching a Lens,” taking into account the information in “Precautions When Attaching/Removing a Lens,” “Checking the Lens Switches,” and “Precautions When Using a Zoom Lens.”

Related Topic

- Precautions when Attaching/Removing a Lens
- Checking the Lens Switches
- Precautions When Using a Zoom Lens
- Attaching a Lens

Mounting Upright in a High, Fixed Location

This topic describes the procedure for mounting the unit upright in a high location using the ceiling bracket (CIB-PCM1 (option)).



WARNING

- To mount the unit in a high location, ask a professional contractor.
- When mounting in a high location, make sure that the mounting surface and mounting material (excluding accessories) can support 200 kg (440 lb 15 oz) or more, and mount the unit as described in this Help Guide. If the mounting is not sturdy enough, the unit may fall and cause serious injury.
- Attach the supplied fall prevention wire rope to the CIB-PCM1 Ceiling Bracket (option) to prevent the unit from falling.
- When the unit is mounted in a high location, check that the mounting has not become loose once a year. Shorten the inspection interval according to the usage conditions.

Installation note

- To protect the lens and the lens connector block of the unit, keep the lens cap and cover on until the lens is attached.
- To prevent lens failure, do not hold the lens parts while working.
- To prevent unit failure, do not hold the camera head while working.

1 **Check the high-location mounting accessories and mounting space.**

CIB-PCM1 ceiling bracket kit (option)

Before you start, check that you have the following parts.

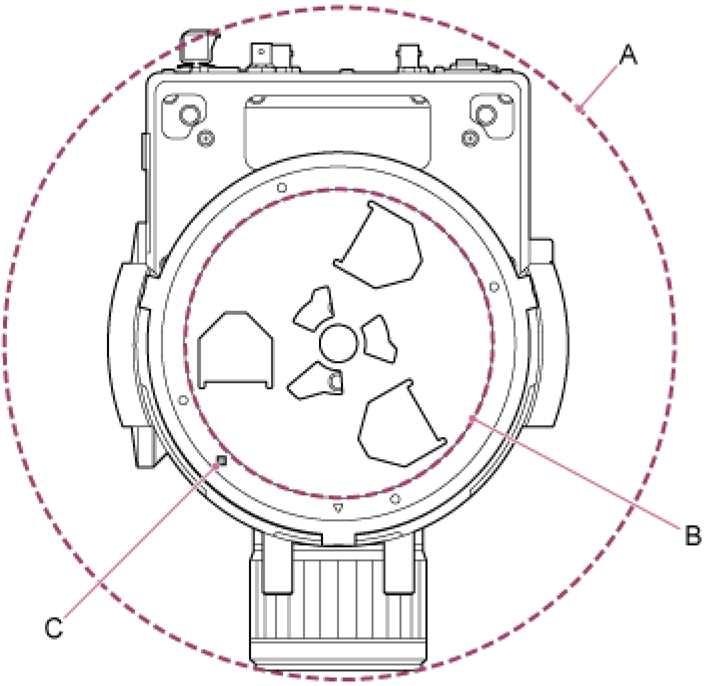
- Body bracket (1)
- Ceiling bracket (1)
- Lens release button cover (1)
- Fall prevention wire rope (1)
- +PSW M3×8 screws (9)
- +PSW M4×8 stainless steel screw for fall prevention wire rope (1)

Note

- The fall prevention wire rope is designed to support the unit when suspended. Do not apply any load to it other than the load of the unit.

Mounting space

Refer to the following drawing when determining the mounting location and direction, taking into consideration the space required for turning the lens and the wiring at the rear of the unit.

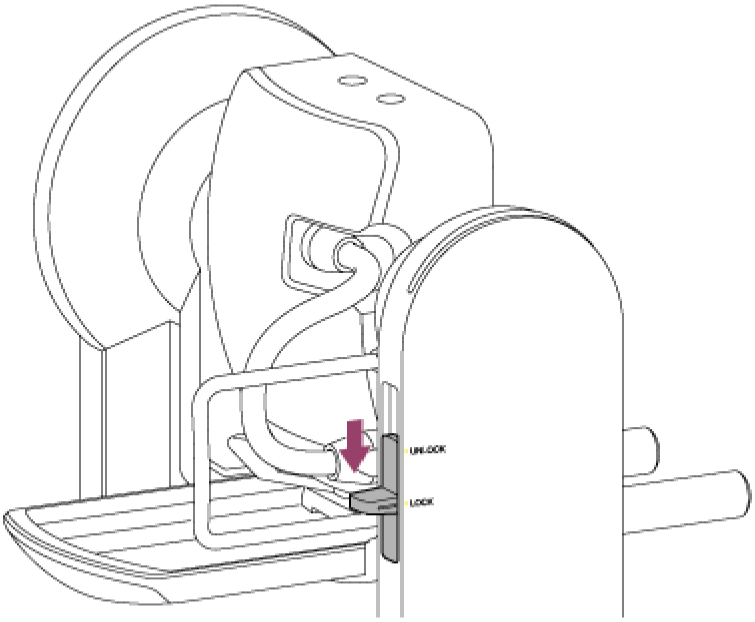


A: Camera head range of movement (e.g. SEL70200GM2 (with SEL20TC attached): Ø370)
B: Ceiling bracket (hole on mounting surface side (Ø150))
C: Mounting alignment hole

Note

- Mount it in a stable location that is not subject to vibration. Locations subject to vibration may cause vibration in the image.
- If the unit must be mounted on an inclined surface, keep it within ±15° of the horizontal and take measures to prevent the unit from falling.

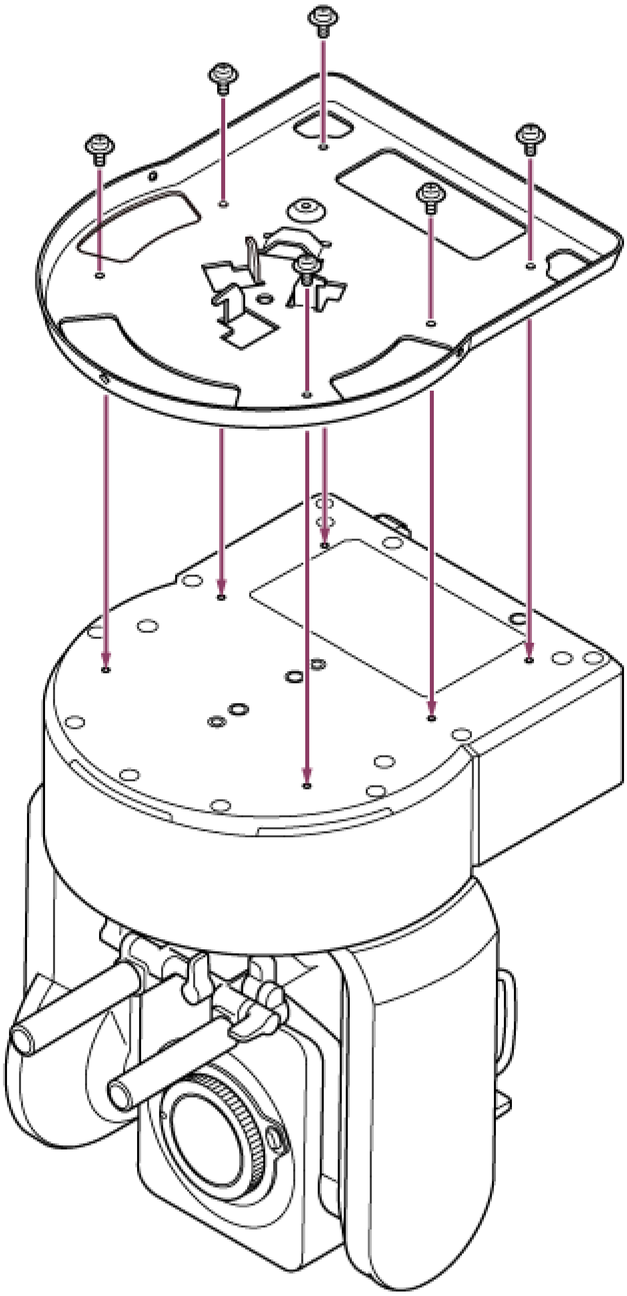
2 **Slide the pan/tilt lock lever to the LOCK position to lock the pan/tilt of the camera head.**



Note

- If the camera head pan/tilt does not lock when the lock lever is in the LOCK position, move the camera head manually until it locks in position.

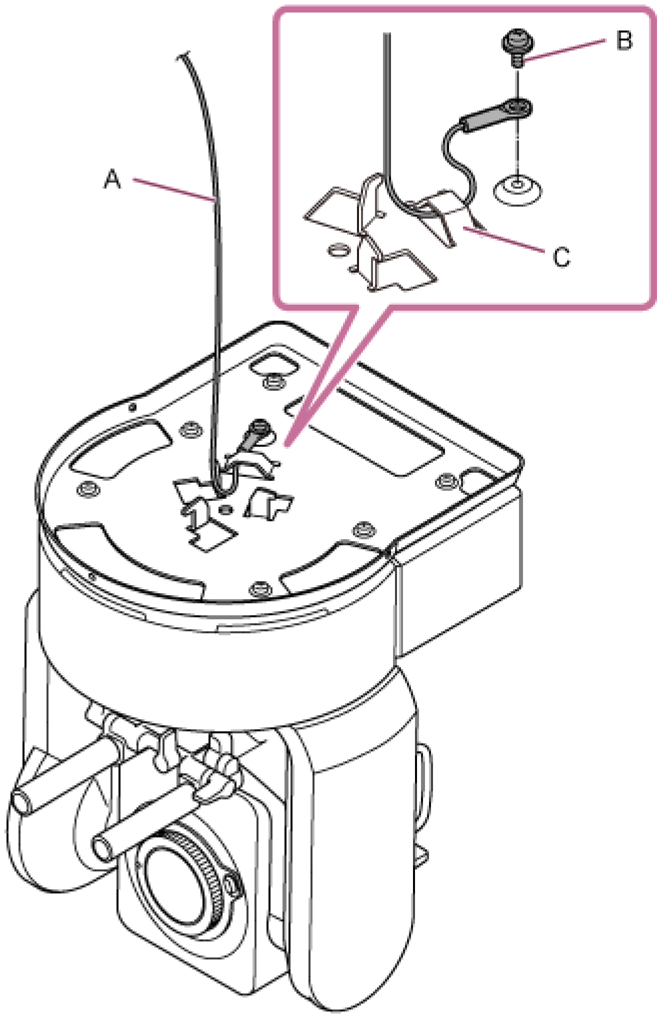
3 **Attach the body bracket to the bottom of the unit using the six supplied screws (M3×8).**



CAUTION

Use the supplied screws. The use of screws other than the supplied screws may damage the interior of the unit.

4 **Attach the fall prevention wire rope to the body bracket.**

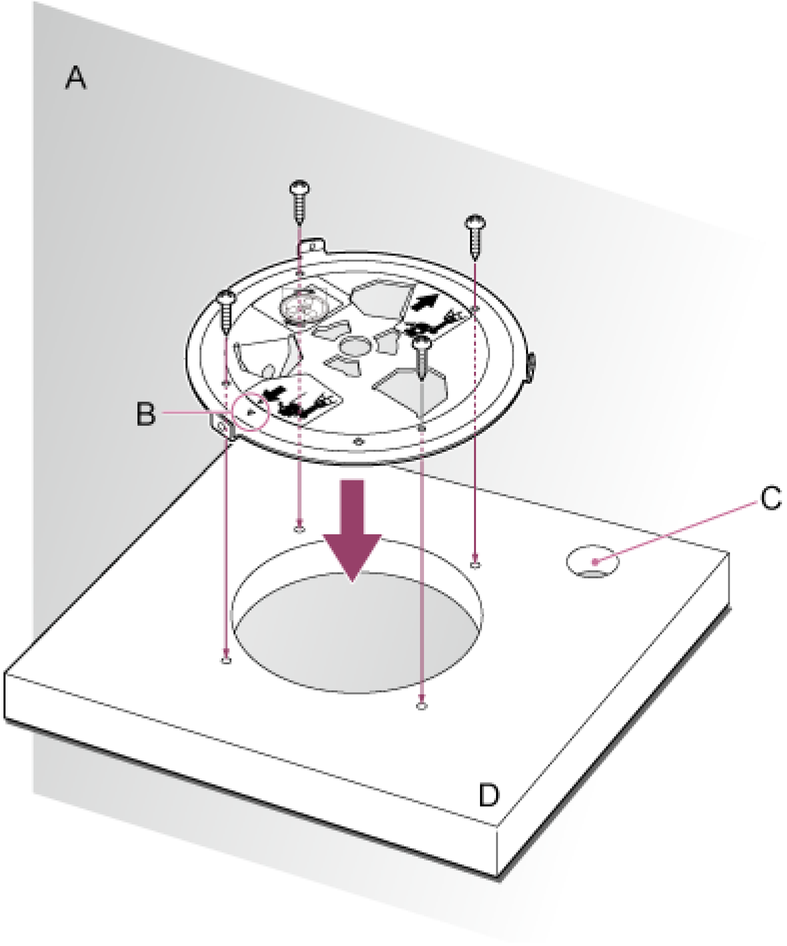


A: Supplied wire rope
B: Supplied Phillips screw (M4×8)
C: Wire rope metal loop

WARNING

Use the supplied screw. The use of a screw other than the supplied screw may reduce the effectiveness of the wire rope function.

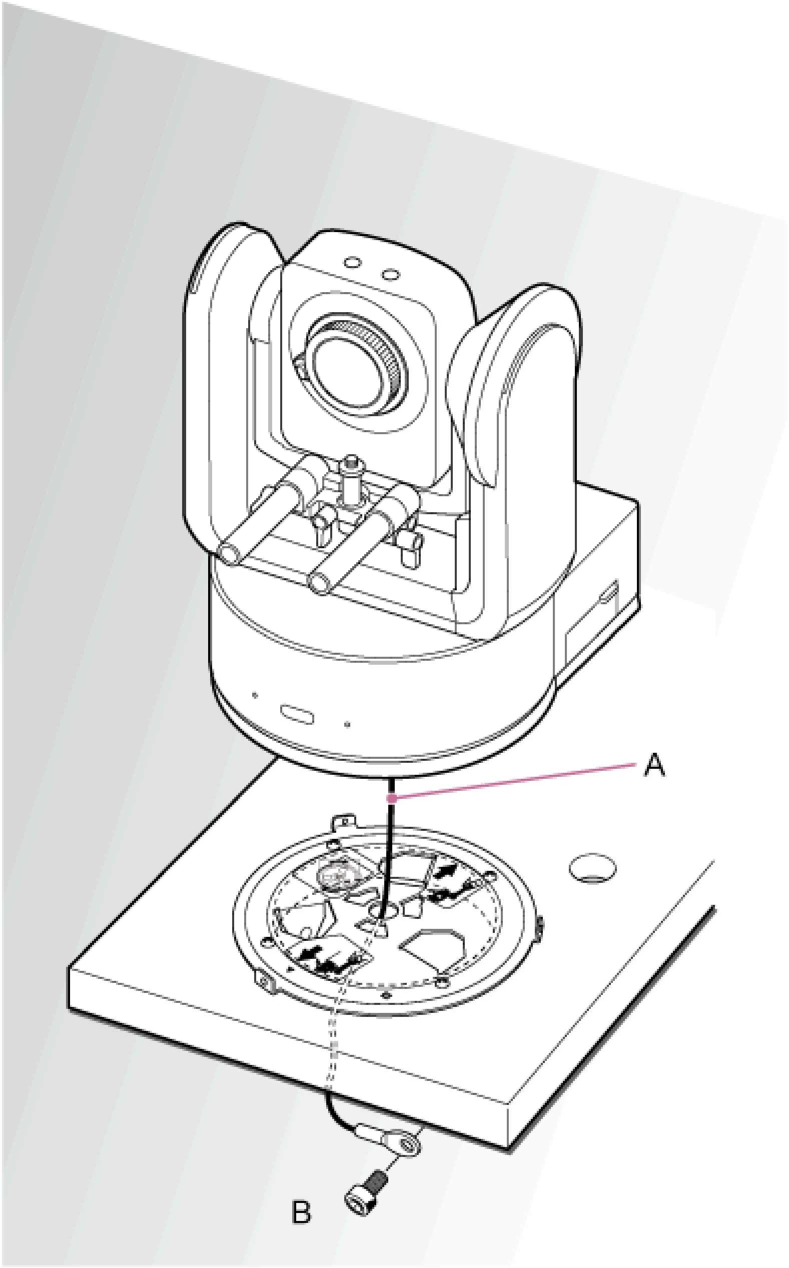
5 **Attach the ceiling bracket to the surface, such as a shelf, where the unit will be mounted.**



A: Wall
B: △ mark (camera forward direction)
C: Hole for connection cables
D: Shelf or other mounting surface

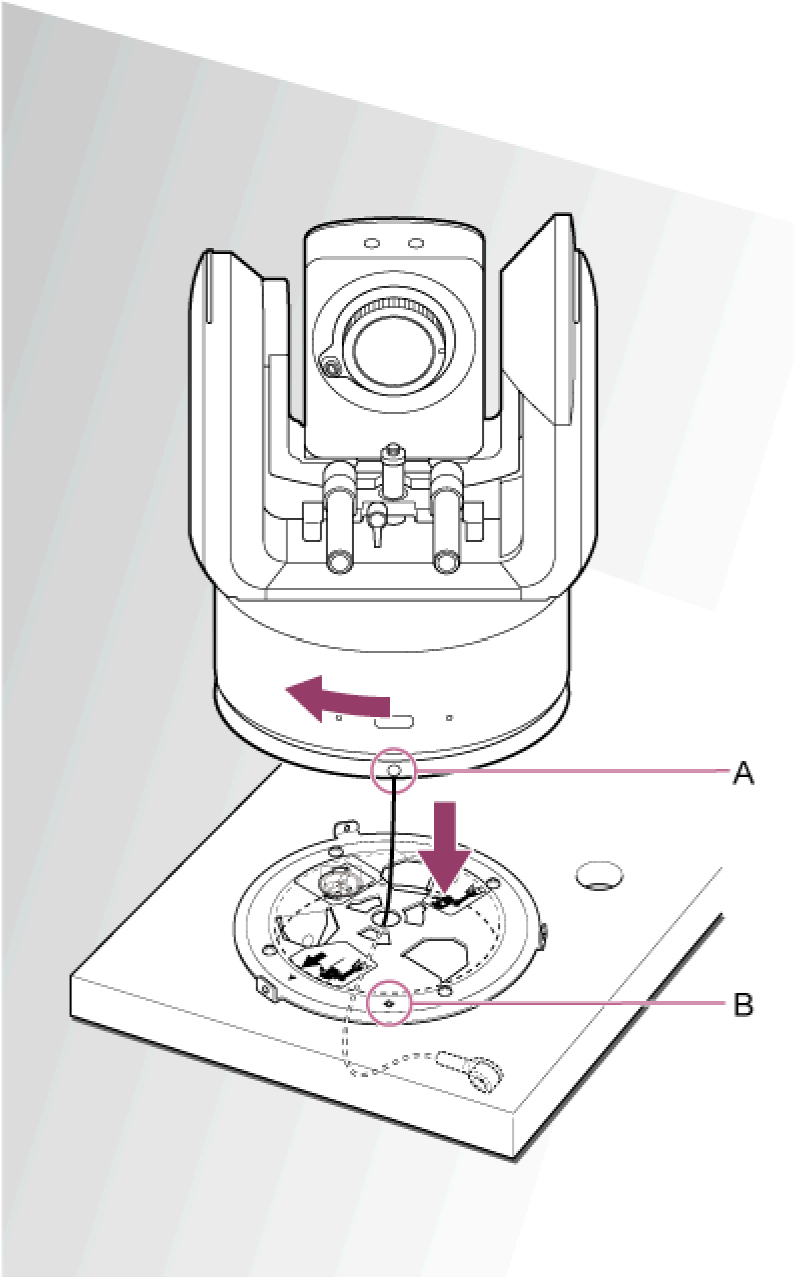
6 **Attach the fall prevention wire rope to a point near the mounting surface.**

Use an M5 (3/16 inch) hexagon socket head cap screw (option) and attach it to an object near the shelf or surface to which the ceiling bracket is attached.



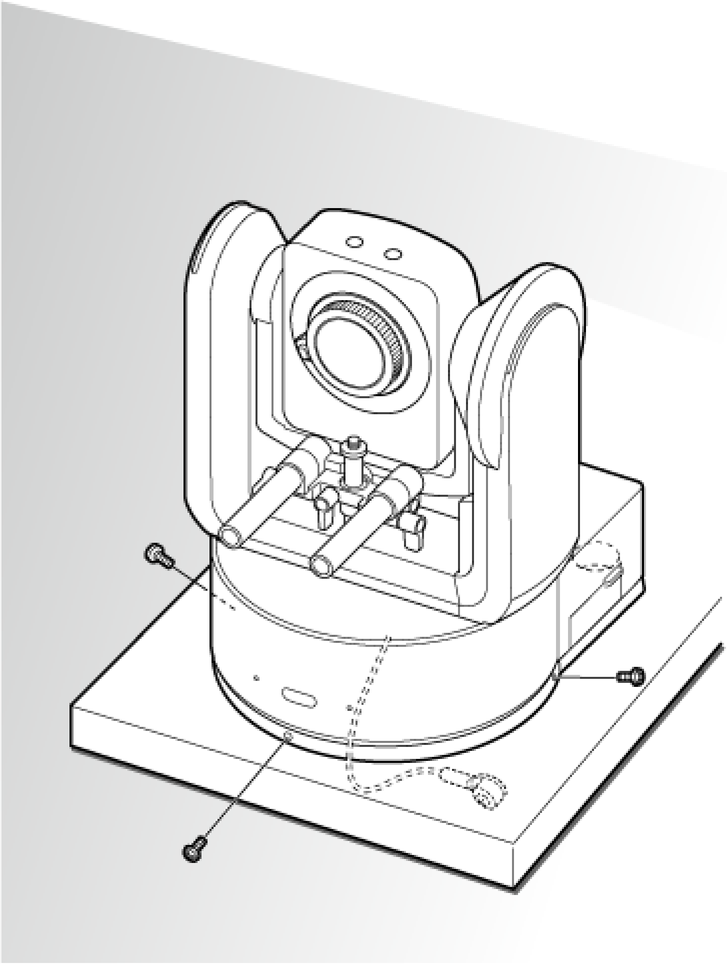
A: Wire rope
B: Hexagon socket head cap screw (M5, 3/16 inch)

7 **Align the ○ screw hole at the front of the body bracket with the ◇ hole of the ceiling bracket, insert the unit, and temporarily fix the body bracket in the ceiling bracket by turning the unit clockwise.**



A: ○ hole
B: ◇ hole

8 **Attach the body bracket and ceiling bracket using the three supplied rotation lock screws (M3×8).**



9. **Check the mounting status.**

   Specifically, check the following items.

   - Mounting screws are correctly attached.
   - Fall prevention wire rope is correctly attached and is not twisted.
   - Unit is mounted level (without tilt or wobble).
   - Unit does not spin freely when turned.

Next, attach the lens. See “Attaching a Lens,” taking into account the information in “Precautions When Attaching/Removing a Lens,” “Checking the Lens Switches,” and “Precautions When Using a Zoom Lens.”

Note

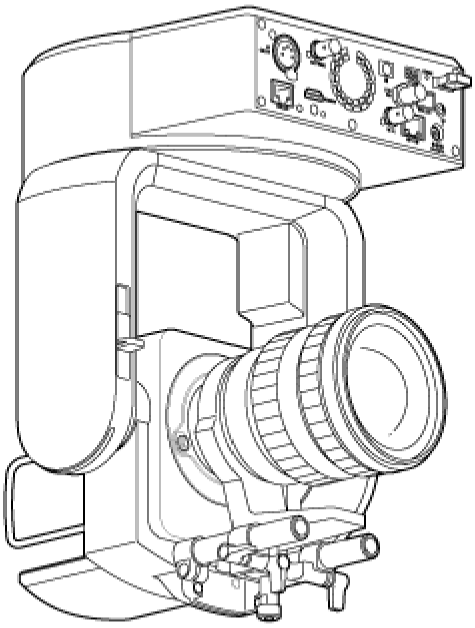
- After attaching a lens, check that the lens is securely attached.
  The lens does not have any protection against falling. Sony can assume no liability for a lens falling from the unit.

Related Topic

- Precautions when Attaching/Removing a Lens
- Checking the Lens Switches
- Precautions When Using a Zoom Lens
- Attaching a Lens

Mounting on a Ceiling

This topic describes the procedure for mounting the unit on a ceiling using the ceiling bracket (CIB-PCM1 (option)).



WARNING

- To mount the unit on a ceiling, ask a professional contractor.
- When mounting on a ceiling, make sure that the mounting surface and mounting material (excluding accessories) can support 200 kg (440 lb 15 oz) or more, and mount the unit as described in this Help Guide. If the mounting is not sturdy enough, the unit may fall and cause serious injury.
- Attach the supplied fall prevention wire rope to the CIB-PCM1 Ceiling Bracket (option) to prevent the unit from falling.
- When the unit is mounted on a ceiling, check that the mounting has not become loose once a year. Shorten the inspection interval according to the usage conditions.

Installation note

- To protect the lens and the lens connector block of the unit, keep the lens cap and cover on until the lens is attached.
- To prevent lens failure, do not hold the lens parts while working.
- To prevent unit failure, do not hold the camera head while working.

1 **Check the ceiling mounting accessories and mounting space.**

CIB-PCM1 ceiling bracket kit (option)

Before you start, check that you have the following parts.

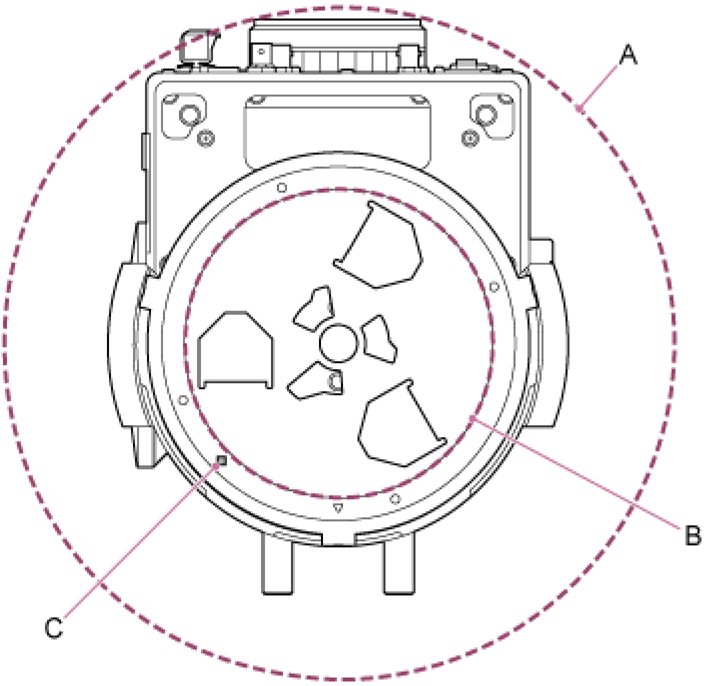
- Body bracket (1)
- Ceiling bracket (1)
- Lens release button cover (1)
- Fall prevention wire rope (1)
- +PSW M3×8 screws (9)
- +PSW M4×8 stainless steel screw for fall prevention wire rope (1)

Note

- The fall prevention wire rope is designed to support the unit when suspended. Do not apply any load to it other than the load of the unit.

Mounting space

Refer to the following drawing when determining the mounting location and direction, taking into consideration the space required for turning the lens and the wiring at the rear of the unit.



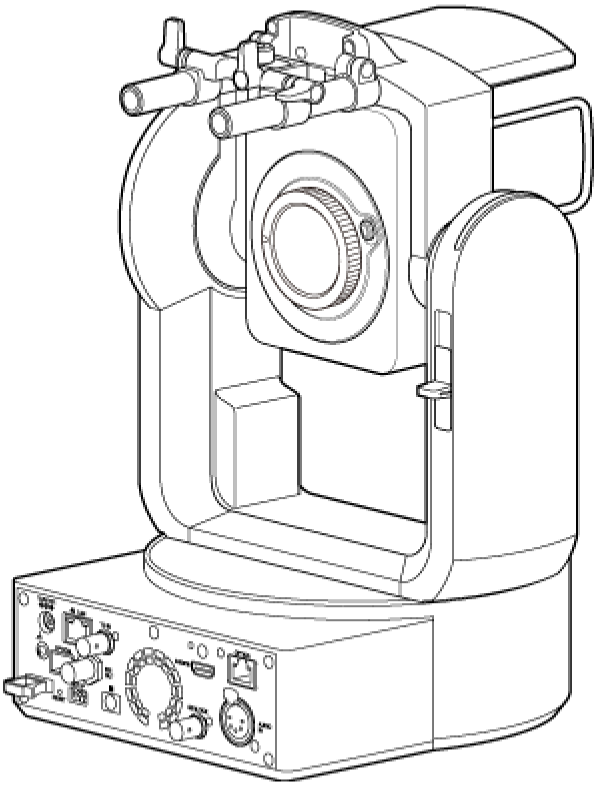
A: Camera head range of movement (e.g. SEL70200GM2 (with SEL20TC attached): Ø370)
B: Ceiling bracket (hole on ceiling side (Ø150))
C: Mounting alignment hole

Note

- Mount on a ceiling (such as concrete) with sufficient strength.
- To mount the unit on a ceiling with insufficient strength, provide sufficient reinforcement.
- Mount it in a stable location that is not subject to vibration. Locations subject to vibration may cause vibration in the image.
- If the unit must be mounted on an inclined surface, keep it within ±15° of the horizontal and take measures to prevent the unit from falling.
- The side opposite the △ hole on the ceiling bracket is the shooting direction (camera front side).

2 **Slide the pan/tilt lock lever to the UNLOCK position to unlock pan/tilt and turn the camera head by 180° in the tilt direction.**

3 **Slide the pan/tilt lock lever to the LOCK position to lock the pan/tilt of the camera head.**

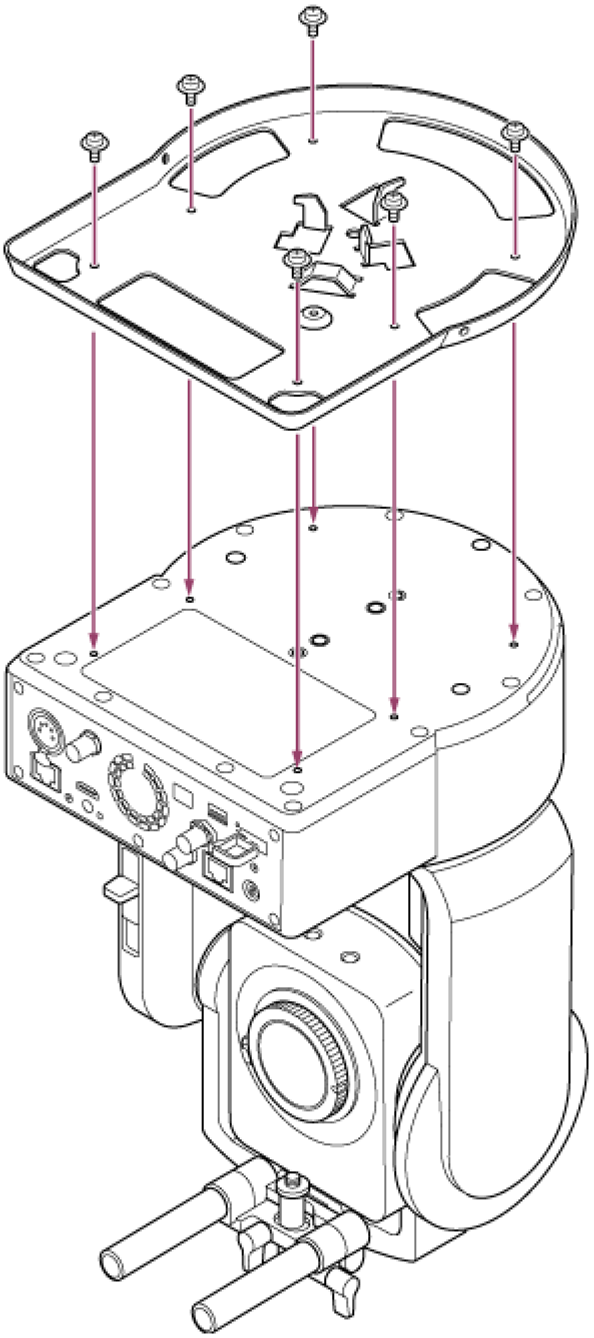


Camera head turned by 180°

Note

- If the camera head pan/tilt does not lock when the lock lever is in the LOCK position, move the camera head manually until it locks in position.

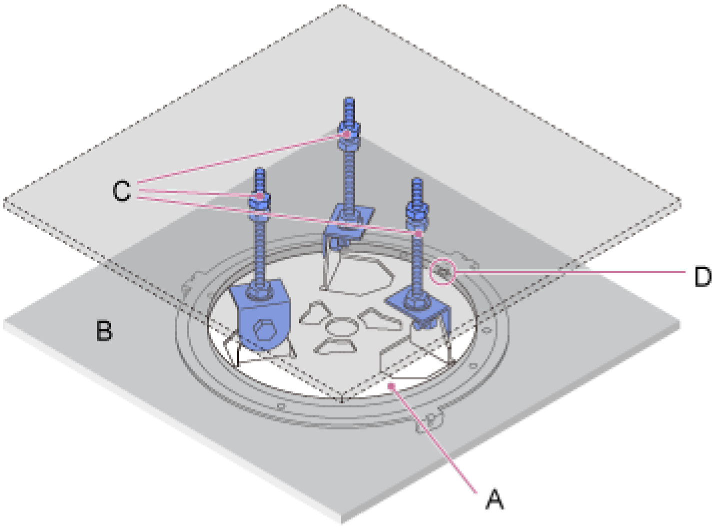
4 **Attach the body bracket to the bottom of the unit using the six supplied screws (M3×8).**



CAUTION

Use the supplied screws. The use of screws other than the supplied screws may damage the interior of the unit.

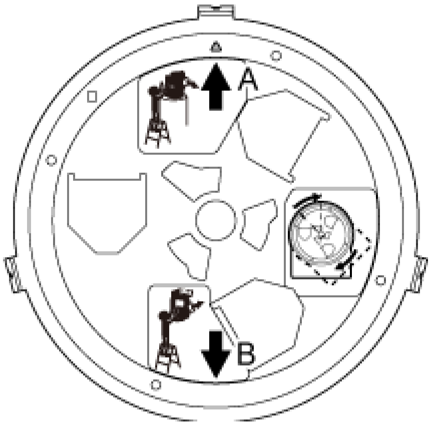
5 **Attach the ceiling bracket to a mounting plate (option), and then attach the plate to the ceiling.**



A: Ceiling bracket
B: Ceiling
C: Mounting plate
D: △ hole

Attach the bracket, according to the orientation of the ceiling bracket

Note that when mounted on a ceiling, the front of the camera is on the opposite side of the ceiling bracket in comparison to a normal upright mounting. Mount correctly by referring to the diagram indicating the mounting direction.

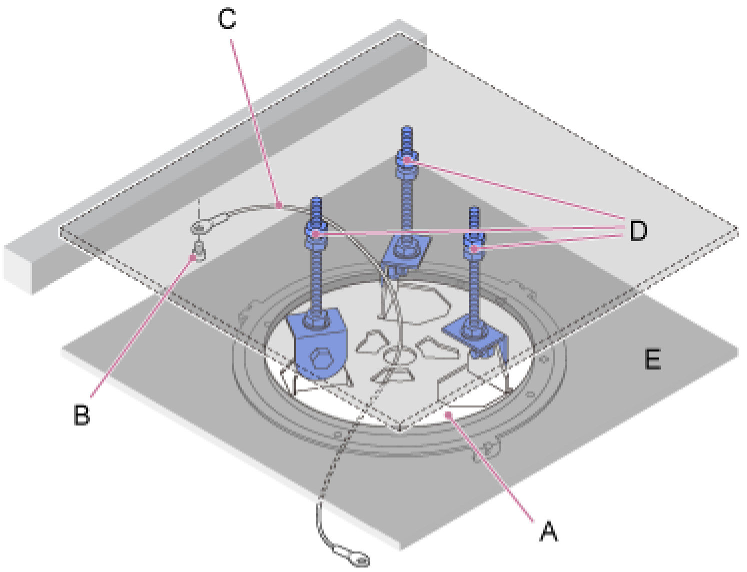


A: Front for upright mounting (△ hole orientation)
B: Front for ceiling mounting

Note

- The mounting surface material is the responsibility of the customer.

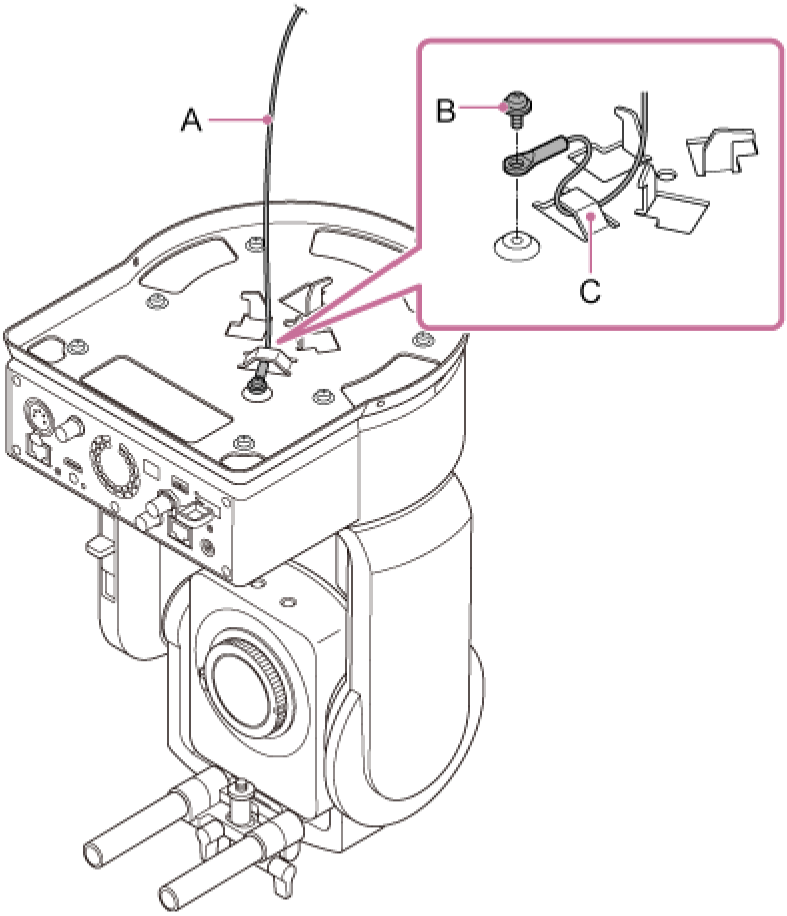
6 **Attach the fall prevention wire rope to the ceiling.**



A: Ceiling bracket
B: Hexagon socket head cap screw (M5, 3/16 inch)
C: Wire rope (supplied)
D: Mounting plate
E: Ceiling

7. **Pull the fall prevention wire rope through the hole in the center of the ceiling bracket, and attach it to the body bracket.**

   Route the fall prevention wire rope through the wire rope metal loop of the body bracket and attach it securely to the bracket using the supplied stainless steel screw (M4×8).



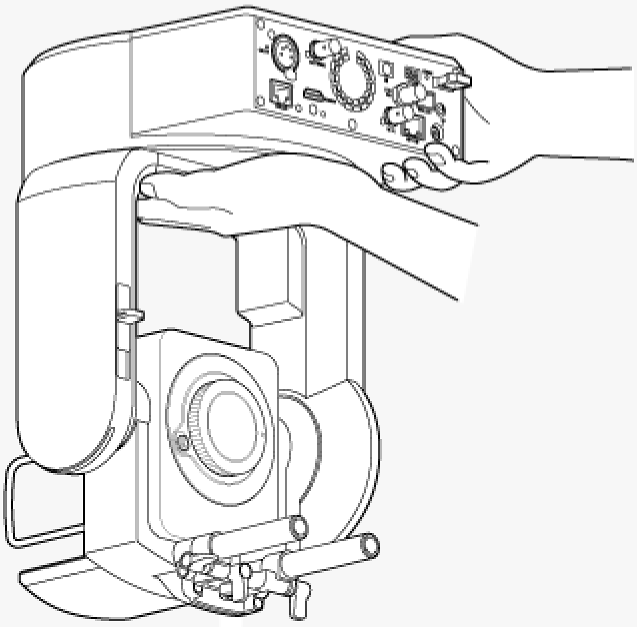
A: Supplied wire rope
B: Supplied Phillips screw (M4×8)
C: Wire rope metal loop

WARNING

Use the supplied screw. The use of a screw other than the supplied screw may reduce the effectiveness of the wire rope function.

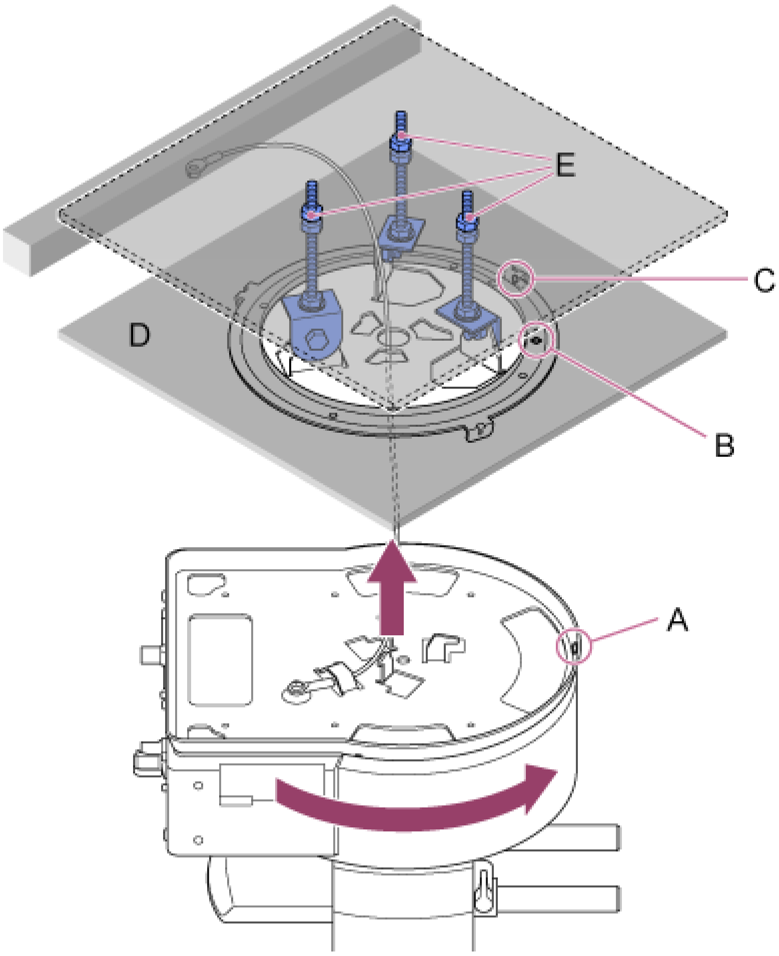
Note

- It is recommended that one person holds the unit as shown in the following diagram while another person mounts the unit.



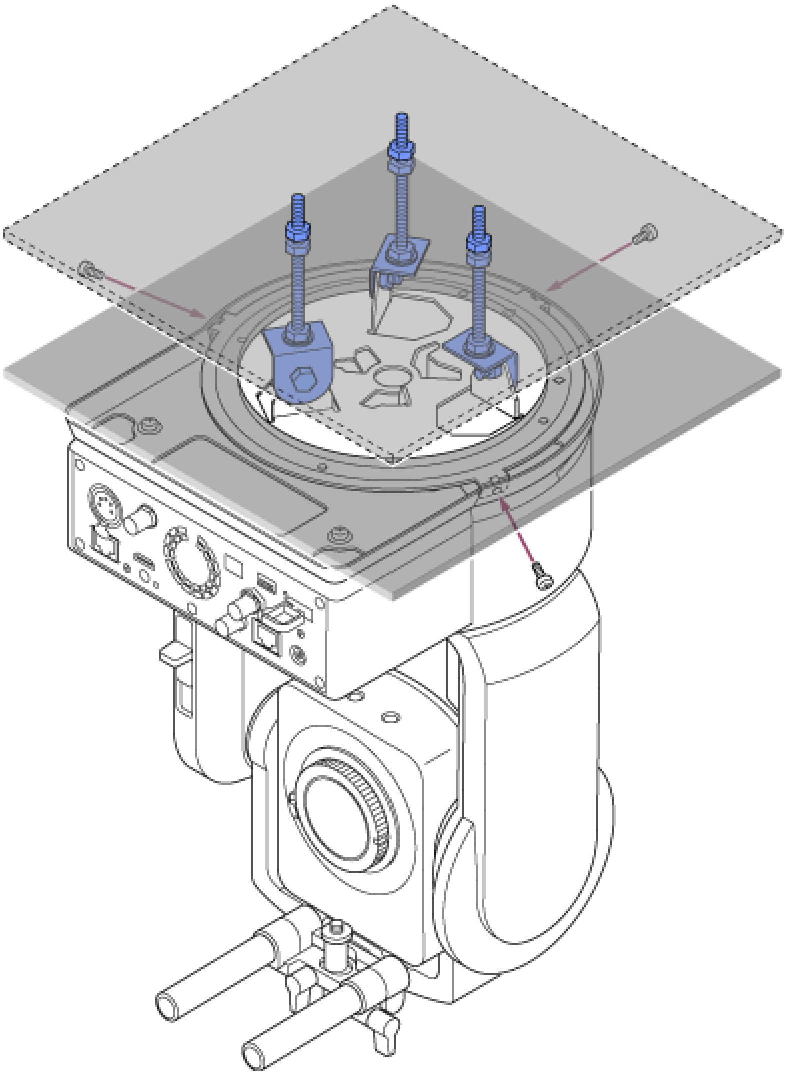
- Do not hold the camera head or lens support while mounting the unit. There is a risk of damage or injury if the unit is dropped or falls.
- Take care when wiring that electrical connectors and cables do not become short-circuited by the fall prevention wire rope.
- The mount can support a suspended mass of up to 8.8 kg (19 lb 6.4 oz) (including the lens). To prevent the unit falling, do not exceed the maximum expected mass.

8 **Align the screw hole (A) on the body bracket with the ◇ hole (B) on the ceiling bracket, insert the unit and turn it about 60 degrees clockwise until the screw hole (A) and the screw hole (C) are aligned.**



A: Screw hole on the body bracket
B: Screw hole on the ceiling bracket (◇ hole)
C: Screw hole
D: Ceiling
E: Mounting plate

9 **Attach the body bracket and ceiling bracket using the three supplied rotation lock screws (M3×8).**



10. **Check the mounting status.**

    Specifically, check the following items.

    - Mounting screws are correctly attached.
    - Fall prevention wire rope is correctly attached and is not twisted.
    - Unit is mounted level (without tilt or wobble).
    - Unit does not spin freely when turned.

Next, attach the lens. See “Attaching a Lens,” taking into account the information in “Precautions When Attaching/Removing a Lens,” “Checking the Lens Switches,” and “Precautions When Using a Zoom Lens.”

Note

- To operate the pan/tilt correctly when the unit is mounted on a ceiling, set [Pan-Tilt] > [Direction] > [Ceiling] to [On] in the web menu.
- After attaching a lens, check that the lens is securely attached.
  The lens does not have any protection against falling. Sony can assume no liability for a lens falling from the unit.

Related Topic

- Precautions when Attaching/Removing a Lens
- Checking the Lens Switches

- Precautions When Using a Zoom Lens
- Attaching a Lens

Precautions when Attaching/Removing a Lens

WARNING

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

Note

- Attach/remove a lens while the unit is turned off.
- A lens is a precision component. Do not place the lens on a surface with the lens mount face down. Attach the supplied lens mount cap.

Hint

- For details about lenses supported by the unit, contact your Sony service representative.

Checking the Lens Switches

The following checks and settings are required, depending on the type of lens.

For a lens with a focus mode switch

Set the switch to AF/MF or AF.
If the switch is set to MF or Full MF, the focus can only be adjusted using the lens ring.

Note

- When using an A-mount lens, manual adjustment from a remote control unit may not be available.

For a lens with a zoom switch

Set the switch to SERVO.
If the switch is set to MANUAL, the zoom can only be adjusted using the zoom ring. Zoom control from the unit has no effect.

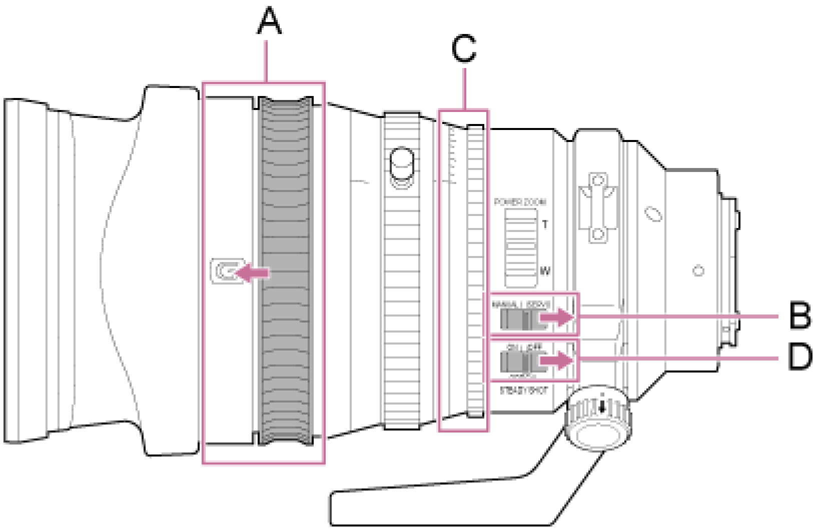
For a lens with an Auto Iris switch

Set the switch to AUTO.
When not set to AUTO, the iris can only be adjusted using the lens ring. Iris operation from the unit has no effect.

For a lens with an image stabilization switch

Set the switch to OFF.
If the switch is set to ON, unexpected behavior may occur during pan/tilt operation.

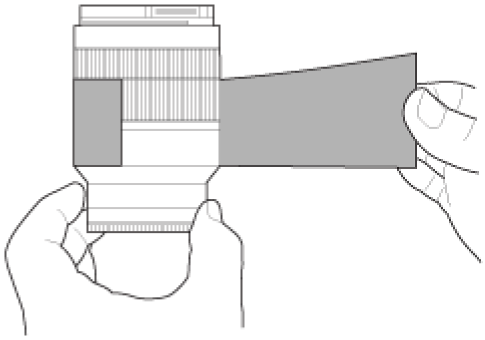
SELP28135G



A: Move the focus ring to the forward position (AF/MF mode).
B: Set the ZOOM switch to the SERVO position.
C: Set the iris ring to “A” and the IRIS LOCK switch to the LOCK position.
D: Set the image stabilizer switch to OFF.

Precautions When Using a Zoom Lens

When using a zoom lens other than a power zoom lens, the zoom position may change depending on the mounting environment. Secure the zoom ring in position using tape according to the purpose of use.



Plastic film tape: 471 BLA 50 or equivalent

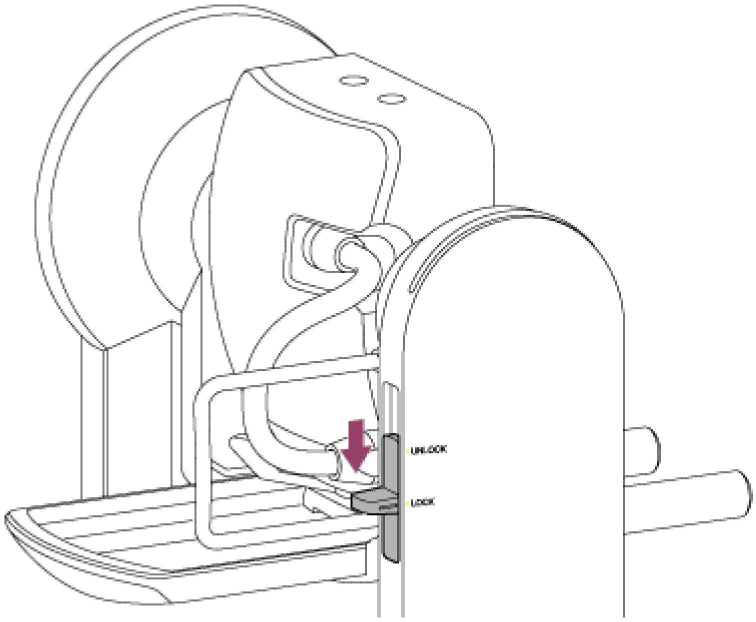
Attaching a Lens

This topic describes how to attach an E-mount lens or A-mount lens.

Note

- Do not transport the unit with the lens still attached.
- When using an A-mount lens, the iris is set manually and focus is set to MF.

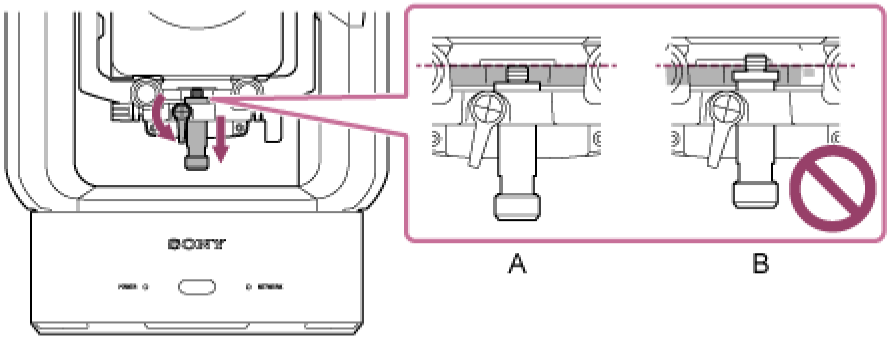
1. **Slide the pan/tilt lock lever to the LOCK position to lock the pan/tilt of the camera head.**



Note

- If the camera head pan/tilt does not lock when the lock lever is in the LOCK position, move the camera head manually until it locks in position.

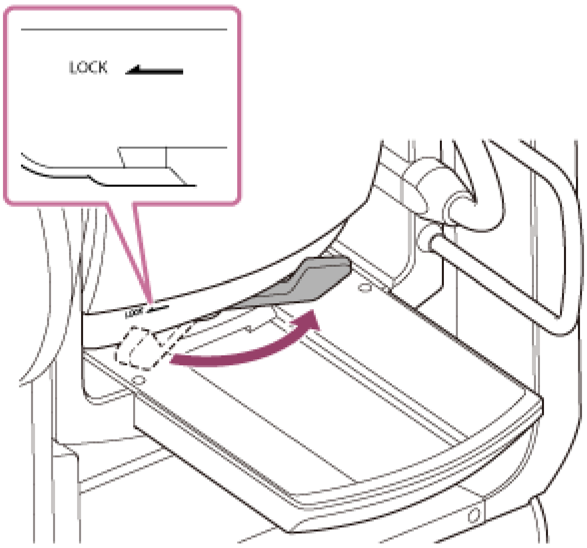
2. **Turn the clamp lever for the lens support pedestal attachment screw counterclockwise to loosen the lock, then move the lens support pedestal attachment screw to a position that does not interfere with the lens.**



A: Correct

B: Incorrect

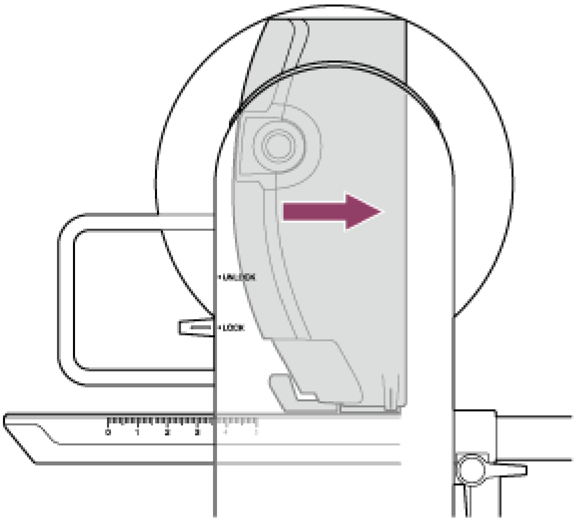
3. **Turn the camera head lock lever in the direction of the arrow to unlock the camera head.**



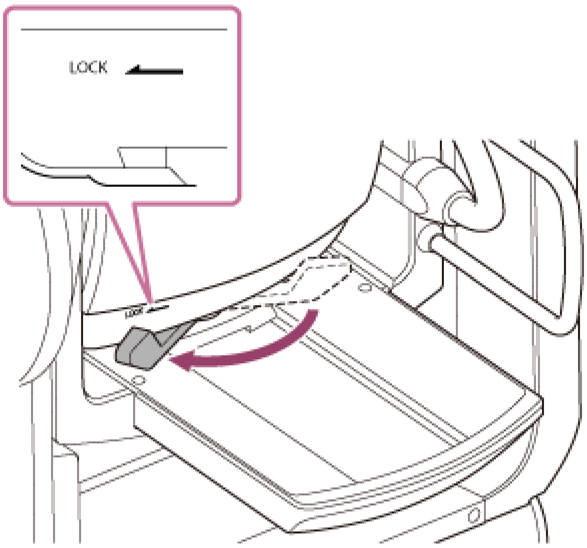
Note

- Until the camera head is locked again, there is a risk that the camera head may move under its own weight. Support the camera head with your hand while performing the task.

4. **Slide the camera head to the frontmost position.**



5. **Turn the camera head lock lever in the direction of the arrow to lock the camera head.**

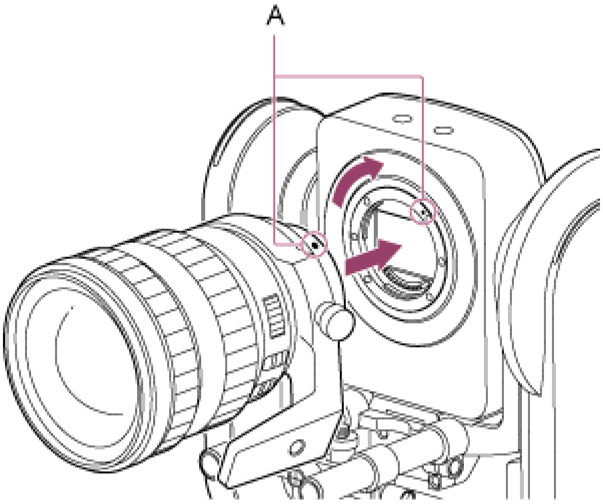


Note

- Make sure the camera head lock lever does not come into contact with other parts to avoid interfering with the tilt operation.

6 **Remove the cap and cover from the unit and the lens.**

7 **Align the lens mount mark (white) with the unit, carefully insert the lens into the camera head, and then turn the lens clockwise until it clicks into the locked position.**

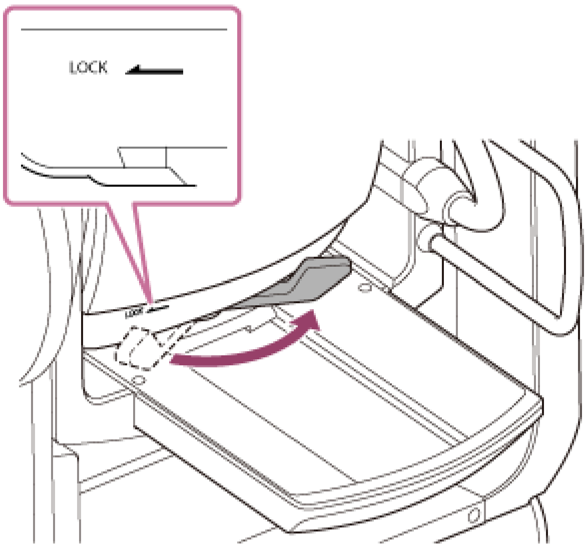


A: Mount marks (white)

Note

- To use an A-mount lens, attach a lens mount adaptor (option) to the unit and then attach the A-mount lens.

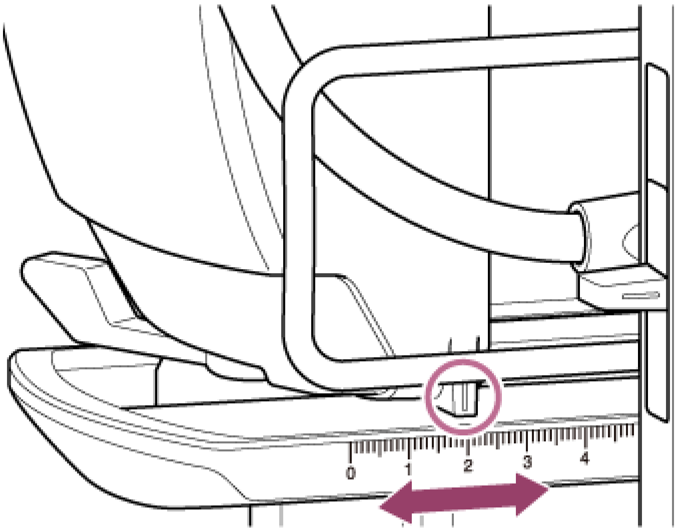
8 **Turn the camera head lock lever in the direction of the arrow to unlock the camera head.**



Note

- Until the camera head is locked again, there is a risk that the camera head may move under its own weight. Support the camera head with your hand while performing the task.

9. **Maintain the forward/rearward balance of the camera head so that the slide base is horizontal.**



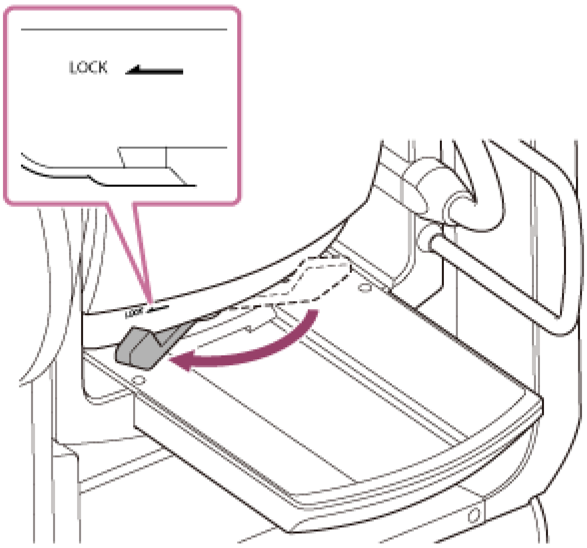
If you are using one of the following lenses, you can roughly balance the unit and lens by referring to the scale on the slide base.

Scale position	Lens name
0.5	SEL70200GM (with SEL20TC attached)
1.7	SEL70200GM
2.0	SEL70200GM2 (with SEL20TC attached)
3.0	SELP28135G, SEL70200GM2
3.5	SELP18110G
3.6	SELC1635G
5.0 or higher	SEL1224GM, SEL1635GM, SELP1635G, SELP18105G, SELP1020G

Note

- Use the slide base scale as a reference for rough balance.
- While attaching the lens, make appropriate adjustments to the balance so that the unit does not tilt back and forth.
- Adjust the balance on a horizontal surface.
- Remove the lens support unit when using the SELC1635G.

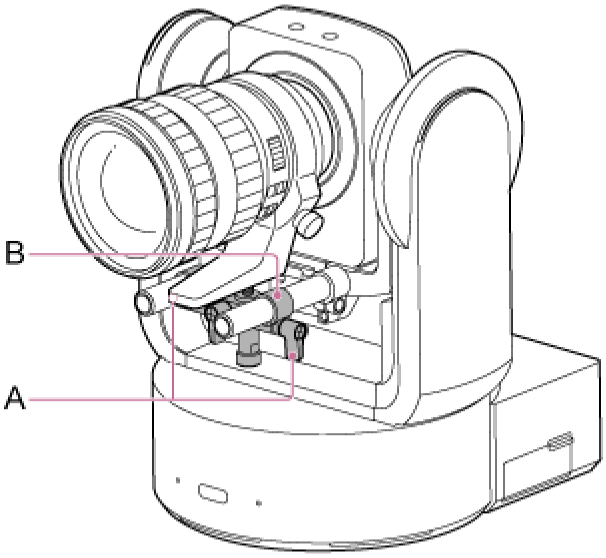
10 **Turn the camera head lock lever in the direction of the arrow to lock the camera head.**



Note

- Make sure the camera head lock lever does not come into contact with other parts to avoid interfering with the tilt operation. Confirmation method: Slide the pan/tilt lock to the UNLOCK position, turn the camera block so that it is facing upward by hand, and visually confirm that it is not in contact with other parts. If there is contact, turn the camera head lock lever again in the direction of the arrow.

11 **Turn the lens support clamp levers counterclockwise to loosen the lens support unit.**



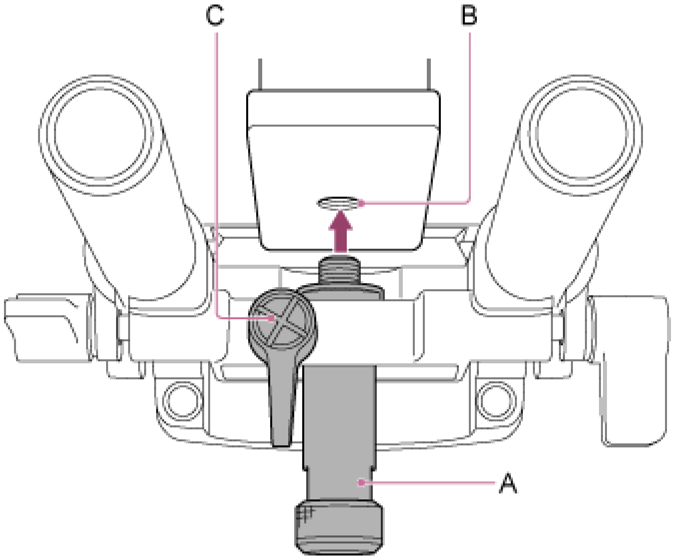
A: Lens support rod clamp lever (2 places)
B: Lens support unit

12 **Move the lens support unit so that the lens support pedestal is aligned with the lens support pedestal attachment screw, then turn the screw clockwise to secure the lens support pedestal.**

Note

- Make sure the lens support pedestal is perpendicular to the lens support pedestal attachment screw, and then tighten.

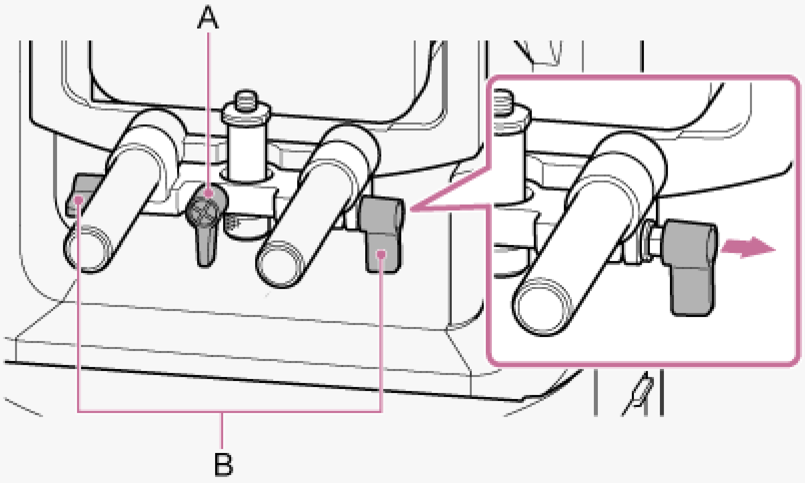
13 **Turn the clamp lever for the lens support pedestal attachment screw clockwise to lock the lens support pedestal attachment screw.**



A: Lens support pedestal attachment screw
B: Attachment screw hole
C: Lens support pedestal attachment screw clamp lever

Hint

- If a clamp lever is in a position that makes it difficult to turn, release the clamp lever and rotate it to an angle that will make operation easier. When in the desired position, close the clamp lever.



A: Lens support pedestal attachment screw clamp lever
B: Lens support rod clamp lever

14 **Turn the two lens support rod clamp levers clockwise to secure the lens support unit.**

15 **Check that both levers are tightened and not loose, the lens is attached correctly, and that the lens switches are set correctly.**

- If a lever is loose or the lens is not attached correctly, the lens may fall and become damaged.
- When using an E-mount power zoom lens, the lens must also be calibrated separately to accurately restore the zoom positions stored in the camera as preset positions. For details, see “Calibrating an E-Mount Lens.”

Related Topic

- Calibrating an E-Mount Lens

Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

Removing a Lens

Remove a lens using the reverse procedure of attaching the lens.

1. **Check that the pan/tilt is locked.**
2. **Turn the clamp lever for the lens support pedestal attachment screw counterclockwise to loosen the lock.**
3. **Remove the lens support pedestal attachment screw on the lens support unit and move it to a position that does not interfere with the lens.**
4. **Unlock the camera head and slide the camera head to the frontmost position.**

   For details, see steps 3 to 5 in “Attaching a Lens.”
5. **Press and hold the lens release button and turn the lens counterclockwise while supporting the lens.**
6. **With the mount marks (white) of the camera and the lens aligned, pull out the lens toward the front.**

Note

- Grasp the lens securely in your hand to prevent the lens from falling.
- If another lens will not be attached immediately, always attach the body cap.

Related Topic

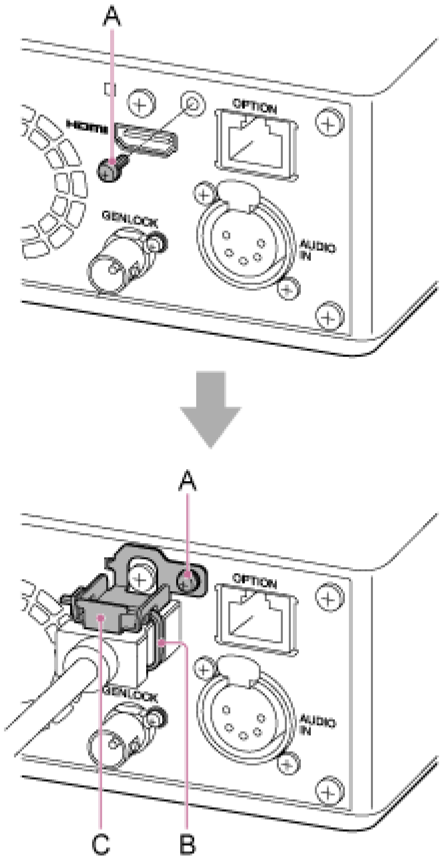
- Attaching a Lens

Connecting Cables

This topic describes cable connections.

1. **Connect the required cables to the connectors on the rear panel.**

   To prevent the HDMI cable from being removed, remove the HDMI cable retaining plate mounting screw (M2.6×6, black) from the connector block and attach the supplied HDMI cable retaining plate using the mounting screw. Secure the HDMI cable to the HDMI cable retaining plate using a commercially available cable tie or band.

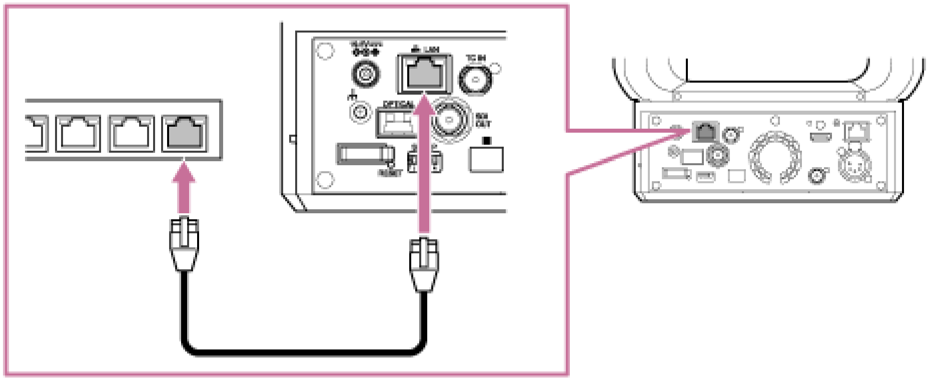


A: HDMI cable retaining plate mounting screw (M2.6×6, black)
B: Commercially available cable tie or band
C: HDMI cable retaining plate (supplied)

Connecting the Unit to a Network Device Via Wired Connection

This topic describes connecting the unit to a network device via a wired connection.

1. **Connect the unit to a network device (such as a Wi-Fi access point or switching hub) using a Category 5e or higher LAN cable.**



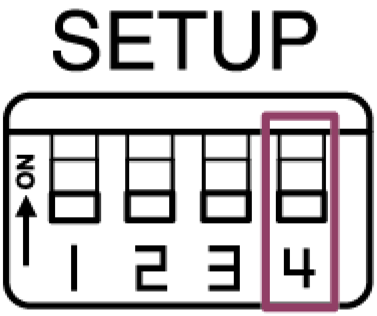
2. **Access the Web App and configure the initial settings of the unit.**

   For details, see “Accessing the Web App from a Web Browser” and “Initial Setup of the Unit.”

Connecting to a network without a DHCP server

The unit is configured by factory default to obtain an IP address automatically from a DHCP server.
In general, commercially available Wi-Fi routers are equipped with a DHCP server function. However, if connecting to a network that does not have a DHCP server, set a fixed IP address using the following procedure.

1. Remove the power supply from the unit.
2. Set SETUP switch 4 to the ON position on the connector block (fixed IP address mode).



3. Connect the power supply to the unit.
   The IP address of the unit will be set to 192.168.0.100, regardless of the IP address setting in the web menu.
4. Set the IP address of the setup computer to a unique address on the same network, such as 192.168.0.200.
5. Connect the setup computer and unit directly using a LAN cable.
6. On the setup computer, enter “192.168.0.100” in the address bar of a web browser
   The Web App of the unit is displayed. You will be prompted to enter the user name and password. Configure settings as described in “Initial Setup of the Unit.”

7. Configure the following in [Network] > [Wireless LAN] > [IPv4] in the web menu and press the [OK] button.
The settings are examples only. Change the settings according to the network to connect.

Item	Setting	Remarks
[DHCP]	[Off]	
[IP Address]	192.168.0.101	The last segment should be a number that is unique among other devices connected to the same network.
[Subnet Mask]	255.255.255.0	
[Gateway]	192.168.0.1	Configure the settings according to the network.

8. Wait about 10 seconds and then remove the power supply from the unit.
9. Set SETUP switch 4 to the OFF position on the connector block.
10. Reconnect the unit to the network LAN cable.
11. Connect the power supply to the unit.
12. Enter the IP address configured in step 7 in a web browser connected to the network.
The Web App screen appears.

Related Topic

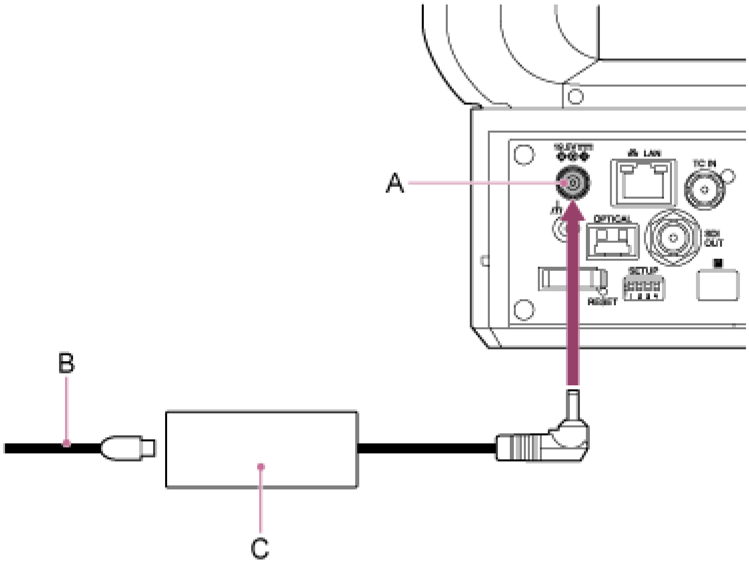
- Accessing the Web App from a Web Browser
- Initial Setup of the Unit
- Using PoE++ Power

Using AC Power

This topic describes the procedure to power the unit using AC power.

1. **Slide the pan/tilt lock lever to the LOCK position to lock the pan/tilt of the camera head.**

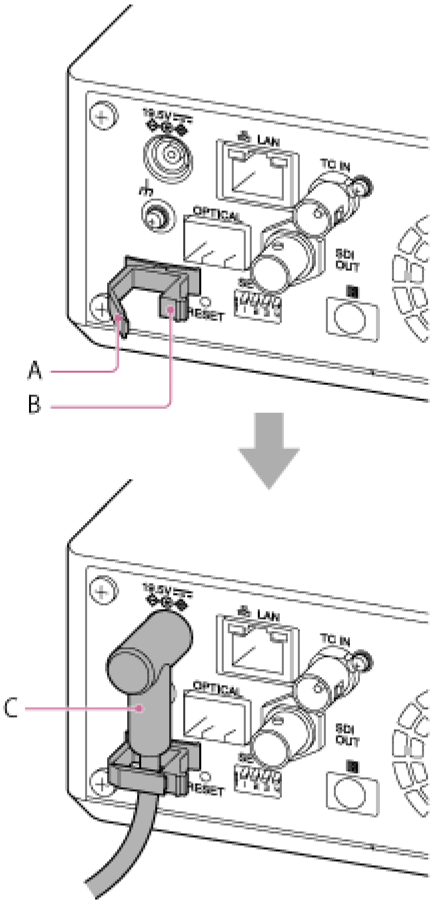
2. **Connect the AC adaptor (supplied) to the DC IN connector on the unit, and connect the power cord (supplied) to an AC power source.**



A: DC IN connector
B: Power cord
C: AC adaptor

3. **Secure the AC adaptor cord using the cord clamper if you want to prevent the cord from being disconnected.**

   Unlock the cord clamper, route the cord through the clamper as shown below, and lock the clamper.



A: Cord clamper
B: Cord clamper lock
C: AC adaptor cord

4. **Check that the POWER lamp on the front of the unit changes from blinking green to solid green and that startup has finished.**

   When the unit has started normally and connected to the network, the NETWORK lamp will light up green.

   - When using a lens that does not support pan/tilt operation, lock the pan/tilt lock lever and skip the following steps. For details about lenses that support pan/tilt, contact your dealer or Sony service representative.

5. **Slide the pan/tilt lock lever to the UNLOCK position to unlock the pan/tilt of the camera head.**

6. **Reset the pan/tilt.**

   - For details, see “Resetting the Pan/Tilt.”

Note

- Do not use any AC adaptor or power cord, other than those provided with the unit. Connecting another adaptor or power cord may cause a fire or malfunction.
- Do not connect and use an AC adaptor in a confined space, such as between a wall and furniture.
- Do not short-circuit the metal parts of the plug of the AC adaptor. Doing so may cause a malfunction.
- Connect the AC adaptor to the nearest AC power source. If a problem occurs during operation, immediately disconnect the power cord from the AC power source.

- When disconnecting the AC adaptor from the unit, grasp the plug and pull it straight out. Pulling on the cable may cause a malfunction.

Related Topic

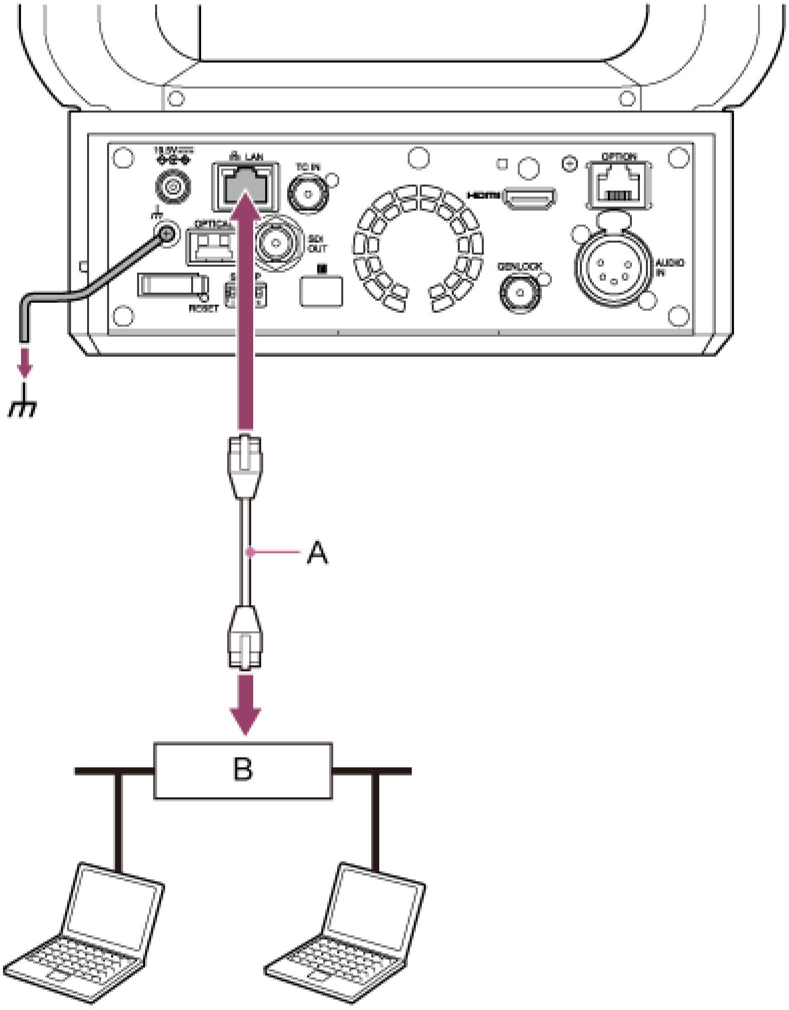
- Resetting the Pan/Tilt

Using PoE++ Power

When the unit is connected to a PoE++ compatible power delivery device, power is supplied to the unit via a commercially available network cable.
This method enables power to be supplied to the unit without the need for power supply wiring in environments where there is no power supply outlet near the mounting location.

1. **Slide the pan/tilt lock lever to the LOCK position to lock the pan/tilt of the camera head.**

2. **Connect the unit and a PoE++ compatible power delivery device using a commercially available network cable.**



A: Network cable
B: PoE++ compatible power delivery device

3. **Check that the POWER lamp on the front of the unit changes from blinking green to solid green and that startup has finished.**

When the unit has started normally and connected to the network, the NETWORK lamp will light up green.

Note

- When power is supplied by PoE++, initial authentication is performed during the interval until startup has finished.
- When using a lens that does not support pan/tilt operation, lock the pan/tilt lock lever and skip the following steps. For details about lenses that support pan/tilt, contact your dealer or Sony service representative.

4. **Slide the pan/tilt lock lever to the UNLOCK position to unlock the pan/tilt of the camera head.**

5. **Reset the pan/tilt.**
   - For details, see “Resetting the Pan/Tilt.”

Note

- The unit conforms to IEEE802.3bt Type 4 Class 8. For details about verified compatible PoE++ power delivery devices, contact your dealer or Sony service representative.
- The unit is compliant with soft authentication (LLDP), but it may be necessary to configure network devices (IEEE802.3bt compliant).
- Do not connect an AC adaptor when using PoE++ power delivery with soft authentication (LLDP) enabled.
- If an AC adaptor and PoE++ power delivery device are connected at the same time, power is supplied from the AC adaptor.
- When supplying power via PoE++, use a Category 5e or higher network cable.
- Wait about 10 seconds after turning the unit on again when powered via PoE++.
- When using PoE++ power delivery, connect the ground terminal to ground.
- When connecting via PoE++ power delivery, do not run wiring outdoors.
- When using PoE++ power delivery, recording and PTZ auto framing cannot be used at the same time.

Related Topic

- Resetting the Pan/Tilt

Resetting the Pan/Tilt

You can reset the pan/tilt, for example, when you replace the lens, using the following procedure.

1. **Slide the pan/tilt lock lever to the UNLOCK position and check that the pan/tilt of the camera head is unlocked.**

2. **Execute the pan/tilt reset function.**

   Pan/tilt reset can be executed from the infrared remote control, Web App, or the RM-IP500 Remote Controller (option).

   - Operation using the infrared remote control: Press the P/T RESET button.
   - Operation using the Web App: Press the ✚ Reset (Pan/tilt reset) button on the ••• (Others) tab in the camera control panel on the live operation screen.
   - Operation using the RM-IP500: Refer to the operating instructions for the RM-IP500.

   Note

   - Executing pan/tilt reset causes the camera head and lens to turn. Check that the lens is not obstructed before executing.
   - The unit has a function that limits the pan/tilt range, but this function is disabled when the unit is turned on or pan/tilt reset is executed.

   Hint

   - When pan/tilt reset is completed, the unit returns to the pre-execution position.

Accessing the Web App from a Web Browser

By connecting the unit to a tablet or computer, you can operate and configure the unit from a web browser.

1. **Check whether your tablet or computer supports Web App operations.**

Item			Requirement
Display			1080×810 pixels or higher recommended Tablet display size: 10-inch or larger recommended
Supported OS and web browser	Windows	OS	Windows 10 or later
		Web browser	Google Chrome
	Mac	OS	macOS 10.15 or later
		Web browser	Google Chrome Safari
	iPad	OS	iPadOS 16 or later
		Web browser	Google Chrome Safari
	Android	OS	Android 12 or later
		Web browser	Google Chrome

Note

- If the required environment is not satisfied, or depending on the usage of the tablet/computer, video display in a web browser may be adversely affected.
- The Web App of this unit uses JavaScript. If using antivirus software on your tablet/computer, the web page may not be displayed correctly.

2. **Check that the unit, tablet or computer, and peripheral devices are turned on.**

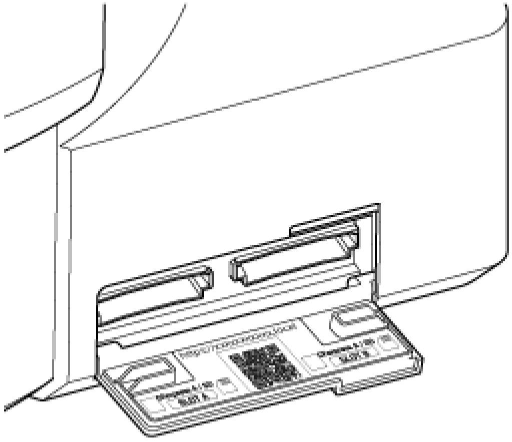
3. **Check that the unit is connected via wired LAN local area connection.**

4. **Check that the tablet or computer are connected via Wi-Fi or wired LAN local area connection.**

5. **Connect to the unit from the web browser of your tablet or computer.**

Connecting using a QR code

Scan the QR code printed on the media cover on the side of the unit using the camera of the tablet.



Open the displayed link on the tablet.
The web browser on the tablet launches and displays the Web App screen of the unit.

Connecting by entering a URL in the address bar of a web browser
Launch a web browser on the tablet or computer, and enter the URL printed on the media cover on the side of the unit.
The web browser should display the Web App screen of the unit.

Connecting by entering the IP address of the unit in the address bar of a web browser
Launch a web browser on your tablet or computer and enter “http://IP address of the unit” in the address bar.
The web browser should display the Web App screen of the unit.

Note

- If the HTTP port number was changed from a value of 80, enter “http://IP address of the unit:Port number” in the address bar.
- When connecting using a QR code or by entering the URL in the address bar of a web browser, use a device that supports mDNS[*].

[*] mDNS: A communication protocol used to determine the IP address from a host name on a local network.

Hint

- You can subsequently access the unit quickly using the bookmark function of the web browser.

Related Topic

- Initial Setup of the Unit
- Connecting the Unit to a Network Device Via Wired Connection

Initial Setup of the Unit

Make sure to configure the unit using the following procedure when using the unit for the first time.
For details about accessing the Web App, see “Accessing the Web App from a Web Browser.”

Hint

- If the backup battery becomes completely discharged, you will need to configure the initial setup again.

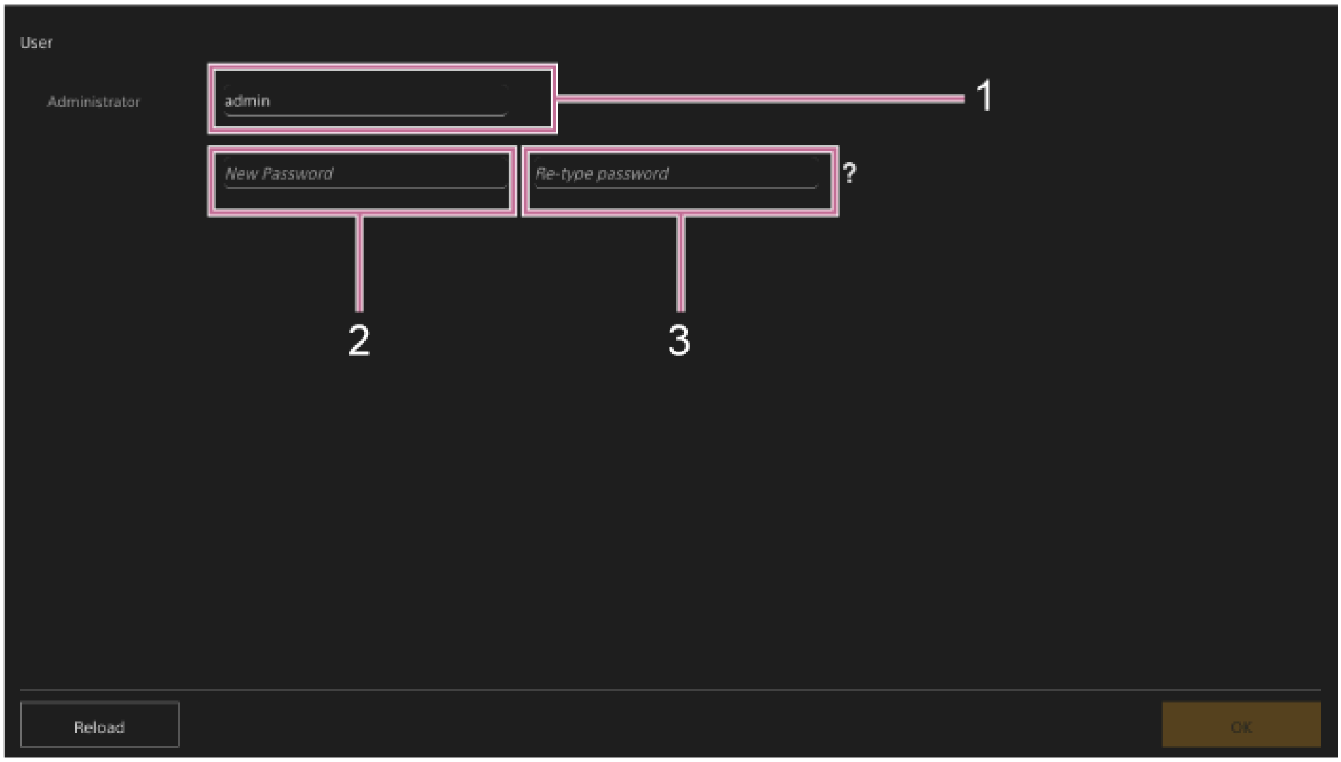
1. **Connect to the unit from a tablet or computer, and launch the Web App.**

   When the unit is used for the first time, you will be prompted to enter a user name and password in the web browser. Enter the following settings.

   - User name: admin
   - Password: (leave blank)

   Follow the on-screen instructions to configure the initial setup.

2. **Enter the administrator (Administrator) user name and password, and press the [OK] button.**



   1: Enter the administrator user name.
   2: Set the administrator password.
   3: Enter the same password again for confirmation.

   Note

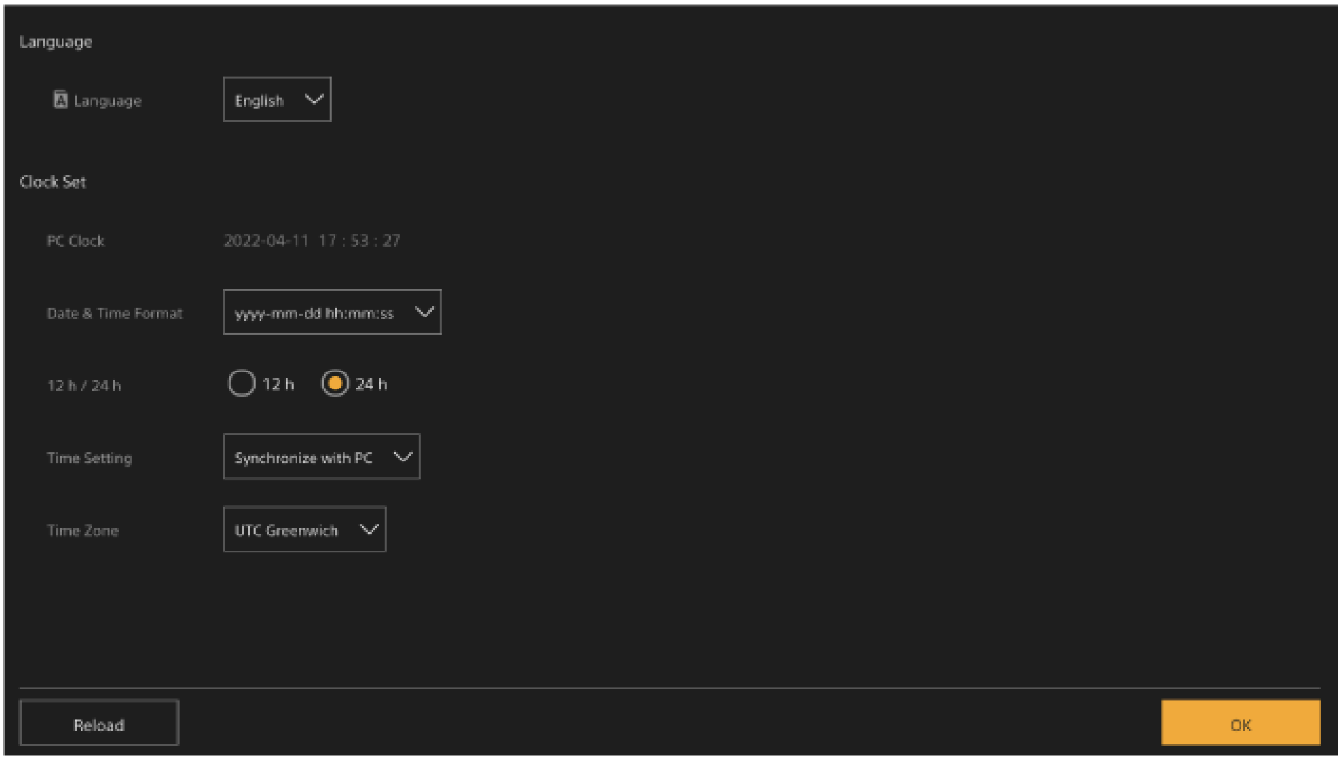
   - The following characters can be used in the user name and password. The password must include at least one upper case letter, one lower case letter, one number, and be 8 to 64 characters in length.
     - Alphanumeric characters

- Symbols (!$%`*+-./<=>?@[]^_{|}~)

Your web browser will reload and you will be prompted to enter the user name and password.

3 **Enter the user name and password that were configured in step 2.**

The language and clock setup screen appears.


Language

Language: English

Clock Set

PC Clock: 2022-04-11 17 : 53 : 27

Date & Time Format: yyyy-mm-dd hh:mm:ss

12 h / 24 h: ○ 12 h ● 24 h

Time Setting: Synchronize with PC

Time Zone: UTC Greenwich

4 **Specify the following items and press the [OK] button.**

[Language]
Select the language to use for the Web App and camera screen display. Changing the language will change the Web App display language.
[Date & Time Format]
Select the display format for the date and time from the following options.
[yyyy-mm-dd hh:mm:ss], [mm-dd-yyyy hh:mm:ss], [dd-mm-yyyy hh:mm:ss]
“yyyy” indicates the year, “mm” indicates the month, “dd” indicates the day, “hh” indicates the hour, “mm” indicates the minute, and “ss” indicates the second, respectively.
[12 h/24 h]
Select [12 h] (12-hour clock) or [24 h] (24-hour clock) for the time display.
[Time Setting]
Select the method for setting the date/time.
[Synchronize with PC]: Synchronize to the date/time of the computer or tablet.
[Manual setting]: Set manually. When this method is selected, entry fields for the date and time appear.
[Time Zone]
Select the time zone.

The live screen for shooting operations appears. Continue to configure the basic operation of the unit according to the operation mode.

Hint

- In some cases, such as when using the unit with a tablet as a pair, it may be easier to use a fixed IP address for the unit.

- To set a fixed IP address, first turn off [Network] > [Wired LAN] > [IPv4] > [DHCP] (slider switch in the left position) in the web menu.
- The setup items related to a fixed IP address appear. Configure the items then press the [OK] button on the screen.

Related Topic

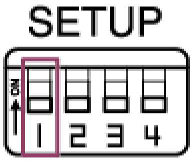
- Accessing the Web App from a Web Browser

Resetting Unit Settings

This topic describes how to reset the unit.
The settings that are reset vary depending on the setting of SETUP switch 1 on the connector block.

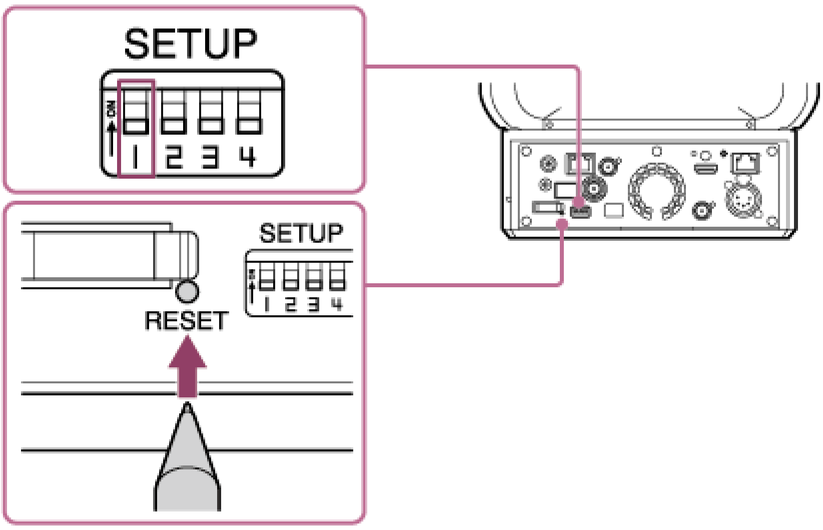
1. **Connect the power supply to the unit.**

2. **Set SETUP switch 1 on the connector block of the unit.**



- To restore only the network settings to the factory default state, set switch 1 to OFF.
- To restore all settings of the unit to the factory default state, set switch 1 to ON.

3. **Use the tip of a pen or other narrow object to press and hold the RESET switch for at least 5 seconds.**



The settings are reset and the unit reboots.

Related Topic

- Connector Block
- Reset

Configuring Basic Operation

This topic describes how to configure the unit for basic operations.

Setting the shooting mode

You can select the shooting mode of the unit to match the workflow.

- Custom mode: Flexibly create images during shooting.
- Log shooting modes: Records S-Log content.
  - Flexible ISO mode: Exposure settings are set by ISO value adjustments matching the scene being shot.
  - Cine EI mode/Cine EI Quick mode: Operate the unit similarly to a film camera (not fully creating images when shooting), with footage developed in post production.

In Cine EI Quick mode, a base sensitivity that is suitable for the Exposure Index setting is selected automatically.
Switch the shooting mode using [Project] > [Base Setting] > [Shooting Mode] in the web menu or camera menu.

Custom mode

You can select the video standard.
Switch using [Project] > [Base Setting] > [Target Display] in the web menu or camera menu.

- [SDR(BT.709)]: Shooting according to HD broadcast standard
- [HDR(HLG)]: Shooting according to next generation 4K broadcast standard

For details, see “Look Overview” and other topics in “Shooting with the Desired Look.”

Log shooting modes (Flexible ISO mode/Cine EI mode/Cine EI Quick mode)

In Log shooting modes, you select the base color gamut for recorded signals and output signals. The color gamut selected here is the color gamut of the video output when the [LUT On/Off] settings are set to [MLUT Off].
You can switch the color gamut using [Project] > [Cine EI/Flex.ISO Set] > [Color Gamut] in the camera menu.

- [S-Gamut3.Cine/SLog3]: Easy to adjust color gamut for digital cinema (DCI-P3).
- [S-Gamut3/SLog3]: Sony wide color gamut that covers the ITU-R BT.2020 color gamut.

For details, see “Shooting with Look Adjustment in Post-Production.”

Supported functions in each shooting mode are given in the following table.
●: Supported, –: Not supported

	Custom	Flexible ISO	Cine EI	Cine EI Quick
ISO/Gain	●	●	–	–
AGC	●	●	–	–
Base Sensitivity	●	–	–	–
Base ISO	–	●	●	● (linked to EI)
Exposure Index	–	–	●	●

	Custom	Flexible ISO	Cine EI	Cine EI Quick
Auto Shutter	●	●	–	–
ATW	●	●	–	–
LUT On/Off	–	●	●	●
Scene File	●	–	–	–
Paint/Look (excluding Base Look)	●	–	–	–

Hint

- In Cine EI Quick mode and Cine EI mode, shooting occurs at a base ISO sensitivity without using gain in order to maximize the performance of the image sensor. The brightness is adjusted using lighting and the ND filter to adjust the amount of light that reaches the image sensor.

Setting the system frequency

Switch using [Project] > [Rec Format] > [Frequency] in the web menu or camera menu. The unit may reboot automatically after switching, depending on the selected value.

Note

- You cannot switch the system frequency during recording or playback.

Setting the imager scan mode

You can set the effective picture size and resolution of the image sensor.
Switch using [Project] > [Rec Format] > [Imager Scan Mode] in the web menu or camera menu.
[FF]: Full-frame size.
[S35]: Super 35mm size.

Note

- You cannot switch the imager scan mode during recording or playback.
- When set to S35, the video format is restricted to 1920×1080.

Setting the codec

You can set the codec for recording.
Switch using [Project] > [Rec Format] > [Codec] in the web menu or camera menu.

Note

- You cannot switch the codec during recording or playback.

Setting the video format

You can set the video format for recording and the output format for output from the camera.

- Switch the video format for recording using [Project] > [Rec Format] > [Video Format] in the web menu or camera menu.
- Switch the output format from the SDI OUT and HDMI OUT connectors using [Monitoring] > [Output Format] in the web menu or camera menu.

Note

- You cannot switch the video format during recording or playback.
- Restrictions may apply to the signal from the SDI OUT and HDMI OUT connectors, depending on the video format setting.

Related Topic

- Look Overview
- Shooting with Look Adjustment in Post-Production

Supported Memory Cards

The unit records audio and video on CFexpress Type A memory cards (available separately) or SDXC memory cards (available separately) inserted in the card slots. The memory cards are also used for proxy recording.

CFexpress Type A memory cards

Use the Sony CFexpress Type A memory cards* listed in “Recommended recording media” in the unit.
For details on operations with media from other manufacturers, refer to the operating instructions for the media or consult the manufacturer’s information.

* Referred to as “CFexpress cards” in this Help Guide.

SDXC memory cards

Use the SDXC memory cards* listed in “Recommended recording media” in the unit.

* Referred to as “SD cards” in this Help Guide.

Recommended recording media

The guaranteed operating conditions will vary depending on the Rec Format and Recording settings.

CFexpress Type A

VPG400/200-compliant
Supported for all recording formats of the unit.

SDXC

Supported under the conditions in the following table. “●” indicates operation has been verified, and “–” indicates that operation is not guaranteed.

RAW Out & XAVC-I, 4096×2160 Class 300, Normal mode

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	–	–	–	–	●
50P	–	–	–	–	–	–	●
29.97P	–	–	–	–	–	●	●
25P	–	–	–	–	–	●	●
24P	–	–	–	–	–	●	●
23.98P	–	–	–	–	–	●	●

RAW Out & XAVC-I, 3840×2160 Class 300, Normal mode

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	–	–	–	–	●
50P	–	–	–	–	–	–	●
29.97P	–	–	–	–	–	●	●
25P	–	–	–	–	–	●	●
23.98P	–	–	–	–	–	●	●

RAW Out & XAVC-I, 3840×2160 Class 300, S&Q (60 fps or lower)

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	–	–	–	–	●
50P	–	–	–	–	–	–	●
29.97P	–	–	–	–	–	–	●
25P	–	–	–	–	–	–	●
23.98P	–	–	–	–	–	–	●

RAW Out & XAVC-I, 3840×2160 Class 300, S&Q (100 fps, 120 fps)
Verified media not available.

XAVC-I, 4096×2160 Class 300, Normal mode

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	–	–	–	–	●
50P	–	–	–	–	–	–	●
29.97P	–	–	–	–	–	●	●
25P	–	–	–	–	–	●	●
24P	–	–	–	–	–	●	●
23.98P	–	–	–	–	–	●	●

XAVC-I, 4096×2160 Class 300, S&Q (60 fps or lower)

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	–	–	–	–	●
50P	–	–	–	–	–	–	●
29.97P	–	–	–	–	–	–	●
25P	–	–	–	–	–	–	●

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
24P	–	–	–	–	–	–	●
23.98P	–	–	–	–	–	–	●

XAVC-I, 3840×2160 Class 300, Normal mode

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	–	–	–	–	●
50P	–	–	–	–	–	–	●
29.97P	–	–	–	–	–	●	●
25P	–	–	–	–	–	●	●
23.98P	–	–	–	–	–	●	●

XAVC-I, 3840×2160 Class 300, S&Q (60 fps or lower)

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	–	–	–	–	●
50P	–	–	–	–	–	–	●
29.97P	–	–	–	–	–	–	●
25P	–	–	–	–	–	–	●
23.98P	–	–	–	–	–	–	●

XAVC-I, 3840×2160 Class 300, S&Q (100 fps, 120 fps)
Verified media not available.

XAVC-I, 1920×1080 Class 100, Normal mode

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	–	–	–	●	●
50P	–	–	–	–	–	●	●
29.97P	–	–	●	–	●	●	●
25P	–	–	●	–	●	●	●
23.98P	–	–	●	–	●	●	●

XAVC-I, 1920×1080 Class 100, S&Q (60 fps or lower)

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	–	–	–	●	●
50P	–	–	–	–	–	●	●
29.97P	–	–	–	–	–	●	●
25P	–	–	–	–	–	●	●
23.98P	–	–	–	–	–	●	●

XAVC-I, 1920×1080 Class 100, S&Q (100 fps, 120 fps)

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	–	–	–	–	●
50P	–	–	–	–	–	–	●
29.97P	–	–	–	–	–	–	●
25P	–	–	–	–	–	–	●
23.98P	–	–	–	–	–	–	●

XAVC-I, 1920×1080 Class 100, S&Q (150 fps, 180 fps)

Verified media not available.

XAVC-I, 1920×1080 Class 100, S&Q (200 fps, 240 fps)

Verified media not available.

XAVC-L, 3840×2160 420, Normal mode

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	●	–	●	●	●
50P	–	–	●	–	●	●	●
29.97P	–	–	●	–	●	●	●
25P	–	–	●	–	●	●	●
23.98P	–	–	●	–	●	●	●

XAVC-L, 3840×2160 420, S&Q (60 fps or lower)

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	●	–	●	●	●
50P	–	–	●	–	●	●	●
29.97P	–	–	–	–	–	●	●

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
25P	–	–	–	–	–	●	●
23.98P	–	–	–	–	–	–	●

XAVC-L, 3840×2160 420, S&Q (100 fps, 120 fps)

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	–	–	–	●	●
50P	–	–	–	–	–	●	●
29.97P	–	–	–	–	–	–	●
25P	–	–	–	–	–	–	●
23.98P	–	–	–	–	–	–	–

XAVC-L, 1920×1080 HD50, Normal mode

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	●	–	●	●	●
50P	–	–	●	–	●	●	●
29.97P	–	–	●	–	●	●	●
25P	–	–	●	–	●	●	●
23.98P	–	–	●	–	●	●	●

XAVC-L, 1920×1080 HD50, S&Q (60 fps or lower)

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	●	●	●	●	●	●	●
50P	●	●	●	●	●	●	●
29.97P	–	–	●	–	●	●	●
25P	–	–	●	–	●	●	●
23.98P	–	–	●	–	●	●	●

XAVC-L, 1920×1080 HD50, S&Q (100 fps, 120 fps)

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	●	–	●	●	●
50P	–	–	●	–	●	●	●
29.97P	–	–	–	–	–	●	●

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
25P	–	–	–	–	–	●	●
23.98P	–	–	–	–	–	●	●

XAVC-L, 1920×1080 HD50, S&Q (150 fps, 180 fps)

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	–	–	–	●	●
50P	–	–	–	–	–	●	●
29.97P	–	–	–	–	–	–	●
25P	–	–	–	–	–	–	●
23.98P	–	–	–	–	–	–	●

XAVC-L, 1920×1080 HD50, S&Q (200 fps, 240 fps)

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	–	–	–	●	●
50P	–	–	–	–	–	●	●
29.97P	–	–	–	–	–	–	●
25P	–	–	–	–	–	–	●
23.98P	–	–	–	–	–	–	●

XAVC-L, 1920×1080 HD35, Normal mode

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	●	●	●	●	●	●	●
50P	●	●	●	●	●	●	●
29.97P	●	●	●	●	●	●	●
25P	●	●	●	●	●	●	●
23.98P	●	●	●	●	●	●	●

XAVC-L, 1920×1080 HD35, S&Q (60 fps or lower)

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	●	●	●	●	●	●	●
50P	●	●	●	●	●	●	●
29.97P	–	–	●	–	●	●	●

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
25P	–	–	●	–	●	●	●
23.98P	–	–	●	–	●	●	●

XAVC-L, 1920×1080 HD35, S&Q (100 fps, 120 fps)

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	●	–	●	●	●
50P	–	–	●	–	●	●	●
29.97P	–	–	●	–	●	●	●
25P	–	–	●	–	●	●	●
23.98P	–	–	–	–	–	●	●

XAVC-L, 1920×1080 HD35, S&Q (150 fps, 180 fps)

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	●	–	●	●	●
50P	–	–	●	–	●	●	●
29.97P	–	–	–	–	–	●	●
25P	–	–	–	–	–	●	●
23.98P	–	–	–	–	–	●	●

XAVC-L, 1920×1080 HD35, S&Q (200 fps, 240 fps)

System frequency	Class 10	U1	U3	VSC V10	VSC V30	VSC V60	VSC V90
59.94P	–	–	●	–	●	●	●
50P	–	–	●	–	●	●	●
29.97P	–	–	–	–	–	●	●
25P	–	–	–	–	–	●	●
23.98P	–	–	–	–	–	–	●

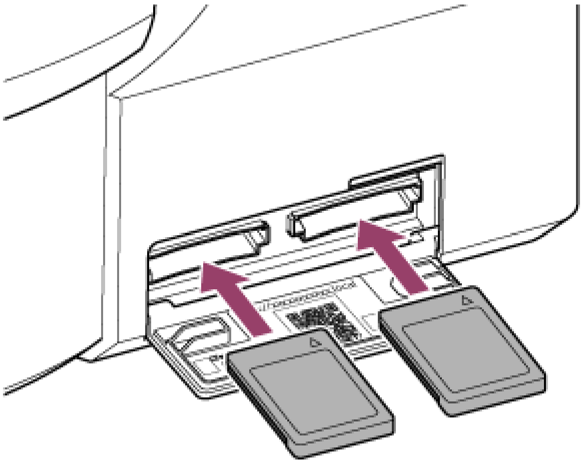
Inserting Memory Cards

This topic describes the precautions when inserting memory cards.

1. **Open the media cover of the card slot section.**

2. **Insert a memory card.**

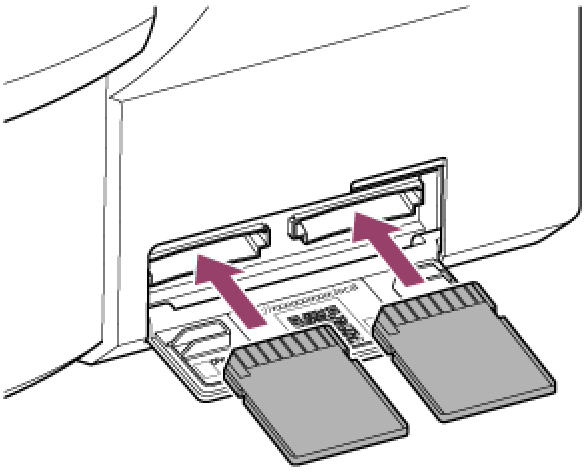
   For CFexpress cards, the label faces up.



Note

- On a ceiling mounted unit, the label faces down.

For SD cards, the label faces down.



Note

- On a ceiling mounted unit, the label faces up.

The access indicator is lit red, then changes to green if the card is usable.

Note

- If the access indicator blinks red continuously and does not change to green, temporarily turn off the unit, and remove and reinsert the memory card.

3. **Close the media cover.**

Note

- The memory card, memory card slot, and image data on the memory card may be damaged if the card is forced into the slot in the incorrect orientation.
- When recording to media inserted in both CFexpress Type A / SD card slots A and B, insert media in both slots that is recommended for operation with the format of the recording.

Ejecting a Memory Card

Open the media cover of the card slot section, and lightly press the memory card in to eject the card.

Note

- If the unit is turned off or the memory card is removed while the memory card is being accessed, the integrity of data on the card cannot be guaranteed. All data recorded on the card may be discarded. Always make sure the access indicator is green or off before turning off the unit or removing the memory card.
- When removing a memory card immediately after recording is finished, the memory card may be hot, but this does not indicate a problem.

Formatting (Initializing) Memory Cards

If an unformatted memory card or a memory card that was formatted in a different specification is inserted, the message “Media Needs to be Formatted” is displayed in the camera image panel.
Format the card using the following procedure.

1. **Select [TC/Media] > [Format Media] in the camera menu.**

2. **Select Media(A) (slot A) or Media(B) (slot B), then select the formatting method (Full Format or Quick Format).**

   A confirmation message appears.
   [Full Format]: Initializes the media completely, including the data region and data management information.
   [Quick Format]: Initializes the data management information of the media only.

3. **Select [Execute].**

   A message is displayed while formatting is in progress, and the access indicator is lit red.
   When formatting ends, a completion message appears.

Note

- Formatting a memory card erases all data, including recorded video data and setup files.
- Messages may appear during execution depending on the formatting process duration.

If formatting fails

Memory cards not supported by the unit cannot be formatted.
A warning message is displayed. Follow the instructions to replace the card with a supported memory card.

To use a card formatted on the unit in the slot of another device

First, make a backup of the card, then reformat the card in the device to be used.

Checking the Remaining Recording Time

When shooting (recording/standby), you can monitor the remaining capacity of the memory card in each slot using the slot A/B remaining media indicators in the camera image panel.
The remaining recording time is calculated from the remaining capacity of the media in each slot and the current recording format (recording bit rate), and is displayed in units of minutes.

Memory card replacement timing

When the total remaining recording time on the two memory cards becomes less than 5 minutes, the message “Media Near Full” appears and the recording/tally lamp starts blinking to warn you.
Replace with media that has free space.
If you continue recording until the total remaining recording time reaches zero, the message changes to “Media Full” and recording stops.

Note

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

Restoring Memory Cards

If for any reason an error should occur in a memory card, the card must be restored before use.
When you load a memory card that needs to be restored, a message appears in the camera image panel asking whether you want to restore it.

To restore a card

Select [Execute] using the arrow buttons in the GUI control panel and press the [Set] button.
A message and progress status (%) are displayed while formatting is in progress, and the access indicator is lit red.
When restoration ends, a completion message appears.

If restoration fails

- Memory cards on which memory errors have occurred cannot be restored. A warning message is displayed. Follow the instructions to replace the memory card.
- Memory cards on which memory errors have occurred may become usable if they are reformatted.
- In some cases, some clips can be restored while others cannot. The restored clips can be played normally.

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.
- Clips shorter than 2 seconds cannot be restored.

Starting/Stopping Recording

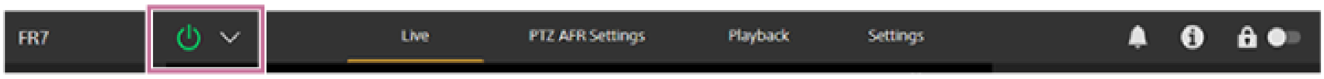
This topic describes how to start/stop recording.

1. **Attach the necessary devices, and check that power of the unit and peripheral devices is being supplied.**

2. **Insert the memory card(s).**

3. **Check the power status of the unit at the top left of the Web App screen.**

When power supply is on
When the unit is turned on, the live operation screen, playback operation screen, or web menu is displayed in the Web App.

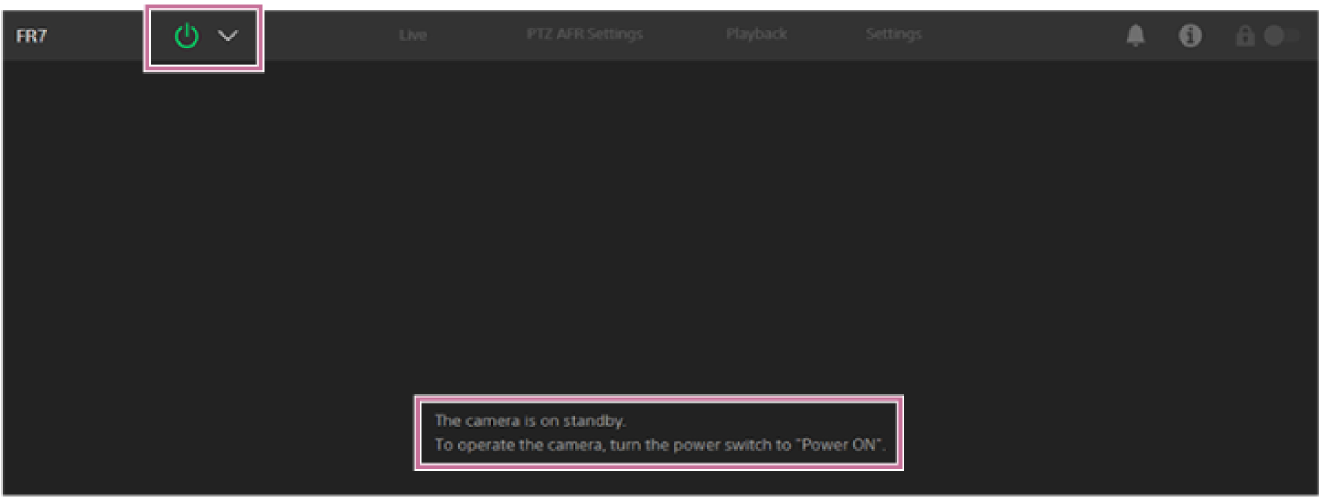


The POWER lamp lights up on the front of the unit and the camera image appears on the live operation screen of the Web App.

Note

- If the administrator password has not been configured, a screen prompting you to configure the password appears. See "Initial Setup of the Unit."

When power supply is in standby state
When the power supply of the unit is in standby state, a message is displayed in the Web App indicating that the power supply is in standby state.



The camera is on standby.
To operate the camera, turn the power switch to "Power ON".

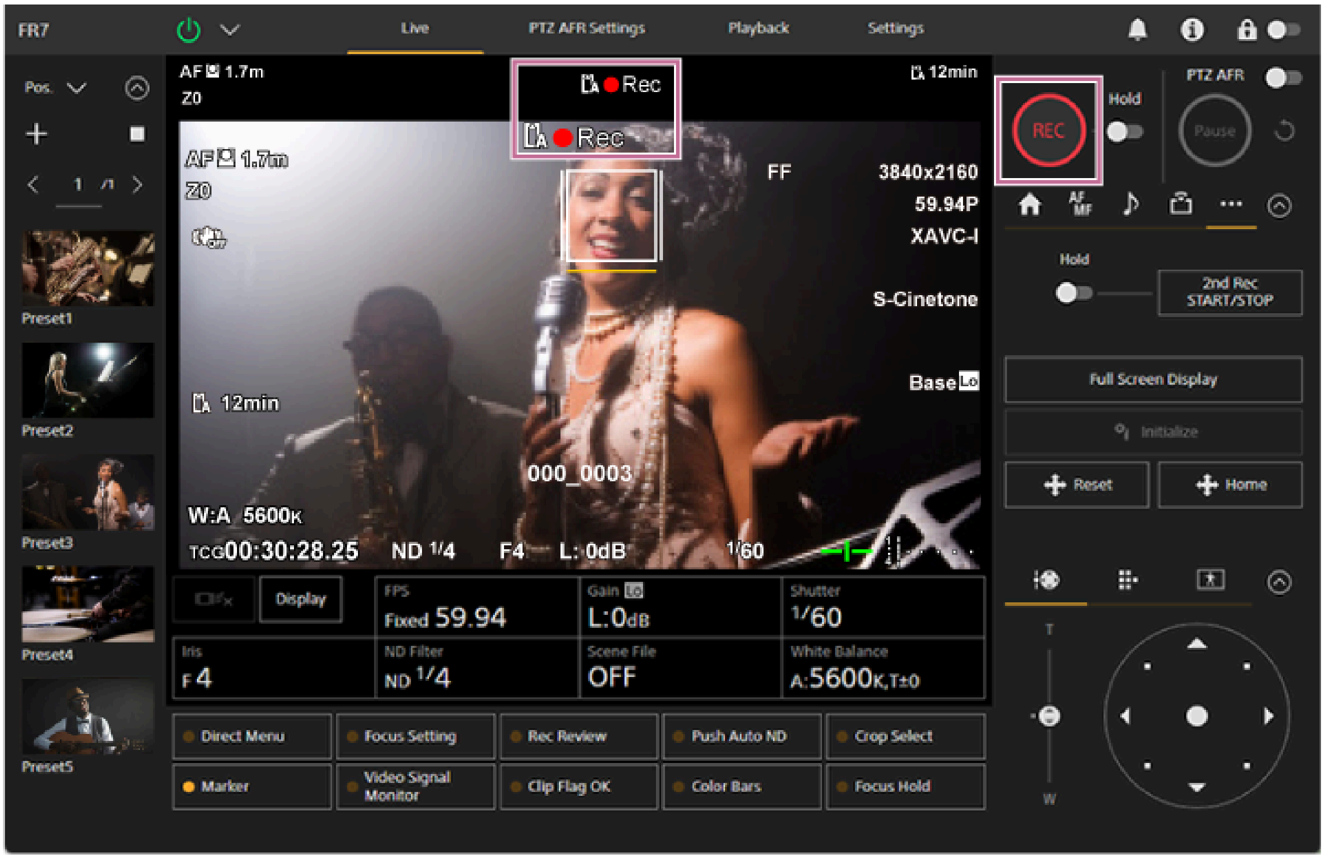
In this state, press the power switch and select [Power ON] from the switch menu. The unit turns on, the POWER lamp lights up green on the front of the unit, and the camera image appears on the live operation screen of the Web App.

Hint

- You can also turn on the unit using the power button on the supplied infrared remote control.

4 **Press the record START/STOP button.**

Recording starts, and the recording/tally lamp (2 places) of the unit lights up.
During recording, the record START/STOP button lights. Also, an icon for the target recording media and [●Rec] are displayed.



5 **To stop recording, press the record START/STOP button again.**

Recording stops, and the recording/tally lamp (2 places) of the unit turns off.
During recording standby state, the record START/STOP button is not lit. Also, an icon for the target recording media and [Stby] are displayed.

Hint

- You can also start/stop recording using the record START/STOP button on the supplied infrared remote control.

To switch the power supply of the unit to standby state

Press the power switch in the Web App and select [Power Standby] to set the power supply of the unit to standby state.

Hint

- You can also set the power supply to standby state using the power button on the supplied infrared remote control.

Related Topic

- Initial Setup of the Unit

Switching Between Memory Cards

When two memory cards are inserted, you can press the [Slot Select] button on the playback control panel of the Web App to switch memory cards.

Hint

- You can also press the SLOT SEL (memory card slot (A)/(B) select) button on the supplied infrared remote control to switch memory cards.

About relay recording

When recording, the unit automatically switches to the second memory card just before the remaining capacity on the first card is reduced to zero (relay recording). You can continue recording continuously when switching memory cards by replacing the memory card that is full with a new memory card.

Note

- You cannot switch between memory cards during playback mode. Also, continuous playback of a clip spanning media in slot A and slot B is not supported.

About recorded data

When you stop recording, the video, audio, and accompanying data from the start to the end of the recording are saved as a single “clip” on a memory card.

Clip name of recorded data

The name of each clip recorded by the unit is automatically assigned using [TC/Media] > [Clip Name Format] in the camera menu.

Maximum clip duration

Up to 6 hours per clip.
The maximum duration of continuous recording is the same as the maximum duration of a clip. If the recording time exceeds the maximum duration of a clip, a new clip is created automatically and recording continues. The new clip appears as a separate clip on the thumbnail screen.
Multiple clips are recorded in succession during relay recording, but recording will stop automatically after approximately 24 hours.

Note

- Do not eject a memory card while recording to it is in progress. When recording, only change memory cards in slots for which the slot access indicator is off.
- When the remaining capacity on the memory card being recorded becomes less than one minute and a recordable memory card is inserted in the other slot, a “Will Switch Slots Soon” message appears. The message disappears after switching memory card slots.
- Relay recording may not operate if recording is started when the remaining memory card capacity is less than one minute. For correct relay recording, check that the remaining memory card capacity is more than one minute before starting recording.
- Video created using the relay recording function of the unit cannot be played back seamlessly on the unit.

- To combine video created using the relay recording function of the unit, use “Catalyst Browse” software.

Checking the Audio

Audio is output from the SDI and HDMI connectors of the unit. Select the combination of audio channels that are output from the HDMI connector using [Audio] > [Audio Output] > [HDMI/Stream Output CH] in the camera menu.
CH1/CH2: CH1 and CH2 combination
CH3/CH4: CH3 and CH4 combination
When monitoring the audio in the Web App, use the audio level meter at the bottom right of the camera image.

Specifying Time Data

This topic describes how to set time data.

Setting the timecode

Set the timecode to record using [TC/Media] > [Timecode] in the camera menu.

Setting user bits

You can add an 8-digit hexadecimal number to the recorded image as user bits. You can also set the user bits to the current time. Set using [TC/Media] > [Users Bit] in the camera menu.

Displaying time data

Set the timecode to display using [TC/Media] > [TC Display] > [Display Select] in the camera menu.
Pressing an assignable button with [DURATION/TC/U-BIT] assigned will switch the display between the timecode, user bits, and duration in sequence.

Reviewing the Recording (Rec Review)

You can review the last recorded clip on the screen (recording review).

Note

- Rec Review is not supported if the video format is changed after recording a clip.

Setting the Rec Review start position

You can set the playback start position to one of the following using [Technical] > [Rec Review] in the camera menu.

- Last 3 seconds of the clip
- Last 10 seconds of the clip
- Start of the clip

Hint

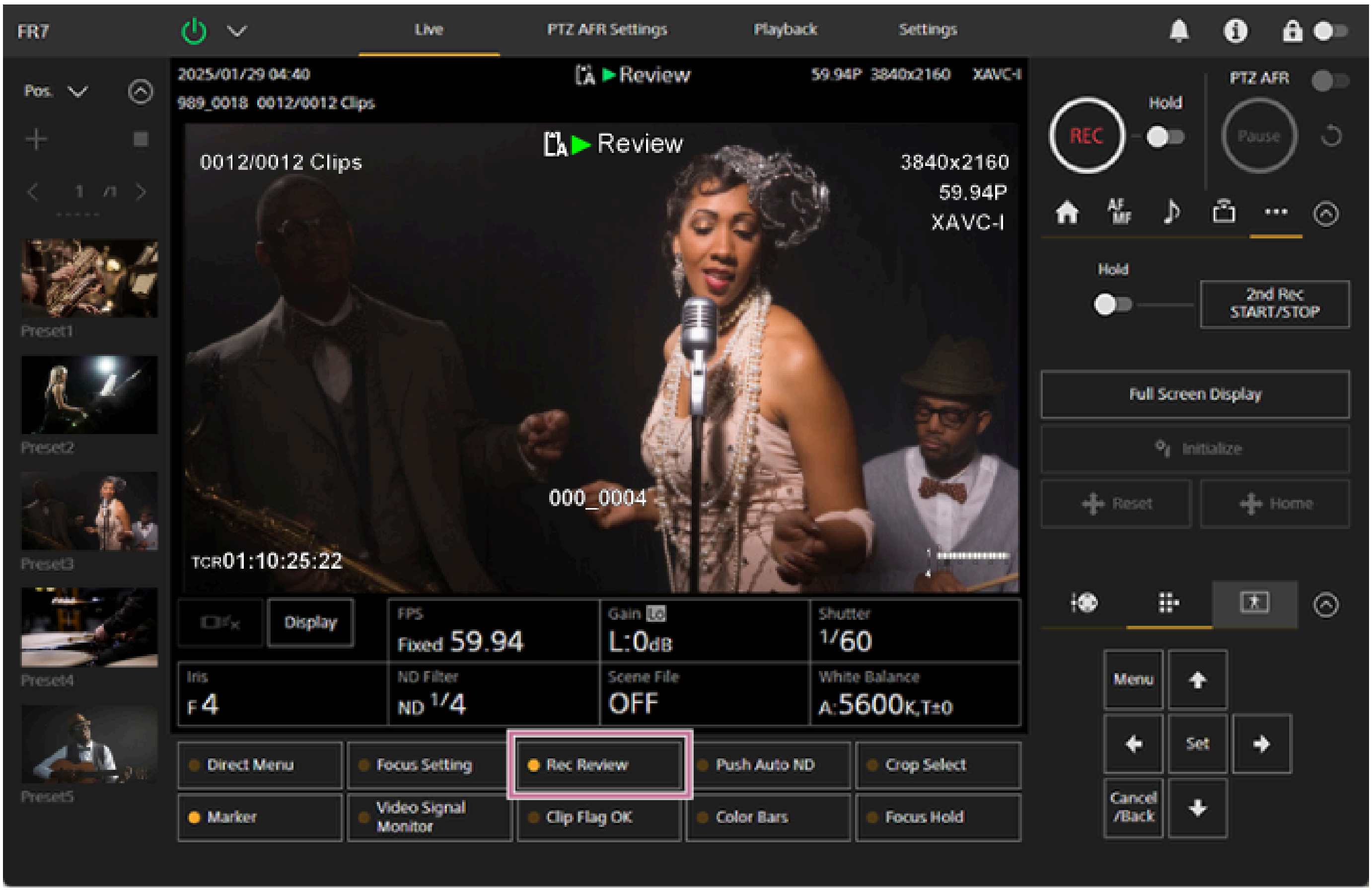
- If you want to review a specific clip after recording multiple clips, press the [Thumbnail] button to display the thumbnail screen, and select the clip to start playback.
- You can also press the THUMBNAIL button of the supplied infrared remote control to display the thumbnail screen.

Rec Review method

Assign the Rec Review function to one of the assignable buttons on the basic configuration adjustment panel beforehand.

- For details about assignment, see “Assignable Buttons” in “Useful Functions.”

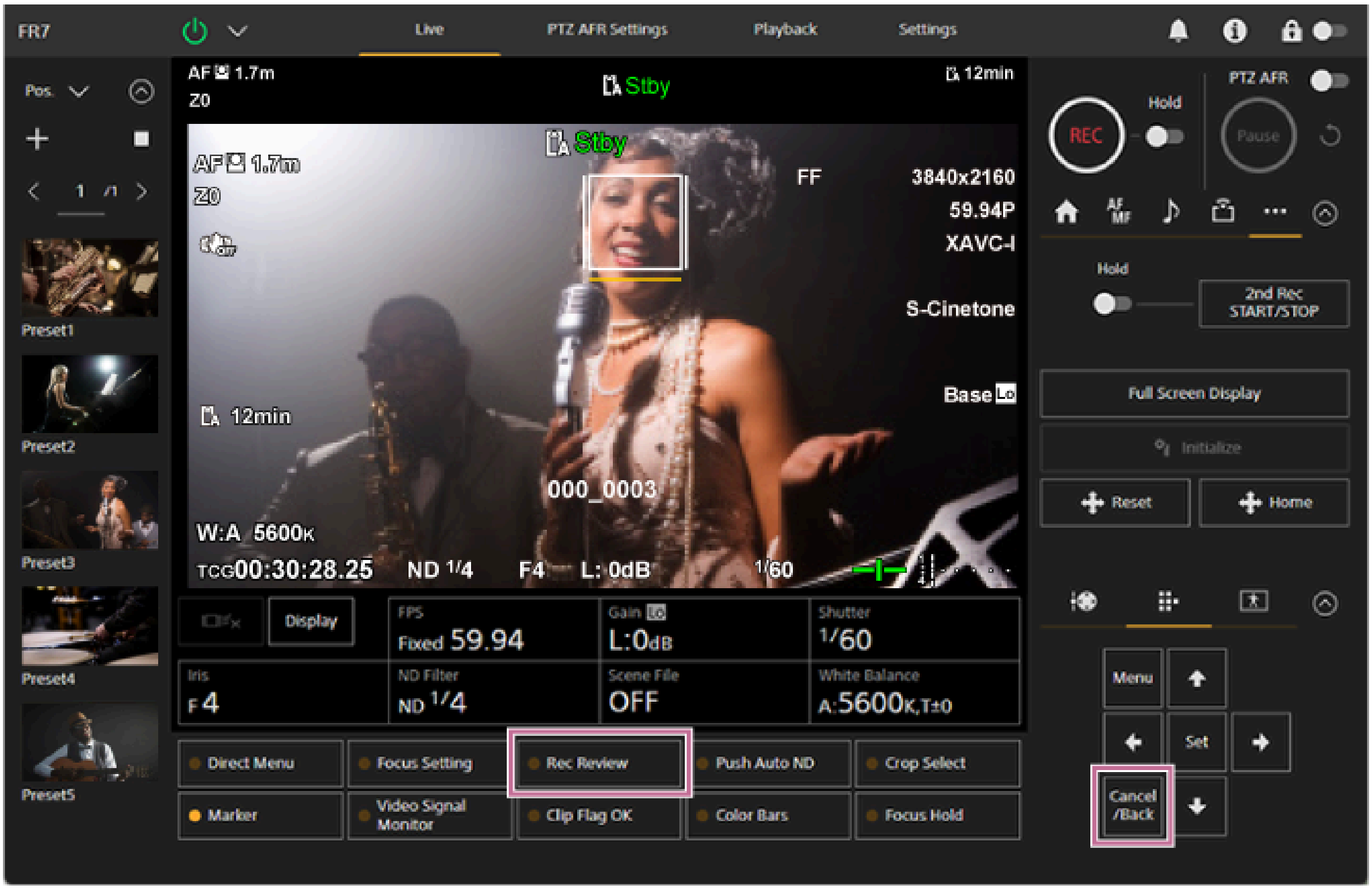
Stop recording and then press an assignable button assigned with the Rec Review function to start playback of the previously recorded clip.



The clip is played to the end, Rec Review ends, and the unit returns to Stby (standby) mode.

To stop Rec Review

Press an assignable button with Rec Review assigned or press the [Cancel/Back] button.



Hint

- You can also press the [Cancel/Back] button of the supplied infrared remote control to stop the Rec Review function.

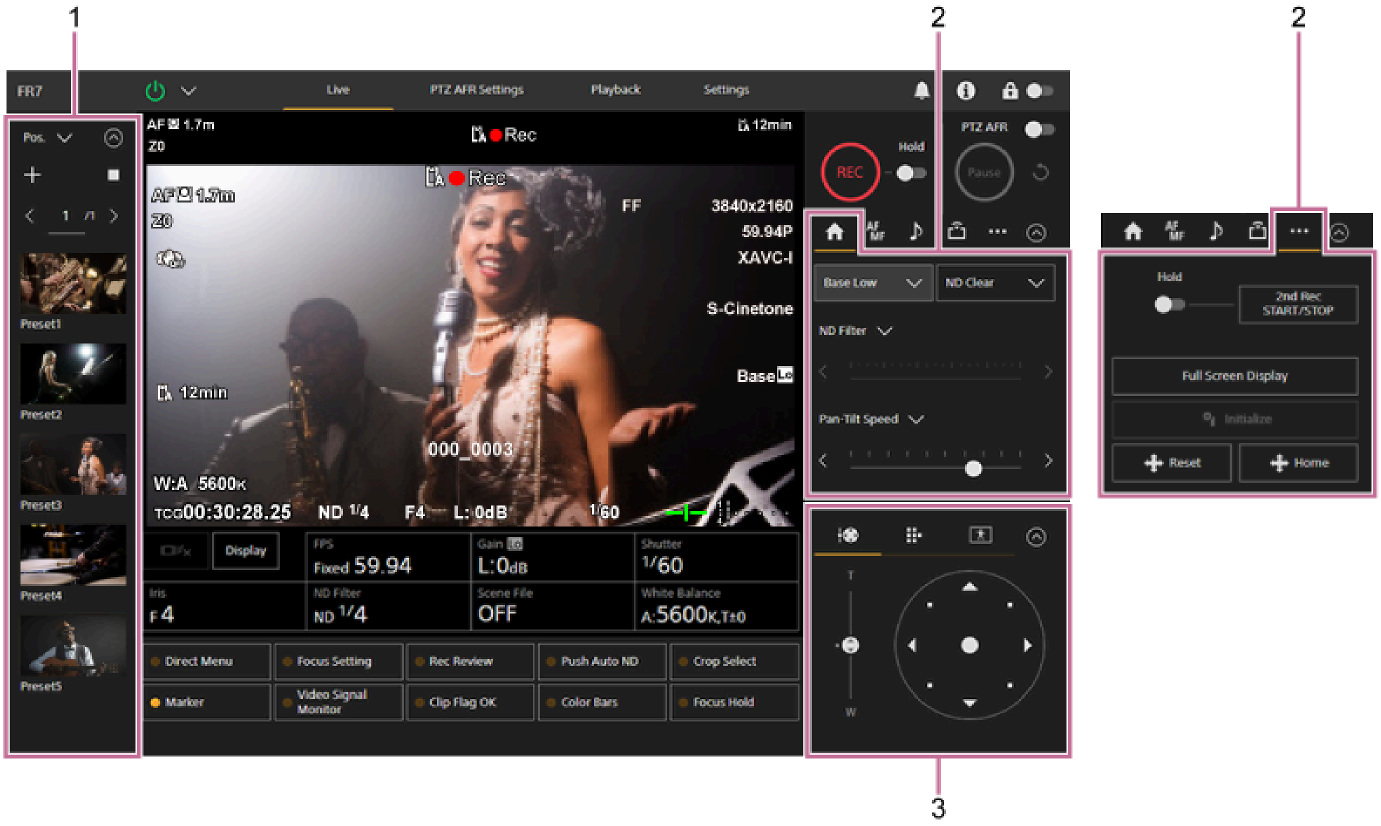
Related Topic

- Assignable Buttons

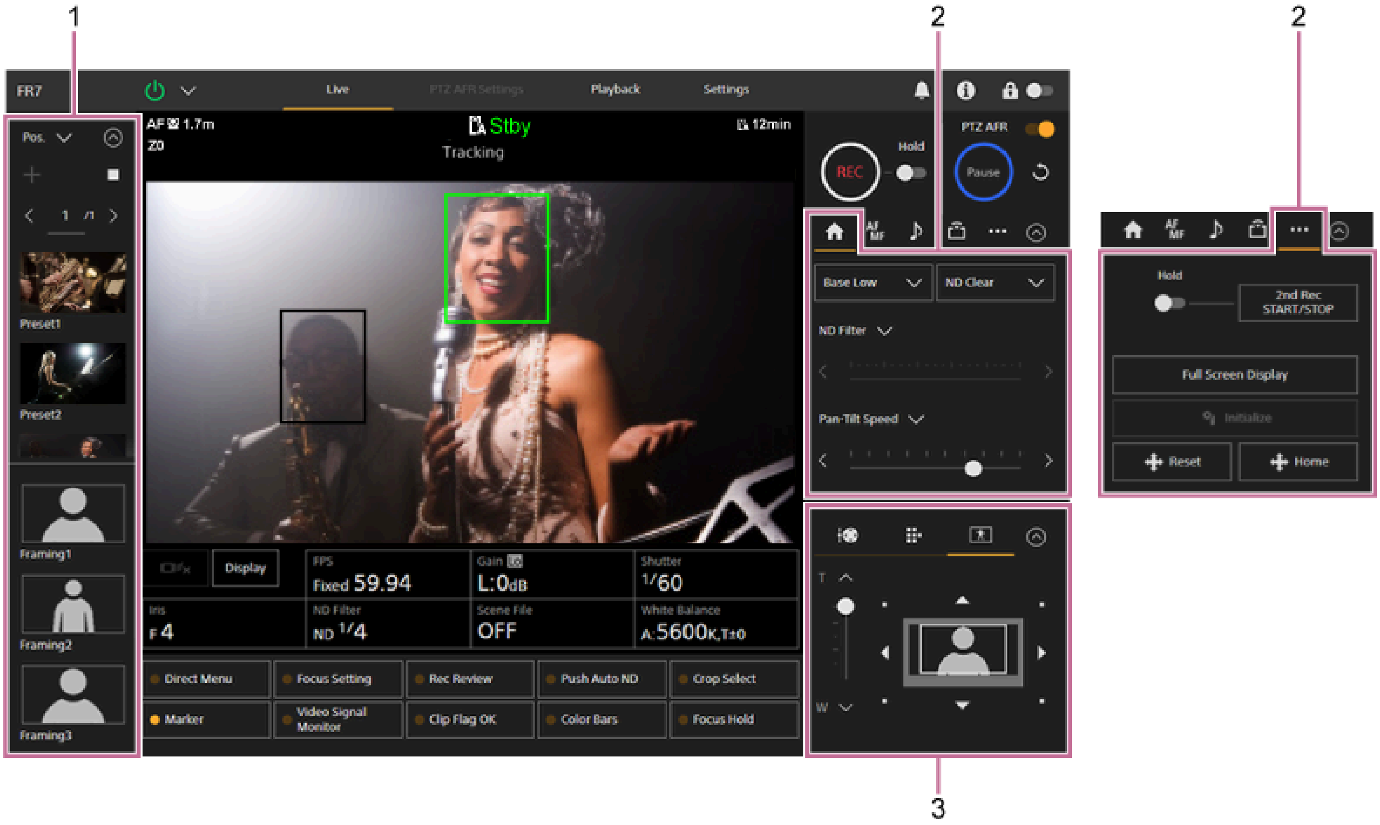
Framing Adjustment Screen

The framing is adjusted using the following parts of the live operation screen.

When PTZ auto framing is off



When PTZ auto framing is on



1. **Preset position control panel**
2. **⌂ (Main) tab / ··· (Others) tab**
3. **Framing control panel**

Note

- Depending on the direction of the camera, the focal length of the lens, and the zoom position, part of the unit or cables connected to the connector block may be visible. Before shooting, check the field of view for the lens and focal length you are using. You can also control the pan/tilt range using [Pan-Tilt] > [P/T Range Limit] in the web menu. When the unit is turned on or pan/tilt reset is executed, this range limit setting is ignored. For details, see [Pan-Tilt] > [P/T Range Limit] in the web menu.

Hint

- You can also control the framing using the supplied infrared remote control.

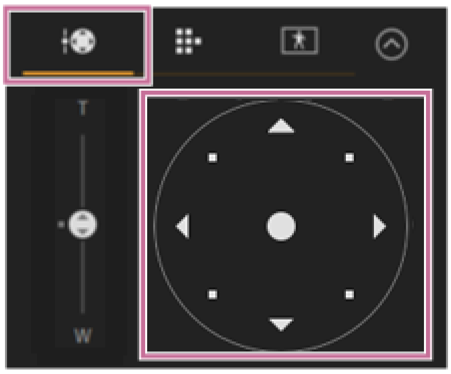
Adjusting the Shooting Direction Using the Web App

Moving the camera horizontally is called panning, and move the camera vertically is called tilting.
You can adjust the shooting direction using pan/tilt operations.

1. **Press the ⊕ (Pan/tilt/zoom) tab in the framing control panel to display the joystick.**

2. **Drag the center of the joystick in the direction you want to view while monitoring the camera image panel.**

   The direction and speed of the camera changes in response to the drag direction and level.
   You can adjust the pan/tilt more precisely by pressing the peripheral areas of the joystick.



Hint

- If [Execute Pan-Tilt Reset] is displayed below the joystick, an inconsistency has occurred in the pan/tilt control origin information of the unit. Execute the pan/tilt reset function to update the origin information. For details, see “Resetting the Pan/Tilt.”

To face the camera back to the front

Press the + Home (Pan/tilt home) button on the ··· (Others) tab in the camera control panel.

Note

- Depending on the direction of the camera, the focal length of the lens, and the zoom position, part of the unit or cables connected to the connector block may be visible. Before shooting, check the field of view for the lens and focal length you are using. You can also control the pan/tilt range using [Pan-Tilt] > [P/T Range Limit] in the web menu. When the unit is turned on or pan/tilt reset is executed, this range limit setting is ignored. For details, see [Pan-Tilt] > [P/T Range Limit] in the web menu.

Related Topic

- Resetting the Pan/Tilt

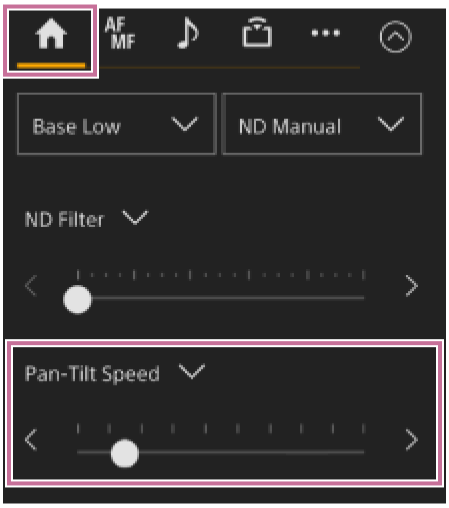
Setting the Pan/Tilt Operating Speed

You can change the pan/tilt operating speed using the [Pan-Tilt Speed] slider in the camera control panel by operating the joystick in the framing control panel.

1. **Press the (Main) tab in the camera control panel.**

2. **Select the [Pan-Tilt Speed] slider from the list.**

   If the [Pan-Tilt Speed] slider is not displayed, select either of the two slider function selection buttons to display the slider.



3. **Move the slider knob left or right.**

   Moving the knob to the left decreases the operating speed, while moving the knob to the right increases the operating speed.

Note

- If there is a wall or other obstacle within the range of motion of the camera, be careful not to hit the camera or lens during pan/tilt operation.
- The pan/tilt acceleration depends on physical characteristics, such as the weight balance of the lens. You can change the acceleration setting using [Pan-Tilt] > [P/T Acceleration] > [Ramp Curve] in the web menu or camera menu.

Setting the Pan/Tilt Operation Acceleration

You can set the acceleration operation in nine gradations using [Pan-Tilt] > [P/T Acceleration] > [Ramp Curve] in the web menu or camera menu. Increase the value for more rapid changes in speed, or decrease the value for more gradual changes in speed.
For greater responsiveness when operating the pan/tilt, select a value in the range 7 to 9.
For greater positional accuracy at the start/end of the movement to a preset position, a value in the range 1 to 6 is recommended.

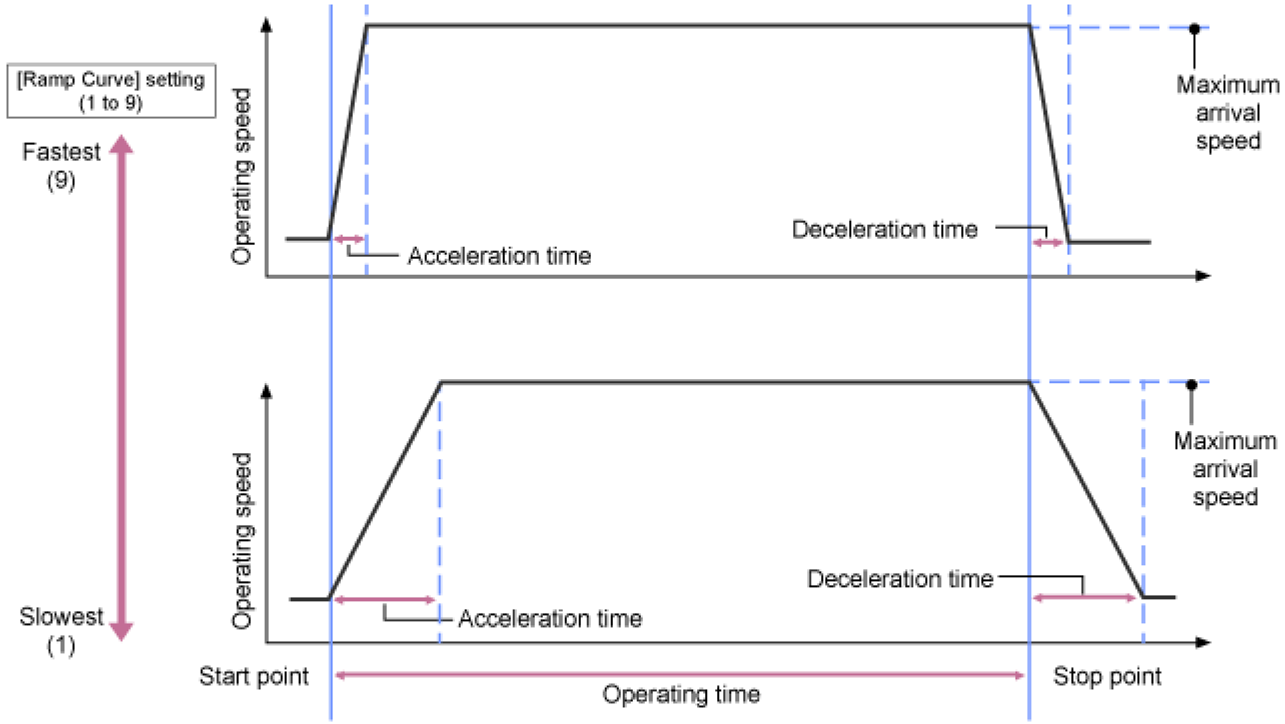
- For details about preset position, see "Saving/Restoring Pan/Tilt and Zoom Position."

Note

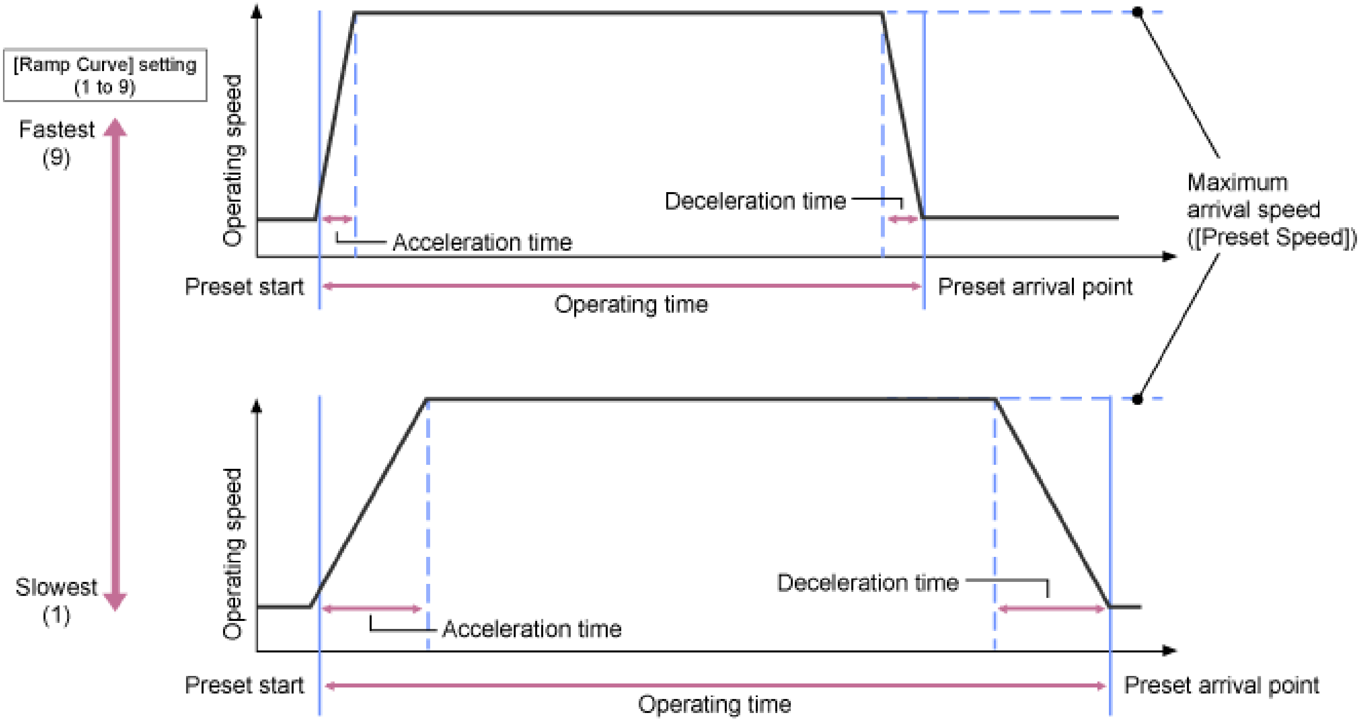
- When the value is set high, the function may not work properly if a heavy lens is attached. Check the operation before actual use.

Relationship between [Ramp Curve] setting and pan/tilt operation

When pan/tilt is operated



When a preset position is recalled

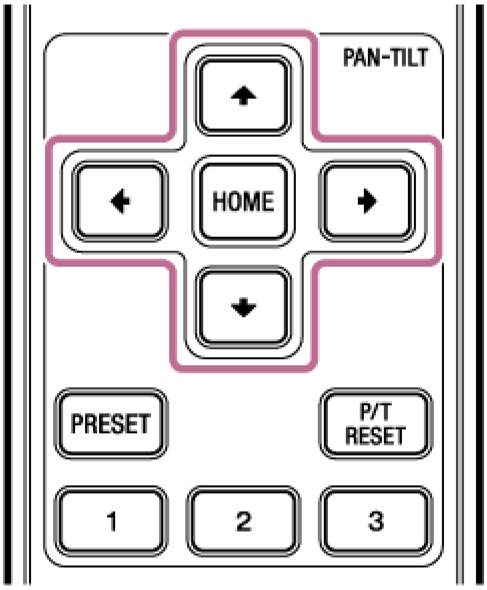

[Ramp Curve] setting
(1 to 9)
Fastest
(9)
Slowest
(1)
Operating speed
Deceleration time
Acceleration time
Preset start
Operating time
Preset arrival point
Maximum
arrival speed
([Preset Speed])
Operating speed
Deceleration time
Acceleration time
Preset start
Operating time
Preset arrival point

Adjusting the Shooting Direction Using the Supplied Infrared Remote Control

You can adjust the shooting direction using the pan/tilt operation buttons of the supplied infrared remote control.

1. **Press the arrow buttons to control the pan/tilt.**

   Press the arrow button of the direction you want to view while monitoring the camera image.
   To move a short distance, press the arrow button briefly.
   To move a large distance, press and hold the arrow button.
   To move diagonally, press and hold the ⬆ (up arrow) or ⬇ (down arrow) button and press the ⬅ (left arrow) or ➡ (right arrow) button.



To face the camera back to the front

Press the HOME button.

Note

- Depending on the direction of the camera, the focal length of the lens, and the zoom position, part of the unit or cables connected to the connector block may be visible. Before shooting, check the field of view for the lens and focal length you are using. You can also control the pan/tilt range using [Pan-Tilt] > [P/T Range Limit] in the web menu. When the unit is turned on or pan/tilt reset is executed, this range limit setting is ignored. For details, see [Pan-Tilt] > [P/T Range Limit] in the web menu.

Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

Setting the Zoom Type

Set the type of zoom using [Technical] > [Zoom] > [Zoom Type] in the camera menu.
The type of zoom will vary depending on the type of lens that is attached.

Type of attached lens	**[Zoom Type] setting**	
	[Optical Zoom Only]	**[On(Clear Image Zoom)]**
Fixed-focus lens/Manual zoom lens	Zoom operation is not supported.	Clear Image Zoom is supported.
Power zoom lens	Optical zoom only is supported.	Optical zoom and Clear Image Zoom are supported.

Note

- Clear Image Zoom is not available in the following cases.
  - When the [Shooting] > [S&Q Motion] > [Setting] is set to On and the [Frame Rate] setting in the camera menu is higher than 60 fps
  - When [Project] > [Rec Format] > [Codec] in the camera menu is set to [RAW] or an option that includes RAW
- Operating the SERVO/MANUAL select switch on a lens resets the magnification of Clear Image Zoom to 1×.
- AF-S is not supported during Clear Image Zoom.

Clear Image Zoom

The unit is equipped with a zoom function that uses image signal processing called Clear Image Zoom. When Clear Image Zoom is enabled, zoom is supported even for fixed-focus lenses. It can also be used to extend the range beyond the optical range on a power zoom lens.
The maximum zoom ratio using Clear Image Zoom varies depending on the recording resolution.

- For QFHD/4K recording resolution: 1.5×
- For HD recording resolution: 2×

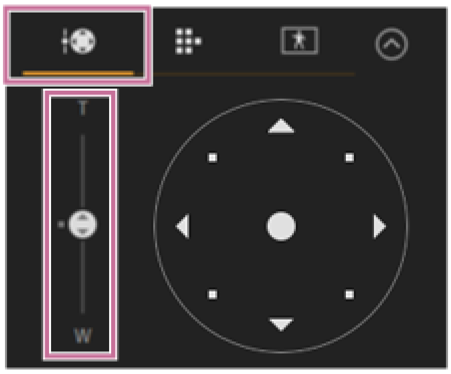
Adjusting the Zoom Using the Web App

You can adjust the zoom of the unit using optical zoom or Clear Image Zoom. This topic describes how to make adjustments using the Web App. For details about Clear Image Zoom, see “Setting the Zoom Type.”

1. **Press the (Pan/tilt/zoom) tab in the framing control panel to display the pan/tilt control panel.**

2. **Slide the [Zoom] slider knob in the [T] (Telephoto) direction or [W] (Wide) direction to adjust the zoom.**

   The zoom speed varies with the movement of the slider.



Note

- Depending on the direction of the camera, the focal length of the lens, and the zoom position, part of the unit or cables connected to the connector block may be visible. Before shooting, check the field of view for the lens and focal length you are using. You can also control the pan/tilt range using [Pan-Tilt] > [P/T Range Limit] in the web menu. When the unit is turned on or pan/tilt reset is executed, this range limit setting is ignored. For details, see [Pan-Tilt] > [P/T Range Limit] in the web menu.
- The actual zoom speed and accuracy will vary depending on the lens. Check the operation before use.

Hint

- You can control the zoom of a manual zoom lens by using a lens controller (option) that is compatible with this unit. For details, see “Connecting a Lens Controller” and “Adjusting the Zoom Using a Lens Controller.”

Related Topic

- Setting the Zoom Type
- Connecting a Lens Controller
- Adjusting the Zoom Using a Lens Controller

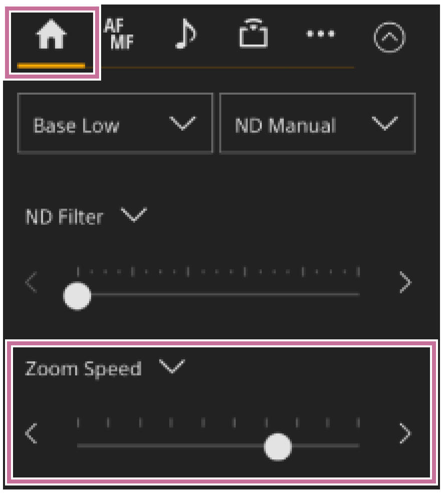
Setting the Zoom Operating Speed

You can change the zoom operating speed of the [Zoom] slider in the framing control panel using the [Zoom Speed] slider in the camera control panel.

1. **Press the ⌂ (Main) tab in the camera control panel.**

2. **Select the [Zoom Speed] slider from the list.**

   If the [Zoom Speed] slider is not displayed, select either of the two slider function selection buttons to display the slider.



3. **Move the [Zoom Speed] slider knob left or right.**

   Moving the knob to the left decreases the operating speed, while moving the knob to the right increases the operating speed.

Note

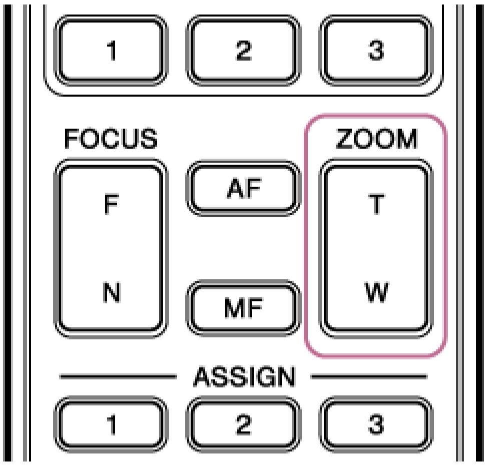
- The actual zoom speed and accuracy will vary depending on the lens. Check the operation before use.

Adjusting the Zoom Using the Supplied Infrared Remote Control

You can adjust the zoom of the unit using optical zoom or Clear Image Zoom. This topic describes how to make adjustments using the supplied infrared remote control. For details about Clear Image Zoom, see “Setting the Zoom Type.”

1. **Press the zoom button to adjust the zoom.**

   Press the T (Telephoto) or W (Wide) button while monitoring the screen to adjust the zoom.
   To zoom in, press the T button.
   To zoom out, press the W button.



Note

- Depending on the direction of the camera, the focal length of the lens, and the zoom position, part of the unit or cables connected to the connector block may be visible. Before shooting, check the field of view for the lens and focal length you are using. You can also control the pan/tilt range using [Pan-Tilt] > [P/T Range Limit] in the web menu. When the unit is turned on or pan/tilt reset is executed, this range limit setting is ignored. For details, see [Pan-Tilt] > [P/T Range Limit] in the web menu.

Hint

- You can control the zoom of a manual zoom lens by using a lens controller (option) that is compatible with this unit. For details, see “Connecting a Lens Controller” and “Adjusting the Zoom Using a Lens Controller.”

Related Topic

- Setting the Zoom Type
- Connecting a Lens Controller
- Adjusting the Zoom Using a Lens Controller

Calibrating an E-Mount Lens

Calibration corrects for differences in the zoom position due to differences in individual lenses when using an E-mount power zoom lens.
To calculate the zoom position accurately, calibrate your lens to correct for individual differences in the lens using the following procedure.

1. **If the lens has a SERVO/MANUAL switch, set to the SERVO position.**

   Note

   - The lens will be unable to receive zoom instructions from the unit if the switch is set to MANUAL.

2. **Run the calibration using [Technical] > [Lens] > [Lens Calibration] in the camera menu.**

   During calibration, the zoom lens moves automatically and is measured.

Calibration data

- Calibration data for up to five lenses can be saved in the unit. The oldest data will be overwritten when a 6th or subsequent lens is calibrated.
- You can check whether calibration data is available for the attached lens by pressing the ⓘ (Camera status) button in the common area of the Web App screen and selecting [Lens] > [Calibration Data].

Saving/Restoring Pan/Tilt, Zoom Position, and Focus Setting Using the Web App

You can save the pan/tilt, zoom position, and focus setting and recall them when required using the Web App (preset position function).

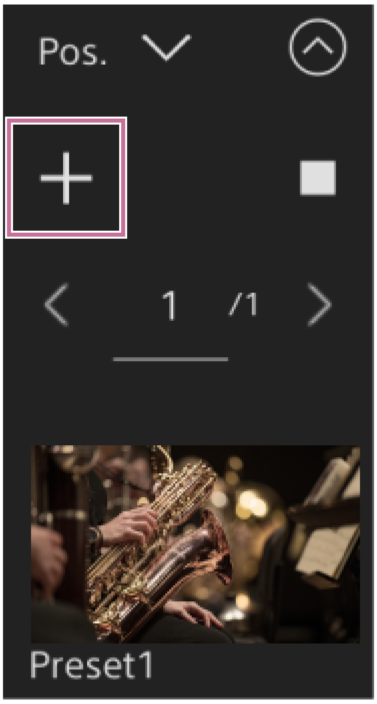
- For details about the items that can be saved/restored, see “Preset Position Saved Items.”

Note

- If the [Pan-Tilt] > [P/T Direction] > [Ceiling] setting in the web menu is changed, all the saved preset positions are deleted.

1. **Set the PTZ assist mode to [Pos.] in the drop-down list at the top of the preset position control panel.**
2. **Determine the position that you want to save using pan/tilt and zoom operations.**
3. **Press the [+] button in the preset position control panel.**

   The image with the saved position is displayed in the preset position control panel.



Hint

- If the preset position control panel is not displayed, press the ⌃ (Open) button to display it.
- Positions are saved in sequence from [Preset1].
- If there are unused presets within a sequence of presets, positions will be saved in presets starting with the unused presets. For example, if preset positions are saved in [Preset1] and [Preset3] but not in [Preset2], the next preset positions will be saved in [Preset2] and then in [Preset4].
- Up to 100 preset positions can be saved.
- You can rename each preset position. For details, see “Renaming Preset Positions Using the Web App.”

4. **Restore a saved position.**

Double-press the position thumbnail you want to restore in the preset position control panel to restore the corresponding position.

Hint

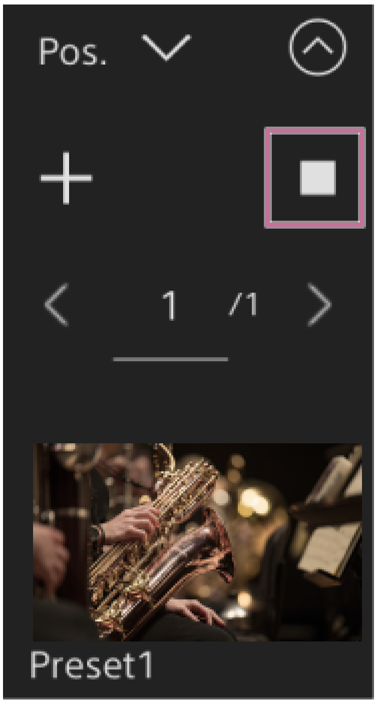
- You can also restore a position by pressing the image, pressing the … (Preset position menu) button that appears and selecting [Recall].
- The transition speed to a saved position is determined by the [Pan-Tilt] > [P/T Preset] > [Pan-Tilt] > [Pan-Tilt Speed for Common] setting in the web menu when the position was saved. You can also change the transition speed after saving. For details, see “Changing the Transition Speed (Pan-Tilt/Zoom/Focus) When Restoring a Preset Position.”
- The degree of change in the pan/tilt position when moving to a preset position can be adjusted using the transition speed and [Ramp Curve] settings. For details, see “Changing the Transition Speed (Pan-Tilt/Zoom/Focus) When Restoring a Preset Position” and “Setting the Pan/Tilt Operation Acceleration.”
- If a different preset is recalled during preset playback, the operation of the first recalled preset stops and operation of the subsequently recalled preset starts.

Note

- If the temperature of the environment has changed significantly between when a preset position was saved and when it is played back, deviation in the framing may occur.
- While a preset position is being restored, you cannot perform any operations other than restoring or canceling the preset position.
- When restoring the preset position of a Clear Image Zoom area, the zoom does not operate smoothly (preset position is restored instantaneously).

To cancel the restore preset position operation

Press the ◻ (Cancel restore) button displayed on the preset position control panel during restore preset position operation to cancel the restore operation. Use the joystick and [Zoom] slider to adjust the framing.



Related Topic

- Preset Position Saved Items
- Renaming Preset Positions Using the Web App
- Changing the Transition Speed (Pan-Tilt/Zoom/Focus) When Restoring a Preset Position
- Setting the Pan/Tilt Operation Acceleration

Renaming Preset Positions Using the Web App

You can rename saved preset positions.

1. **Set the PTZ assist mode to [Pos.] in the drop-down list at the top of the preset position control panel.**

2. **Press the preset position you want to rename.**

   The ••• (Preset position menu) button appears at the top right of the image.

3. **Press the ••• (Preset position menu) button and select [Rename] from the displayed menu.**

4. **Enter a new preset name.**

Replacing a Saved Preset Position with a New Position Using the Web App

You can replace a saved preset position with a new position.

1. **Set the PTZ assist mode to [Pos.] in the drop-down list at the top of the preset position control panel.**

2. **Determine the position that you want to save using pan/tilt and zoom operations.**

3. **Press the position image you want to replace in the preset position control panel.**

   The ••• (Preset position menu) button appears at the top right of the image.

4. **Press the ••• (Preset position menu) button and select [Replace] from the displayed menu.**

   The new position replaces the current setting.

Deleting a Saved Preset Position Using the Web App

You can delete saved preset positions.

1. **Set the PTZ assist mode to [Pos.] in the drop-down list at the top of the preset position control panel.**

2. **Press the position image you want to delete in the preset position control panel.**

   The ••• (Preset position menu) button appears at the top right of the image.

3. **Press the ••• (Preset position menu) button and select [Delete] from the displayed menu.**

   The saved position is deleted.

Synchronizing the Pan/Tilt Operation and Zoom/Focus Operation When Restoring a Preset Position

---

You can synchronize the pan/tilt operation and zoom operation when restoring a saved preset position for smoother framing.

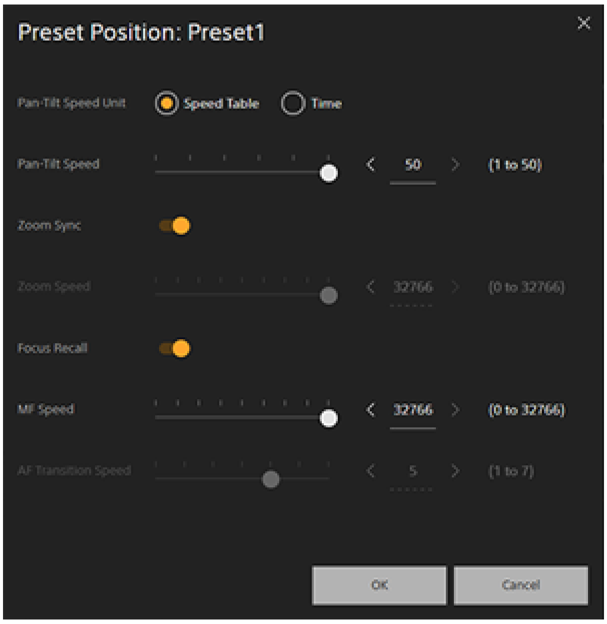
1. **Set the PTZ assist mode to [Pos.] in the drop-down list at the top of the preset position control panel.**

2. **Press the image for the preset position for which you want to change the transition speed.**

   The ••• (Preset position menu) button appears at the top right of the image.

3. **Press the ••• (Preset position menu) button and select [Edit…] from the displayed menu.**

   The setup screen for the selected preset position appears.



Preset Position: Preset1

Pan-Tilt Speed Unit ● Speed Table ○ Time
Pan-Tilt Speed < 50 > (1 to 50)
Zoom Sync
Zoom Speed < 32766 > (0 to 32766)
Focus Recall
MF Speed < 32766 > (0 to 32766)
AF Transition Speed < 5 > (1 to 7)

4. **Slide the [Zoom Sync] switch to the right to turn the function on and press the [OK] button.**

   The next time a saved position is restored, the camera will move at the configured speed.

Hint

- You can specify settings used for registering a preset position beforehand. Set [Pan-Tilt] > [P/T Preset] > [Default] > [Zoom Sync] to [On] in the web menu.
- When [Pan-Tilt] > [P/T Preset] > [Pan-Tilt Speed Setting Way] is set to [Common], all preset positions will be restored at the speed set using [Pan-Tilt] > [P/T Preset] > [Pan-Tilt Speed for Common].
- After zoom movement is completed, the camera moves to the saved focus position.
- After the movement is completed, [AF Transition Speed] returns to its original setting.

Note

- Depending on the zoom speed range of the lens, the zoom operation may finish before the pan/tilt operation ends, or conversely, the zoom operation may continue. Check the the operation beforehand.

Changing the Transition Speed (Pan-Tilt/Zoom/Focus) When Restoring a Preset Position

You can change the transition speed (pan/tilt operation, zoom operation, focus operation) when restoring a saved preset position.

1. **Set [Pan-Tilt] > [P/T Preset] > [Pan-Tilt Speed Setting Way] to [Separate] in the web menu.**

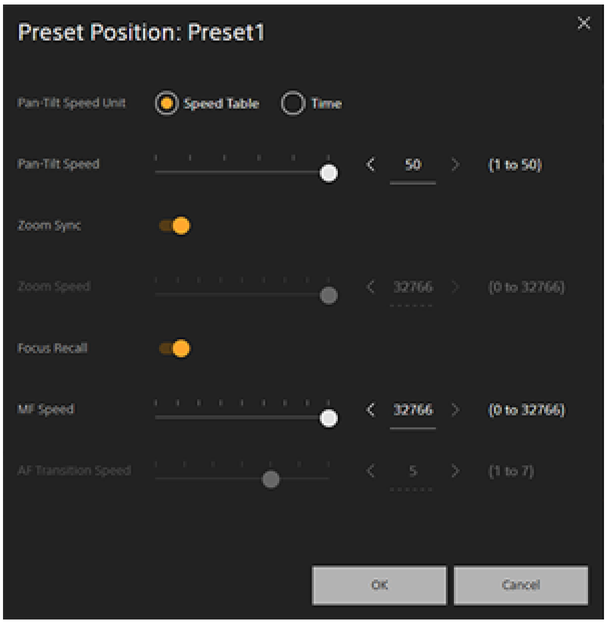
2. **Set the PTZ assist mode to [Pos.] in the drop-down list at the top of the preset position control panel.**

3. **Press the image for the preset position for which you want to change the transition speed.**

   The ··· (Preset position menu) button appears at the top right of the image.

4. **Press the ··· (Preset position menu) button and select [Edit…] from the displayed menu.**

   The setup screen for the selected preset position appears.



Preset Position: Preset1

Pan-Tilt Speed Unit ● Speed Table ○ Time

Pan-Tilt Speed < 50 > (1 to 50)

Zoom Sync

Zoom Speed < 32766 > (0 to 32766)

Focus Recall

MF Speed < 32766 > (0 to 32766)

AF Transition Speed < 5 > (1 to 7)

5. **Select [Pan-Tilt Speed Unit] > [Speed Table] and set the transition speeds (Pan-Tilt/Zoom/Focus) you want to change using the sliders or enter values directly and press the [OK] button.**

   The next time a saved position is restored, the camera will move at the configured speed.

Hint

- When [Pan-Tilt] > [P/T Preset] > [Pan-Tilt Speed Setting Way] is set to [Common], all positions will be restored at the set speed using [Pan-Tilt] > [P/T Preset] > [Pan-Tilt Speed for Common].
- After zoom movement is completed, the camera moves to the saved focus position.
- After the movement is completed, [AF Transition Speed] returns to its original setting.

- When restoring the preset position of a Clear Image Zoom area, the zoom does not operate smoothly (preset position is restored instantaneously).

Changing the Transition Time (Pan-Tilt/Zoom) When Restoring a Preset Position

You can change the transition time (pan/tilt operation, zoom operation) when restoring a saved preset position.

1. **Set [Pan-Tilt] > [P/T Preset] > [Pan-Tilt Speed Setting Way] to [Separate] in the web menu.**

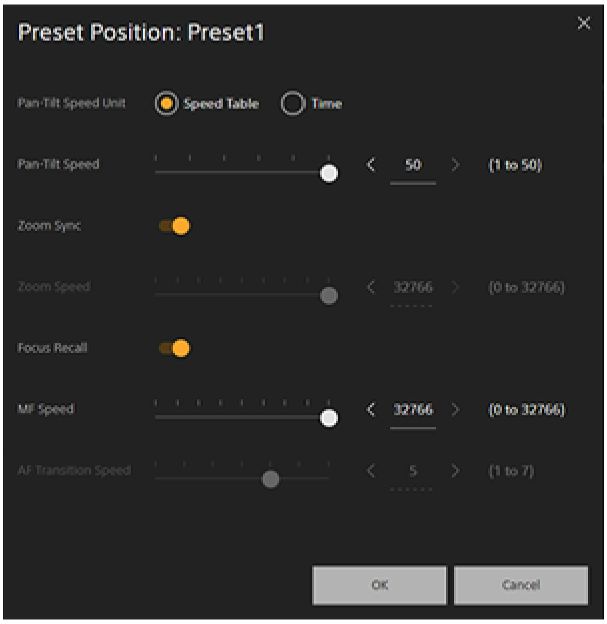
2. **Set the PTZ assist mode to [Pos.] in the drop-down list at the top of the preset position control panel.**

3. **Press the image for the preset position for which you want to change the transition time.**

   The ⋯ (Preset position menu) button appears at the top right of the image.

4. **Press the ⋯ (Preset position menu) button and select [Edit…] from the displayed menu.**

   The setup screen for the selected preset position appears.



Preset Position: Preset1

Pan-Tilt Speed Unit ● Speed Table ○ Time

Pan-Tilt Speed 50 (1 to 50)

Zoom Sync

Zoom Speed 32766 (0 to 32766)

Focus Recall

MF Speed 32766 (0 to 32766)

AF Transition Speed 5 (1 to 7)

5. **Select [Pan-Tilt Speed Unit] > [Time] and set the transition times (Pan-Tilt/Zoom) you want to change using the sliders or enter values directly and press the [OK] button.**

   The next time a saved position is restored the camera will move with the configured time.

Hint

- When [Pan-Tilt] > [P/T Preset] > [Pan-Tilt Speed Setting Way] is set to [Common], all positions will be restored at the set speed using [Pan-Tilt] > [P/T Preset] > [Pan-Tilt Speed for Common].
- After zoom movement is completed, the camera moves to the saved focus position.
- After the movement is completed, [AF Transition Speed] returns to its original setting.
- If [Pan-Tilt] > [P/T Preset] > [Default] > [Zoom Sync] is set to [On] in the web menu, zoom also operates with the specified time.

- When [Pan-Tilt] > [P/T Preset] > [Pan-Tilt Speed Setting Way] is set to [Common] the transition time configured here is applied.
- You can set the transition time in 0.5 second increments.
- When restoring the preset position of a Clear Image Zoom area, the zoom does not operate smoothly (preset position is restored instantaneously).

Note

- Depending on the type of lens and the ambient temperature, the maximum acceleration and accuracy may differ and the camera may not operate as specified.
- Depending on the pan/tilt distance, there may be an error in the specified time.

Saving/Restoring Pan/Tilt and Zoom Position Using the Supplied Infrared Remote Control

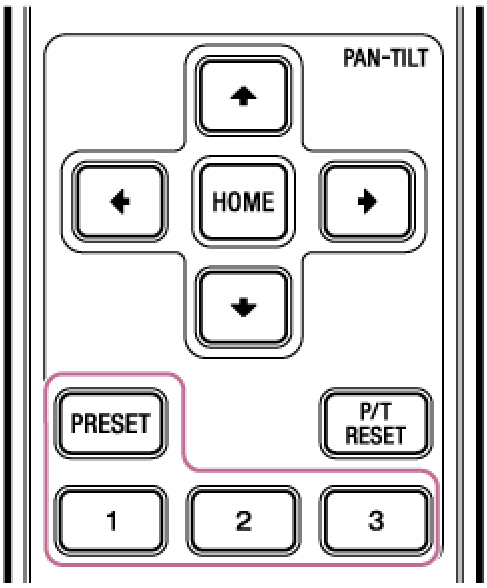
You can save the pan/tilt and zoom position and recall them when required using the supplied infrared remote control.

1. **Adjust the pan/tilt and zoom of the camera.**

2. **Set the PTZ assist mode to [Pos.] in the drop-down list at the top of the preset position control panel in the Web App.**

3. **Press and hold the PRESET button and press one of the 1 to 3 buttons.**

   The camera orientation and zoom position are saved as a preset position.



4. **Restore a saved preset position.**

   Press one of the 1 to 3 buttons to restore that preset position.

Hint

- The transition speed when restoring a preset position is determined by the saved [Pan-Tilt] > [P/T Preset] > [Pan-Tilt Speed] value in the web menu. You can change the transition speed after saving a value. For details, see “Changing the Transition Speed (Pan-Tilt/Zoom/Focus) When Restoring a Preset Position.”

Related Topic

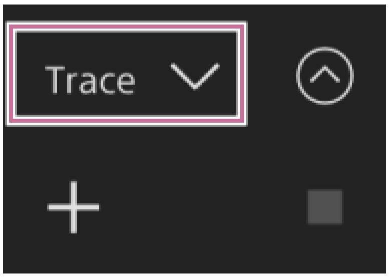
- Changing the Transition Speed (Pan-Tilt/Zoom/Focus) When Restoring a Preset Position

Recording Camera Framing Operations Using the Web App

You can record camera framing operations using the Web App.

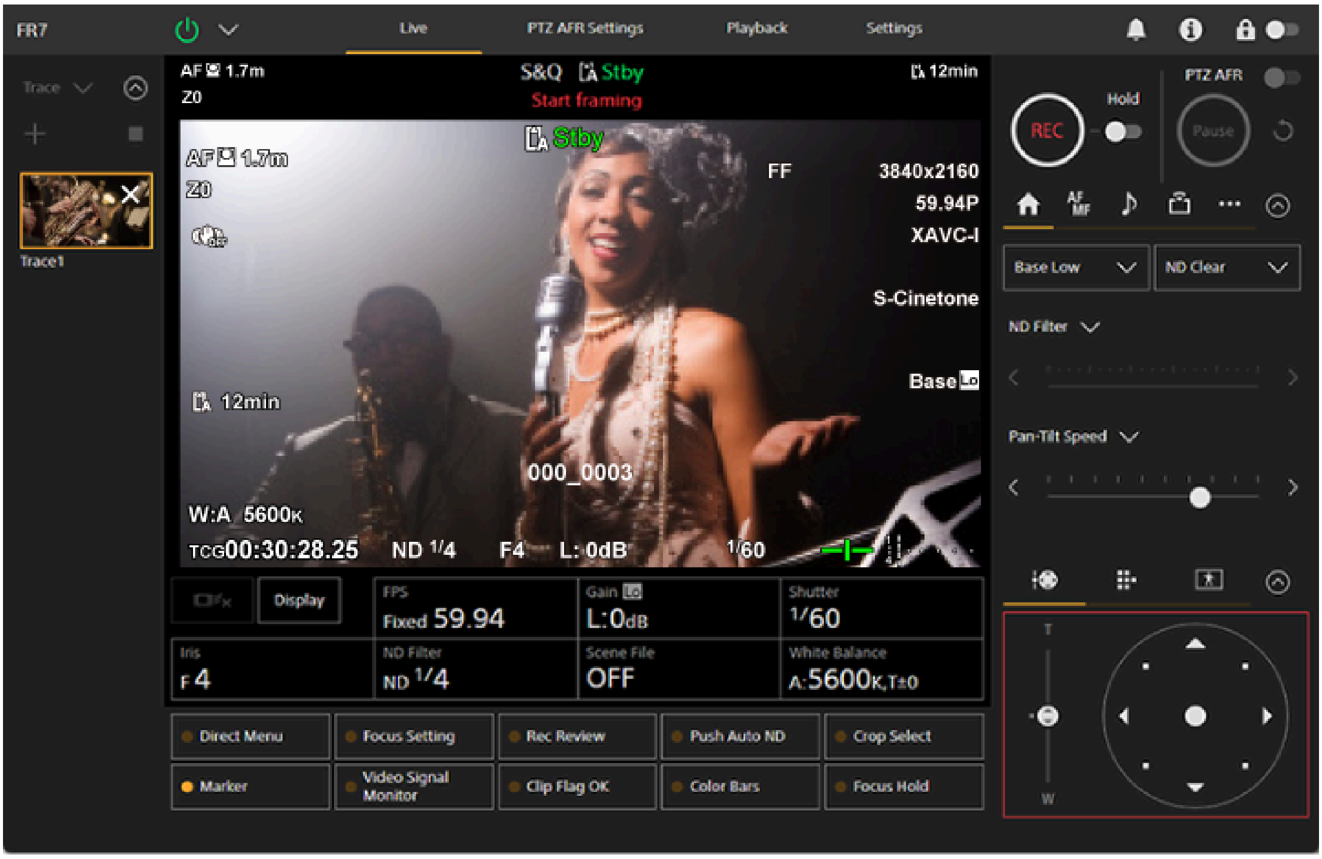
1. **Adjust the operation starting position of the camera.**

2. **Set the PTZ assist mode to [Trace] in the drop-down list at the top of the preset position control panel.**



3. **Press the [+] button in the preset position control panel.**

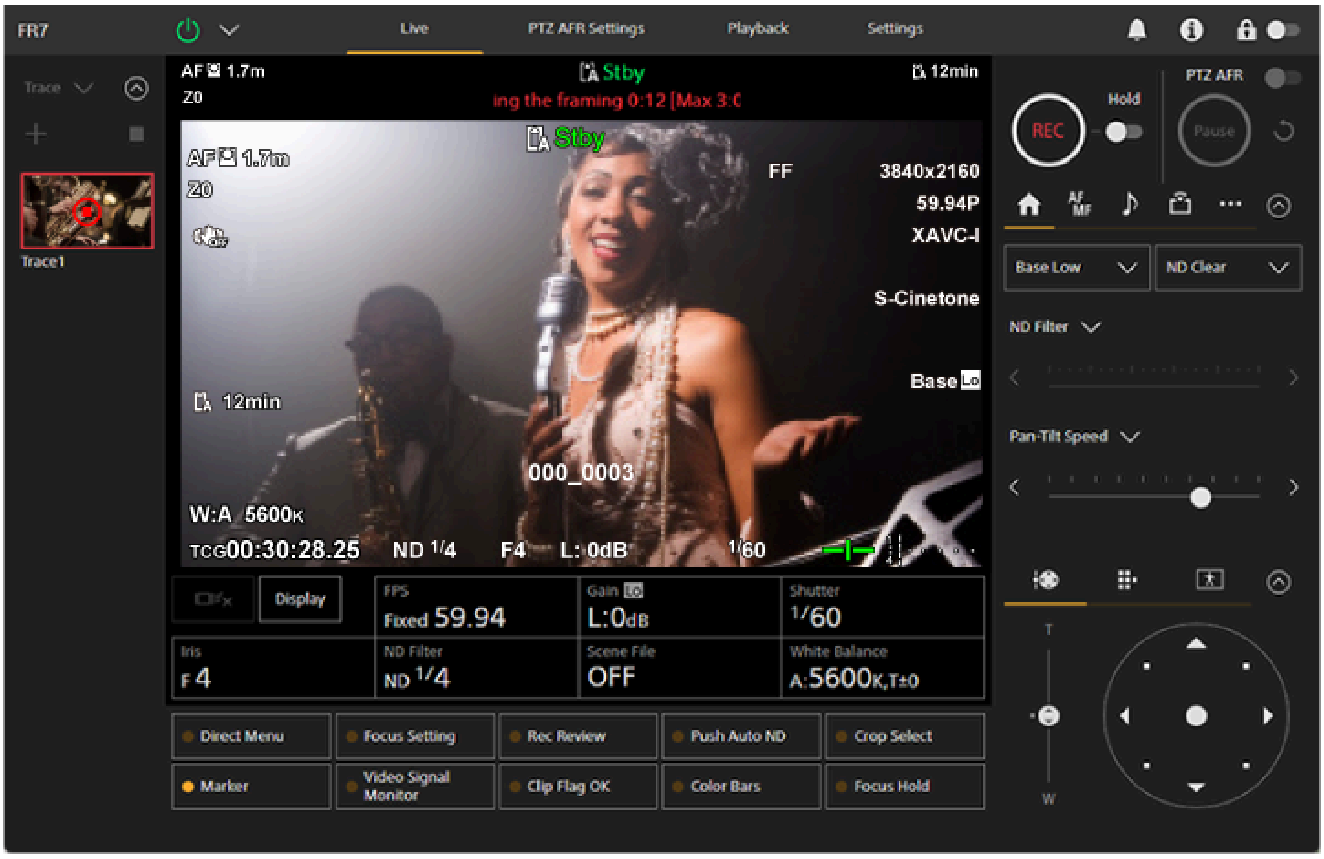
   A thumbnail is added and the camera switches to recording standby state.



Hint

- You can press the × (Close) button on the thumbnail to exit recording standby state and return to normal operation.

4. **Start the framing operation using the joystick and [Zoom] slider.**



FPS Fixed 59.94
Gain L:0dB
Shutter 1/60
Iris F4
ND Filter ND 1/4
Scene File OFF
White Balance A:5600K,T±0
Base Low
ND Clear

Recording starts from the instant the framing operation starts.

5. **Press the ● (Stop recording) button on the thumbnail to stop recording.**

Hint

- The remaining recording time is displayed at the top of the camera image panel while recording.

Note

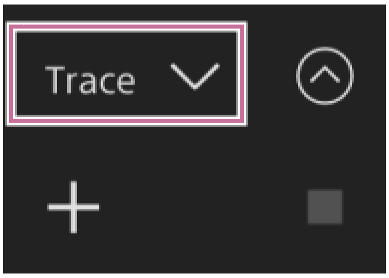
- The recorded framing operations will be deleted if you switch to ceiling mount
- Switching the system frequency may delete recorded framing operations.
- Zoom operation is not recorded when a lens controller is connected.
- The maximum duration for recording a single framing operation is 3 minutes. Recording will automatically stop when the recording duration reaches 3 minutes.
- If the camera is operated from another device while recording a framing operation, the operations from the other device will also be recorded. For details about recording operations using a third-party remote controller, contact the corresponding manufacturer.
- Focus and image quality settings are not recorded by this function.
- The pan/tilt/zoom operations recorded when recording a framing operation cannot be reproduced exactly during framing playback.
- If, after recording a framing operation, you set the pan/tilt range limit using [Pan-Tilt] > [P/T Range Limit] in the web menu, the pan/tilt range limit will not be applied during framing playback. If you want to use a framing operation and the pan/tilt limit function together, set the pan/tilt range limit before recording the framing operation.
- Recording/playback of framing operations is not available in the following cases.
  - When RAW video output is selected
  - When the video signal is not output from the SDI output connector

- When PTZ auto framing is on

Playing Camera Framing Operations Using the Web App

You can play a recorded camera framing operation using the Web App.

1. **Set the PTZ assist mode to [Trace] in the drop-down list at the top of the preset position control panel.**



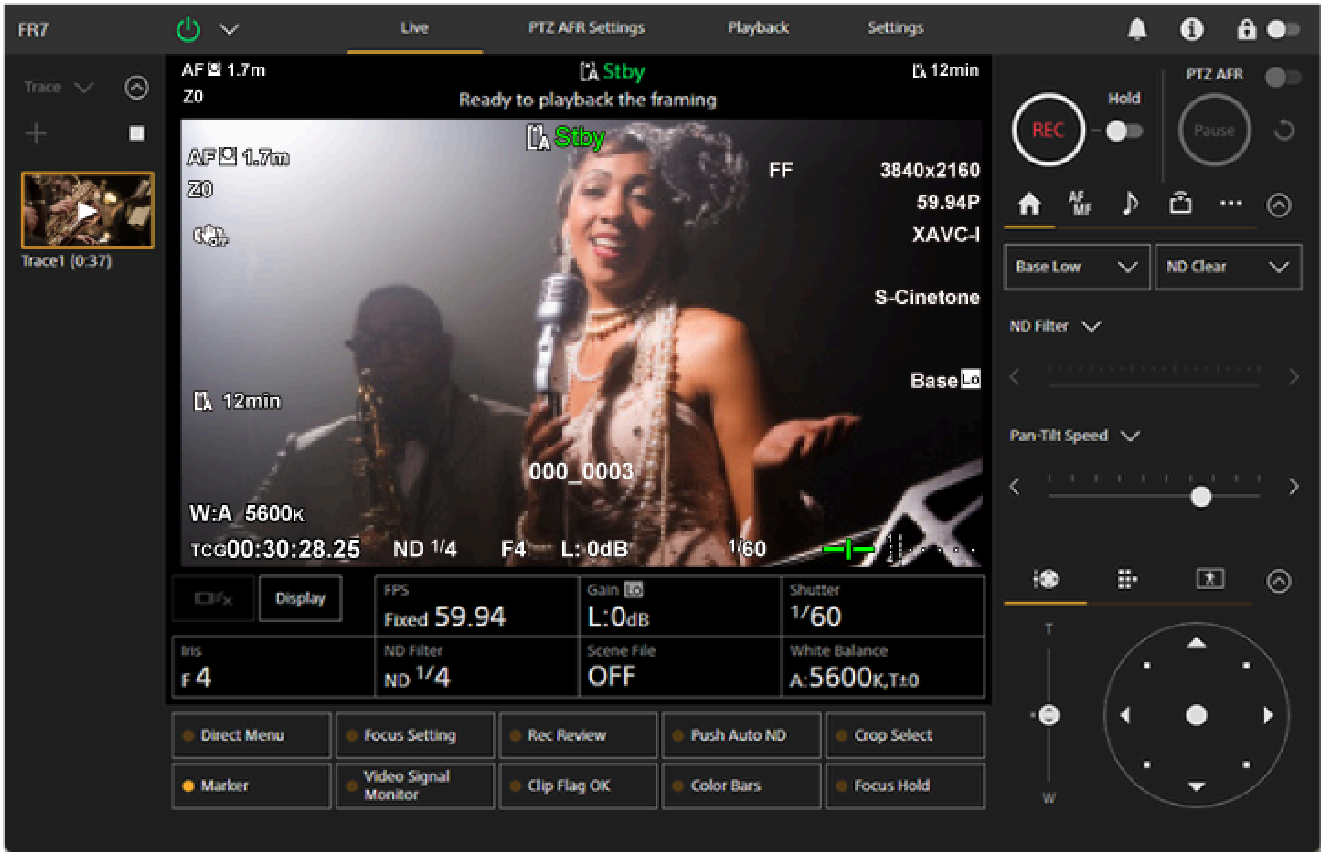
2. **Select a thumbnail with the framing operation you want to play.**

   The (Prepare) button appears on the thumbnail.

3. **Press the (Prepare) button.**

   The camera moves to the framing operation starting position and switches to playback standby state.

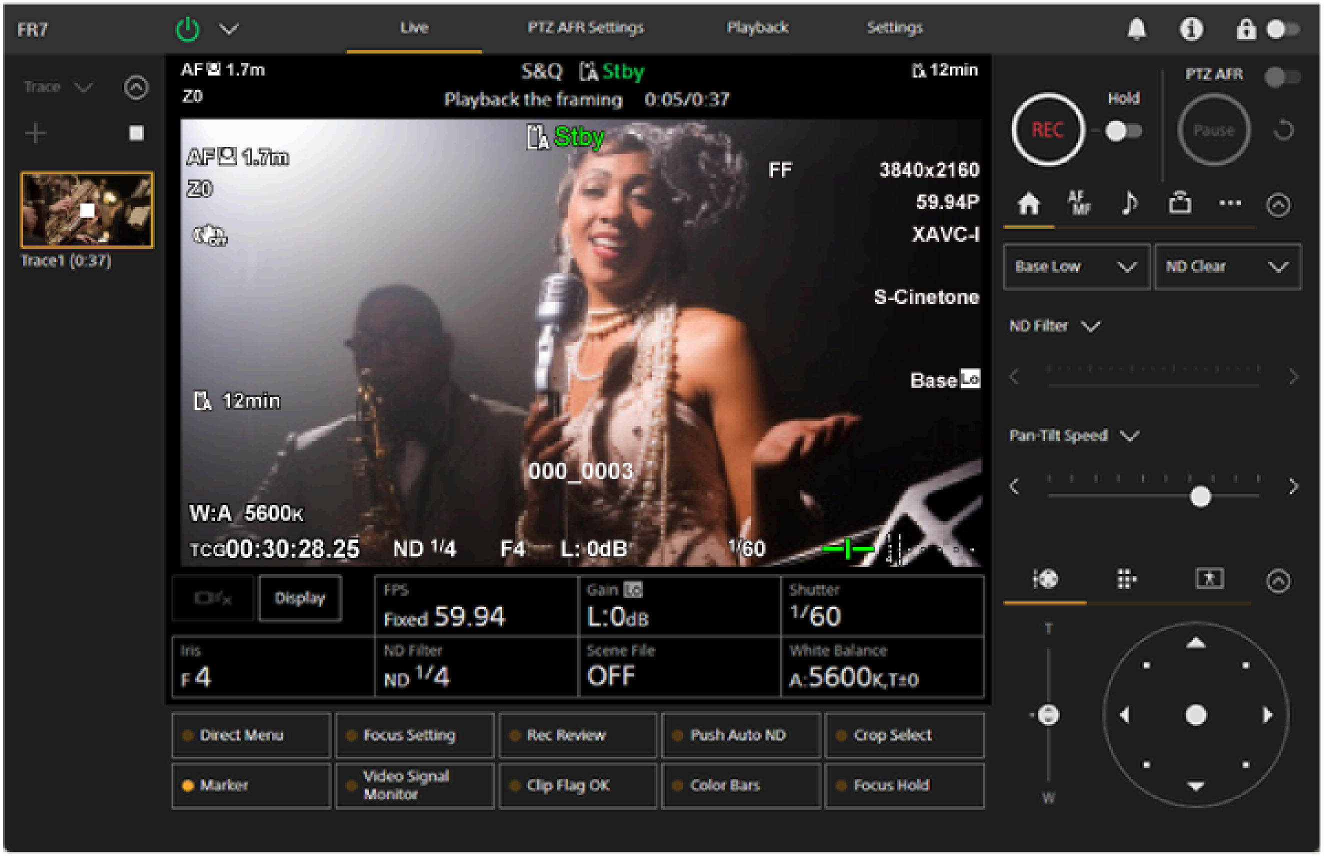
4. **Press the ▶ (Play) button on the thumbnail.**



Ready to playback the framing

FPS Fixed 59.94
Gain L:0dB
Shutter 1/60
Iris F4
ND Filter ND 1/4
Scene File OFF
White Balance A:5600K,T±0

Framing playback starts.



FPS Fixed 59.94

Gain L:0dB

Shutter 1/60

Iris F4

ND Filter ND 1/4

Scene File OFF

White Balance A:5600K,T±0

Hint

- In playback standby state and during playback, you can cancel playback and return to normal operation by doing any of the following operations.
  - Press the □ (Stop) button on the thumbnail or in the preset position control panel.
  - Operate the joystick.
  - Operate the [Zoom] slider.
- The elapsed playback time is displayed at the top of the camera image panel during playback.

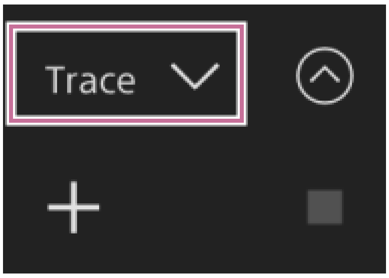
Note

- Unexpected behavior may occur if the Clear Image Zoom setting differs between recording and playback of framing operations.
- Zoom operation playback is not supported when a lens controller is connected. Operating the zoom will stop playback of framing operations.
- During framing operation playback, changing the pan/tilt range limit using [Pan-Tilt] > [P/T Range Limit] in the web menu has no effect. Set the pan/tilt range limit before recording a framing operation.

Deleting Camera Recorded Framing Operations Using the Web App

You can delete camera recorded framing operations using the Web App.

1. **Set the PTZ assist mode to [Trace] in the drop-down list at the top of the preset position control panel.**



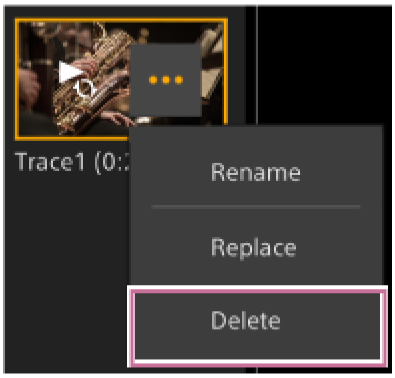
2. **Select a thumbnail with the framing operation you want to delete.**

   The ··· (Trace menu) button appears on the thumbnail.

3. **Press the ··· (Trace menu) button.**

   The menu appears.

4. **Select [Delete] from the displayed menu.**



The selected framing operation is deleted.

Recording Camera Framing Operations Using the Supplied Infrared Remote Control

You can record camera framing operations using the supplied infrared remote control.

1. **Access the live operation screen of the Web App.**
2. **Set the PTZ assist mode to [Trace] in the drop-down list at the top of the preset position control panel.**
3. **Adjust the operation starting position of the camera using the infrared remote control.**
4. **Press and hold the PRESET button and press one of the POSITION1 to 3 buttons.**

   The camera switches to recording standby state.
5. **Perform the framing operation you want to record.**
6. **To end recording, press and hold the PRESET button and press the POSITION button selected in step 4.**

For details about playing a recorded framing operation, see “Playing Camera Framing Operations Using the Supplied Infrared Remote Control.”

Note

- The maximum duration for recording a single framing operation is 3 minutes. Recording will automatically stop when the recording duration reaches 3 minutes.
- If the camera is operated from another device while recording a framing operation, the operation from the other device will also be recorded as part of the framing operation.
- If the image quality is adjusted while recording a framing operation, that change is not recorded.

Related Topic

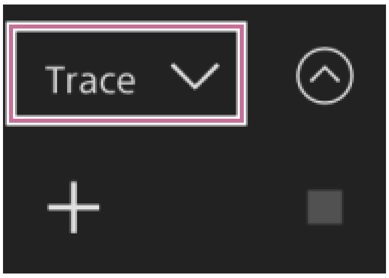
- Playing Camera Framing Operations Using the Supplied Infrared Remote Control

Playing Camera Framing Operations Using the Supplied Infrared Remote Control

You can play a recorded camera framing operation using the supplied infrared remote control.

1. **Access the live operation screen of the Web App.**

2. **Set the PTZ assist mode to [Trace] in the drop-down list at the top of the preset position control panel.**



3. **Select and press one of the POSITION1 to 3 buttons for which a framing operation was recorded.**

   The pan/tilt/zoom of the camera move to the playback starting position.

4. **After the camera moves to the playback starting position, press the same POSITION button again.**

   Playback starts.

Note

- Operating the pan/tilt/zoom of the camera will stop playback.

Related Topic

- Recording Camera Framing Operations Using the Supplied Infrared Remote Control

About PTZ Auto Framing

The unit is equipped with a PTZ auto framing function that recognizes people and automatically adjusts the camera direction and zoom position.
PTZ auto framing has two modes: “manual tracking start mode” in which you can start tracking a person manually, and “auto tracking start mode” in which tracking of a person will start automatically when the person enters an area configured manually, beforehand.
Set the mode to use before using this function using the procedure described in “Configuring PTZ Auto Framing Initial Settings.”

- For details about PTZ auto framing operation in manual tracking start mode, see “Specifying the Subjects for Automatic Tracking (manual tracking start mode).”
- For details about PTZ auto framing operation in auto tracking start mode, see “Selecting Subjects in a Specified Position and Tracking Automatically (auto tracking start mode).”

The following six states exist for PTZ auto framing.

Live operation screen display	Status
(No display)	PTZ auto framing is off.
[Preparing]	Preparing for PTZ auto framing execution.
[Return to Start Position]	Moving to the configured start position (auto tracking start mode only).
[Detecting]	The tracking subject is detected (auto tracking start mode only).
[Select Target]	Waiting for tracking target selection. Tap a person to track in the camera image pane.
[Tracking]	Target is being tracked.
[Tracking Paused]	Tracking is paused. Press the [Resume] button or tap a person within the camera image pane to resume tracking.
[Target Lost]	Tracking of the selected target has been lost.

You can select a tracking target by tapping a person within the camera image pane in the [Detecting], [Tracking], and [Target Lost] states.
You can monitor the PTZ auto framing execution status using the tally lamp of the unit. For details, see “Checking the PTZ Auto Framing Status Remotely.”

Note

- Configure the following settings in the Web App when using auto framing.
  - [Pan-Tilt] > [P/T Speed] > [Speed Step]: [Extended]
  - [Pan-Tilt] > [P/T Acceleration] > [Ramp Curve]: 7 to 9
- During PTZ auto framing, the information displayed on the camera image is minimal.
- During auto focus, the person being tracked is the focus target. To focus on something other than the person you are tracking, set to manual focus.
- Settings related to auto focus cannot be changed during PTZ auto framing operation.

- Proper auto tracking operation may not be possible if the camera focus or exposure is not set properly, or due to factors such as the shooting environment (for example, brightness), the shooting angle (extremely high angle or low angle), or the density, size, clothing, movement, or obscuring of people.
- The full effectiveness of the face recognition function may not be obtained if the following conditions are not met.
  - Facing toward the front
  - Normal facial expression (eyes closed, no extreme facial expressions such as anger or crying)
  - No excessive covering of the face (sunglasses, mask, etc.)
- The actual zoom speed and accuracy will vary depending on the lens. Check the operation before use.
- If the lens is changed or the [Zoom Type], [Imager Scan Mode], [S&Q Motion], [P/T Range Limit], or [P/T Direction] > [Ceiling] is changed, change the settings on the [Start Position] screen and [Detection Settings] screen of the PTZ AFR settings screen. For details, see “Configuring PTZ Auto Framing Initial Settings.”
- When using PoE++ power delivery, recording and PTZ auto framing cannot be used at the same time.
- PTZ auto framing cannot be executed during thumbnail display, playback, Rec Review, color bars display, lens calibration, and when HDMI output is not possible.
- Immediately after switching PTZ auto framing on/off, there will be a few seconds during which no operation will be accepted.
- PTZ auto framing cannot be used if the HDMI output is larger than 1920×1080. Also, after changing the video output settings, it may take several 10s of seconds for PTZ auto framing to start, so allow a margin of time before use.
- PTZ auto framing cannot be used if both [Stream] > [Stream] > [Stream Setting] > [Setting] is set to [RTSP] and [Stream] [Video Stream] > [Codec 2] is set to anything other than [Off] in the web menu.
- PTZ auto framing cannot be used if both [Stream] > [Stream] > [Stream Setting] > [Setting] is set to [NDI|HX] and [Stream] > [Video Stream] > [Frame Rate 2] is higher than 10fps in the web menu.

Related Topic

- Configuring PTZ Auto Framing Initial Settings
- Specifying the Subjects for Automatic Tracking (manual tracking start mode)
- Selecting Subjects in a Specified Position and Tracking Automatically (auto tracking start mode)
- Checking the PTZ Auto Framing Status Remotely

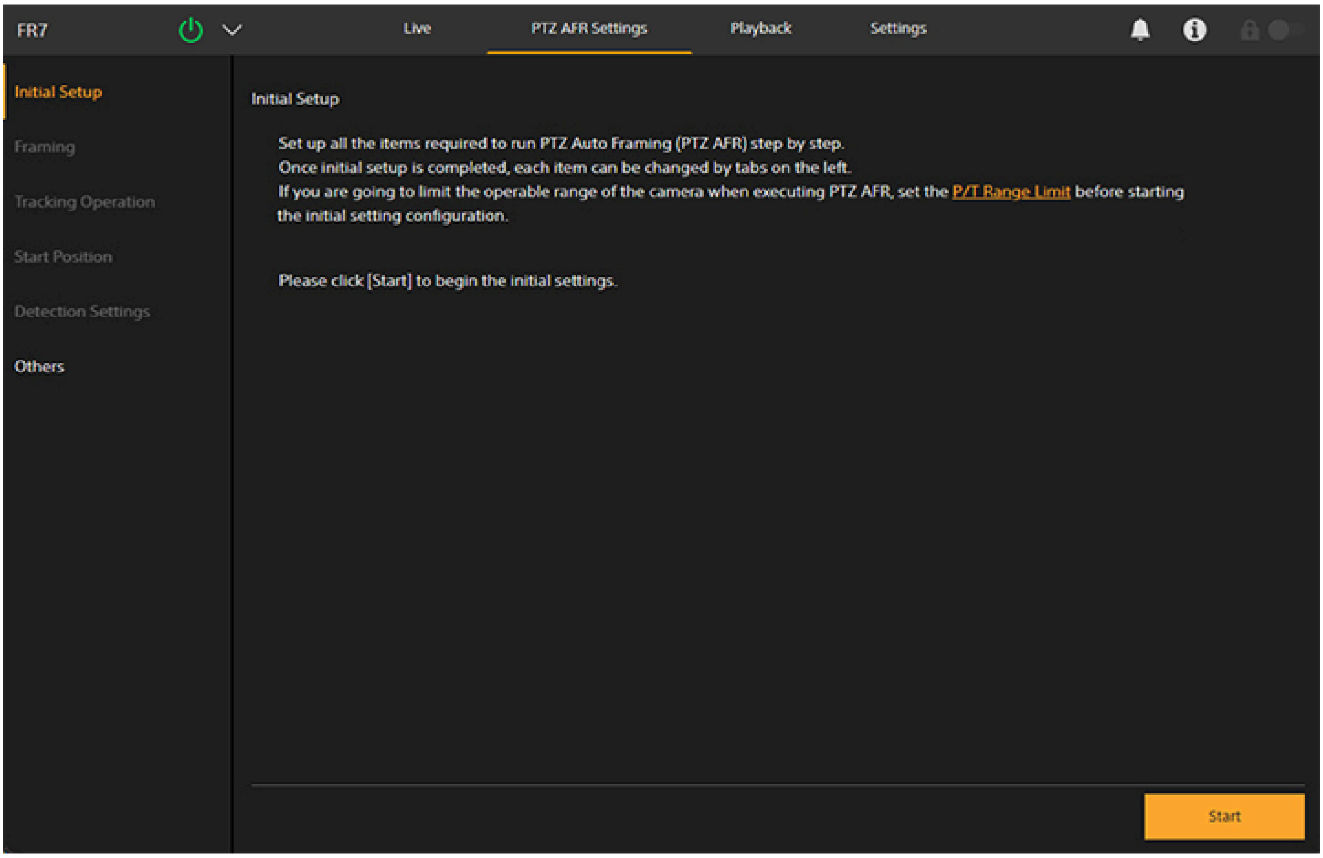
Configuring PTZ Auto Framing Initial Settings

This topic describes how to configure PTZ auto framing initial settings.

1. **Press the [PTZ AFR Settings] tab.**

   The [Initial Setup] screen of the PTZ AFR setup screen appears.

2. **Check the description on the screen and press the [Start] button.**



Initial Setup

Set up all the items required to run PTZ Auto Framing (PTZ AFR) step by step.
Once initial setup is completed, each item can be changed by tabs on the left.
If you are going to limit the operable range of the camera when executing PTZ AFR, set the P/T Range Limit before starting the initial setting configuration.

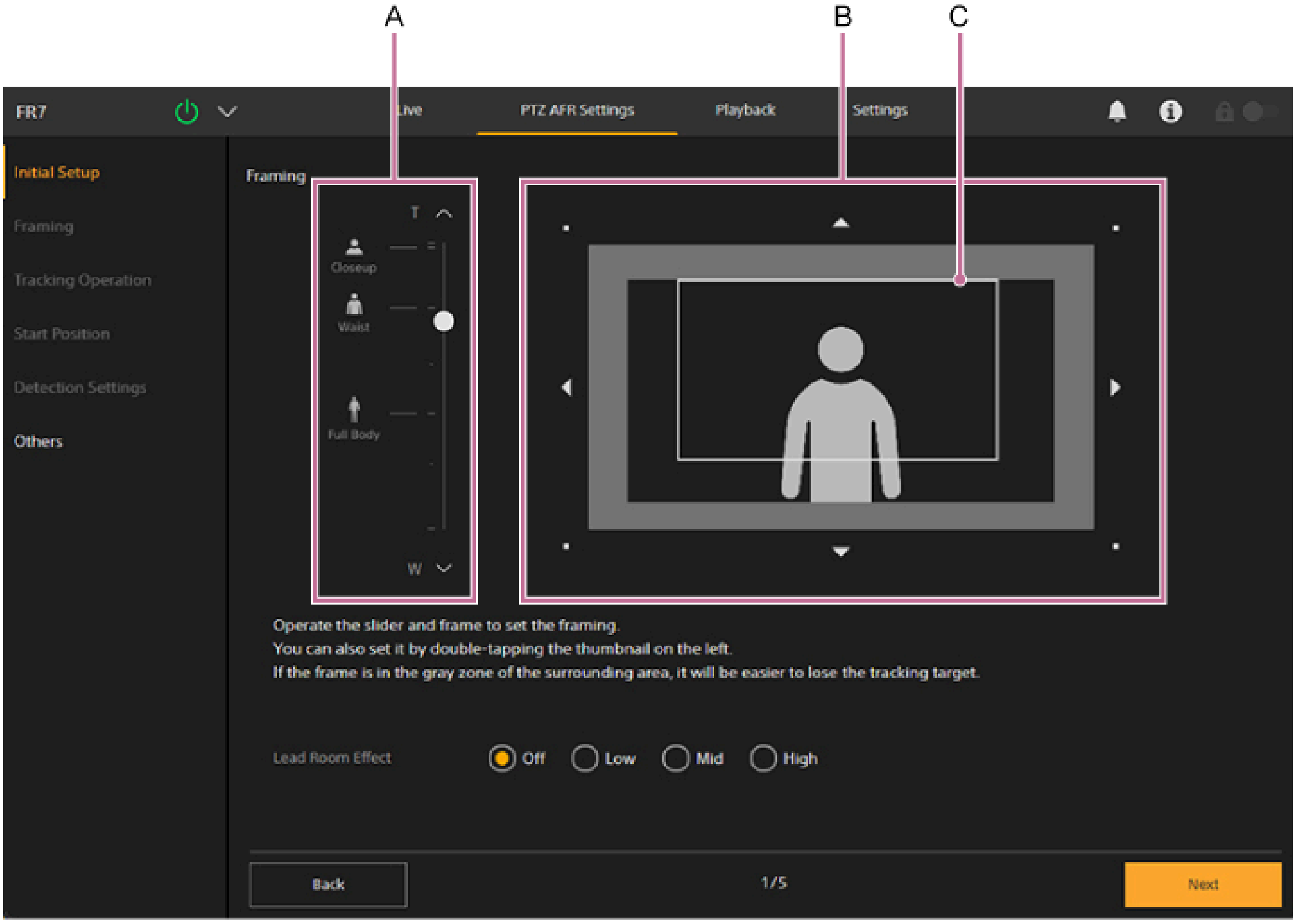
Please click [Start] to begin the initial settings.

Hint

- The [Start] button is displayed only when configuring settings for the first time.

Configuration of the PTZ auto framing settings starts.

3. **Adjust the desired PTZ auto framing composition on the [Framing] screen.**



Operate the slider and frame to set the framing.
You can also set it by double-tapping the thumbnail on the left.
If the frame is in the gray zone of the surrounding area, it will be easier to lose the tracking target.

Lead Room Effect ● Off ○ Low ○ Mid ○ High

A: Human body size slider
B: Composition adjustment panel
C: Composition frame
Adjust the size and position of the person within the image.
[Lead Room Effect]: Sets the strength of the effect that creates white space in the composition according to the orientation of the face.

Hint

- Double-clicking an icon on the left side of the human body size slider will set the composition frame to the size (zoom ratio) and position of the person for that icon.

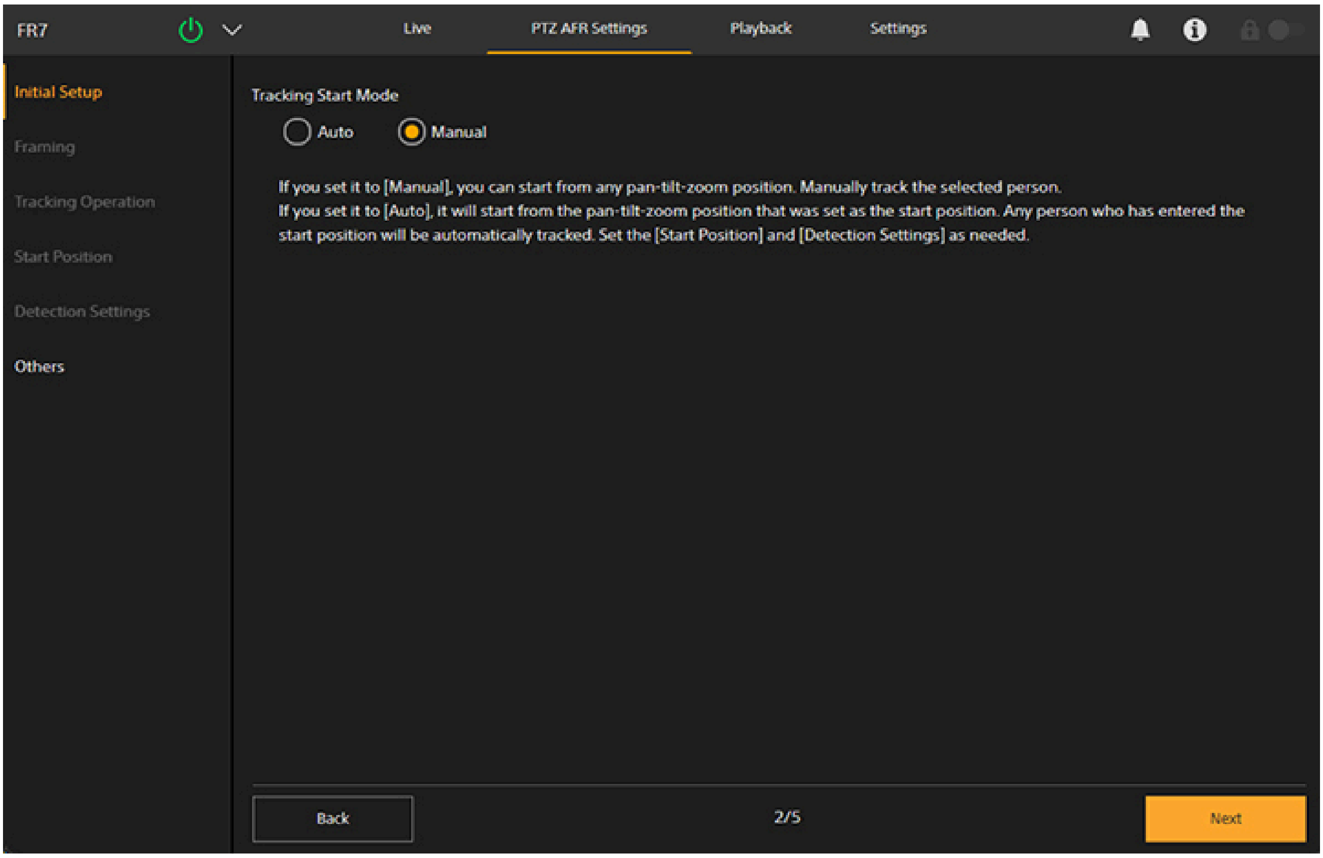
Note

- If the white composition frame overlaps the gray zone, it will be easy to lose people moving in the opposite direction.
- If you compose your shot so that the person is large, it will be easy to lose people if they move quickly. In this case, make the person smaller and position them so that there is enough room to move around.

4. **When finished configuring, press the [Next] button.**

   The next setup screen appears.

5. **Set the tracking mode on the [Tracking Operation] screen.**



Tracking Start Mode

○ Auto ● Manual

If you set it to [Manual], you can start from any pan-tilt-zoom position. Manually track the selected person.
If you set it to [Auto], it will start from the pan-tilt-zoom position that was set as the start position. Any person who has entered the start position will be automatically tracked. Set the [Start Position] and [Detection Settings] as needed.

Sets the tracking start mode.

- [Auto]: In this mode, tracking a person automatically starts when a person enters the specified detection area in the field of view configured for the start position (auto tracking start mode). When this setting is selected, configuration on the [Start Position] screen and [Detection Settings] is required.
- [Manual]: In this mode, tracking does not start until you manually specify the person to track (manual tracking start mode).

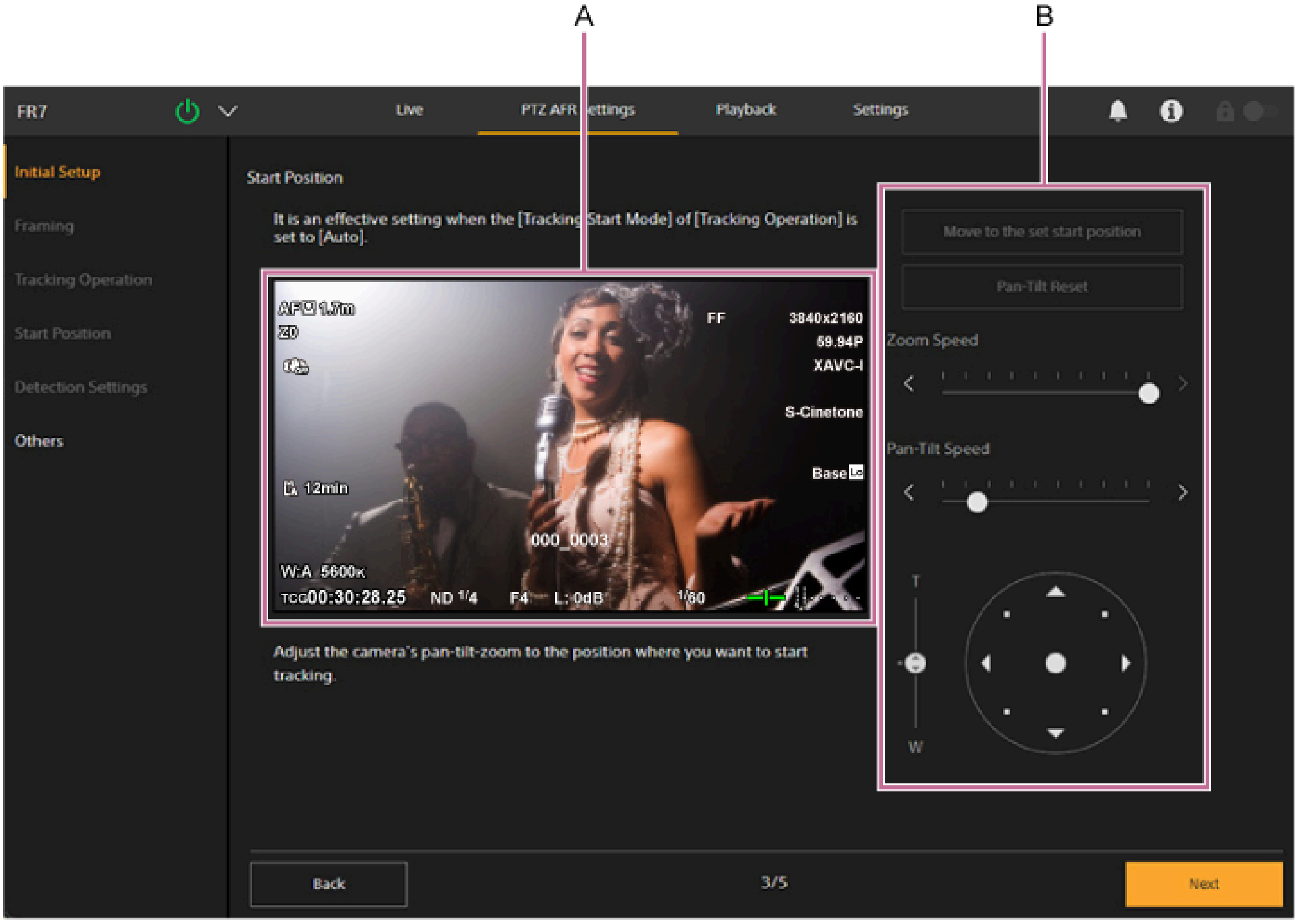
6. **When finished configuring, press the [Next] button.**

The next setup screen appears.

- When [Auto] is selected, go to step 7.
- When [Manual] is selected, go to step 11.

7. **Set the start position for auto tracking on the [Start Position] screen.**

Configure the start position used when PTZ auto framing is in auto tracking start mode. This setting is not required for manual tracking start mode.
The camera will return to the start position when you press the ↻ (Restart) button on the live operation screen or if tracking of the person you were tracking is lost.



Start Position

It is an effective setting when the [Tracking Start Mode] of [Tracking Operation] is set to [Auto].

Adjust the camera's pan-tilt-zoom to the position where you want to start tracking.

A: Camera image panel
B: Framing control panel
Set the start position.

- Set the start position using the framing control panel to pan, tilt and zoom the camera image while monitoring the camera image in the camera image panel. You can adjust the pan/tilt and zoom transition speed using the sliders.
- By default, the [Move to the set start position] button is disabled. It is enabled after the initial configuration is completed. Press it to move to the currently configured start position.
- Press the [Pan-Tilt Reset] button to reset the pan/tilt. Press the button when the POWER lamp and NETWORK lamp are blinking simultaneously on the front panel of the unit or when [Execute Pan-Tilt Reset] is displayed in the framing control panel.

Note

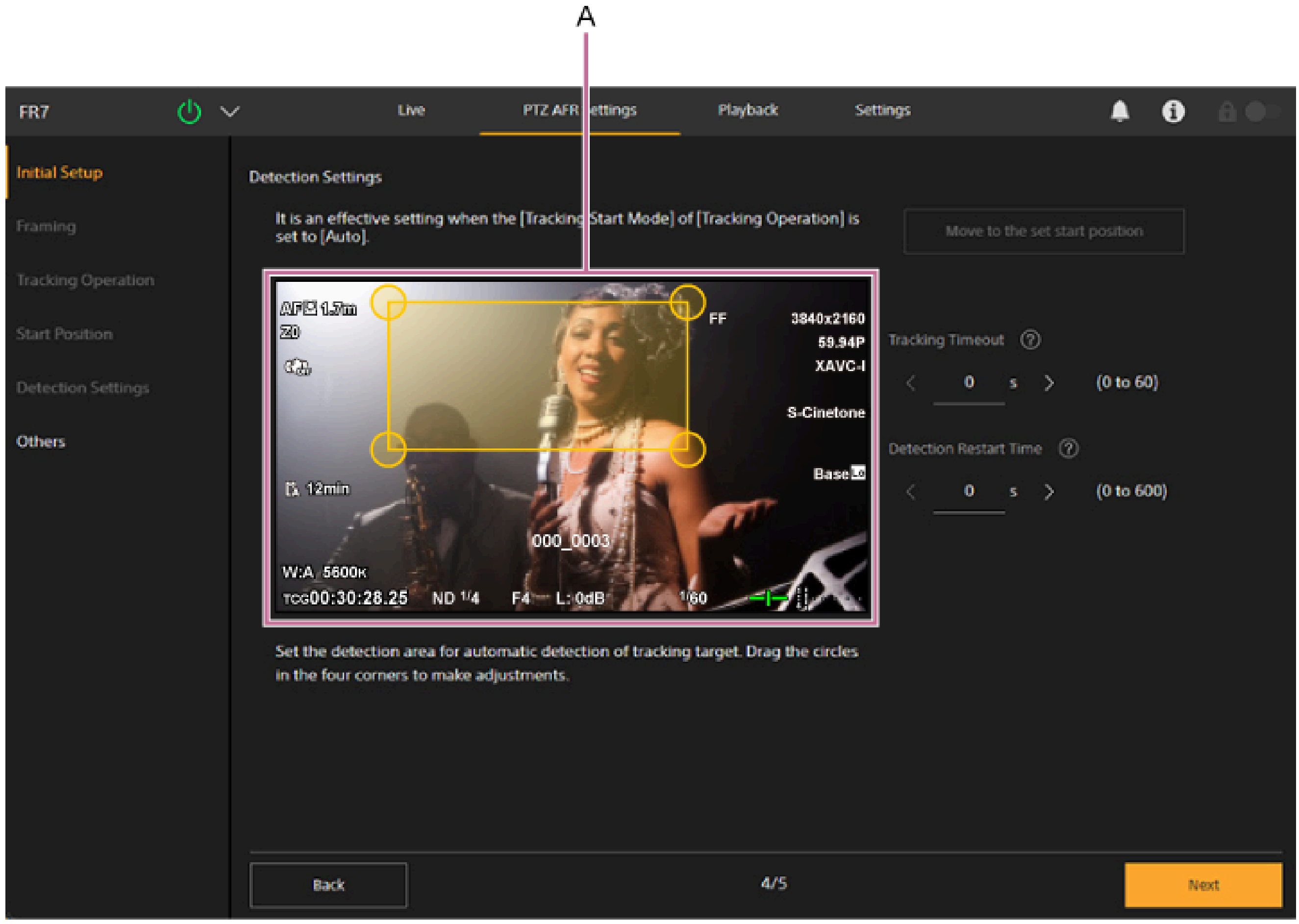
- Reconfiguration will be required in the following cases.
  - When the lens is changed or the [Imager Scan Mode] setting is changed
  - When [Rec Format] > [Video Format] is changed from 1920×1080 to 3840×2160 during Clear Image Zoom operation
  - When the [Zoom Type] setting is changed
  - When [S&Q Motion] > [Frame Rate] is set to a value exceeding 60fps
  - When [P/T Range Limit] is changed
  - When [P/T Direction] > [Direction] > [Ceiling] is changed

8. **When finished configuring, press the [Next] button.**

   The next setup screen appears.

9. **Set the detailed settings related to auto tracking start on the [Detection Settings] screen.**

   This setting is not required for manual tracking start mode.



It is an effective setting when the [Tracking Start Mode] of [Tracking Operation] is set to [Auto].

Tracking Timeout ⓘ
‹ 0 s › (0 to 60)

Detection Restart Time ⓘ
‹ 0 s › (0 to 600)

Set the detection area for automatic detection of tracking target. Drag the circles in the four corners to make adjustments.

A: Detection range setup panel
Sets the range for detecting the target person to track.

- Set the tracking range by dragging the circles on the four corners of the orange frame in the detection range setup panel while monitoring the camera image. A person entering this range will become the target for auto tracking.
- By default, the [Move to the set start position] button is disabled. It is enabled after the initial configuration is completed. Press it to move to the currently configured start position.
- [Tracking Timeout]: Set the time for returning to the start position if detection of the tracking target face is lost. Set to 0 seconds to disable the timeout function (default value: 0 seconds). This sets the time before the camera automatically stops tracking a person whose face is not visible, such as a spectator facing away from you that may mistakenly become the tracking target, and returns to the start position.
- [Detection Restart Time]: Set the time between when auto tracking starts until it restarts automatically. Set to 0 seconds to disable the auto restart function (default value: 0 seconds). If you want to switch the tracking target at regular intervals while shooting, rather than tracking only a specific person, you can set a time to stop tracking automatically and then restart automatically.

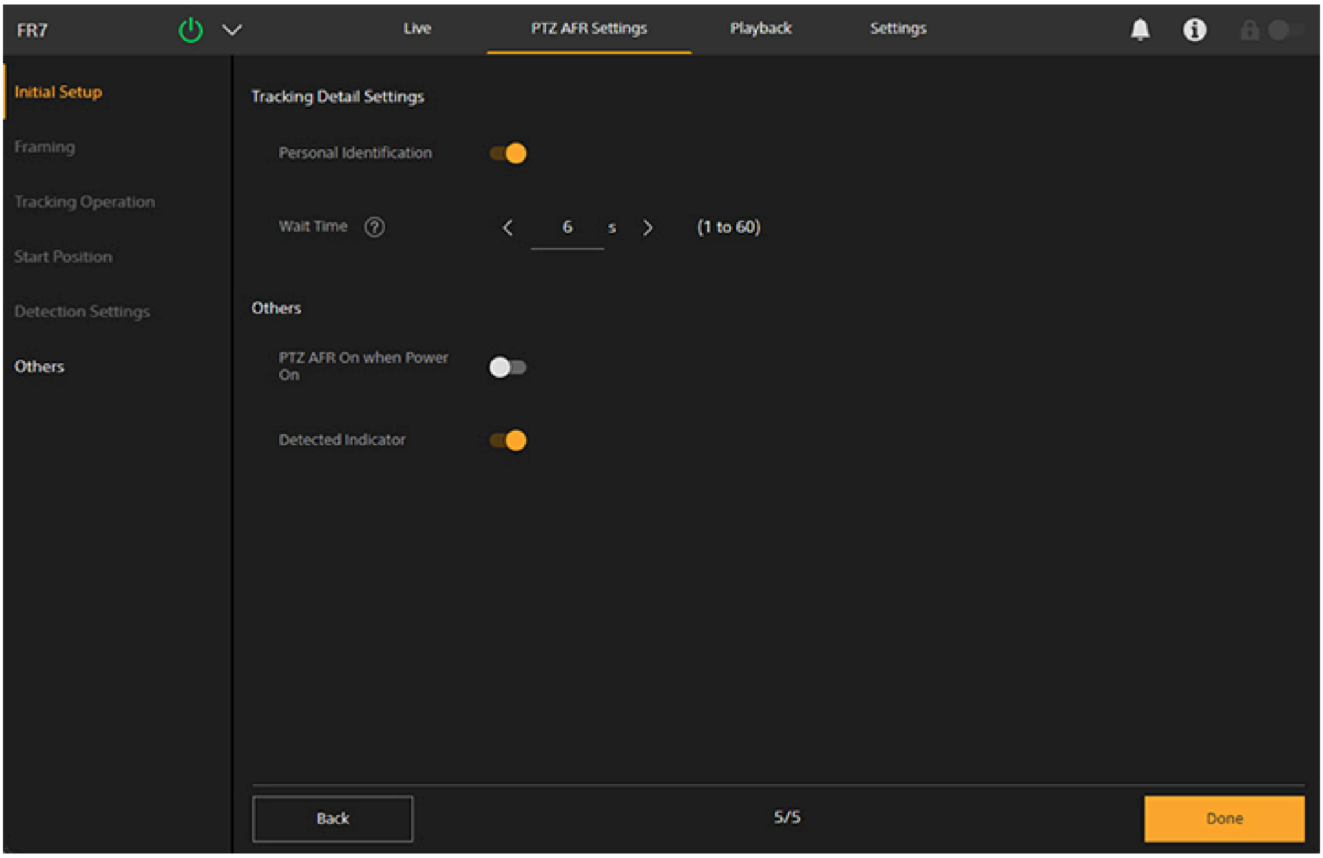
Note

- Reconfiguration will be required if the start position setting is changed.

10 When finished configuring, press the [Next] button.

The next setup screen appears.

11 Configure the settings on the [Others] screen.



Tracking Detail Settings

Personal Identification ●

Wait Time ? < 6 s > (1 to 60)

Others

PTZ AFR On when Power On ○

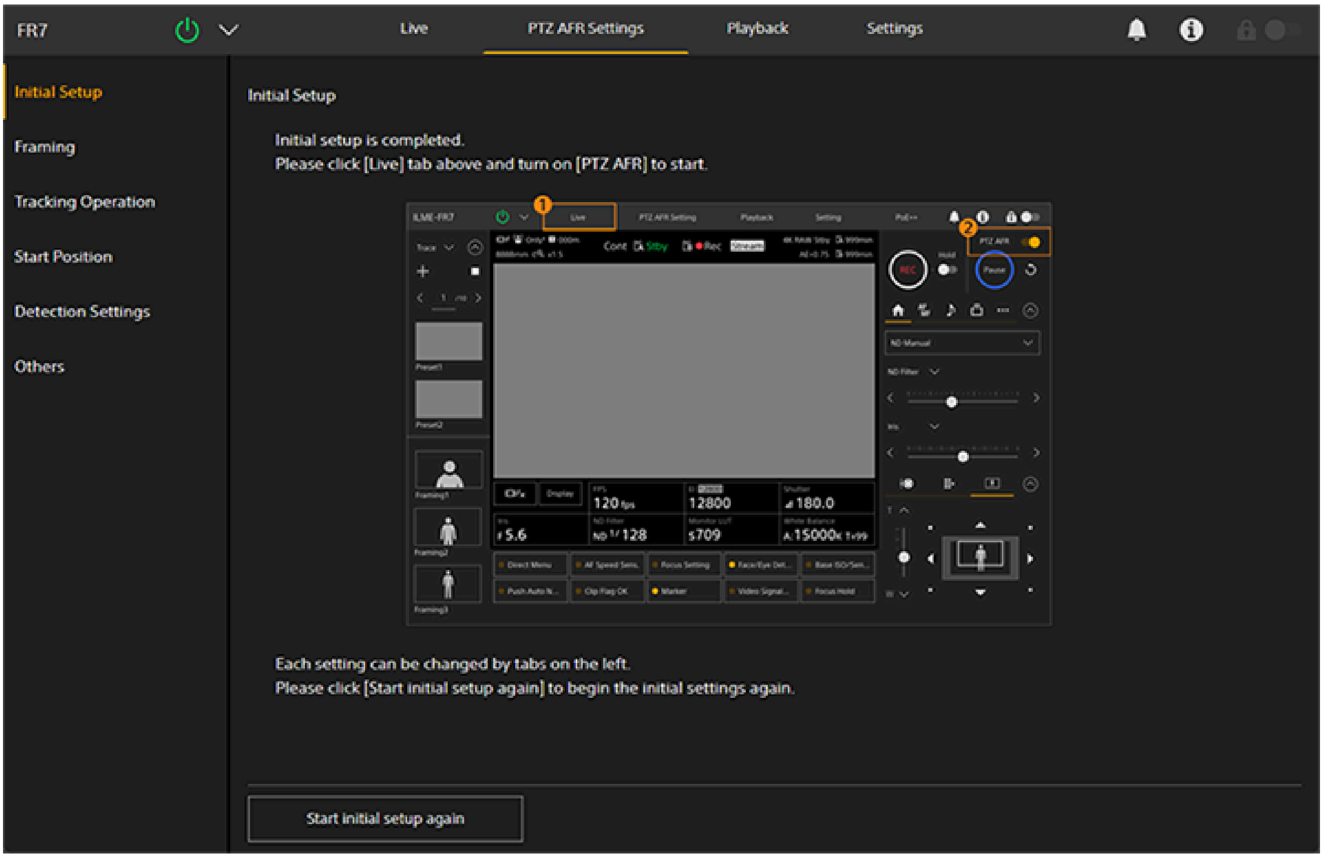
Detected Indicator ●

Configure the following settings, as required.

- [Personal Identification]: Set to the on position for normal operation. Set to the off position if you want the camera to automatically track someone at all times without identifying them.
- [Wait Time]: Set the time to stop pan/tilt/zoom operation and wait when the tracking target is lost.
- [PTZ AFR On when Power On]: Set to the on position to start with PTZ auto framing enabled when the unit is turned on.
- [Detected Indicator]: Set to the on position to display a frame around a detected person’s face as a target or candidate for auto tracking. It also displays the detection range for the start position.

12 **When finished configuring, press the [Done] button.**

The following completion screen appears.



Initial Setup

Initial setup is completed.
Please click [Live] tab above and turn on [PTZ AFR] to start.

Each setting can be changed by tabs on the left.
Please click [Start initial setup again] to begin the initial settings again.

Configuration of the PTZ auto framing initial settings is completed.

Once you have completed the initial setup, you can open each page individually from the items on the left side of the PTZ AFR settings screen. If any settings are changed, press the [OK] button on each page to apply the settings.

Related Topic

- Structure of the PTZ AFR Settings Screen

Specifying the Subjects for Automatic Tracking (manual tracking start mode)

In this mode, you manually specify the person you want to track to start tracking.

1. **Check that the human tracking start mode is set to manual tracking start mode on the PTZ AFR setup screen.**

   For details about the tracking start mode, see “Configuring PTZ Auto Framing Initial Settings.”
   If the initial settings have not been configured, the unit operates in manual tracking start mode.

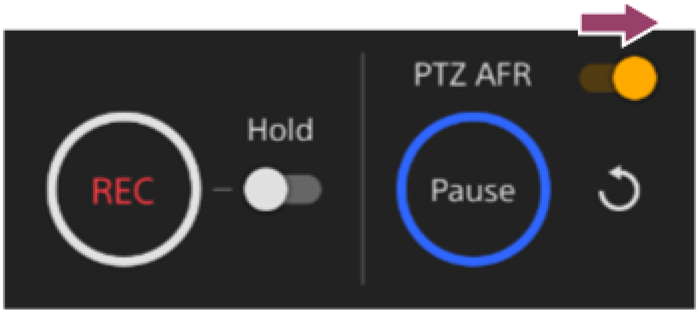
2. **Capture the person you want to track in the Web App framing control panel using the camera.**

   Hint

   - You can also recall a preset position setting and use that framing to capture a person.

3. **Set the [PTZ AFR] switch to the on position on the live operation screen.**

   The area around the [Pause] button blinks blue.



4. **Tap a person to track in the camera image panel.**

   The area around the [Pause] button is lit blue.
   During auto tracking, the [Pause] button is enabled.
   You can change the person to track at any time during auto framing. Tap the person you want to track to switch the tracking target to that person.

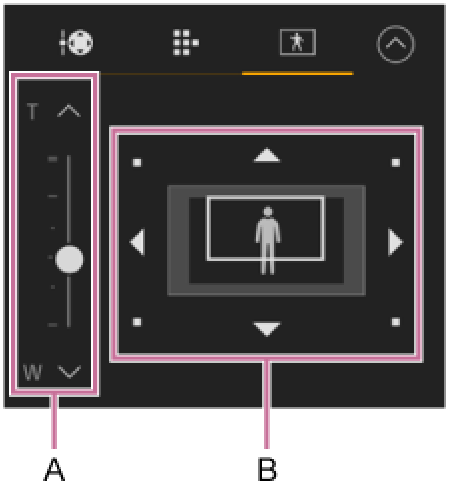
5. **Press the [Pause] button to pause pan/tilt/zoom operation due to auto tracking, as required.**

   The area around the [Pause] button blinks blue.

   - If you press the [Pause] button during auto framing, the pan/tilt/zoom operation due to auto tracking is paused, and the button changes to a [Resume] button. To resume auto framing, press the [Resume] button.
   - If you operate the joystick/zoom slider or recall a preset position during auto framing, the pan/tilt/zoom operation due to auto tracking is paused, and the button changes to a [Resume] button. To resume, press the [Resume] button.
   - You can also tap a person to track to resume, instead of using the [Resume] button.

6. **Press the (AFR composition adjustment) tab on the live screen control panel to display the AFR composition adjustment panel.**

7. **Adjust the size of the person and composition position in the AFR composition adjustment panel.**



A: Human body size slider
B: Composition adjustment panel
Adjust the size and position of the person within the image.

- Set the size of the person within the image using the human body size slider.
- Set the position of the person within the image using the composition adjustment panel. Specify the composition by dragging the white composition frame.

Note

- If the white composition frame overlaps the surrounding gray zone, it will be easy to lose people moving in the opposite direction. Basically, adjust the composition frame so that the person does not enter the gray area.
- If you compose your shot so that the person is large, it will be easy to lose people if they move quickly. In this case, make the person smaller and position them so that there is enough room to move around.

Hint

- Unless you have a specific preference, setting auto focus is recommended. The tracking performance will be reduced if the person is out of focus.
- In manual tracking start mode, the ↻ (Restart) button is disabled.

Related Topic

- Configuring PTZ Auto Framing Initial Settings

Selecting Subjects in a Specified Position and Tracking Automatically (auto tracking start mode)

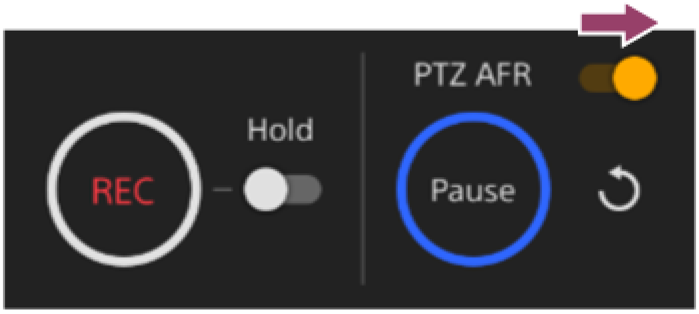
You can automatically track a person who appears at a specified position.

1. **Check that the human tracking mode is set to auto tracking start mode on the PTZ AFR setup screen and that the settings required for auto tracking have been configured.**

   For details, see “Configuring PTZ Auto Framing Initial Settings.”

2. **Set the [PTZ AFR] switch to the on position on the live operation screen.**

   The area around the [Pause] button blinks blue.



   The camera image automatically moves to the start position. Auto tracking starts when a person enters the detection area.
   During auto tracking, the [Pause] button is enabled and the surrounding area is lit blue.

   - If detection of the person being tracked is lost, you can press the ↻ (Restart) button to return to the start position and wait for detection of a tracking target to resume tracking. You can also manually operate the pan/tilt/zoom to bring the tracking subject into the field of view and press the [Resume] button to resume tracking.

Hint

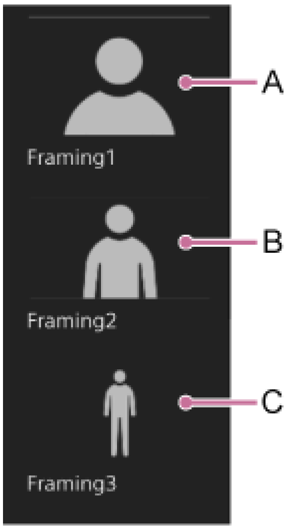
- Unless you have a specific preference, setting auto focus is recommended. The tracking performance will be reduced if the person is out of focus.
- If you press the [Pause] button during auto framing, the pan/tilt/zoom operation due to auto tracking is paused, and the button changes to a [Resume] button. To resume auto framing, press the [Resume] button.
- If you operate the joystick/zoom slider or recall a preset position during auto framing, the pan/tilt/zoom operation due to auto tracking is paused, and the button changes to a [Resume] button. To resume, press the [Resume] button.
- During auto framing, you can adjust the composition in the AFR composition adjustment panel. For details, see “Specifying the Subjects for Automatic Tracking (manual tracking start mode).”
- If a tracking target is specified manually in auto tracking start mode, tracking of that person will take priority. To return to auto tracking start mode, press the ↻ (Restart) button.
- If the camera completely loses sight of a person specified manually, the camera returns to auto tracking start mode.

Related Topic

- Structure of the PTZ AFR Settings Screen
- Specifying the Subjects for Automatic Tracking (manual tracking start mode)

Recalling a PTZ Auto Framing Composition Preset

When PTZ auto framing is enabled, three composition presets are displayed on the live operation screen.
You can change the composition instantly by recalling a composition preset instead of operating the AFR composition adjustment panel.
The unit is shipped with three typical composition presets.



A: Close-up size
B: Waist size
C: Full body size

1. **Set the [PTZ AFR] switch to the on position on the live operation screen.**

   The composition preset control panel is displayed on the left side of the live operation screen.

2. **Press the composition preset to recall.**

   The ··· (Preset Framing Menu) button appears at the top right of the image.

3. **Press the ··· (Preset Framing Menu) button and select [Recall] from the displayed menu.**

   The selected composition preset is recalled in the AFR composition adjustment panel.

   Hint

   - You can also double-tap a composition preset to recall it.

To rename a composition preset

You can rename a composition preset. For details, see “Renaming a PTZ Auto Framing Composition Preset.”

To change a composition preset

You can change a composition preset. For details, see “Switching a PTZ Auto Framing Composition Preset to a New Preset.”

Hint

- The number of composition presets is three (fixed). They cannot be added or deleted.

Related Topic

- Renaming a PTZ Auto Framing Composition Preset
- Switching a PTZ Auto Framing Composition Preset to a New Preset

Renaming a PTZ Auto Framing Composition Preset

1. **Set the [PTZ AFR] switch to the on position on the live operation screen.**

   The composition preset control panel is displayed on the left side of the live operation screen.

2. **Press the composition preset to rename.**

   The ⋯ (Preset Framing Menu) button appears at the top right of the image.

3. **Press the ⋯ (Preset Framing Menu) button and select [Rename] from the displayed menu.**

4. **Enter a new composition preset name.**

Switching a PTZ Auto Framing Composition Preset to a New Preset

You can replace an existing composition preset with a new composition.

1. **Set the [PTZ AFR] switch to the on position on the live operation screen.**

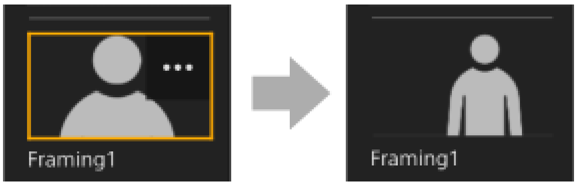
   The composition preset control panel is displayed on the left side of the live operation screen.

2. **Adjust the size of the person and position in the AFR composition adjustment panel.**

   For details about adjustment, see “Specifying the Subjects for Automatic Tracking (manual tracking start mode).”

3. **Select the composition preset to replace, press the ··· (Preset Framing Menu) button and select [Replace] from the displayed menu.**

   The composition adjusted in step 2 is registered as a composition preset.
   The composition preset changes to the new composition.



   Replacement example

Hint

- [Framing] on the PTZ AFR settings screen and the AFR composition adjustment panel are linked. To return to the default composition, replace the composition by setting a typical composition in [Framing].

Related Topic

- Specifying the Subjects for Automatic Tracking (manual tracking start mode)

Checking the PTZ Auto Framing Status Remotely

You can monitor the PTZ auto framing status using the tally lamp of the unit.

1. **Set [Technical] > [Tally] > [Tally Control] to [PTZ AFR] in the web menu.**

The tally lamp changes as follows according to the PTZ auto framing status.

Tally lamp	PTZ auto framing status
Not lit	PTZ auto framing is off.
Lit green	Auto tracking is in progress.
Blinking green	PTZ auto framing is on, but operator intervention is required. Check the message displayed in the camera image panel of the live operation screen and take the required action.

Hint

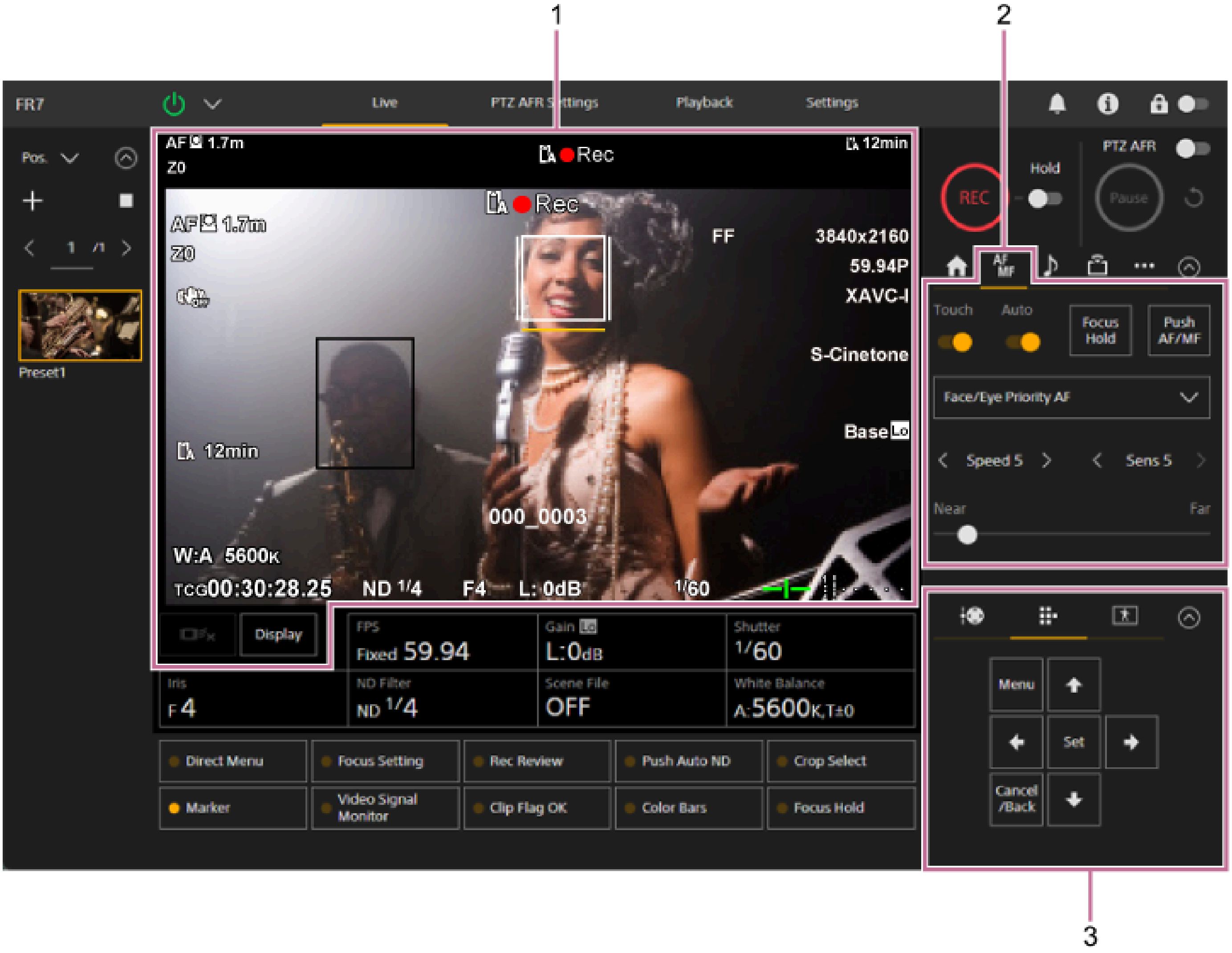
- In auto tracking start mode, the tally lamp blinks green until a person enters the detection area.

Related Topic

- Tally

Focus Adjustment Screen

The focus is adjusted using the following parts of the live operation screen.



FPS Fixed 59.94
Gain L:0dB
Shutter 1/60
Iris F4
ND Filter ND 1/4
Scene File OFF
White Balance A:5600K,T±0

1. **Camera image panel**
   You can adjust the focus by touching the camera image. You can disable touch operation in the Web App by turning off the [Touch Focus] switch on the AF/MF (Focus) tab in the camera control panel.
2. **Camera control panel AF/MF (Focus) tab**
3. **GUI control panel**

Adjusting Manually Using the Web App

You can adjust the focus manually, for example, in the following cases.

- Subjects partially obscured by water droplets
- Subjects with low contrast against the background
- Subjects further away than nearby subjects

Note

- Manual focusing cannot be controlled from the Web App while zoom operation is in progress.

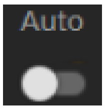
1. **If the lens is fitted with a focus selector switch, set the switch to the “AF/MF” or “AF” position.**

   Note

   - If the switch is set to the “Full MF” or “MF” position, lens focusing cannot be operated from the unit. See “For a lens with a focus mode switch” in “Checking the Lens Switches.”

2. **Slide the [Auto Focus] switch to the left position in the camera control panel to turn auto focus off.**

   Manual focus mode is activated.

   (MF)

3. **Adjust using the slider at the bottom of the AF MF (Focus) tab.**

Hint

- You can also use auto focus when manual adjustment is the main method of operation. For details, see “Setting the Auto Focus Target Manually (AF Assist) Using the Web App.”

Related Topic

- Checking the Lens Switches
- Setting the Auto Focus Target Manually (AF Assist) Using the Web App

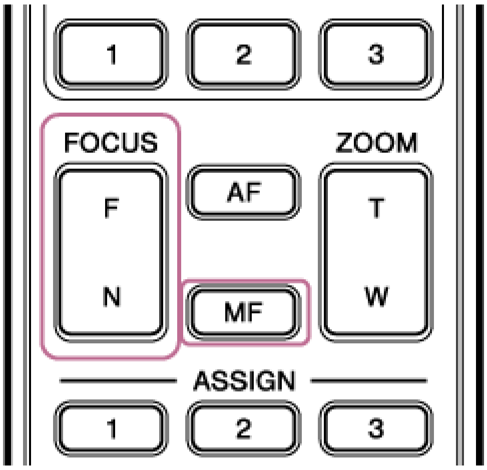
Adjusting Manually Using the Supplied Infrared Remote Control

You can adjust the focus manually using the supplied infrared remote control.

1. **Press the MF button on the infrared remote control.**

2. **Adjust the focus manually using the F (Far) button and N (Near) button.**

   To focus on a far subject, press the F button.
   To focus on a near subject, press the N button.



Hint

- You can also use auto focus when manual adjustment is the main method of operation. For details, see “Focusing Manually During Auto Focus Using the Supplied Infrared Remote Control.”

Related Topic

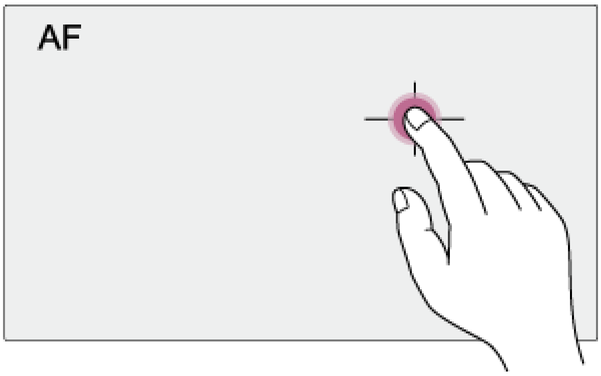
- Focusing Manually During Auto Focus Using the Supplied Infrared Remote Control

Focusing by Specifying a Focus Position (Spot Focus)

In manual focus mode, you can specify the position where you want to adjust the focus in the camera image panel.

1. **Set [Shooting] > [Focus] > [Touch Function in MF] to [Spot Focus] in the web menu or camera menu.**
2. **Slide the [Touch Focus] switch on the AF MF (Focus) tab to the right position to turn it on.**
3. **Slide the [Auto Focus] switch on the AF MF (Focus) tab to the left position to turn it off.**
4. **Specify the focus position.**

   The spot focus marker appears and the image is adjusted to be in focus at that position.



Example of specifying the position by touch operation

Note

- The spot focus function does not operate if the lens is set for manual focusing.

Hint

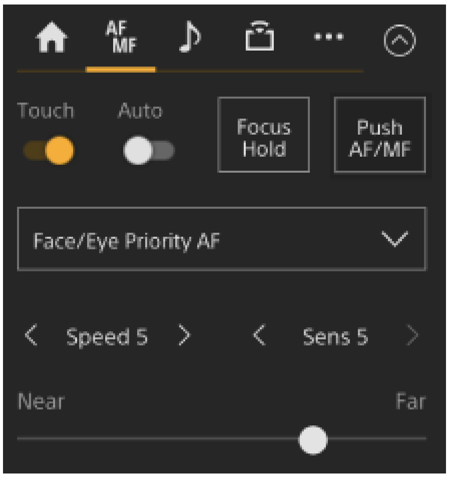
- In spot focus mode, you can press an assignable button assigned with [Push AF/MF] to temporarily stop spot focus and enable auto focus while the button is pressed. The focus returns to manual focus when you release the button.

Using Auto Focus Temporarily (Push Auto Focus (AF))

When in manual focus mode, you can adjust the focus temporarily using auto focus by pressing the [Push AF/MF] button to focus automatically while the button is pressed.
This is useful when you want to move the focus slowly from one subject to another subject during manual focus.

1. **Set [Shooting] > [Focus] > [Push AF Mode] to [AF] in the camera menu.**
2. **Slide the [Auto Focus] switch on the AF MF (Focus) tab to the left position to turn it off.**
3. **Press the [Push AF/MF] button.**

   Auto focus is active while the button is pressed.

   Push auto focus is released and the focus returns to manual focus when you release the button.

Note

- The push auto focus function does not operate if the lens is set for manual focusing.

Hint

- The same operation is supported using an assignable button assigned with [Push AF/MF].

Using Single-Shot Auto Focus (Push Auto Focus (AF-S))

You can press the [Push AF/MF] button when in manual focus mode to focus automatically at high speed.
This function is convenient when you focus on a subject before shooting.

1. **Set [Shooting] > [Focus] > [Push AF Mode] to [Single-shot AF(AF-S)] in the web menu or camera menu.**

2. **Specify the position for which you want to adjust the focus using [Shooting] > [Focus] > [Focus Area (AF-S)] in the camera menu.**

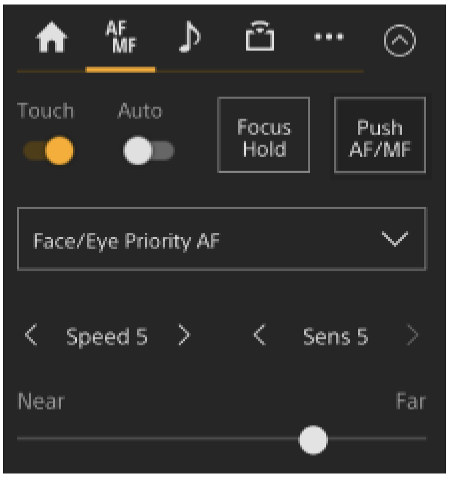
   Hint

   - You can change the position by pressing an assignable button assigned with [Focus Setting] to display an orange frame around the focus area and selecting a position using touch operation.

3. **Slide the [Auto Focus] switch on the AF MF (Focus) tab to the left position to turn it off.**

4. **Press the [Push AF/MF] button.**

   If you release the button before focusing finishes, push auto focus will stop.



   During push auto focus, the focus status is displayed by the focus indicator.
   On: The focus is fixed at the focus position.
   Blinking: Out of focus. As the unit will not focus automatically, change the composition and focus settings to achieve focus.
   The focus returns to manual focus when you release the button.

Note

- The push auto focus function does not operate if the lens is set for manual focusing.
- The focus area frame is not hidden when using the [Display] button.
- During Clear Image Zoom operation, the [Focus Area (AF-S)] frame position cannot be set. During push auto focus operation, the AF operation also gives priority to the center portion.

- The [Focus Area (AF-S)] frame position cannot be configured during PTZ auto framing. The AF operation gives priority to the subject being tracked.

Hint

- The same operation is supported using an assignable button assigned with [Push AF/MF].
- You can also assign [Push AF Mode] to an assignable button.
- You can also assign [Focus Area (AF-S)] to an assignable button.
- You can display/hide the focus area frame using [Monitoring] > [Display On/Off] > [Focus Area Ind.(AF-S)] in the camera menu.

Adjusting Automatically Using the Web App

The unit uses phase detection AF for high-speed focusing and contrast AF for high-accuracy focusing.
The combination of these two AF methods provides auto focus with both high speed and high accuracy.

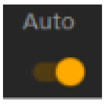
1. **If the lens is fitted with a focus selector switch, set the switch to the “AF/MF” or “AF” position.**

   Note

   - If the switch is set to the “Full MF” or “MF” position, lens focusing cannot be operated from the unit. See “For a lens with a focus mode switch” in “Checking the Lens Switches.”

2. **Slide the [Auto Focus] switch to the right position in the camera control panel to turn it on.**

   Auto focus mode is activated.

   (AF)

Note

- A lens that supports auto focus is required.
- Accuracy may not be obtained depending on the shooting conditions.
- The focus cannot be adjusted automatically on an A-mount lens.

Hint

- During auto focus mode, you can adjust the focus using the Focus slider in the camera control panel. For details, see “Setting the Auto Focus Target Manually (AF Assist) Using the Web App.”

Related Topic

- Checking the Lens Switches
- Setting the Auto Focus Target Manually (AF Assist) Using the Web App

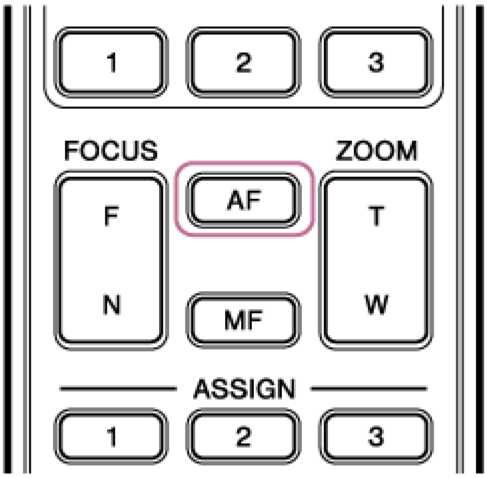
Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

Adjusting Automatically Using the Supplied Infrared Remote Control

You can adjust the focus automatically using the supplied infrared remote control.

1. **Press the AF button on the infrared remote control.**

   The focus on a subject is adjusted automatically.



Note

- You can also use auto focus when manual adjustment is the main method of operation. For details, see “Focusing Manually During Auto Focus Using the Supplied Infrared Remote Control.”

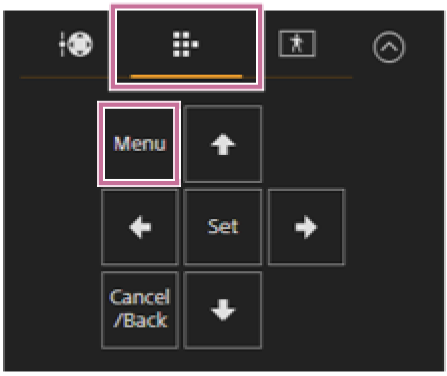
Related Topic

- Focusing Manually During Auto Focus Using the Supplied Infrared Remote Control

Setting the Auto Focus Area/Position (Focus Area)

You can set the target area for auto focus and adjust the focus for that area.

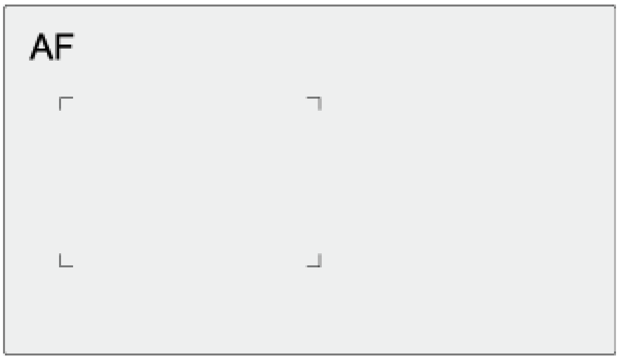
1. **Press the [Menu] button on the GUI control panel to open the camera menu.**



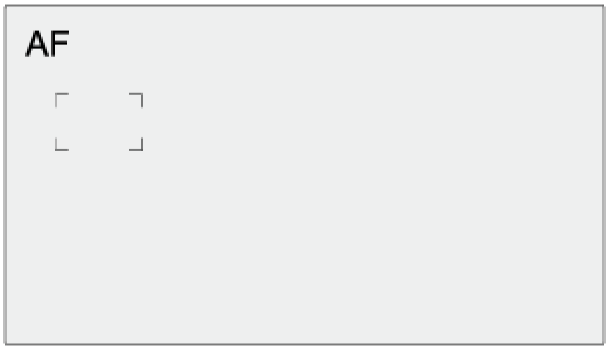
2. **Set the target area for auto focus using [Shooting] > [Focus] > [Focus Area] in the camera menu.**

[Wide]:
Searches for a subject over a wide angle of the image when focusing. A frame is not displayed.

[Zone]:
Automatically searches for a focus position within the specified zone.
After selection, specify the position using the arrow buttons in the GUI control panel.



You can return to the center position by pressing and holding the [Set] button.
[Flexible Spot]:
Focuses on a specified position in the image.
After selection, specify the position using the arrow buttons in the GUI control panel.



You can return to the center position by pressing and holding the [Set] button.

Note

- The focus area frame is not hidden when using the [Display] button on the camera image panel.

Hint

- You can display/hide the focus area frame using [Monitoring] > [Display On/Off] > [Focus Area Indicator] in the camera menu.

Changing the Focus Area Quickly (Focus Setting)

You can change the position and size of the auto focus area quickly during shooting by assigning [Focus Setting] to an assignable button.

- For details about assignable buttons, see “Assignable Buttons.”

The operation varies depending on the focus area setting.

When [Shooting] > [Focus] > [Focus Area] is set to [Flexible Spot] or [Zone] in the camera menu

- You can change the position of the focus area by pressing an assignable button assigned with [Focus Setting] and adjusting using the arrow buttons in the GUI control panel. You can return the position of the focus area to the center while adjusting the position by pressing the [Set] button.
- You can change the size of the focus area by pressing and holding an assignable button assigned with [Focus Setting]. After changing the size, you can change the position of the focus area by pressing the [Set] button. When finished, press an assignable button assigned with [Focus Setting] to return to the original screen.

When [Shooting] > [Focus] > [Focus Area] is set to [Wide] in the camera menu

You can only change the size of the focus area by pressing and holding an assignable button assigned with [Focus Setting]. The position can be also be changed by first changing the type to [Flexible Spot] or [Zone].

Hint

- When both [Shooting] > [Focus] > [Push AF Mode] is set to [Single-shot AF(AF-S)] in the camera menu and the [Auto Focus] switch is set to the off position (manual focus mode), you can change the [Focus Area (AF-S)] focus area position.
- The focus area frame is displayed orange when the position of the focus area can be changed.

Related Topic

- Assignable Buttons

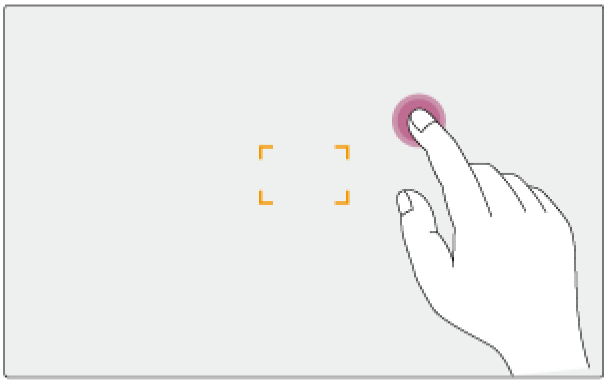
Moving the Focus Area Frame Using Touch Operation (Touch Focus Area)

You can change the position of the focus area by pressing an assignable button assigned with [Focus Setting] to change the focus area display to orange, and then move the focus area frame using touch operation in the camera image panel. Tap the screen to move the focus area, with the focus area centered on the tapped position. Drag on the screen to move the focus area to the position traced by your finger.

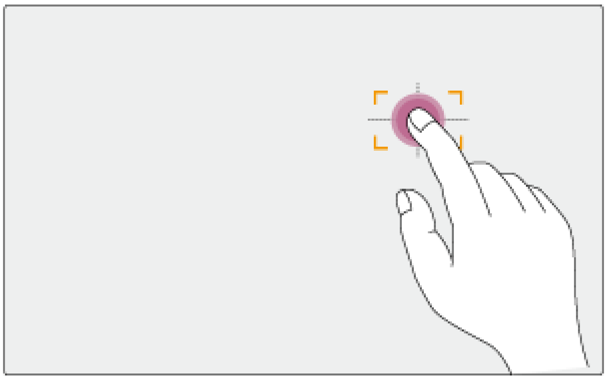
Hint

- You can enable/disable the touch focus area on the shooting screen using an assignable button assigned with [Focus Setting].

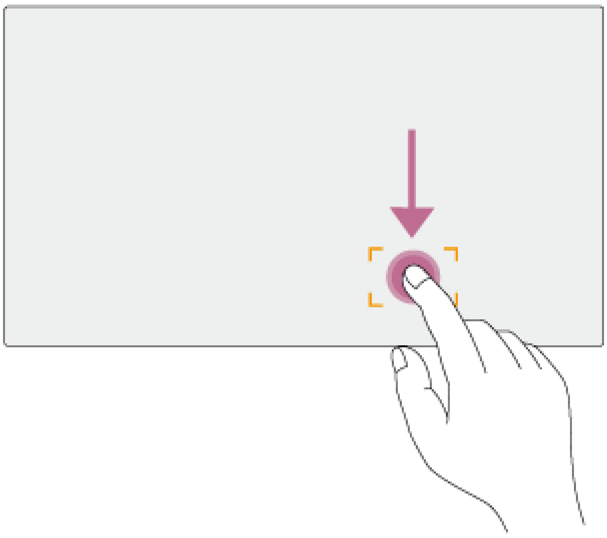
1. **Tap any position.**



The tapped position becomes the center of the focus area.



2. **Drag to move the focus area, tracing your finger position.**



Note

- If you tap a position or drag the focus area to a position that exceeds the setting range, the focus area is set to the top/bottom/left/right edge of the setting range.
- This function is not available in the following circumstances.
  - When the [Touch Focus] switch is turned off in the camera control panel
  - When the focus area frame is displayed in gray or is not displayed at all
  - During PTZ auto framing execution

SONY
Help Guide

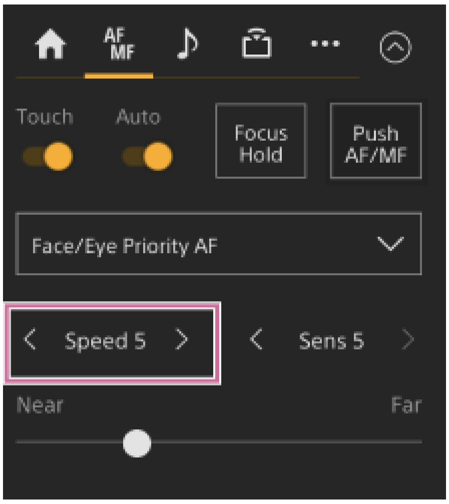
Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

Adjusting the Auto Focus Operation (AF Transition Speed, AF Subject Shift Sensitivity)

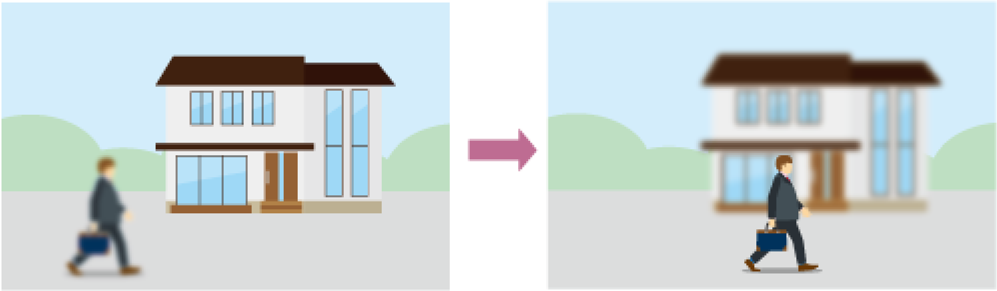
You can adjust the auto focus operation by changing the transition speed and the subject shift sensitivity.

Setting the AF transition speed

You can set the speed of the focus drive for when the subject changes using the [AF Transition Speed] button in the camera control panel.

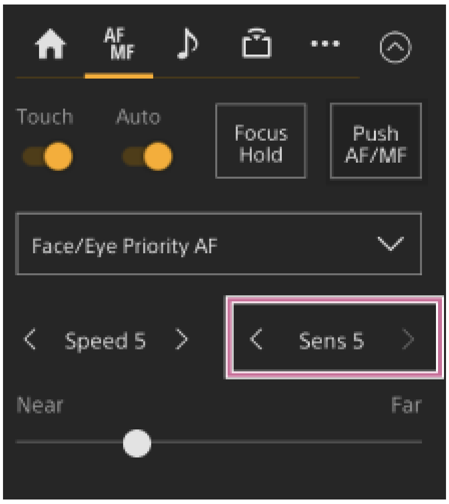


Select the speed from the range [Speed 1] (Slow) to [Speed 7] (Fast) in increments of 1. Press the < button to decrease the value (slower) or the > button to increase the value (faster).
When set to low speed, the focus moves slowly when the subject to be focused changes, enabling the shooting with impressive image expression.
When set to high speed, the focus switches between subjects quickly. In the example below, the focus changes quickly from the building in the background to the person walking in the foreground. The subject that enters the frame is immediately focused, making this setting ideal for documentary shooting which requires quick focusing.



AF subject shift sensitivity

You can set the sensitivity for changing between subjects using [AF Subj. Shift Sens.] button in the camera control panel.



Select the sensitivity from the range [Sens 1] (Locked On) to [Sens 5] (Responsive) in increments of 1. Press the < button to decrease the value (change slowly) or the > button to increase the value (change rapidly).
When set to a low sensitivity, the focus does not readily shift even if another subject moves in front of the in-focus subject.

When set to a high sensitivity, the focus shifts to give priority to the subject that moves in front.

Hint

- If [AF Speed/Sens.] is assigned to an assignable button, the level bars for adjusting values are displayed in the camera image panel in the following order each time the button is pressed, allowing you to change the AF transition speed and AF subject shift sensitivity settings.
  AF transition speed → AF subject shift sensitivity → No display …

Setting the Auto Focus Target Manually (AF Assist) Using the Web App

After shifting and adjusting the focus manually, you can pass focus control to auto focus for fine focus adjustment.

1. **Set [Shooting] > [Focus] > [AF Assist] to [On] in the camera menu.**

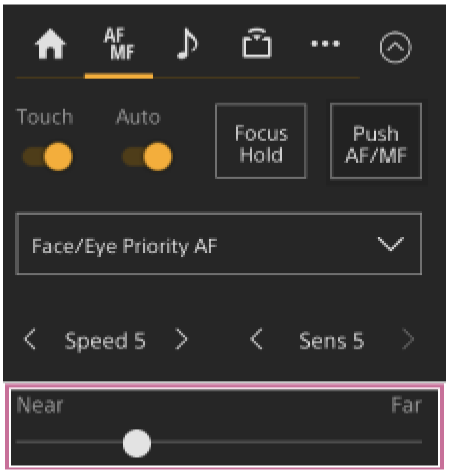
2. **Set [Shooting] > [Focus] > [AF Assist Control] to [On] in the web menu.**

3. **Slide the [Auto Focus] switch to the right position in the camera control panel to turn it on.**

   Auto focus mode is activated.

4. **Set the focus target using the [Focus] slider in the camera control panel.**

   [Near]: Focus on a near subject.
   [Far]: Focus on a far subject.



   In the AF assist state, a subject at the distance set with the [Focus] slider will be focused automatically.

Note

- In the AF assist state, shifting the focus becomes difficult, regardless of the [Shooting] > [Focus] > [AF Subj. Shift Sens.] setting in the camera menu.
- The AF assist state is canceled by the following.
  - When the subject focused using the [Focus] slider is no longer visible
  - When switching to manual focus
  - When realtime tracking AF is started

Hint

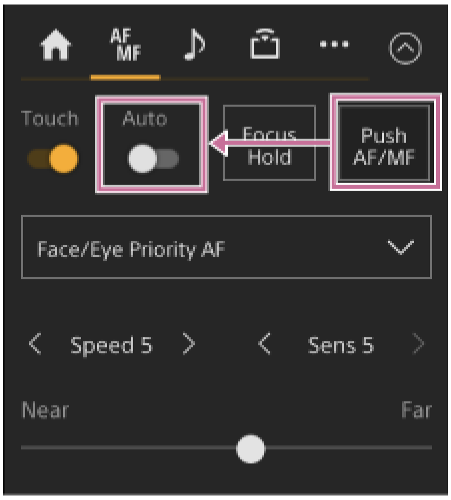
- The AF assist state can be canceled quickly by using an assignable button assigned with [Push AF/MF].
- Realtime tracking AF stops when the [Focus] slider is operated.
- In Face/Eye Only AF mode, auto focus focuses on the face closest to the focus position of the [Focus] slider.

Focusing Manually During Auto Focus Using the Supplied Infrared Remote Control

When [Shooting] > [Focus] > [AF Assist] is set to [On] in the camera menu, you can use the F (Far) button and N (Near) button on the supplied infrared remote control even during auto focus to adjust the focus on a subject.

Using Manual Focus Temporarily During Auto Focus (Push Manual Focus)

Press the [Push AF/MF] button when in auto focus mode to focus manually while the button is pressed. The focus returns to auto focus when you release the button.
This allows you to temporarily stop auto focus and focus manually when something that is not the subject of shooting crosses in front of the subject.



Hint

- The same operation is supported using an assignable button assigned with [Push AF/MF].

Tracking Using Face and Eye Detection (Face/Eye Detection AF)

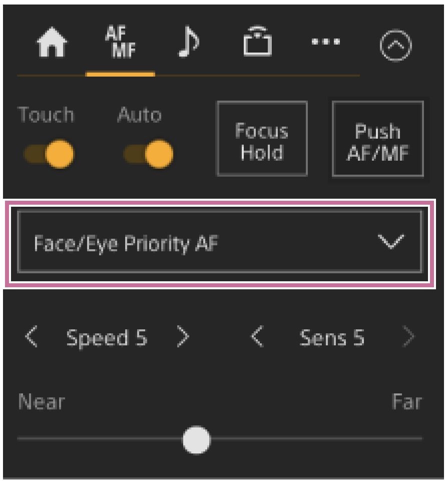
The unit can detect people’s faces and eyes as a target to track, and then adjust the focus on faces and eyes within the focus area.
When faces are detected, gray face/eye detection frames are displayed. When auto focusing is possible, the frames change to white and tracking starts. When eyes are detected and the focus is adjusted, the face/eye detection frame is displayed on the eyes. When multiple individuals are detected, the main subject is automatically determined.
This function is available only when the focus mode is AF mode or during push auto focus.

Hint

- When the focus area is set to [Zone] or [Flexible Spot] and faces or eyes overlap within the specified focus area, the face/eye detection frames change to white, and the unit focuses on those faces/eyes automatically.
- When push auto focus (AF-S) is used, the face/eye detection frames for the faces/eyes that are in focus change to green.

Setting using the [Face/Eye Detection AF] button in the camera control panel

Press the [Face/Eye Detection AF] button and set the face/eye detection AF operation.



Face/Eye Priority AF

Speed 5

Sens 5

[Face/Eye Only AF]: The camera detects the faces/eyes of subjects (people) and focuses and tracks only on their faces/eyes. While a face or eye is not detected, AF is temporarily stopped and the ! (Face/Eye Only AF mode auto focus paused) icon is displayed. This mode is effective when you want to auto focus and track faces/eyes only.
[Face/Eye Priority AF]: The camera detects the faces/eyes of subjects (people) and prioritizes the focusing/tracking on the faces/eyes. When a face or eye is not detected, focusing is in AF mode (default setting).
[AF]: The face/eye detection AF function is disabled.

Note

- During push auto focus operation, [Face/Eye Priority AF] is activated even if [Face/Eye Only AF] is currently selected.
- When the [Auto Focus] switch is set to the off position, face/eye detection AF is disabled (excluding during push auto focus operation).
- If you turn the camcorder off while [Face/Eye Only AF] is selected, the mode automatically switches to [Face/Eye Priority AF] when the camcorder is next turned on.

Hint

- You can set the face/eye detection AF operation using [Shooting] > [Focus] > [Face/Eye Detection AF] in the camera menu.

To hide face/eye detection frames

You can show/hide face/eye detection frames using [Monitoring] > [Display On/Off] > [Face/Eye Detection Frame] in the camera menu.

Note

- Green face/eye detection frames are displayed for faces and eyes that are in focus using push auto focus (AF-S), and are not hidden using the [Display] button or when [Face/Eye Detection Frame] is set to [Off].

To switch the face/eye detection AF operation using an assignable button

Assign [Face/Eye Detection AF] to an assignable button. You can then switch face/eye detection AF operation in the order [Face/Eye Priority AF], [Face/Eye Only AF], and [AF] each time you press the button.

Setting using the direct menu

You can also set the face/eye detection AF operation using the direct menu.

- For details about the direct menu, see “Direct Menu Operation.”

Related Topic

- Direct Menu Operation

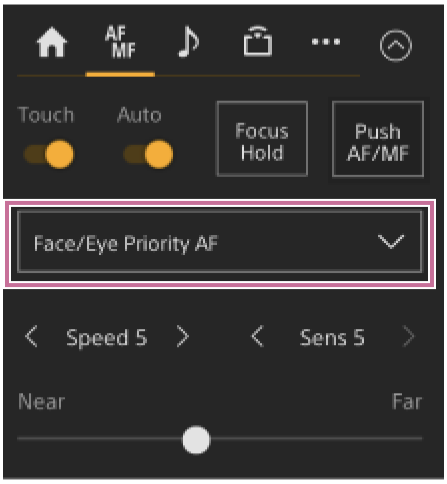
Tracking a Specified Subject (Realtime Tracking AF)

You can maintain focus on a subject by specifying the subject by touch operation or by selecting a face detection frame in the camera control panel.
When a subject is selected, a white tracking frame is displayed and tracking starts.

Hint

- Tracking occurs over the entire image area, regardless of the focus area setting.
- When [Shooting] > [Focus] > [Touch Function in MF] is set to [Tracking AF] in the web menu or camera menu, realtime tracking AF is supported even when the focus mode is MF mode.

The following actions occur for the tracking target, depending on the face/eye detection AF operating mode setting.



[Face/Eye Only AF] or [Face/Eye Priority AF]: Focusing and tracking of the specified subject.
If the tracking target is a person and a face/eye is detected, the camera focuses on that face/eye.
When a tracking target face/eye is detected, the tracking target face is saved. When saved, a ✿ (saved tracking face icon) is displayed.

Note

- If tracking AF is started during manual focus, the tracking target face is not saved.

[AF]: Use for focusing and tracking of a specified subject. Face/eye detection does not occur, even if the tracking target is a person.

Note

- The realtime tracking AF function does not operate if the lens is set for manual focusing.

Starting realtime tracking AF

When a specific subject is specified as the tracking target, tracking of that target starts.

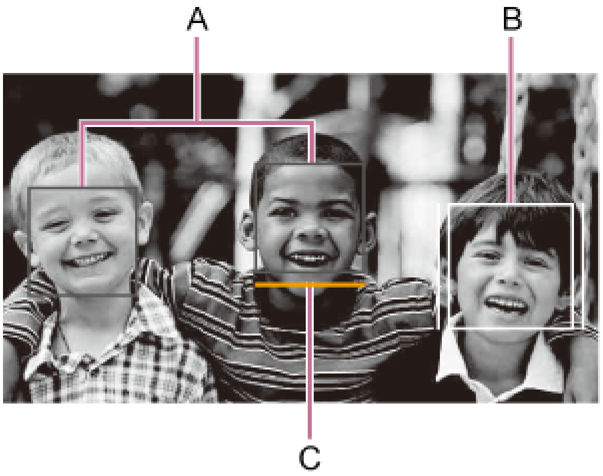
To specify by touch operation

Slide [Touch Focus] switch on the (Focus) tab in the camera control panel to the right position to turn it on, then tap the target subject to track in any of the following states.

- During manual focus or during push manual focus, and when [Shooting] > [Focus] > [Touch Function in MF] is set to [Tracking AF] in the web menu or camera menu
- During auto focus or during push auto focus (AF)

To specify by face detection frame selection

Move the face selection cursor (orange underline) to the target subject to track using the arrow buttons in the GUI control panel, and press the [Set] button.



A: Face detection frames (gray)
B: Tracking frame
C: Face selection cursor (orange)

Note

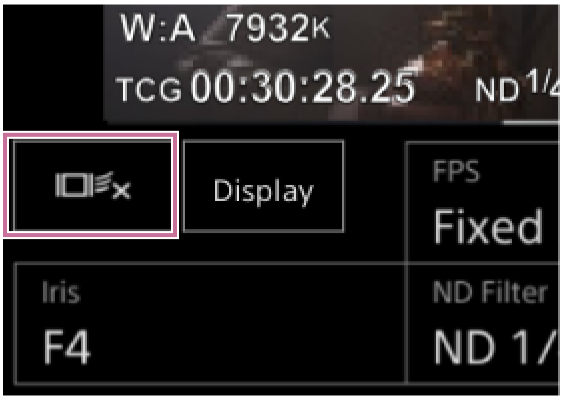
- During manual focus, tracking cannot be started by face detection frame selection.

Hint

- You can also change the target to track during realtime tracking AF.

Stopping realtime tracking AF

Press the (realtime tracking AF stop) button.



W:A 7932K
TCG 00:30:28.25 ND 1/4
FPS Fixed
Iris F4
ND Filter ND 1/

Hint

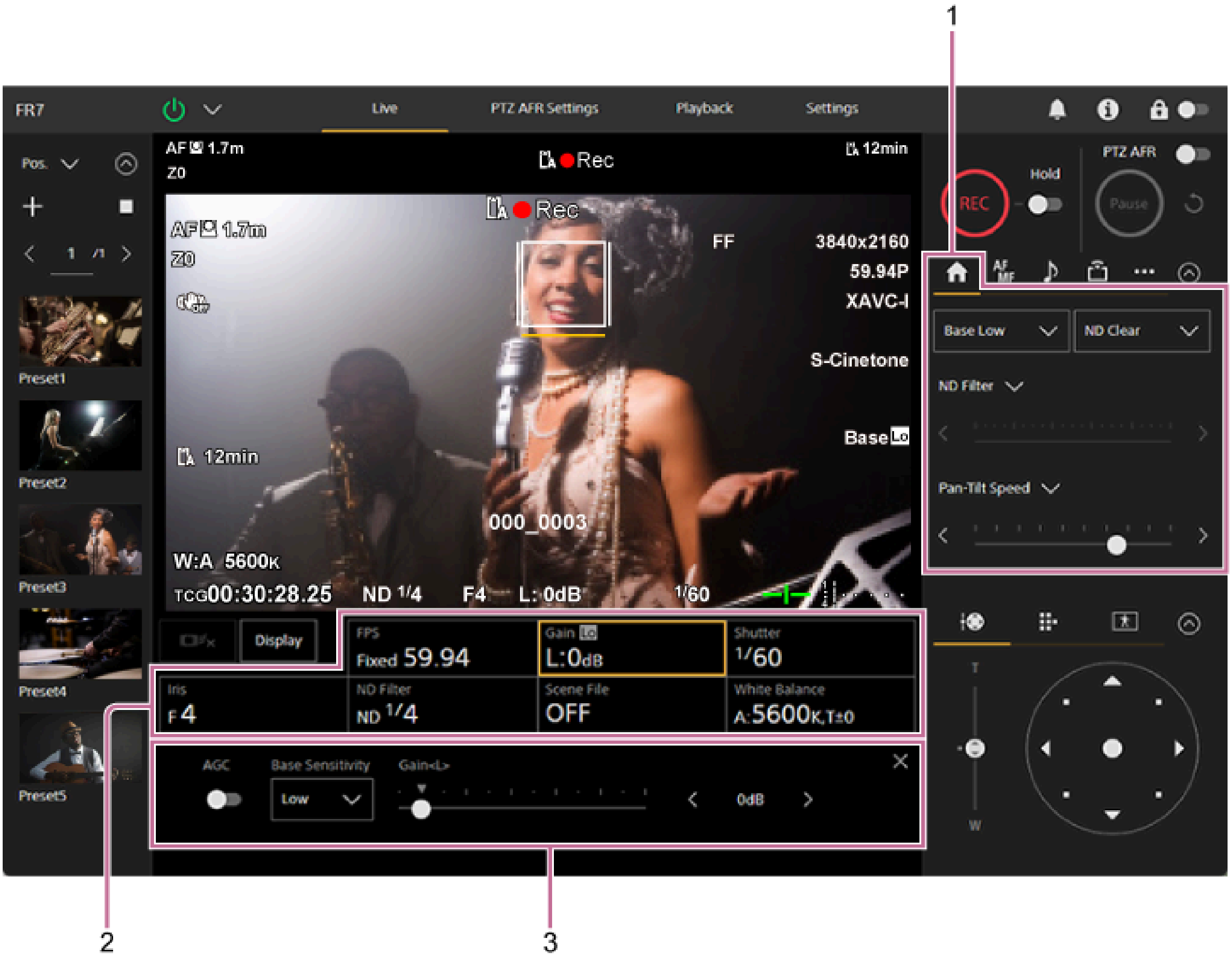
- Realtime tracking AF will stop in the following cases:
  - When the [Auto Focus] switch or AUTO/MANUAL control on the lens is switched
  - When the focus mode is changed

  - When AF assist is executed
  - When the focus area setting or face/eye detection AF action is changed
  - When an assignable button assigned with [Push AF/MF] is pressed
  - When the tracking target is not within the shooting screen or when the subject is out of focus for a few seconds
  - When the [PTZ AFR] switch is switched

- When a tracking face is saved (when the ✿ (saved tracking face icon) is displayed), realtime tracking AF will resume when the saved tracking face enters the image area. To clear the tracking face, stop realtime tracking AF as described above.

Brightness Adjustment Screen

You can adjust the brightness by adjusting the iris, gain, shutter speed, and by adjusting the light level using ND filters in the following control panels of the Web App live operation screen. You can also adjust the brightness automatically.



1. **Camera control panel – 🏠 (Main) tab**
2. **Camera basic configuration panel**
   Displays the setting status of basic functions required for shooting on buttons. Press a button to display the corresponding setup screen for each function in the camera basic configuration adjustment panel below.
3. **Camera basic configuration adjustment panel**
   Displays the adjustment panel for the setup item selected on the camera basic configuration panel.

Note

- The gain cannot be adjusted when [Shooting Mode] is set to [Cine EI Quick] or [Cine EI]. Also, the brightness cannot be adjusted automatically using the shutter speed when set to [Cine EI Quick] or [Cine EI]. Brightness auto adjustment using the iris and ND filter is supported.

Hint

- Cine EI mode is a mode for shooting at a base sensitivity without using gain in order to maximize the performance of the image sensor. The brightness is adjusted using lighting and the ND filter to adjust the amount of light that reaches the image sensor. For details about Exposure Index (EI), see “Changing the Distribution of Dark and Bright Areas in the Recorded Image.”

Related Topic

- Changing the Distribution of Dark and Bright Areas in the Recorded Image

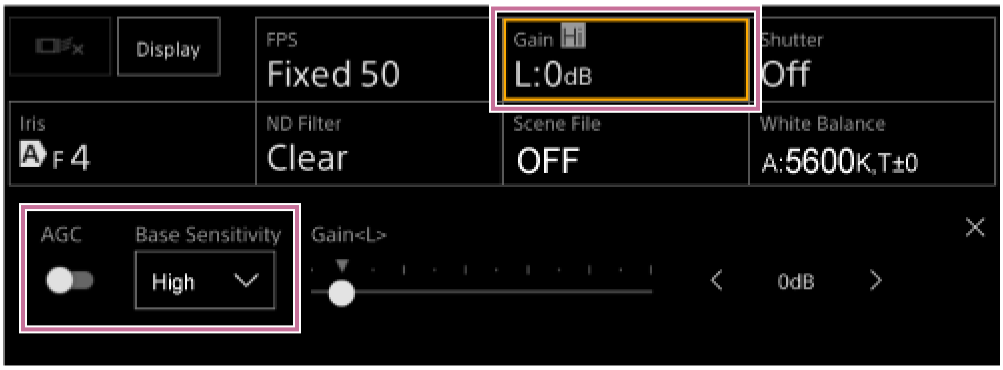
Setting the Base Sensitivity

You can set the base sensitivity before starting to adjust the brightness.

When [Shooting Mode] is set to [Custom]

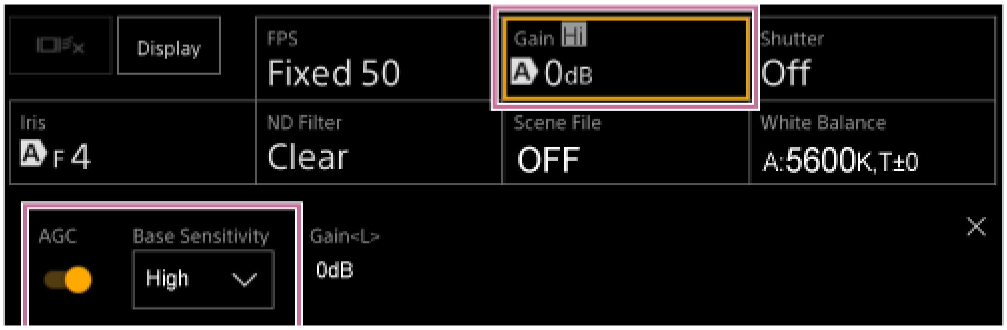
Press the [ISO/Gain] button in the camera basic configuration panel and set [Base Sensitivity] on the ISO/gain adjustment panel to [High] or [Low].
Select [Low] in normal lighting conditions and select [High] in low lighting conditions.

Screen when [AGC] is turned off



FPS Fixed 50
Gain Hi L:0dB
Shutter Off
Iris A F 4
ND Filter Clear
Scene File OFF
White Balance A:5600K,T±0
AGC
Base Sensitivity High
Gain<L> 0dB

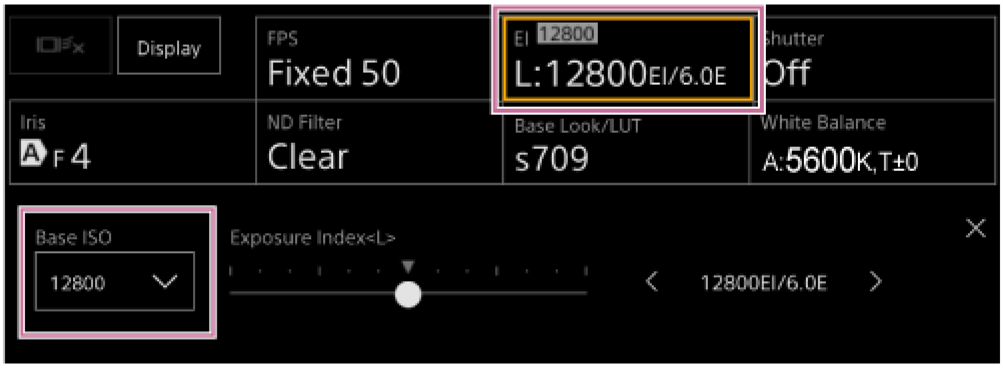
Screen when [AGC] is turned on



FPS Fixed 50
Gain Hi A 0dB
Shutter Off
Iris A F 4
ND Filter Clear
Scene File OFF
White Balance A:5600K,T±0
AGC
Base Sensitivity High
Gain<L> 0dB

When [Shooting Mode] is set to [Flexible ISO] or [Cine EI]

Press the [Base ISO/Exposure Index] button in the camera basic configuration panel and set [Base ISO] on the Base ISO/Exposure Index adjustment panel to [ISO 12800] or [ISO 800].
Select [ISO 800] in normal lighting conditions and select [ISO 12800] in low lighting conditions.



FPS Fixed 50
EI 12800 L:12800EI/6.0E
Shutter Off
Iris A F 4
ND Filter Clear
Base Look/LUT s709
White Balance A:5600K,T±0
Base ISO 12800
Exposure Index<L> 12800EI/6.0E

Hint

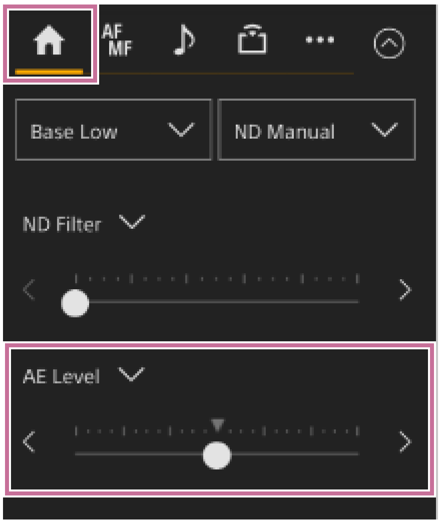
- You can also set this on the 🏠 (Main) tab in the camera control panel.
- Can also be set using [Shooting] > [ISO/Gain/EI] > [Base Sensitivity] or [Base ISO] in the camera menu.
- You can also assign [Base ISO/Sensitivity] to an assignable button.
- In [Cine EI Quick] shooting mode, the base sensitivity is automatically set according to the [Exposure Index] setting.

Setting the Target Level for Automatic Brightness Adjustment

The target level for automatic brightness adjustment is set using the [AE Level] slider in the camera control panel.

1. **Press the 🏠 (Main) tab in the camera control panel.**

   If the [AE Level] slider is not displayed, select either of the two slider function selection buttons and select the [AE Level] slider from the list.



   The [AE Level] slider appears.

2. **Set the target level using the slider.**

   Move the slider knob to the left to make the image darker. Move the slider knob to the right to make the image brighter.

   Hint

   - Can also be set using [Shooting] > [Auto Exposure] > [Level] in the camera menu.

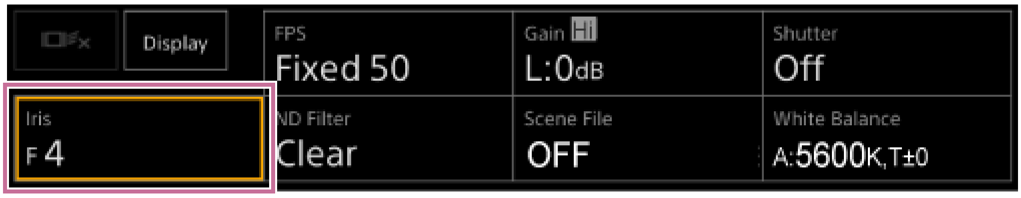
Adjusting the Iris Automatically

You can adjust the brightness automatically according to the subject. A compatible lens is required.

1. **If a lens with an Auto Iris switch is attached, set the switch to AUTO.**

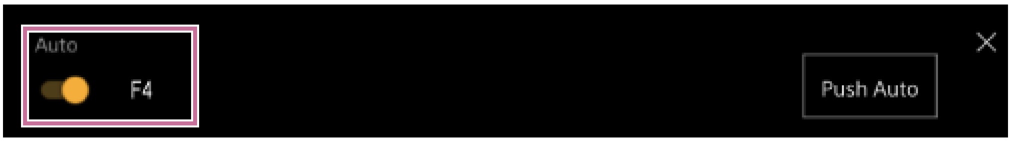
2. **Press the [Iris] button in the camera basic configuration panel.**

   The frame of the [Iris] button changes to orange.



   The Iris adjustment panel appears.

3. **Slide the [Auto] switch to the right position to turn it on.**



   The iris switches to auto adjustment mode. The auto adjusted iris value is displayed on the right side of the switch.

Note

- The iris cannot be adjusted automatically on an A-mount lens.

Hint

- You can also assign [Auto Iris] to an assignable button.

Adjusting the Iris Manually

You can adjust the brightness manually.

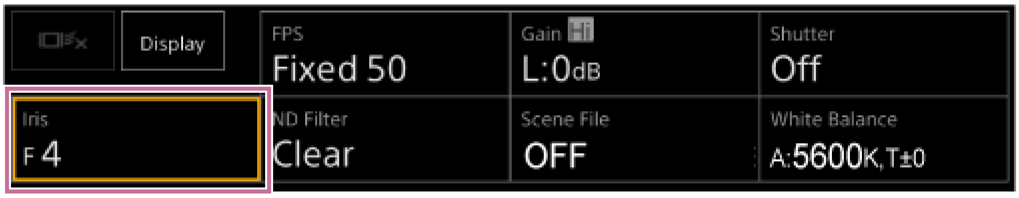
1. **If a lens with an Auto Iris switch is attached, set the switch to AUTO.**

   Note

   - When the Auto Iris switch of the lens is set to MANUAL, the [Auto Iris] and [Push Auto Iris] functions on the unit have no effect. Manual iris adjustments on the unit also have no effect.

2. **Press the [Iris] button in the camera basic configuration panel.**

   The frame of the [Iris] button changes to orange.

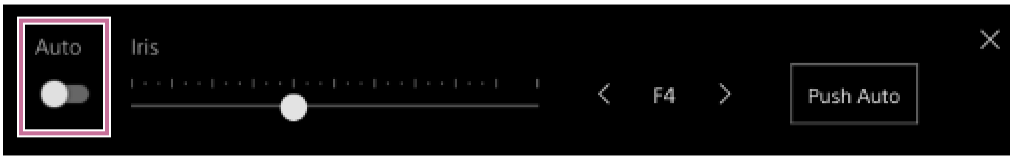


Display

FPS: Fixed 50
Gain: L:0dB
Shutter: Off
Iris: F 4
ND Filter: Clear
Scene File: OFF
White Balance: A:5600K,T±0

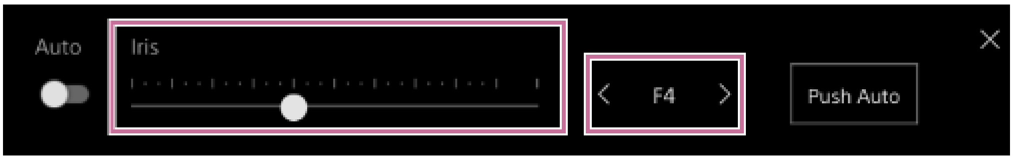
   The Iris adjustment panel appears.

3. **Slide the [Auto] switch to the left position to turn it off.**



   The iris switches to manual adjustment mode.

4. **Adjust the iris using the [Iris] slider or [Iris] adjustment buttons.**

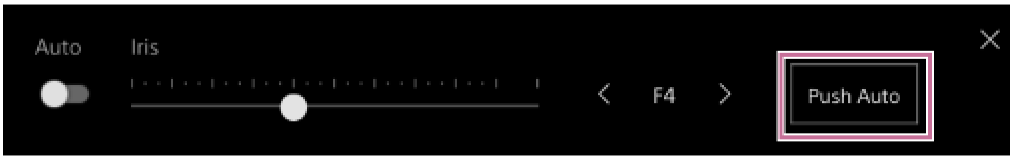


   Hint

   - The slider and adjustment button settings are linked.
   - You can also assign the iris to the slider on the ⌂ (Main) tab in the camera control panel.

To temporarily adjust the iris automatically

You can also press the [Push Auto] button on the Iris adjustment panel to adjust the iris automatically while the button is pressed.



Hint

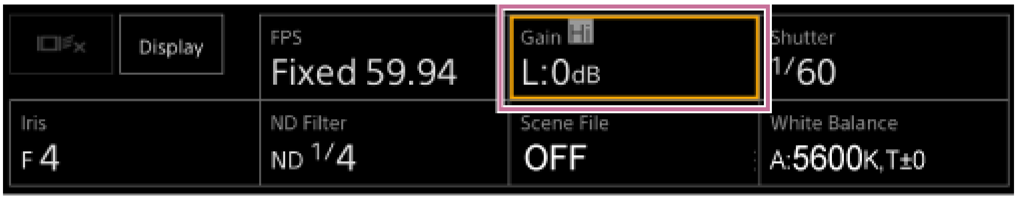
- Press an assignable button assigned with the [Push Auto Iris] function to adjust the iris automatically while the button is pressed. The iris returns to manual mode when you release the button.

Adjusting the Gain Automatically

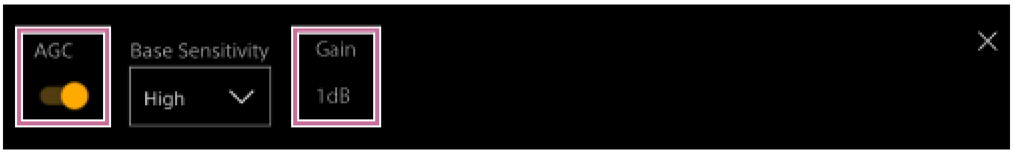
You can adjust the brightness automatically using the gain setting when [Shooting Mode] is set to [Custom] or [Flexible ISO].

1. **Set [Project] > [Shooting Mode] to [Custom] in the web menu or camera menu.**
2. **Press the [ISO/Gain] button in the camera basic configuration panel.**

   The frame of the [ISO/Gain] button changes to orange.

   The ISO/Gain adjustment panel appears.
3. **Slide the [AGC] switch to the right position to turn it on.**

   The gain switches to auto adjustment mode. The auto adjusted gain value is displayed on the right side of the switch.

Hint

- You can also perform the same action by setting [Shooting] > [Auto Exposure] > [AGC] to [On] in the camera menu.
- You can also assign [AGC] to an assignable button.

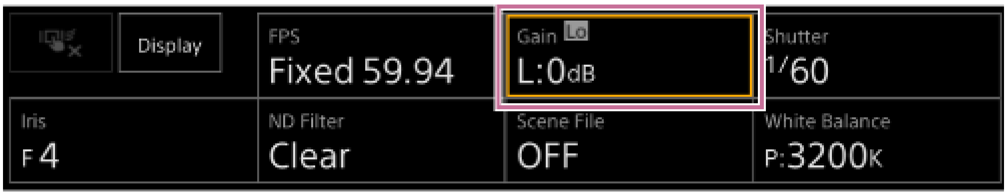
Adjusting the Gain Manually

You can adjust the brightness manually using the gain setting when [Shooting Mode] is set to [Custom] or [Flexible ISO]. You can control the gain when you want to adjust the exposure while using a fixed iris setting or when you want to prevent the gain increasing due to AGC.

1. **Set [Project] > [Shooting Mode] to [Custom] in the web menu or camera menu.**

2. **Press the [ISO/Gain] button in the camera basic configuration panel.**

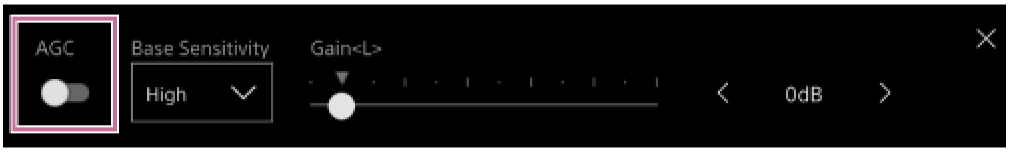
   The frame of the [ISO/Gain] button changes to orange.



Display
FPS Fixed 59.94
Gain L:0dB
Shutter 1/60
Iris F4
ND Filter Clear
Scene File OFF
White Balance P:3200K

   The ISO/Gain adjustment panel appears.

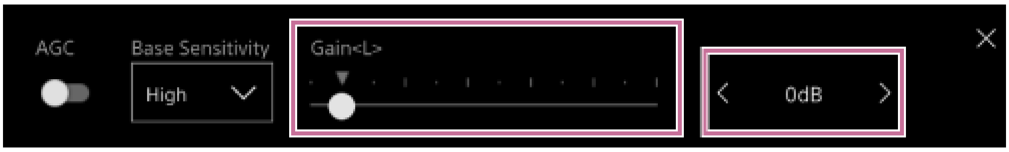
3. **Slide the [AGC] switch to the left position to turn it off.**



AGC
Base Sensitivity High
Gain<L> 0dB

   The gain switches to manual adjustment mode.

4. **Adjust the gain using the [ISO/Gain] slider or [ISO/Gain] adjustment buttons.**



AGC
Base Sensitivity High
Gain<L> 0dB

Hint

- The slider and adjustment button settings are linked.

To temporarily adjust the gain manually

You can also adjust the gain temporarily by assigning [ISO/Gain] to a slider function selection button on the 🏠 (Main) tab in the camera control panel and using the slider.
This is useful when you want to adjust the exposure by one step without changing the depth of field.
The adjustment result returns to the preset value configured using [ISO/Gain<L>] after performing any of the following operations.

- Changing ISO/Gain adjustment items

- Switching the base sensitivity
- Setting the AGC switch to the on position
- Switching the power supply of the unit to standby

To temporarily adjust the gain automatically using an assignable button

Press an assignable button assigned with the [Push AGC] function to adjust the gain automatically while the button is pressed.
The gain returns to manual mode when you release the button.
The adjustment result returns to the preset value configured using [ISO/Gain<L>] after performing any of the following operations.

- Changing ISO/Gain adjustment items
- Switching the base sensitivity
- Setting the AGC switch to the on position
- Switching the power supply of the unit to standby

Note

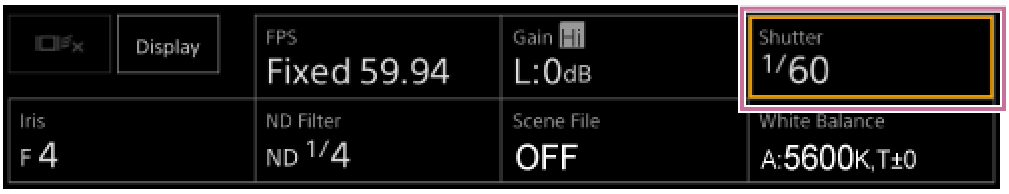
- This function cannot be executed when [Shooting] > [Iris] > [Bokeh Control] is set to [On] in the camera menu.

Adjusting the Shutter Automatically

You can adjust the shutter automatically in response to the brightness of the image.

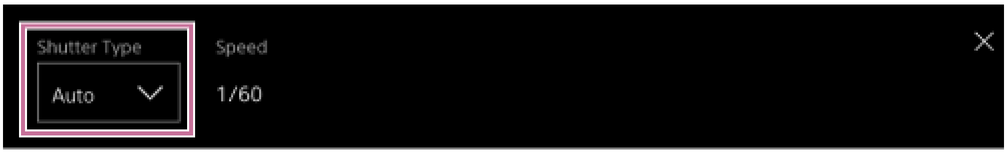
1. **Press the [Shutter] button in the camera basic configuration panel.**

   The frame of the [Shutter] button changes to orange.



   The Shutter adjustment panel appears.

2. **Press the [Shutter Type] button and select [Auto] from the list.**



Hint

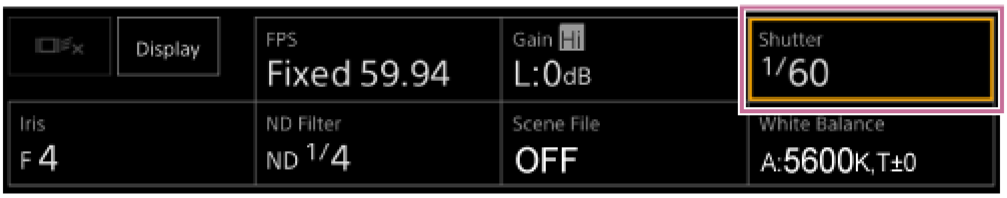
- You can also perform the same action by setting [Shooting] > [Auto Exposure] > [Auto Shutter] to [On] in the camera menu.
- You can also assign [Auto Shutter] to an assignable button.

Adjusting the Shutter Manually

You can adjust the shutter manually.

1. **Press the [Shutter] button in the camera basic configuration panel.**

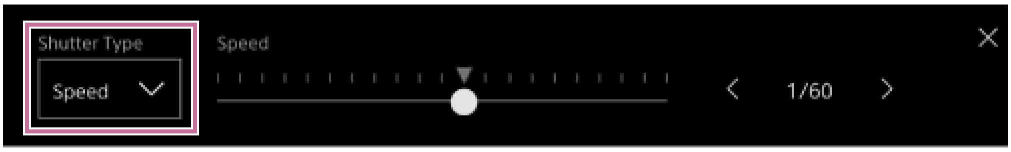
   The frame of the [Shutter] button changes to orange.



FPS Fixed 59.94
Gain Hi L:0dB
Shutter 1/60
Iris F 4
ND Filter ND 1/4
Scene File OFF
White Balance A:5600K,T±0

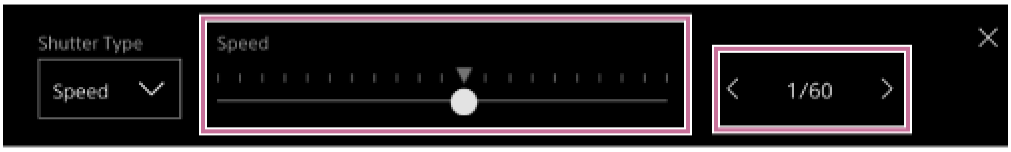
   The Shutter adjustment panel appears.

2. **Press the [Shutter Type] button and select [Speed] from the list.**



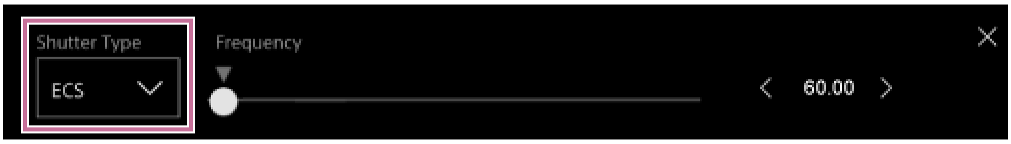
Shutter Type Speed
Speed 1/60

3. **Adjust the shutter using the [Speed] slider or [Speed] adjustment buttons.**



Shutter Type Speed
Speed 1/60

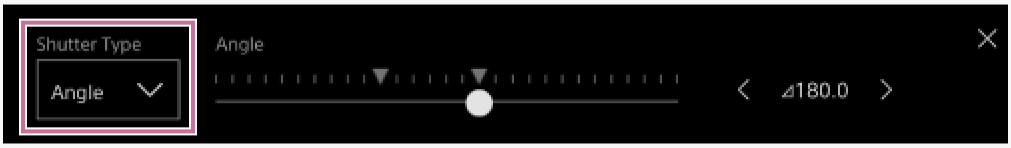
   To adjust the exposure time to match the frame interval, select [Off] in step 2. You can also set a fixed value using [ECS] (frequency) or automatically adjust it using [Auto].
   Example: Set using [ECS] (frequency)



Shutter Type ECS
Frequency 60.00

Hint

- The slider and adjustment button settings are linked.
- To use [Angle] instead of [Speed] or [Off], set [Shooting] > [Shutter] > [Mode] to [Angle] in the camera menu.



Shutter Type Angle
Angle ⊿180.0

About the ND Filter

In conditions where the lighting is too bright, you can set the appropriate brightness by changing the ND filter.
When shooting a brightly lit subject, closing the iris too much may cause diffraction blur, producing an image starting to go out of focus (typical phenomena in cameras). You can suppress this effect to obtain better shooting results using the ND filter.
The unit features the following ND filter modes.

Preset mode

- See “Adjusting in Preset Mode.”

Variable mode (automatic adjustment)

- See “Adjusting Automatically in Variable Mode.”

Variable mode (manual adjustment)

- See “Adjusting Manually in Variable Mode.”

Related Topic

- Adjusting in Preset Mode
- Adjusting Automatically in Variable Mode
- Adjusting Manually in Variable Mode

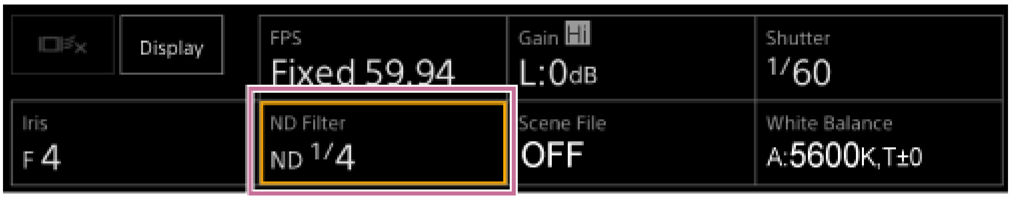
Adjusting in Preset Mode

You can select three ND filter transmittance values beforehand and quickly switch between them when shooting.

1. **Set [Shooting] > [ND Filter] > [Mode] to [Preset] in the camera menu.**

2. **Press the [ND Filter] button in the camera basic configuration panel.**

   The frame of the [ND Filter] button changes to orange.

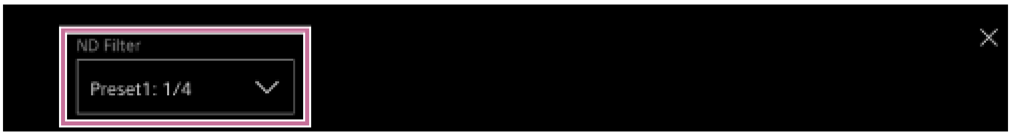


Display
FPS Fixed 59.94
Gain Hi L:0dB
Shutter 1/60
Iris F 4
ND Filter ND 1/4
Scene File OFF
White Balance A:5600K,T±0

   The ND Filter adjustment panel appears.

3. **Press the [ND Filter] button and select one of the following from the list.**

   [Clear]: No ND filter.
   [Preset1]: Transmittance set by [Shooting] > [ND Filter] > [Preset1] in the camera menu.
   [Preset2]: Transmittance set by [Shooting] > [ND Filter] > [Preset2] in the camera menu.
   [Preset3]: Transmittance set by [Shooting] > [ND Filter] > [Preset3] in the camera menu.



ND Filter Preset1: 1/4

   When one of [Preset1] to [Preset3] is selected for the ND filter, the transmittance value is displayed beside the ND filter name.

Hint

- When an assignable button assigned with [ND Filter Position] is pressed, the ND filter changes in the sequence [Clear] → [Preset1] → [Preset2] → [Preset3] → [Clear].

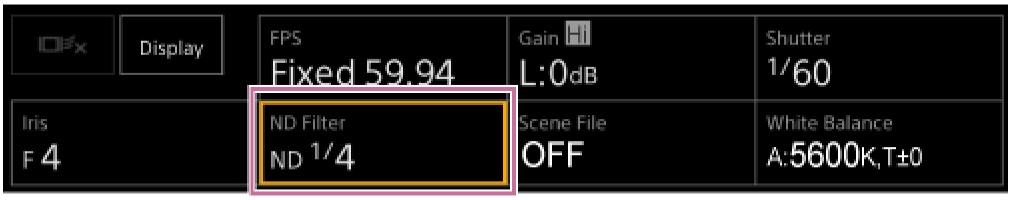
Adjusting Automatically in Variable Mode

You can enable auto exposure adjustment using the ND filter.

1. **Set [Shooting] > [ND Filter] > [Mode] to [Variable] in the camera menu.**

2. **Press the [ND Filter] button in the camera basic configuration panel.**

   The frame of the [ND Filter] button changes to orange.



Display

FPS Fixed 59.94

Gain L:0dB

Shutter 1/60

Iris F 4

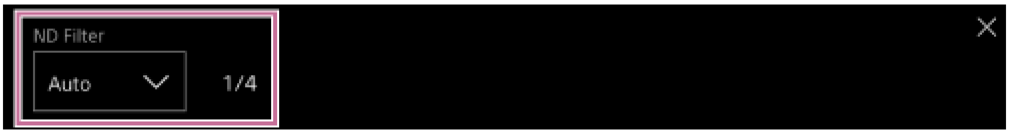
ND Filter ND 1/4

Scene File OFF

White Balance A:5600K,T±0

   The ND Filter adjustment panel appears.

3. **Press the [ND Filter] button and select [Auto] from the list.**



ND Filter Auto 1/4

   The automatically adjusted ND filter transmittance value is displayed beside the [ND Filter] button.

Note

- When the ND filter is switched to or from [Clear] during shooting, the ND filter frame is displayed on the image and an operating sound is emitted.

Hint

- You can also assign [Auto ND Filter] to an assignable button, and press the button to switch between [Auto] and [Manual].

Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

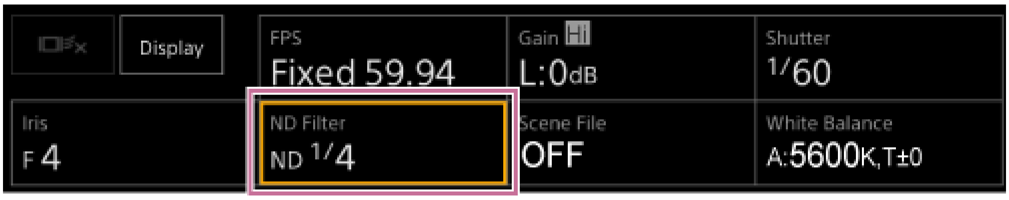
Adjusting Manually in Variable Mode

You can perform manual exposure adjustment using the ND filter.

1. **Set [Shooting] > [ND Filter] > [Mode] to [Variable] in the camera menu.**

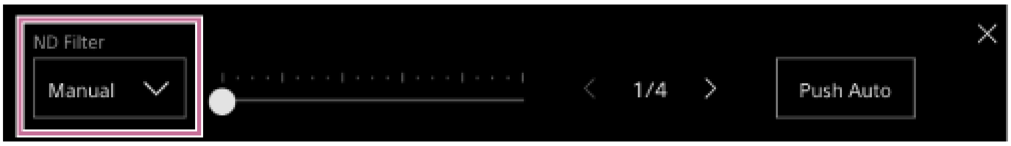
2. **Press the [ND Filter] button in the camera basic configuration panel.**

   The frame of the [ND Filter] button changes to orange.

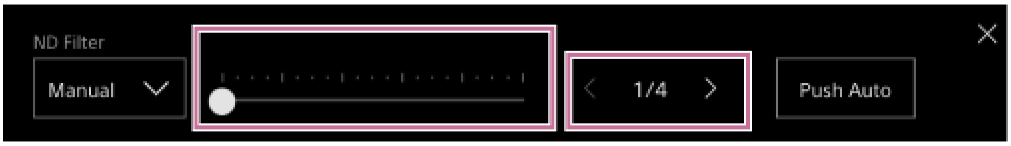


   The ND Filter adjustment panel appears.

3. **Press the [ND Filter] button and select [Manual] from the list.**



4. **Adjust the transmittance of the ND filter using the [ND Filter] slider or [ND Filter] adjustment buttons.**



Hint

- The slider and adjustment button settings are linked.
- You can also adjust the ND filter on the 🏠 (Main) tab in the camera control panel.

To temporarily adjust automatically

You can assign [Push Auto ND] to an assignable button, and temporarily turn auto ND filter on while the button is pressed. Releasing the button sets auto ND filter back to off.
Set the ND filter to [Manual].

Note

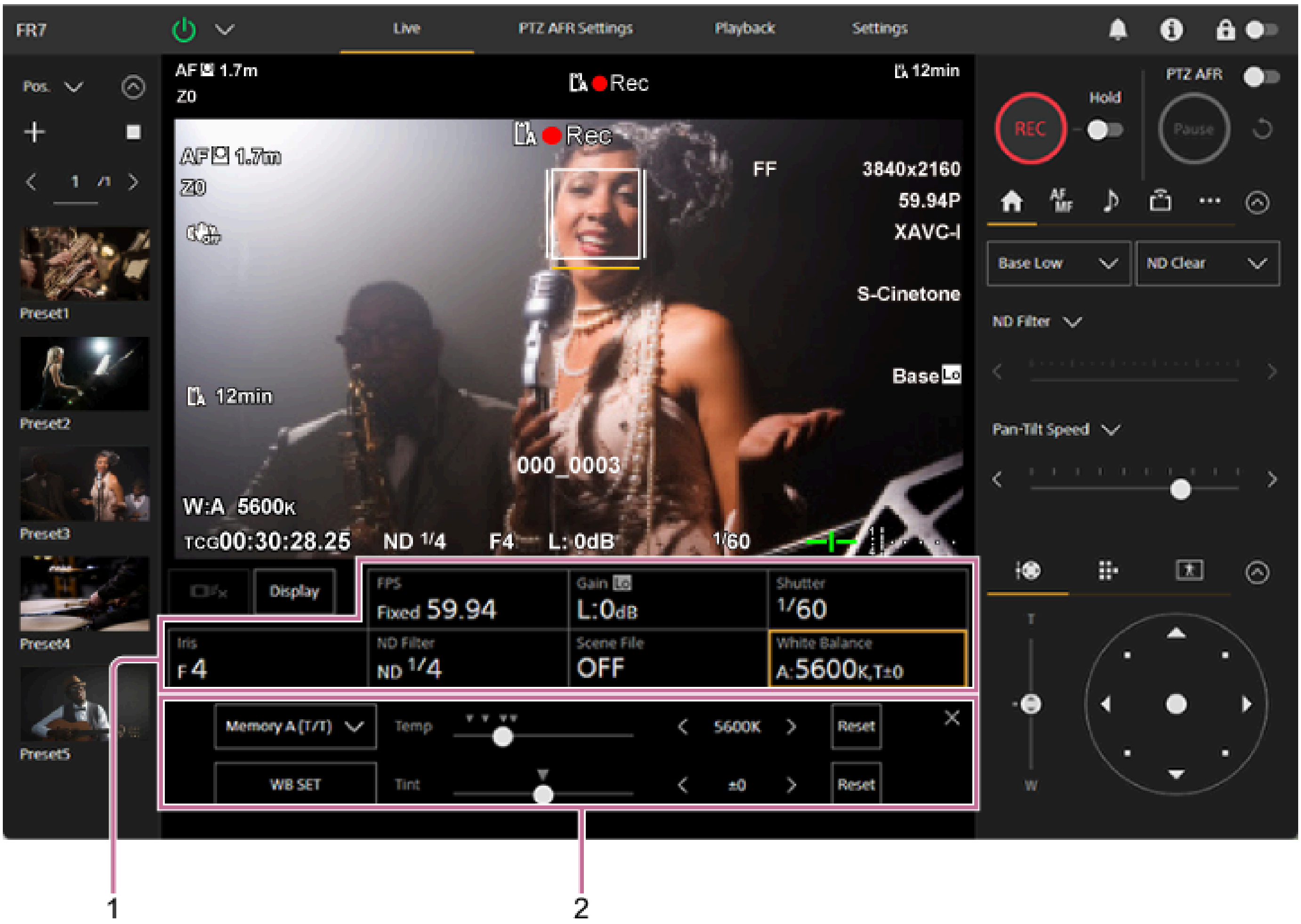
- When the ND filter is switched to or from [Clear] during shooting, the ND filter frame is displayed on the image and an operating sound is emitted.

Hint

- You can also assign [ND Filter Position] to an assignable button, and press the button to switch between [Manual] and [Clear].
- You can also press the [Push Auto] button on the ND Filter adjustment panel to turn auto ND filter on while the button is pressed.

White Balance Adjustment Screen

You can adjust the white balance using the live operation screen of the Web App to obtain a white balance that makes the image look more natural.



FPS Fixed 59.94
Gain L:0dB
Shutter 1/60
Iris F 4
ND Filter ND 1/4
Scene File OFF
White Balance A:5600K,T±0

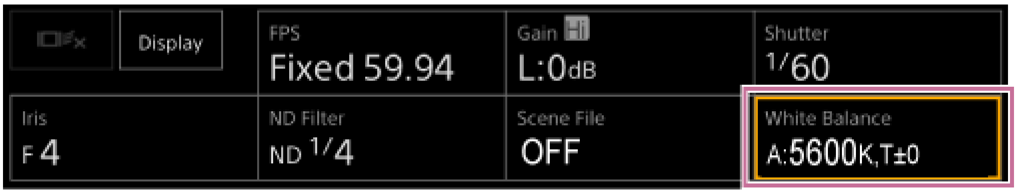
1. **Camera basic configuration panel**
2. **Camera basic configuration adjustment panel**
   Displays the adjustment panel for the setup item selected on the camera basic configuration panel.

Adjusting the White Balance Automatically

You can obtain an appropriate adjusted white balance at all times using ATW (auto tracking white balance).
When ATW is enabled, the white balance is automatically adjusted as the color temperature of the light source changes.

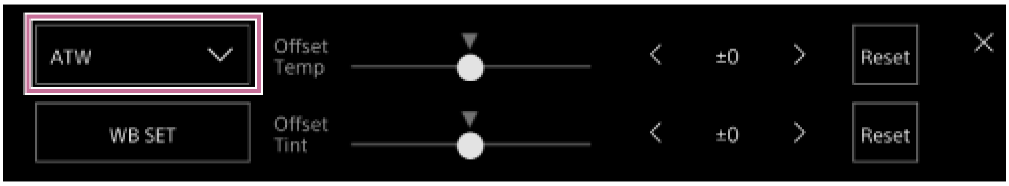
1. **Press the [White Balance] button in the camera basic configuration panel.**

   The frame of the [White Balance] button changes to orange.



   The White Balance adjustment panel appears.

2. **Press the [White Mode] button and select [ATW] from the list.**



Note

- ATW cannot be used when [Shooting Mode] is set to [Cine EI] or [Cine EI Quick].
- It may not be possible to adjust to the appropriate color using ATW, depending on the lighting and subject conditions.
  Examples:
  - When a single color dominates the subject, such as sky, sea, ground, or flowers.
  - When the color temperature is extremely high or extremely low.
- If the ATW auto tracking speed is slow or the appropriate effect cannot be obtained, press the [WB SET] button to run auto white balance.

Hint

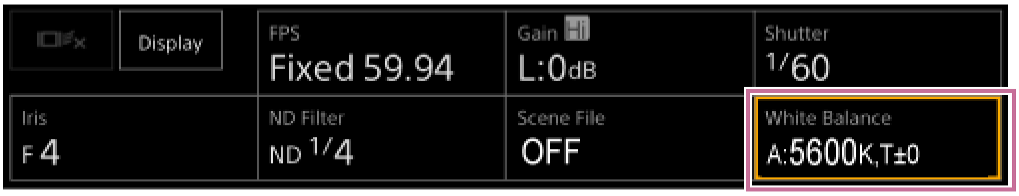
- You can select the response speed when in ATW mode from five steps (1, 2, 3, 4, 5) using [Shooting] > [White Setting] > [ATW Speed] in the camera menu. The lower the number, the faster the response speed.
- You can freeze the current white balance setting by assigning the [ATW Hold] function to an assignable button, and pressing the assignable button to temporarily pause ATW during ATW mode.

Adjusting the White Balance Manually

You can adjust the white balance manually.

1. **Press the [White Balance] button in the camera basic configuration panel.**

   The frame of the [White Balance] button changes to orange.

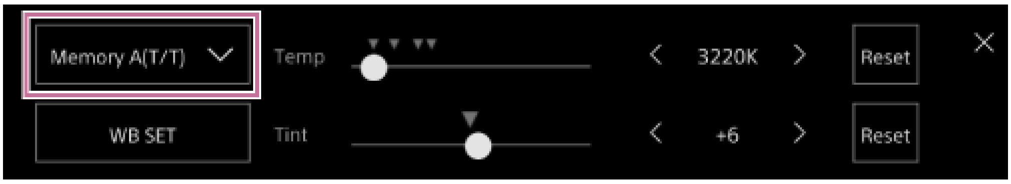


FPS Fixed 59.94
Gain L:0dB
Shutter 1/60
Iris F4
ND Filter ND 1/4
Scene File OFF
White Balance A:5600K,T±0

   The White Balance adjustment panel appears.

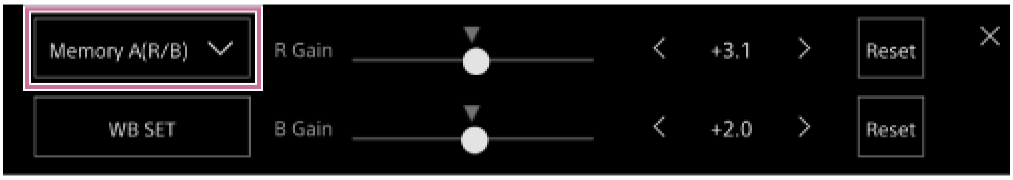
2. **Press the [White Mode] button and select one of the following from the list.**

   [Memory A (T/T)]



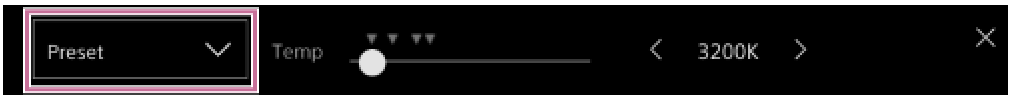
Temp 3220K
Tint +6

   [Memory A (R/B)]



R Gain +3.1
B Gain +2.0

   [Preset]



Temp 3200K

3. **Adjust the white balance using the sliders or adjustment buttons.**

   Hint

   - The slider and adjustment button settings are linked.
   - The difference between [Memory A (T/T)] and [Memory A (R/B)] is that the axis of adjustment is different, but the adjustment results are linked.

   For [Memory A (T/T)]
   This mode adjusts the white balance saved in memory A by adjusting the color temperature (Temp) and Tint.
   You can set the color temperature in 20 K increments in the range 2000 K to 5600 K. Values above 5600 K can be set at intervals equal to the amount of color change (mired) from 5580 K to 5600 K.

Pressing the [Reset] button on the right side of [Temp] or [Tint] restores the corresponding setting to the default value.

For [Memory A (R/B)]

This mode adjusts the white balance saved in memory A by adjusting the R Gain and B Gain.

Pressing the [Reset] button restores the corresponding gain setting to the default value.

For [Preset]

This mode adjusts the color temperature to a preset value.

You can set the value in 100 K increments.

In preset mode, you can also assign [Preset White Select] to an assignable button, and press the button to change to a preconfigured preset value.

[Custom]: 3200 K → 4300 K → 5600 K → 6300 K → 3200 K…

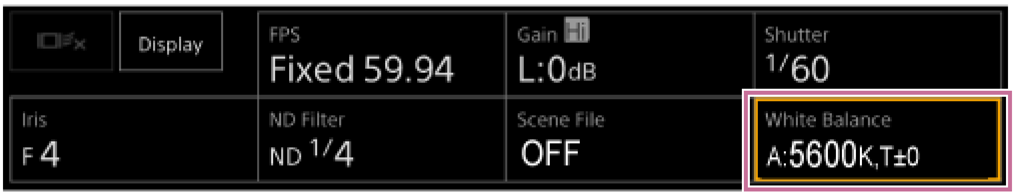
[Flexible ISO], [Cine EI], [Cine EI Quick]: 3200 K → 4300 K → 5500 K → 3200 K…

Running Auto White Balance

In memory A mode, the white balance to save is adjusted automatically.

1. **Press the [White Balance] button in the camera basic configuration panel.**

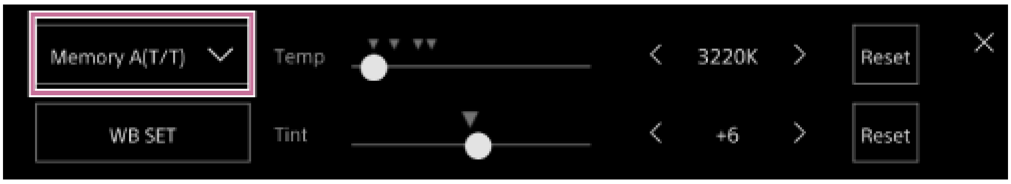
   The frame of the [White Balance] button changes to orange.



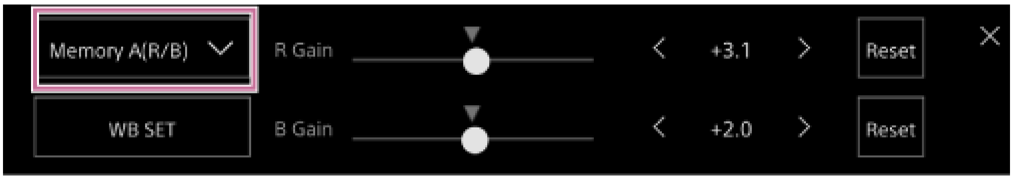
   The White Balance adjustment panel appears.

2. **Press the [White Mode] button and select [Memory A (T/T)] or [Memory A (R/B)] from the list.**

   [Memory A (T/T)]



   [Memory A (R/B)]



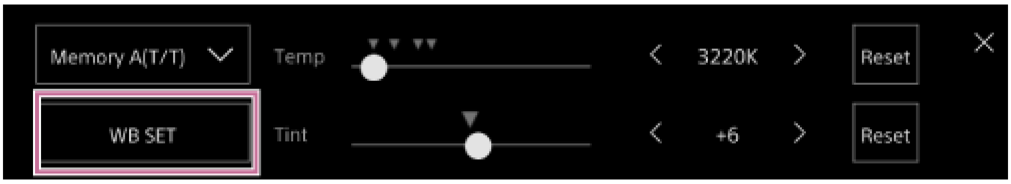
3. **Place white paper (or other object) in a location with the same lighting source and conditions as the subject, then zoom in on the paper to show white on the screen.**

4. **Adjust the brightness.**

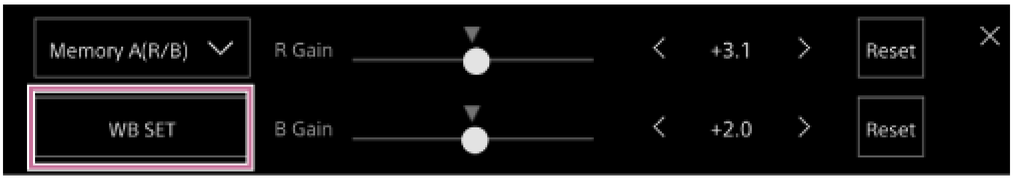
   Adjust the iris using the procedure in “Adjusting the Iris Manually.”

5. **Press the [WB SET] button on the white balance adjustment panel.**

   [Memory A (T/T)]



   [Memory A (R/B)]



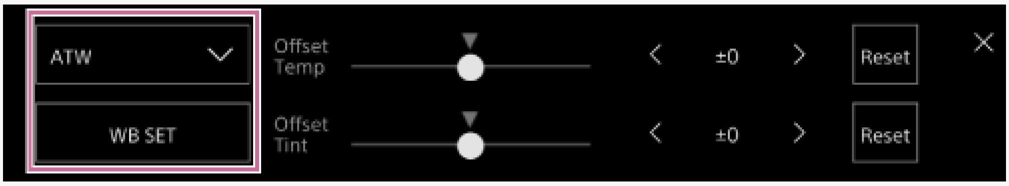
If auto white balance is run in memory mode, the result of auto adjustment is saved in memory A.

Note

- If the adjustment is not successful, an error message is displayed on the screen for about three seconds. If the error message persists after repeated attempts to set white balance, contact your Sony service representative.

Hint

- You can also run it in ATW mode. You can use this when you want to quickly adjust the white balance during ATW operation. After adjustment, the mode returns to normal ATW operation.

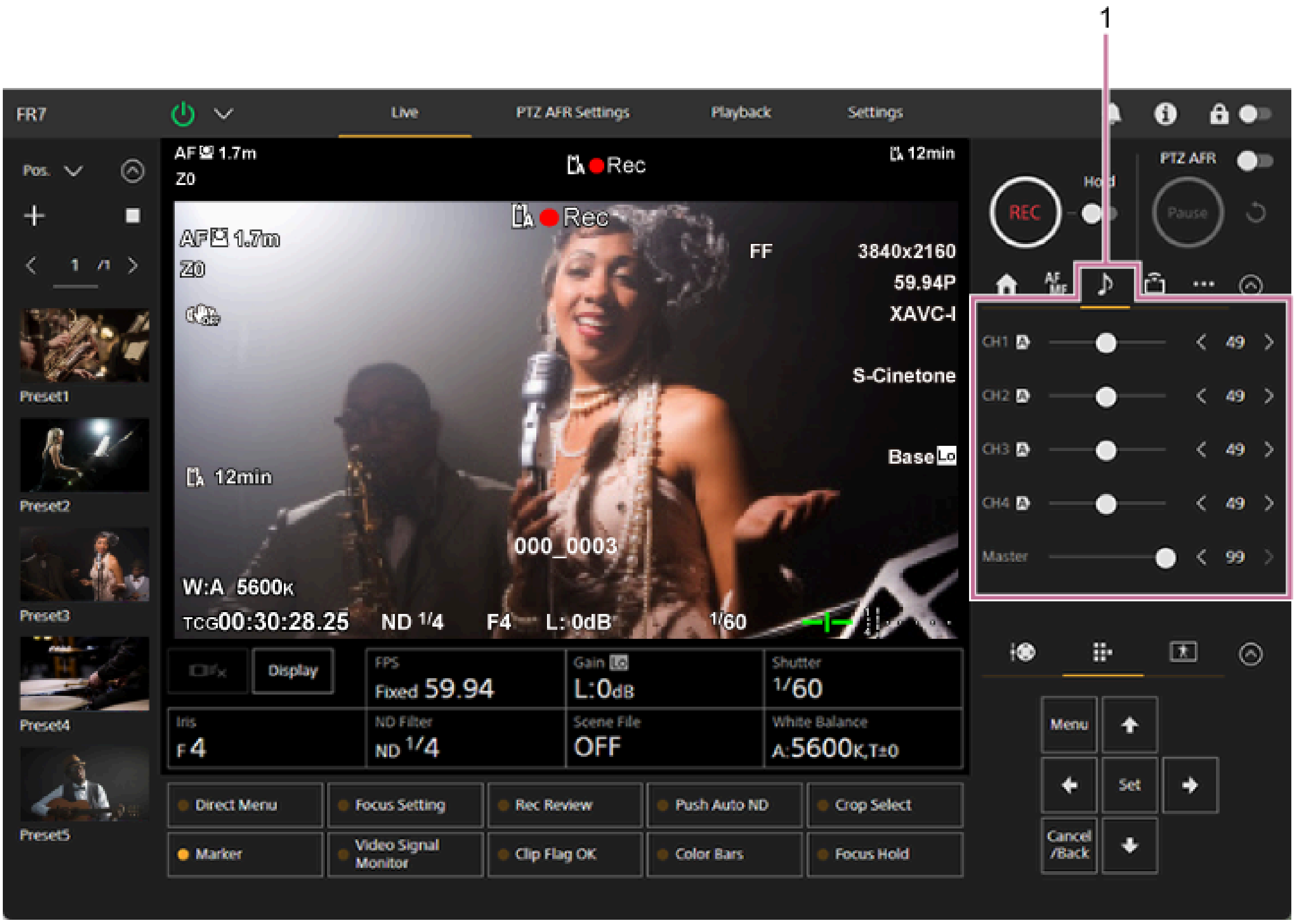


Related Topic

- Adjusting the Iris Manually

Audio Configuration Screen

You can adjust the audio level to be recorded by the unit on the live operation screen of the Web App. Configure the switches on the connector block of the unit and configure the audio using the camera menu or web menu.



1. **Camera control panel – ♪ (Audio) tab**

Selecting the Audio Input Device

Set the following switches according to the device connected to the AUDIO IN connector.

1. **When a microphone is connected, set SETUP switch 2 on the connector block on the rear of the unit.**

   CH-1 and CH-2 have common settings.

Setting	Description
OFF (default)	Select when using a dynamic microphone or battery-operated microphone. This turns off the +48 V phantom power supply and sets the LINE or MIC input as the CH-1 and CH-2 audio source.
ON	Select when using a +48 V phantom power supply compatible microphone. This turns on the +48V phantom power supply and sets the phantom power supply compatible microphone as the CH-1 and CH-2 audio source.

2. **Set the type of connected device using [Audio] > [Audio Input] > [AUDIO IN Select] in the camera menu.**

3. **Select the audio input using [Audio] > [Audio Input] > [CH1 Input Select] to [CH4 Input Select] in the web menu or camera menu.**

Note

- Audio is not recorded in Interval Rec mode or Slow & Quick Motion mode.

Adjusting the Audio Recording Level Automatically

Set the channel for which you want to adjust the audio recording level automatically to [Auto] on the [Audio] page of the web menu or using [Audio] > [Audio Input] > [CH1 Level Control] to [CH4 Level Control] in the camera menu.
The channels specified for auto adjustment are indicated by an A (Auto) icon beside the corresponding channels on the ♪ (Audio) tab of the live operation screen.

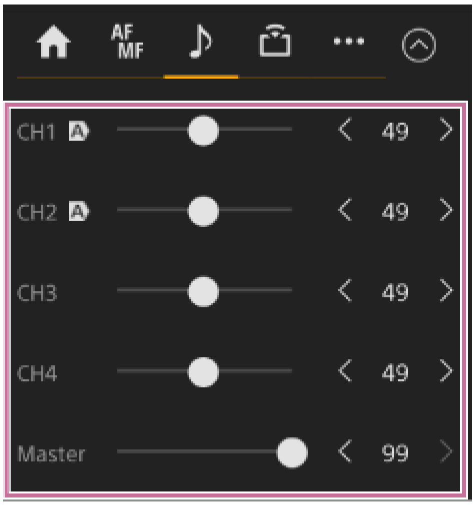
Adjusting the Audio Recording Level Manually

You can adjust the audio recording level manually.

1. **Set the channel for which you want to adjust the audio recording level manually to [Manual] on the [Audio] page of the web menu or using [Audio] > [Audio Input] > [CH1 Level Control] to [CH4 Level Control] in the camera menu.**

2. **Press the ♪ (Audio) tab in the camera control panel.**

3. **On the [Audio] screen in the camera control panel, set the audio recording level using the slider or adjustment buttons for the channel whose audio recording level you want to set manually.**



CH1 A 49
CH2 A 49
CH3 49
CH4 49
Master 99

Note

- Channels for which the A (Auto) icon is displayed are adjusted automatically. Changes to values using the slider or buttons are not applied to the recorded audio.

Hint

- The slider and adjustment button settings in each row are linked.
- You can check the audio input level in realtime using the audio level meter display on the shooting screen.

Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

Direct Menu Operation

You can check the status and settings of the unit displayed overlaid on the camera image, and select and change the settings using the GUI control buttons on the infrared remote control.
The following items can be configured.
[Face/Eye Detection AF]
[SteadyShot]
[White Mode]
[Color Temp]
[Scene File]
[ND Filter Position]
[Auto ND Filter]
[ND Filter] value
[Auto Iris]
[Iris] value
[AGC]
[Gain] value
[ISO] value
[Exposure Index]
[Shutter Type]
[Auto Shutter]
[Shutter] value
[Auto Exposure Mode]
[Auto Exposure Level]
[S&Q Motion] and [Frame Rate]

1. **Press an assignable button assigned with [Direct Menu] on the infrared remote control.**

   The [Direct Menu] button is assigned to assignable button 1 by factory default.
   Only the items on the screen that can be configured using the direct menu are selectable using the orange cursor.

2. **Move the cursor to the item you want to set using the arrow buttons in the GUI control panel and press the [Set] button.**

   A menu is displayed or the item is displayed on a white background.

3. **Select a setting using the arrow buttons and press the [Set] button.**

   The menu or white background disappears and the new setting is displayed with an orange cursor.
   Press an assignable button assigned with the direct menu function again or wait 3 seconds without performing any action to exit the direct menu.

Hint

- You can also perform the same function using an assignable button and the GUI control panel of the Web App.

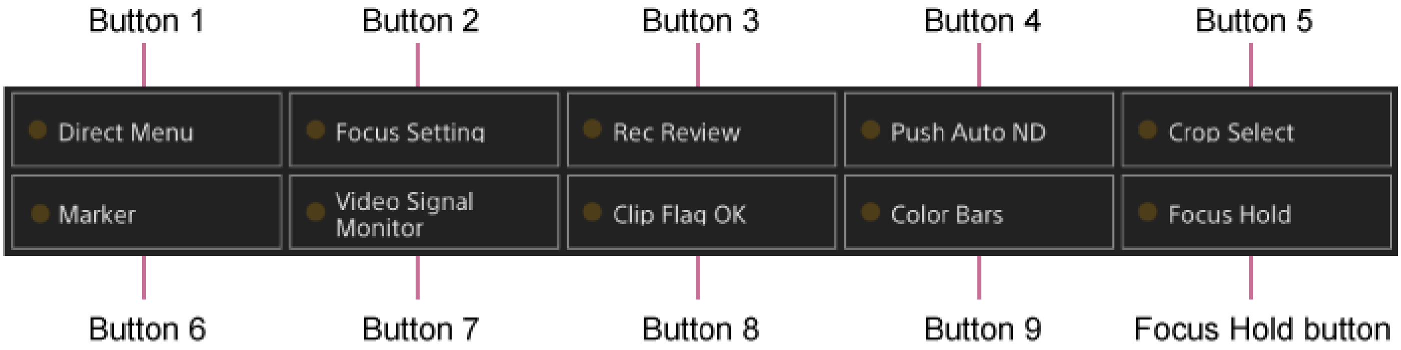
Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

Assignable Buttons

There are ten assignable buttons in the Web App of the unit to which you can assign functions.
The assignable buttons are displayed on the live operation screen and playback operation screen.

Note

- The list of assignable buttons is not displayed when configuring settings in the camera basic operation panel of the live operation screen. To end the operation, press the [X] button at the top right of the adjustment panel.



The following functions are assigned to the buttons by factory default.
Button 1: [Direct Menu]
Button 2: [Focus Setting]
Button 3: [Rec Review]

- Buttons 1 to 3 are equivalent to the same number buttons on the supplied infrared remote control.

Button 4: [Push Auto ND]
Button 5: [Crop Select]
Button 6: [Marker]
Button 7: [Video Signal Monitor]
Button 8: [Clip Flag OK]
Button 9: [Color Bars]
Focus Hold button: [Focus Hold]

- The Focus Hold button is equivalent to the Focus Hold button on an E-mount lens.

To change a button function

Use [Project] > [Assignable Button] in the camera menu.
When you change an assignment, the display of the assignable button list changes.
For details about the assignable functions, see “Assignable Button” in “Camera Menu and Detailed Settings.”

Related Topic

- Assignable Button

Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

Slow & Quick Motion

When the recording format is set to the following values, you can specify different values for the shooting frame rate and playback frame rate.
The following table shows the configurable frame rates.

System frequency: 59.94/50/29.97/25/23.98, Imager scan mode: FF

Codec	Video format	Configurable frame rates
RAW	3840×2160P	1–60, 100, 120
RAW & XAVC-I	3840×2160P	1–60, 100, 120
XAVC-I	4096×2160P	1–60
	3840×2160P	1–60, 100, 120
	1920×1080P	1–60, 100, 120, 150, 180, 200, 240
XAVC-L	3840×2160P	1–60, 100, 120
	1920×1080P	1–60, 100, 120, 150, 180, 200, 240

System frequency: 59.94/50/29.97/25/23.98, Imager scan mode: S35

Codec	Video format	Configurable frame rates
XAVC-I	1920×1080P	1–60, 100, 120
XAVC-L	1920×1080P	1–60, 100, 120

System frequency: 24, Imager scan mode: FF

Codec	Video format	Configurable frame rates
XAVC-I	4096×2160P	1–60

Note

- Slow & Quick Motion cannot be set during recording, playback, or while the thumbnail screen is displayed.
- Audio recording is not supported in Slow & Quick Motion mode.
- The auto iris and auto shutter functions are disabled in Slow & Quick Motion mode.
- Auto focus has the following limitations in Slow & Quick Motion mode.
  - Limitations due to lens model, system frequency, and shooting frame rate

Sony lens	System frequency	AF availability
Other than SEL16F28	–	7 fps or higher supported
SEL16F28	59.94/29.97/23.98	30, 60, 120, 240 fps supported
	50.00/25.00	25, 50, 100, 200 fps supported
	24.00	Not supported

- The auto focus function is temporarily disabled if the iris is set to F18 or higher.

- For details about using RAW output, see “Recording RAW Video.”

Related Topic

- Recording RAW Video

Interchangeable Lens Digital Camera
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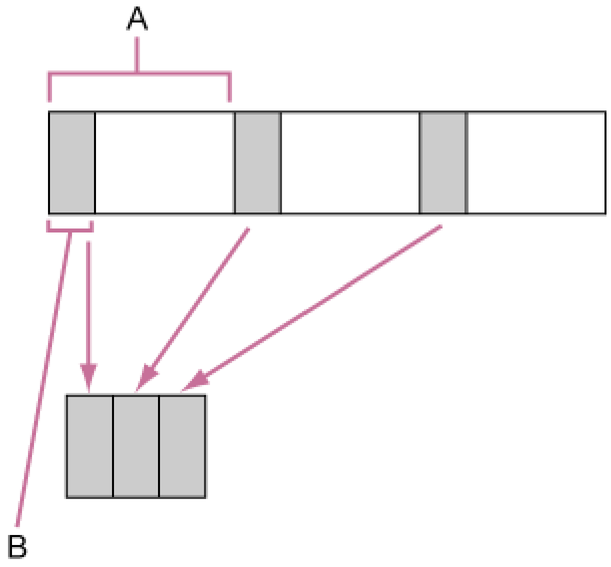
Recording Video Intermittently (Interval Rec)

The Interval Rec function allows you to capture video intermittently to the unit’s internal memory. This function is an effective way to shoot slow-moving subjects.
When you start recording, the unit automatically records a specified number of frames (Number of Frames) at a specified interval time (Interval Time).



A: Shooting interval (Interval Time)
B: Number of frames in one take (Number of Frames)

Note

- Only one special recording function, such as Interval Rec recording, can be used at any one time.
- If another special recording mode is enabled while Interval Rec is in use, Interval Rec is automatically released.
- Interval Rec mode is automatically released after changing system settings, such as the video format.
- Interval Rec settings cannot be changed during recording or playback, or when the thumbnail screen is displayed.

Limitations during recording

- Audio is not recorded.
- Reviewing the recording (Rec Review) is not possible.

If the unit is turned off during recording

- When the power supply to the unit is set to the standby state, the media is accessed for several seconds to record the images stored in memory up till that moment, and then the unit switches to standby state automatically.
- If the DC power cord is disconnected, the power is turned off from the AC adaptor, or the PoE++ power delivery is disconnected, then the shots taken up to that point may be lost (maximum 10 seconds). Care should be exercised.

Setting the number of frames and the interval between shooting

Set [Project] > [Interval Rec] > [Setting] to [On] in the web menu, and set [Number of Frames] and [Interval Time].
The unit exits Interval Rec mode when it is powered off, but the [Number of Frames] and [Interval Time] settings are retained. You do not need to set them again the next time you shoot in Interval Rec mode.

Hint

- Can also be set using [Project] > [Interval Rec] in the camera menu.

Starting shooting

Press the record START/STOP button to start recording. “Int●Rec” and “Int●Stby” appear alternately.

Stopping shooting

Stop the recording.
When shooting ends, the video data stored in memory up to that point is written to the media.
To exit Interval Rec mode, do one of the following.

- Switch the power supply of the unit to standby.
- In recording standby mode, set [Project] > [Interval Rec] > [Setting] to [Off].

Also, Interval Rec mode is automatically released when the unit is rebooted.

Recording Cached Pictures (Picture Cache Rec)

The Picture Cache Rec function allows you to capture video retroactively when you start recording by maintaining an internal cache memory of a specified duration when shooting.

Setting the cache size

Set [Project] > [Picture Cache Rec] > [Setting] to [On] in the web menu, and set the cache size using [Cache Size].

[Cache Size] setting	Cache time (approximate)
[Short]	5 seconds
[Medium]	10 seconds
[Long]	20 seconds
[Max]	Maximum value for each recording format

Note

- Picture Cache Rec cannot be used in combination with Interval Rec, 2-slot simultaneous recording, or proxy recording. When Picture Cache Rec is set to On, these other special recording modes are forcibly set to Off.
- Picture Cache Rec mode cannot be selected while recording or Rec Review is in progress.
- When Picture Cache Rec is set to On, the timecode is recorded in [Free Run] mode even if set to [Regen] or [Rec Run].
- The [Output Format] setting may not be configurable in Picture Cache Rec mode. If this occurs, temporarily set Picture Cache Rec to Off, and then change the setting.

Hint

- The cache time may be shorter, depending on the recording format. Check the time displayed in [Project] > [Picture Cache Rec] > [Cache Rec Time] in the web menu.
- Can also be set using [Project] > [Picture Cache Rec] in the camera menu.
- You can also switch [Picture Cache Rec] between On and Off using an assignable button.

Starting Picture Cache Rec

When [Picture Cache Rec] is set to On, “●Cache” (● is green) appears.
When you press the record START/STOP button, recording starts and video is written to memory cards starting from the video stored in the cache memory.

Note

- Changing the recording format or basic look clears the video in cache memory stored up to that point, and starts caching new video. Consequently, picture cache recording of pictures before changing format is not possible, even if you start recording immediately after changing format.
- If Picture Cache Rec is set to On or Off immediately after inserting a memory card, cache data may not be recorded on the card.

- Video is stored in cache memory when the Picture Cache Rec function is set to On. Video prior to the function being set to On is not cached.
- Video is not stored in cache memory while a memory card is being accessed, such as during playback, Rec Review, or thumbnail screen display. Picture cache recording of video during that interval is not possible.

Canceling Picture Cache Rec

Set [Project] > [Picture Cache Rec] > [Setting] to [Off] in the web menu, or press an assignable button assigned with the [Picture Cache Rec] function.

Recording to Memory Cards A and B Simultaneously (2-slot Simul Rec)

You can record to both memory card A and memory card B simultaneously by setting [Project] > [Simul Rec] > [Setting] to [On] in the web menu or camera menu.

Recording separately to memory card A and memory card B

You can start/stop recording to each memory card independently using the record START/STOP button or the [2nd Rec START/STOP] button on the ··· (Others) tab.
By factory default, both buttons are set to start/stop simultaneous recording to both memory cards A and B.
When the buttons are set to control recording for different memory cards, the [SDI/HDMI Rec Control] record start/stop control follows the recording state of slot A.

Changing the setting

Set the following using [Project] > [Simul Rec] > [Rec Button Set] in the camera menu.

[Rec Button Set] setting	Buttons and memory cards
Rec Button:<Slot A> <Slot B> 2nd Rec Button: <Slot A> <Slot B>	Starts/stops simultaneously recording to memory cards A and B using either button.
Rec Button:<Slot A> 2nd Rec Button: <Slot B>	The record START/STOP button starts/stops recording to memory card A, and the [2nd Rec START/STOP] button on the ··· (Others) tab starts/stops recording to memory card B.
Rec Button:<Slot B> 2nd Rec Button: <Slot A>	The record START/STOP button starts/stops recording to memory card B, and the [2nd Rec START/STOP] button on the ··· (Others) tab starts/stops recording to memory card A.

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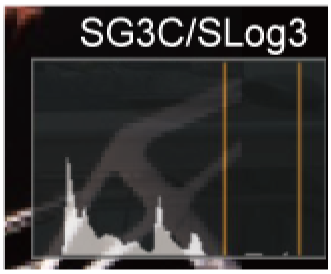
Video Signal Monitor

You can set the type of video signal to display in the camera image panel to waveform, vectorscope, or histogram using [Monitoring] > [Video Signal Monitor] > [Setting] in the camera menu.
The orange line indicates the set values of [Level Marker 1] and [Level Marker 2].
You can also assign the [Video Signal Monitor] function to an assignable button.

Monitoring target display

In Log shooting modes, the color gamut setting or monitor LUT setting information is displayed at the top right of the video signal monitor to indicate the monitor target.



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Clip Flags

You can add an [OK] clip flag to a clip by pressing an assignable button assigned with the [Clip Flag OK] function and selecting [Add OK].
You can delete an [OK] clip flag by pressing the button twice and selecting [Delete Clip Flag].

Hint

- You can also add a clip flag using [Thumbnail] > [Set Clip Flag] in the camera menu.
- The thumbnail screen can be displayed sorted by clip flag type (filtered clip thumbnail screen). For details, see “Operations on Recorded Clips” in “Thumbnail Screen.”

Related Topic

- Operations on Recorded Clips

Breathing Compensation

You can set whether to perform breathing compensation for the lens using [Technical] > [Lens] > [Breathing Compensation] in the camera menu.
This function corrects for the phenomenon in which changes in the angle of view occur as the focus position varies. When breathing compensation is executed, a portion of the image is electronically cropped to maintain a constant angle of view so that the breathing phenomenon does not appear.

Note

- When breathing compensation is enabled, the angle of view and image quality may change slightly.
- Depending on the lens, it may not be possible to correct the change in the angle of view when breathing compensation is enabled.
- Compensation is not possible when a lens that does not support breathing compensation is attached.
- This function is set to Off (fixed) in the following cases.
  - When [Technical] > [Lens] > [Distortion Comp.] is set to [Off] in the camera menu
  - When [Shooting] > [S&Q Motion] > [Setting] is set to [On] in the web menu or camera menu
  - When [Project] > [Rec Format] > [Codec] is set to [RAW] or [RAW & XAVC-I] in the web menu or camera menu

Proxy Recording Overview

This function allows you to simultaneously record low-resolution proxy data at the same time as recording high-resolution original data video.

- For details about supported memory cards, formatting memory cards, and checking the remaining capacity, see “Supported Memory Cards” in “Preparing Memory Cards.”

About the recorded file

The file name extension is “.mp4”.
The timecode is also recorded simultaneously.

Storage destination of the recorded file

The recorded file is stored in the following directory.

Recording media	Folder path
SDXC	/PRIVATE/XDROOT/Sub
CFexpress Type A	/XDROOT/Sub

About the file name

- The file name consists of the clip name recorded on the memory card and an “S03” suffix.
- For clip names, see [TC/Media] > [Clip Name Format] in the camera menu.

Related Topic

- Supported Memory Cards

Recording a Proxy

You can start recording when proxy recording is enabled.

1. **Set [Project] > [Proxy Rec] > [Setting] to [On] in the web menu or camera menu.**

2. **Insert a memory card into a CFexpress Type A / SD card slot.**

   For CFexpress cards, insert with the label facing up.
   For SD cards, insert with the label facing down.

   Note

   - Proxy Rec cannot be set to On at the same time as S&Q Motion or Interval Rec. When Proxy Rec is set to On, these other recording modes are forcibly set to Off.

3. **Press the record START/STOP button.**

   Proxy recording starts.

   Note

   - If the unit is turned off or the memory card is removed while the memory card is being accessed, the integrity of data on the card cannot be guaranteed.
     All data recorded on the memory card may be discarded. Always make sure the memory card access indicator is off before turning off the unit or removing the memory card.
   - Make sure that the memory card does not pop out when inserting or removing it.

To stop shooting

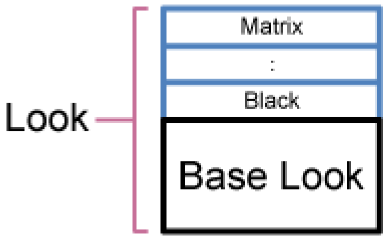
Stop the recording.

To set the audio channel for proxy recording

Set the audio channel for proxy data recording using [Project] > [Proxy Rec] > [Audio Channel] in the camera menu.

Look Overview

When the unit is in Custom mode, you can add adjustments to the black, matrix, and other parameters to create a “look” based on the base look.



You can also quickly select a different look by saving different combinations of settings in scene files.
The unit is provided with a total of seven preset looks.

Selecting a Look

This topic describes how to select a look.

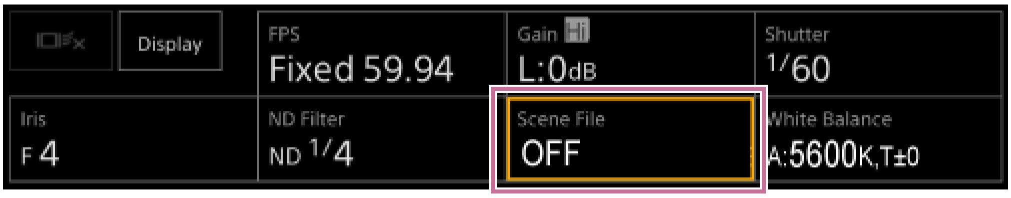
1. **Check that [Project] > [Base Setting] > [Shooting Mode] is set to [Custom] in the web menu or camera menu.**

   Hint

   - In [Custom] mode, the [ISO/Gain] button and [Scene File] button are displayed in the camera basic configuration panel.

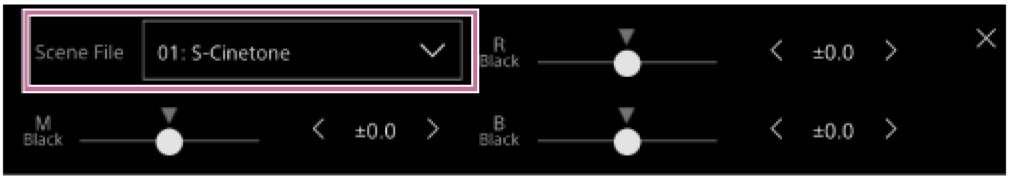
2. **Press the [Scene File] button in the camera basic configuration panel.**

   The frame of the [Scene File] button changes to orange.



   The Scene File adjustment panel appears.

3. **Press the [Scene File] button on the adjustment panel and select a scene file with the desired look from the list.**



   The following presets are configured by factory default.

[Target Display]	[SDR(BT.709)]	[HDR(HLG)]
Scene file 1	[S-Cinetone]	[HLG Live]
Scene file 2	[Standard]	[HLG Natural]
Scene file 3	[Still]	(Not registered)
Scene file 4	[ITU709]	(Not registered)
Scene file 5	[709tone]	(Not registered)
Scene files 6 to 16	(Not registered)	(Not registered)

   Hint

- You can also select a look using [Paint/Look] > [Scene File] > [Recall] in the camera menu. You can also recall a preset look using [Scene File] > [Preset Recall].

Note

- Scene file 5 preset is set to [709tone] with software version 2.0 or later. When updating from software version prior to version 2.0, it is displayed when [Maintenance] > [Reset] > [Factory Default] in the web menu is executed.

Importing a Desired Base Look

You can import a 3D LUT file, created on a computer or other device, as a base look. Up to 16 files can be imported.
File format: CUBE file (*.cube) for a 17-grid or 33-grid 3D LUT created using Catalyst Browse, RAW Viewer, or DaVinci Resolve[*] (by Blackmagic Design Pty. Ltd.).

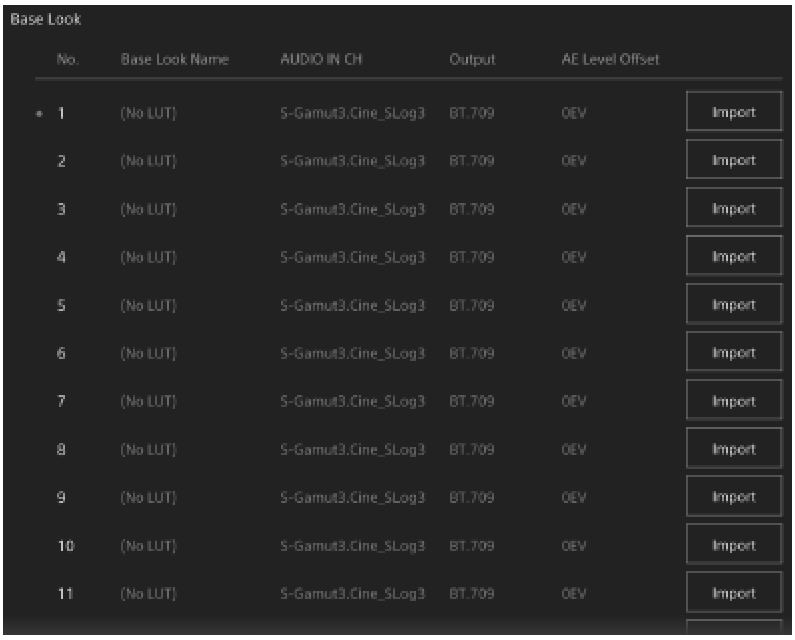
[*] Verified with Resolve V9.0, V10.0, and V11.0.

- Input color gamut/Gamma: [S-Gamut3.Cine/S-Log3] or [S-Gamut3/S-Log3]

1. **Save the 3D LUT file on the device running the Web App.**

2. **Open [Paint/Look] > [Base Look] in the web menu.**

   A list of registered base looks appears.



Base Look

No.	Base Look Name	AUDIO IN CH	Output	AE Level Offset	
• 1	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
2	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
3	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
4	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
5	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
6	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
7	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
8	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
9	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
10	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
11	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import

3. **Press the [Import] button in the row where you want to import the file.**

   The file selection dialog appears.

4. **Select the prepared 3D LUT file.**

   The imported 3D LUT file becomes the base look of the unit.

5. **Select the imported 3D LUT file using [Paint/Look] > [Base Look] > [Select] in the camera menu.**

6. **Configure [Paint/Look] > [Base Look] > [Input] and [Output] in the camera menu to match the attributes of the imported 3D LUT file.**

To adjust for underexposure

If there is a tendency for underexposure when auto exposure is selected when using the imported base look, adjust the look using [Paint/Look] > [Base Look] > [AE Level Offset] in the web menu.

Note

- Just importing a 3D LUT file does not affect the image. Load the imported 3D LUT file using [Paint/Look] > [Base Look] > [Select] in the camera menu.
- If [Input] is not set correctly, the proper look will not be obtained.
- The [Input], [Output], and [AE Level Offset] menu item settings are applied to the base look selected using [Select]. If multiple 3D LUT files are imported, select each 3D LUT file using [Select], and configure [Input], [Output], and [AE Level Offset] individually for each file.
- The configured [Input], [Output], and [AE Level Offset] settings are saved for each 3D LUT file.
- The base look/LUT selection options for imported 3D LUT files are common to [SDR(BT.709)], [HDR(HLG)], and Log shooting modes, but color gamut and gamma conversion are not performed according to these modes.
- 3D LUT files are not deleted when [Maintenance] > [Reset] > [All Reset (except for Network Settings)] is executed in the web menu.
- A ! (3D LUT file attachment error) displayed in front of the [Base Look Name] display indicates that 3D LUT files cannot be attached to clips recorded in Log shooting modes. Import the 3D LUT file again.

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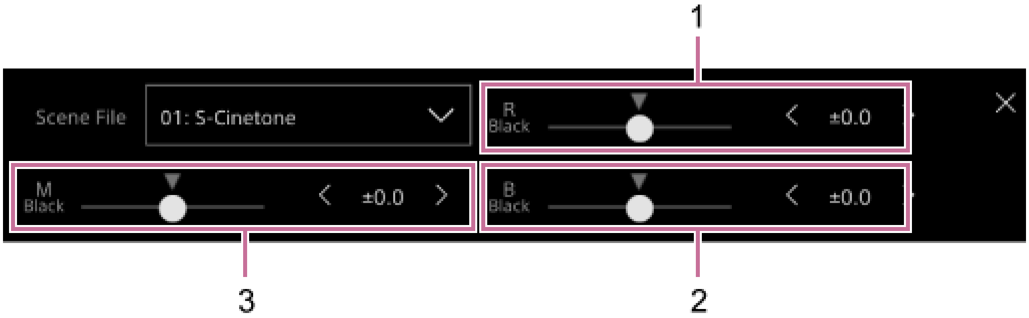
Customizing a Look

You can customize the look based on the base look using the [Master Black], [R Black], and [B Black] sliders in the Scene File adjustment panel in the camera basic configuration panel and [Paint/Look] > [Matrix] and other setup items in the camera menu.
Connect the unit to a TV or monitor, and adjust the picture quality while observing the picture on the TV or monitor screen.



1: [R Black] slider/adjustment buttons
2: [B Black] slider/adjustment buttons
3: [Master Black] slider/adjustment buttons

Note

- When you import a 3D LUT file and apply it to the image, the desired look defined in the 3D LUT file will not be obtained if [Paint/Look] > [Matrix] and settings other than the base look settings in the camera menu are changed.
- You can reset all customized settings using [Paint/Look] > [Reset Paint Settings] > [Reset without Base Look] in the camera menu.

Saving a Look

You can save the current look as a scene file in internal memory using [Paint/Look] > [Scene File] > [Store] in the camera menu.
You can quickly recall a saved look using the Scene File adjustment panel or using direct menu operations.

Note

- If you select another look without saving the current look, the current look is discarded.

Hint

- You can overwrite the preset scene files. To restore a preset scene file, load the look to be restored using [Paint/Look] > [Scene File] > [Preset Recall] in the camera menu, and then save the scene file using [Scene File] > [Store].

To delete a saved look

You can delete a scene file saved in internal memory using [Paint/Look] > [Scene File] > [Delete] in the camera menu.

Hint

- When deleted, it is no longer displayed in the Scene File adjustment panel or the direct menu.

Deleting a Base Look

You can delete imported 3D LUT files individually using [Paint/Look] > [Base Look] > [Delete] in the camera menu.
You can delete all imported 3D LUT files using [Paint/Look] > [Base Look] > [Delete All] in the camera menu.

Note

- Before deleting, check that the base look is not being used in any scene files. If a base look that is being used is deleted, the look of the corresponding scene files will be incorrect.
- Imported 3D LUT files are not deleted when [Maintenance] > [Reset] > [All Reset (except for Network Settings)] is executed in the web menu.
- A deleted base look can no longer be used as a LUT in Log shooting modes.

Shooting with Look Adjustment in Post-Production

By using the unit in Log shooting modes[*1] and recording gradations evenly from dark areas to bright areas, you can make fine adjustments, such as locally restoring the gradations of dark areas and bright areas, in post production. However, when viewing the recorded images on a conventional monitor, the overall contrast will appear low, making focus and exposure adjustments difficult.
You can apply a LUT to the monitor target on the unit to assist various adjustments during shooting. You can also apply the LUT used when shooting automatically upon playback to quickly check the finished result.
LUTs are applied by the following systems. However, only one LUT can be applied.

- SDI output
- HDMI output and streaming
- Proxy clip recorded on recording media
- High-res (main) clip recorded on recording media

[*1] Generic term for Flexible ISO mode/Cine EI mode/Cine EI Quick mode

Applying a LUT to HDMI Output and Streaming

You can apply a LUT to HDMI output and streaming.

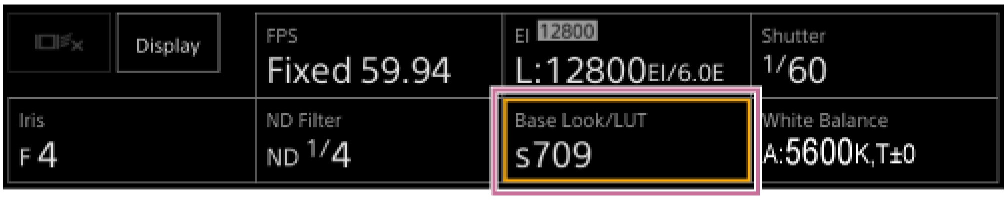
1. **Check that [Project] > [Base Setting] > [Shooting Mode] is set to [Flexible ISO], [Cine EI], or [Cine EI Quick] in the web menu or camera menu.**

   Hint

   - In Log shooting modes, the [Base ISO/Exposure Index] button and [Base Look/LUT] button are displayed in the camera basic configuration panel.

2. **Press the [Base Look/LUT] button in the camera basic configuration panel.**

   The frame of the [Base Look/LUT] button changes to orange.



FPS
Fixed 59.94

EI 12800
L:12800EI/6.0E

Shutter
1/60

Iris
F 4

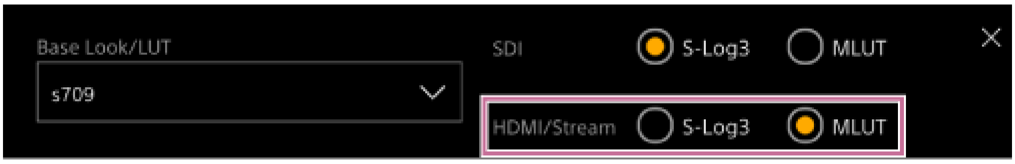
ND Filter
ND 1/4

Base Look/LUT
s709

White Balance
A:5600K,T±0

   The Base Look/LUT adjustment panel appears.

3. **Select [HDMI/Stream] > [MLUT].**



Base Look/LUT
s709

SDI ● S-Log3 ○ MLUT

HDMI/Stream ○ S-Log3 ● MLUT

Note

- The image in the Web App camera image panel is also included in the streaming image.

Hint

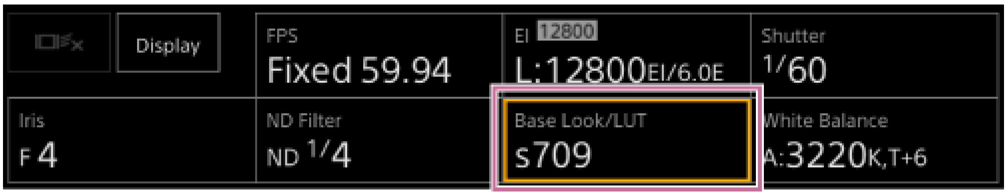
- This can also be set using [Shooting] > [LUT On/Off] > [HDMI/Stream] in the camera menu.
- SDI output can be set in the same way.
- For video on recording media, you can set this using [Shooting] > [LUT On/Off] > [Internal Rec] and [Proxy] in the camera menu.
- A ! (3D LUT file attachment error) displayed in front of the [Base Look/LUT] display indicates that 3D LUT files cannot be attached to clips recorded in Log shooting modes. Import the 3D LUT file again.
  This icon is also displayed when attachment fails due to temporary processing congestion.

Changing a LUT

You can change the LUT to apply.

1. **Press the [Base Look/LUT] button in the camera basic configuration panel.**

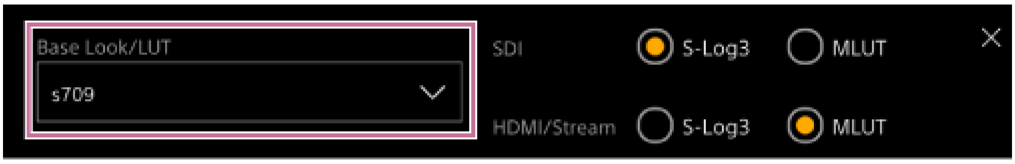
   The frame of the [Base Look/LUT] button changes to orange.



Display
FPS Fixed 59.94
EI 12800 L:12800EI/6.0E
Shutter 1/60
Iris F 4
ND Filter ND 1/4
Base Look/LUT s709
White Balance A:3220K,T+6

   The Base Look/LUT adjustment panel appears.

2. **Press the [Base Look/LUT] button and select the base look to apply.**



Base Look/LUT s709
SDI ● S-Log3 ○ MLUT
HDMI/Stream ○ S-Log3 ● MLUT

Hint

- The unit provides [s709], [709(800%)], and [S-Log3] as preset LUTs.
- You can also import and apply a 3D LUT file. For details, see “Importing a Desired Base Look” and “Deleting a Base Look.”
- This can also be set using [Paint/Look] > [Base Look] > [Select] in the camera menu.

Related Topic

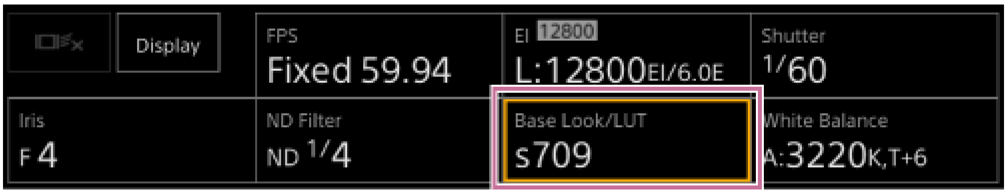
- Importing a Desired Base Look
- Deleting a Base Look

Changing the Distribution of Dark and Bright Areas in the Recorded Image

In Cine EI and Cine EI Quick shooting modes, you can change the distribution of dark areas and bright areas, for example, if you want to prioritize the tone of dark areas over bright areas, by changing the Exposure Index from the base sensitivity.

1. **Press the [Base Look/LUT] button in the camera basic configuration panel.**

   The frame of the [Base Look/LUT] button changes to orange.

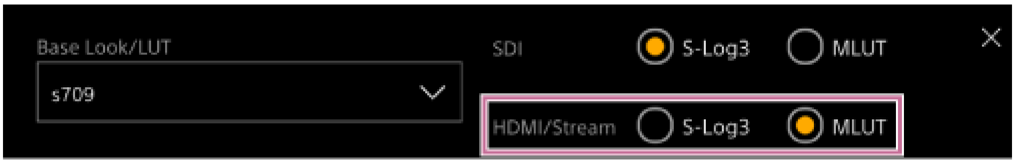


FPS Fixed 59.94
EI 12800 L:12800EI/6.0E
Shutter 1/60
Iris F 4
ND Filter ND 1/4
Base Look/LUT s709
White Balance A:3220K,T+6

   The Base Look/LUT adjustment panel appears.

2. **Select [HDMI/Stream] > [MLUT].**

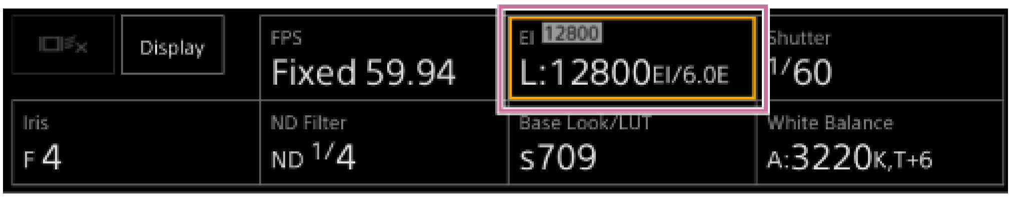
   A LUT is applied to HDMI output and streaming.



Base Look/LUT s709
SDI ● S-Log3 ○ MLUT
HDMI/Stream ○ S-Log3 ● MLUT

3. **Press the [Base ISO/Exposure Index] button in the camera basic configuration panel.**

   The frame of the [Base ISO/Exposure Index] button changes to orange.

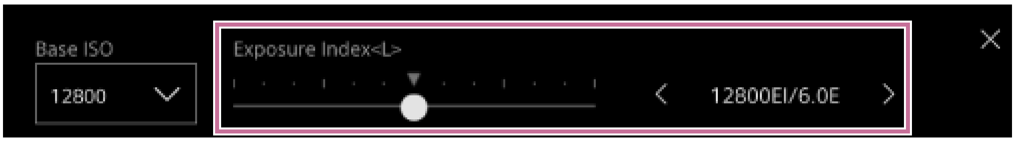


FPS Fixed 59.94
EI 12800 L:12800EI/6.0E
Shutter 1/60
Iris F 4
ND Filter ND 1/4
Base Look/LUT s709
White Balance A:3220K,T+6

   The Base ISO/Exposure Index adjustment panel appears.

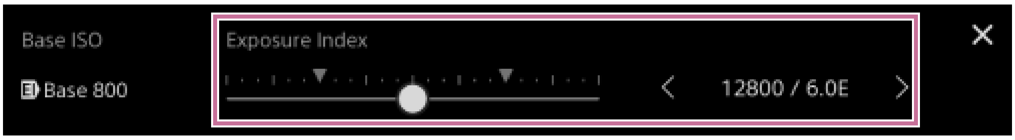
4. **Adjust the exposure index according to the desired distribution of dark and bright areas using the [Exposure Index] slider or [Exposure Index] adjustment buttons.**

   For [Cine EI]



Base ISO 12800
Exposure Index<L> 12800EI/6.0E

   For [Cine EI Quick]
   The base sensitivity is set automatically according to the specified Exposure Index value.



5. **Adjust the lighting and/or ND filter so that the camera image output from [HDMI/Stream] has the appropriate exposure.**

Hint

- This can also be set using [Shooting] > [ISO/Gain/EI] > [Exposure Index] in the camera menu.
- SDI output can be used in the same way.
- The second numerical value of the setting indicates how many steps of brightness information are assigned for bright areas (brightness higher than 18% gray). Areas brighter than these are overexposed.
  Example: In “400EI/5.0E,” 5.0 steps are assigned on the bright side.
- You can also use this as a guide to check the tone of dark and bright areas during shooting. Remember to return to the original EI value after checking the exposure. Also, in Cine EI Quick mode, be careful to not adversely affect the base sensitivity.

Recording RAW Video

You can record the RAW video signal output from the SDI OUT connector of the unit to a supported external recorder. The supported RAW output formats are shown below.

System frequency	[Codec]	[RAW Output Format]
59.94 / 50 / 29.97 / 25 / 23.98	RAW	4096×2160
	RAW	3840×2160
	RAW & XAVC-I	4096×2160
	RAW & XAVC-I	3840×2160
24	RAW	4096×2160
	RAW & XAVC-I	4096×2160

1. **Connect an external RAW recorder to the SDI OUT connector of the unit.**

2. **Set [Project] > [Base Setting] > [Shooting Mode] to [Cine EI], [Cine EI Quick], or [Flexible ISO] in the web menu or camera menu.**

3. **Set the angle of view (FF only) using [Project] > [Rec Format] > [Imager Scan Mode] in the web menu or camera menu.**

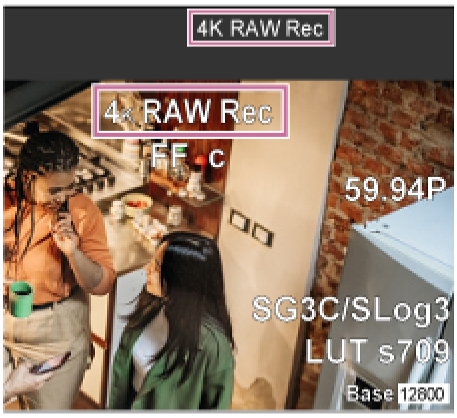
4. **Set [Project] > [Rec Format] > [Codec] to [RAW] in the web menu or camera menu.**

   Selecting [RAW & XAVC-I] will simultaneously record video to an external RAW recorder and video to the memory cards in the unit.

5. **Set the resolution using [Project] > [Rec Format] > [RAW Output Format] in the web menu or camera menu.**

6. **Check that the external recorder is turned on, then press the record START/STOP button on the live operation screen.**

   The RAW video recording status is indicated by an icon in the camera image panel.



Note

- The recording control signal is output from the SDI OUT connector of the unit, but it is not possible to get the status of the external recorder. Accordingly, the unit may indicate RAW video recording is in progress when the external recorder is not actually recording. Check the indicator on the external recorder to obtain the correct operating status.

Note

- When recording is started on an external recorder without using the record START/STOP button on the live operation screen, clips may not be recorded properly.

Recording RAW Video in Slow & Quick Motion Mode

You can record RAW video in Slow & Quick Motion mode.

- For details about the supported frame rates for shooting, see “Slow & Quick Motion.”

Related Topic

- Slow & Quick Motion

Switching the Bokeh Control Function On/Off

You can easily adjust the degree of bokeh by linking the ND filter and gain to the iris operation.

Switching the bokeh control function on/off

This function can be enabled only when adjusting the exposure manually. Set the ND filter to variable mode, then set the iris, gain, shutter, and ND filter to manual adjustment.
You can switch the bokeh control function on/off using [Shooting] > [Iris] > [Bokeh Control] in the camera menu.
When the bokeh control function is set to On, a B (B) icon is displayed on the ND filter and gain indicators.

Note

- This function is enabled only on E-mount lenses that can communicate with the unit.
- The maximum effect of this function can be obtained using a Sony E-mount lens.
- The bokeh control function is set to Off when any of the following operations is performed.
  - When the unit is turned off
  - When any of the iris, gain, shutter, or ND filter is set to Auto
  - When the shooting mode is switched
  - When the ND filter is set to clear or preset mode
  - When the lens is removed
  - When the unit reboots, for example, after switching the frequency

Hint

- You can also assign the [Bokeh Control] function to an assignable button and switch the bokeh control function between On and Off using the button.

Adjusting the Degree of Bokeh

Adjust the settings in steps 2 to 4 as required.

1. **Set the bokeh control function to On.**
2. **Fully open the iris.**
3. **Set the ND filter to 1/128.**
4. **Set the gain to 0 dB and use lighting to get the correct exposure.**
5. **Adjust the focus.**
6. **Adjust the iris.**

   The degree of bokeh changes.

Note

- The appearance may vary depending on the operation speed, lens, shooting settings, and subject, and also the brightness may change. Performing a camera test before shooting is strongly recommended.
- The brightness may change when the iris operation direction changes, such as when opening the iris after closing it or when closing the iris after opening it. In this case, adjust slightly more than required beforehand and then back up a little, check the brightness, and then start shooting. For example, if you want to open the iris to F8 aperture and blur the background, first close the aperture past F8 and then return to F8, check the brightness, and start shooting.
- Perform bokeh control operations slowly. If you need to speed up the operation, try adjusting gradually while checking the changes to the image.

Hint

- When the bokeh control function is set to On, the ND filter and gain operate together to offset changes in exposure due to iris adjustment, allowing you to change the degree of bokeh.
- The bokeh control is first linked to the ND filter in response to the iris operation. When the ND filter can no longer be changed, the gain is linked.
- In MF mode, it is recommended that you first open the iris and then adjust the focus.
- If you use the auto ND filter instead of the bokeh control function, the ND filter follows the change in the brightness of the subject.

Display during gain link operation

When the bokeh control function is set to On, the gain may change as the iris is adjusted.
When the gain link is active and the gain changes, a message appears at the top of the screen and the B (B) icon on the gain indicator blinks.

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Saving and Loading Configuration Data Overview

You can save the settings of the unit as configuration data using the Web App. This allows you to quickly recall an appropriate set of menu settings for the current situation.
With this unit, you can save almost all settings related to camera functions, other than the following note, as an ALL file (file with all settings).

Note

- Network function settings and authentication information are not saved. For details about saved items, see “List of Menu Items.”

Related Topic

- List of Menu Items

Saving an ALL File

This topic describes how to save an ALL file.

Note

- An ALL file cannot be saved during PTZ auto framing operation. Turn PTZ auto framing off and then save an ALL file.

1. **Open [Project] > [All File] in the web menu.**
2. **Press the [Save All File] > [Save] button.**

   The web browser will download a file named all-file.ALL momentarily.
3. **Specify a location and file name for the downloaded all-file.ALL file, and save the file.**

   For details about file operations, refer to the operating instructions of your device.

Loading an ALL File

This topic describes how to load an ALL file.

Note

- The unit will reboot automatically after loading configuration data. After rebooting, reload the page in the web browser.
- An ALL file cannot be loaded during PTZ auto framing operation. Turn PTZ auto framing off and then load an ALL file.

1. **Open [Project] > [All File] in the web menu.**
2. **Press the [Load All File] > [Load] button.**

   The open file dialog appears on the device running the Web App.
3. **Open the file you want to load.**

   For details about file operations, refer to the operating instructions of your device.
4. **When the load file name confirmation screen appears, press the [OK] button.**
5. **When the execution result screen appears, press the [OK] button.**
6. **Wait for the unit to reboot, then reconnect the Web App.**

About File Transfer

You can transfer a proxy clip or original clip recorded on the unit to a server on the Internet or to a server on the local network.

Note

- When the power supply is set to standby state, file transfers are placed on hold even though the unit is still powered.

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Registering a File Transfer Destination

You can register a transfer destination server before starting a file transfer.

1. **Select [Network] > [File Transfer] > [Default Upload Server] > [Server Settings1] (or [Server Settings2], [Server Settings3]) in the web menu.**

   Hint

   - The name of the selection option will change according to [Display Name] configured in the next step.

2. **Configure the following items for [Network] > [FTP Server 1] to [FTP Server 3] in the web menu.**

   [Display Name]
   Enter the name of the server to display in the transfer job list when selecting a transfer destination server.
   [Service]
   Displays the server type.
   [FTP]: FTP server
   [Host Name]
   Enter the address or host name of the server.
   [Port]
   Enter the port number of the server to connect.
   [User Name]
   Enter the user name.
   [Password]
   Enter the password.
   [Passive Mode]
   Turn passive mode on/off.
   [Destination Directory]
   Enter the name of the directory on the destination server.

   Note

   - If characters that are invalid on the destination server are entered in [Destination Directory], files will be transferred to the user’s home directory. Invalid characters will vary depending on the server.

   [Using Secure Protocol]
   Set whether to perform secure FTP transfer.
   [Root Certificate]
   Load/clear a certificate.
   [Load]: Load a CA certificate. Loads PEM-format certificates.
   [Clear]: Clear the CA certificate.
   [None]: Do not load or clear a certificate.

   Note

   - Set the clock of the unit to the correct time before loading a CA certificate.
   - When recording in XAVC-I 4096×2160P/3840×2160P 59.94/50P, [Load] cannot be selected.

   [Root Certificate Status]: Displays the load status of the certificate.

> **[Reset]:** Resets the Server Settings settings to the defaults.

Uploading a Proxy Clip on a Memory Card from the Thumbnail Screen

You can upload proxy clips on a memory card individually from the thumbnail screen.

1. **Press the [Thumbnail] button on the live operation screen of the Web App.**

   The display changes from the camera image to the thumbnail screen.

2. **Select [Thumbnail] > [Transfer Clip (Proxy)] > [Select Clip] in the camera menu.**

   To transfer all proxy clips simultaneously, select [Transfer Clip (Proxy)] > [All Clips].
   Clips can be transferred from the thumbnail screen or the filtered clip thumbnail screen.

3. **Select the clip you want to transfer using the [Set] button, and press the [Menu] button.**

   A transfer confirmation screen appears.

4. **Select [Execute].**

   The files corresponding to the selected clip are registered as a transfer job, and uploading begins.
   When the transfer job is successfully registered, the transfer result screen appears.

5. **Press the [OK] button.**

Note

- Up to 200 transfer jobs can be registered.

Uploading an Original Clip on a Memory Card from the Thumbnail Screen

You can upload an original clip on a memory card from the thumbnail screen.

1. **Press the [Thumbnail] button on the live operation screen of the Web App.**

   The display changes from the camera image to the thumbnail screen.

2. **Select [Thumbnail] > [Transfer Clip] > [Select Clip] in the camera menu.**

   To transfer all original clips simultaneously, select [Transfer Clip] > [All Clips].
   Clips can be transferred from the thumbnail screen or the filtered clip thumbnail screen.

3. **Select the clip you want to transfer using the [Set] button, and press the [Menu] button.**

   A transfer confirmation screen appears.

4. **Select [Execute].**

   The files corresponding to the selected clip are registered as a transfer job, and uploading begins.
   When the transfer job is successfully registered, the transfer result screen appears.

5. **Press the [OK] button.**

Note

- Up to 200 transfer jobs can be registered.

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Checking the File Transfer Status

You can check the status of file transfer by selecting [Network] > [File Transfer] > [View Job List] in the camera menu.

Note

- Up to 200 transfer jobs can be registered.
- The transfer jobs are retained when the unit is switched to standby state, but up to 10 minutes of recent progress information may be lost if the power is disconnected by any other means.
- If an error occurs during file transfer, the transfer of a clip with the same name as a transferred clip may not be resumed depending on the settings and status of the transfer destination server. In this case, check the transfer destination server settings and status.

Hint

- If [Network] > [File Transfer] > [Auto Upload (Proxy)] is set to [On] in the camera menu and a network connection exists, proxy files are automatically uploaded to the server specified using [Default Upload Server] when recording ends.

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Uploading Using Secure FTP

You can upload files with encryption using FTPS in Explicit mode (FTPES) for the connection with the destination file server.
For secure FTP transfer, set [Using Secure Protocol] to [On] in the destination file server settings and load a certificate.

- For details about configuration, see “Registering a File Transfer Destination.”

Related Topic

- Registering a File Transfer Destination

About Streaming

The unit can simultaneously stream the video and audio that is output from the HDMI connector.

Note

- To use streaming as the main video, set [Monitoring] > [Output Display] > [SDI] to [On] and [HDMI/Stream] to [Off] in the web menu, and monitor the camera status on an SDI monitor.
- If a monitor connected to the HDMI connector does not support the HDMI output format configured using the [Monitoring] menu in the web menu or camera menu, the camera image will not be output to the Web App. Streaming video also cannot be output.
- The streaming resolution cannot be set higher than the HDMI output signal resolution.
- When viewed by multiple users, the image may become distorted depending on the codec settings.

The unit supports the following streaming methods. The video codecs available for selection are shown in parentheses.

- RTSP (H.264, H.265)
- RTMP (H.264)[*1]
- SRT-Caller (H.264)
- SRT-Listener (H.264)
- NDI|HX (H.264, H.265)

Configure the streaming format setting, video codec setting, and audio codec setting in that order.

Streaming format	Codec setting			
	Video Stream 1	Video Stream 2	Video Stream 3	Audio Stream
RTSP	● video 1	●[*2] video 2	–	●
RTMP	●	–	–	●[*1]
SRT	●	–	–	●
NDI|HX	● Main	● Sub	–	●
Web App	–	–	●	–

●: Enabled, –: Disabled

[*1] RTMP can be selected when [Stream] > [Audio Stream] is set to [On] in the web menu.
[*2] When the system frequency is 59.94 or 50 and the HDMI output format is 3840×2160 or higher, video 2 output is not available.

Hint

- The image in the Web App camera image panel is also a streaming system.

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Setting the Streaming Format

Set the streaming format using [Stream] > [Stream] > [Stream Setting] > [Setting] in the web menu.

When [Setting] is set to [RTSP]

In RTSP streaming, the image from a single camera can be viewed simultaneously by up to five users.
You can set up to two video codec modes.

[Port Number]
Sets the port number to use for RTSP streaming. The default value is 554.
Changing the setting will reboot the RTSP server.

[Time Out]
Specifies the timeout time of the Keep-Alive command for RTSP streaming. The timeout time can be set in the range 0 seconds to 600 seconds. The default value is 60 seconds.
When set to 0 seconds, timeout due to the Keep-Alive command does not occur.

[Authentication]
Sets whether authentication is required.

[Video Port Number 1], [Video Port Number 2]
Specifies the image data communications port number to use for RTSP unicast streaming. The factory default value for Video Port Number 1 is 51000. The factory default value for Video Port Number 2 is 53000. Specify an even number in the range 1024 to 65534. The number set here and the subsequent odd number, obtained by adding 1, become the two port numbers used for image data communications and control.
[Video Port Number 1] and [Video Port Number 2] correspond to [Stream] > [Video Stream] > [Video Stream 1] and [Video Stream 2].

[Audio Port Number]
Specifies the audio data communications port number used for RTSP unicast streaming. The default value is 57000. Specify an even number in the range 1024 to 65534. The number set here and the subsequent odd number, obtained by adding 1, become the two port numbers used for audio data communications and control.

When [Setting] is set to [RTMP]

The video codec mode that can be used for RTMP is H.264 only. To use RTMP, [Stream] > [Audio Stream] must be set to [On] in the web menu.

[Server URL]
Sets the upload destination URL. Specify a character string beginning with “rtmp://” or “rtmps://”.

[Stream Key]
Enter the stream key obtained from the site you are using. Pressing the [Clear] button will clear the entry.

Note

- Exercise caution when handling the stream key. If the stream key is known by a third party, there is a risk of spoofing the stream.

[Root Certificate]
Imports the root certificate required for streaming using the RTMPS protocol. To import the root certificate, press the [Load] button and select a root certificate. Press the [OK] button in the file selection dialog to import the selected file into the unit. If there is an imported root certificate in the unit, the root certificate will be updated. To delete an imported root certificate, press the [Delete] button on the setup screen. The root certificate status is displayed in [Root Certificate Status].

Note

- Import the root certificate required by the streaming service.

When [Setting] is set to [SRT-Caller] or [SRT-Listener]

The video codec mode is H.264 only.

[Destination]
Displayed when the streaming mode is set to [SRT-Caller]. Sets the connection destination URL.

[Port Number]
Displayed when the streaming mode is set to [SRT-Listener]. Sets the port number on which to listen. The default value is 4201.

[Latency]
Sets the latency in the range 20 ms to 8000 ms. The default value is 120.

[TTL]
Sets the TTL value in the range 1 to 255. The default value is 64.

[Encryption]
Selects the encryption method. Select Off, AES128, or AES256. The default value is Off.

[Passphrase]
Sets the passphrase used for encryption. Pressing the [Clear] button will reset the configured passphrase.

[ARC]
To enable the Adaptive Rate Control function, set to On.
When the Adaptive Rate Control function is enabled, interruptions in the image caused by communication line congestion can be reduced.

When [Setting] is set to [NDI|HX]

An NDI|HX license is pre-installed in software version 3.00 and later.

Note

- The unit complies with NDI® HX2 by Vizrt NDI AB.
- The unit can send video to NDI® HX2 compatible software applications and hardware over the network.

[License]
Displays the license information.

[Source Name]
Displays the source name.

[Group]
To enable the NDI grouping function, set to On.
[Group Name]: Sets the NDI group name. Multiple settings can be configured separated by a comma.

[Discovery Server 1], [Discovery Server 2]
Sets NDI discovery server 1 and NDI discovery server 2.

[Reliable UDP Mode]
To enable Reliable UDP mode, set to On.

[Multicast Mode]
To enable multicast streaming, set to On.
[Multicast Prefix]: Sets the prefix to use for multicast streaming.
[Multicast Netmask]: Sets the netmask that determines the multicast address range.
[Multicast TTL]: Sets the TTL value for multicast streaming in the range 1 to 256. The default value is 3.

[Multi-TCP Mode]
To enable Multi-TCP mode, set to On.

[Unicast UDP Mode]
To enable Unicast UDP mode, set to On.

About 3rd-party services and software

Different terms of use may apply.

- The provision of services and software updates may be interrupted or terminated without notice.

- The description of services and software is subject to change without notice.
- Separate registration and subscription may be required.

Sony will not be liable for any claims made by users or a third party due to the use of services and software of other companies.

Setting the Video Codec for Streaming

Set the video codec using [Stream] > [Video Stream] in the web menu.

[Video Stream 1], [Video Stream 2], [Video Stream 3]

You can set up to three image codec modes. Configure the following settings separately for each image mode.
[Video Stream 3] is used for the Web App camera image panel display.

Note

- When [Stream] > [Stream Setting] > [Setting] is set to [RTMP], [SRT-Caller], or [SRT-Listener], some of the [Video Stream 1], [Video Stream 2], and [Video Stream 3] settings ([Codec], [Size], [Frame Rate], [Bit Rate Compression Mode]) have default values.

[Codec 1], [Codec 2], [Codec 3]

Select [H.264], [H.265], or [Off]. Note that [Codec 1] cannot be set to [Off]. Also, [Codec 3] is set to [JPEG] (fixed).

Note

- The following symptoms may occur depending on the combination of various settings, such as the picture size, frame rate, and bit rate of [Codec 1], [Codec 2], and [Codec 3].
  - Increased video latency.
  - Frame skipping during video playback.
  - Intermittent audio.
  - Slow camera response to various commands.
  - Slow camera response to operations from a remote controller.
  - Slow monitor screen display and configuration operations.

  If you experience these symptoms, reduce the values of the picture size, frame rate, and bit rate parameters, or change the values of other setup parameters to resolve the issue.
- When [Stream] > [Stream Setting] > [Setting] is set to [RTMP], [SRT-Caller], or [SRT-Listener], [Codec 1] is set to [H.264] (fixed). [Codec 2] is set to [Off] (fixed).
- When the picture size or system frequency of the HDMI output is changed, [Codec 2] is set to [Off].
- During PTZ auto framing execution, when [Stream] > [Stream] > [Stream Setting] > [Setting] is set to [RTSP] in the web menu, [Codec 2] is set to [Off] (fixed).

[Size 1], [Size 2], [Size 3]

Selects the picture size to stream from the camera.
The available picture size options will vary depending on the picture size of the HDMI output.

Note

- When the picture size or system frequency of the HDMI output is changed, the maximum picture size will be selected.

[Frame Rate 1], [Frame Rate 2], [Frame Rate 3]

Sets the frame rate of the image.
“fps” units indicate the number of frames streamed per second.
The available frame rate options will vary depending on the picture size of the HDMI output.

Note

- When the picture size or system frequency of the HDMI output is changed, the maximum frame rate will be selected.
- During PTZ auto framing execution, [Frame Rate 2] is restricted to 10 fps or lower.

[I-Picture Mode 1], [I-Picture Mode 2]
Sets the method for specifying the I-picture insertion interval for H.264 and H.265 to [Time] or [Frame].
Cannot be set for [Codec 3].
[Time]: Sets the I-picture insertion interval as a time.
[Frame]: Sets the I-picture insertion interval as a number of frames.
[I-Picture Interval 1], [I-Picture Interval 2]
Sets the I-picture insertion interval in units of seconds. Sets a value in the range 1 second to 5 seconds. The default value is 1 second.
Cannot be set for [Codec 3].
[I-Picture Ratio 1], [I-Picture Ratio 2]
Sets the I-picture insertion interval for H.264 and H.265 as a number of frames in the range 15 to 300. The default value is 300 frames.
Cannot be set for [Codec 3].
[Profile 1], [Profile 2]
Sets the H.264 or H.265 image codec profile.
[H.264]: Select [high], [main], or [baseline] profile.
[H.265]: Select [main] or [main10] profile. When two video codecs are enabled, only the [main] profile selection option is available.
Image compression efficiency increases in the order of [high], [main], and [baseline]. Select a profile supported by your system.
When [H.265] is set to [main10], operation is in [main10] when the HDMI output is YCrCb or in [main] when the HDMI output is RGB.
Cannot be set for [Codec 3].
[Bit Rate Compression Mode 1], [Bit Rate Compression Mode 2]
Select [CBR] or [VBR].
To maintain a constant bit rate, select [CBR]. To maintain image quality, select [VBR].
Cannot be set for [Codec 3].

Note

- The frame rate and bit rate actually streamed may differ from the set values, depending on the picture size, shooting scene, network environment, and other factors.
- When [Stream] > [Stream Setting] > [Setting] is set to [RTMP], [SRT-Caller], or [SRT-Listener], [Bit Rate Compression Mode 1] is set to [CBR] (fixed).

[Bit Rate 1], [Bit Rate 2]
You can set the bit rate per video stream when [Bit Rate Compression Mode] is set to [CBR]. Setting a high bit rate allows you to stream high image quality video.
Cannot be set for [Codec 3].
[Quality 1], [Quality 2], [Quality 3]
Sets the image quality in the range 1 to 10. A value of 10 sets the highest image quality. The default value is 6.
For [Quality 1] and [Quality 2], you can set H.264 image quality by setting [Bit Rate Compression Mode] to [VBR] and [Codec] to [H.264]. You can set H.265 image quality by setting [Bit Rate Compression Mode] to [VBR] and [Codec] to [H.265].

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Setting the Audio Codec for Streaming

Set the audio codec using [Stream] > [Audio Stream] in the web menu.
[Setting]
To enable audio streaming, set to On.

Note

- To select RTMP, always set to On beforehand.

[Codec]
Selects the type of codec to use for streaming audio.
[AAC (256kbps)]: Select to prioritize the sound quality.
[AAC (128kbps)]: Select to prioritize the data capacity.
This setting has no affect on the clip recorded by the unit or the audio signal embedded in the HDMI/SDI signal.

Starting/Stopping Streaming

For [RTSP], [SRT-Listener], and [NDI|HX]

The unit waits for a streaming delivery request.
Launch a client application for viewing streaming and access the URL shown in the following table.
Enter the values for the user name and password that are configured on the unit.

Streaming format		URL
RTSP	Video Stream 1	rtsp://<camera_address>:<Port>/video1
	Video Stream 2	rtsp://<camera_address>:<Port>/video2
SRT-Listener		srt://<camera_address>:<Port>
NDI|HX		Refer to the operating instructions for the NDI|HX compatible client device.

<camera_address>: IP address of the unit
<Port>: Listener port configured using [Port Number]

Note

- Playback in all applications or devices is not guaranteed.

For [RTMP] and [SRT-Caller]

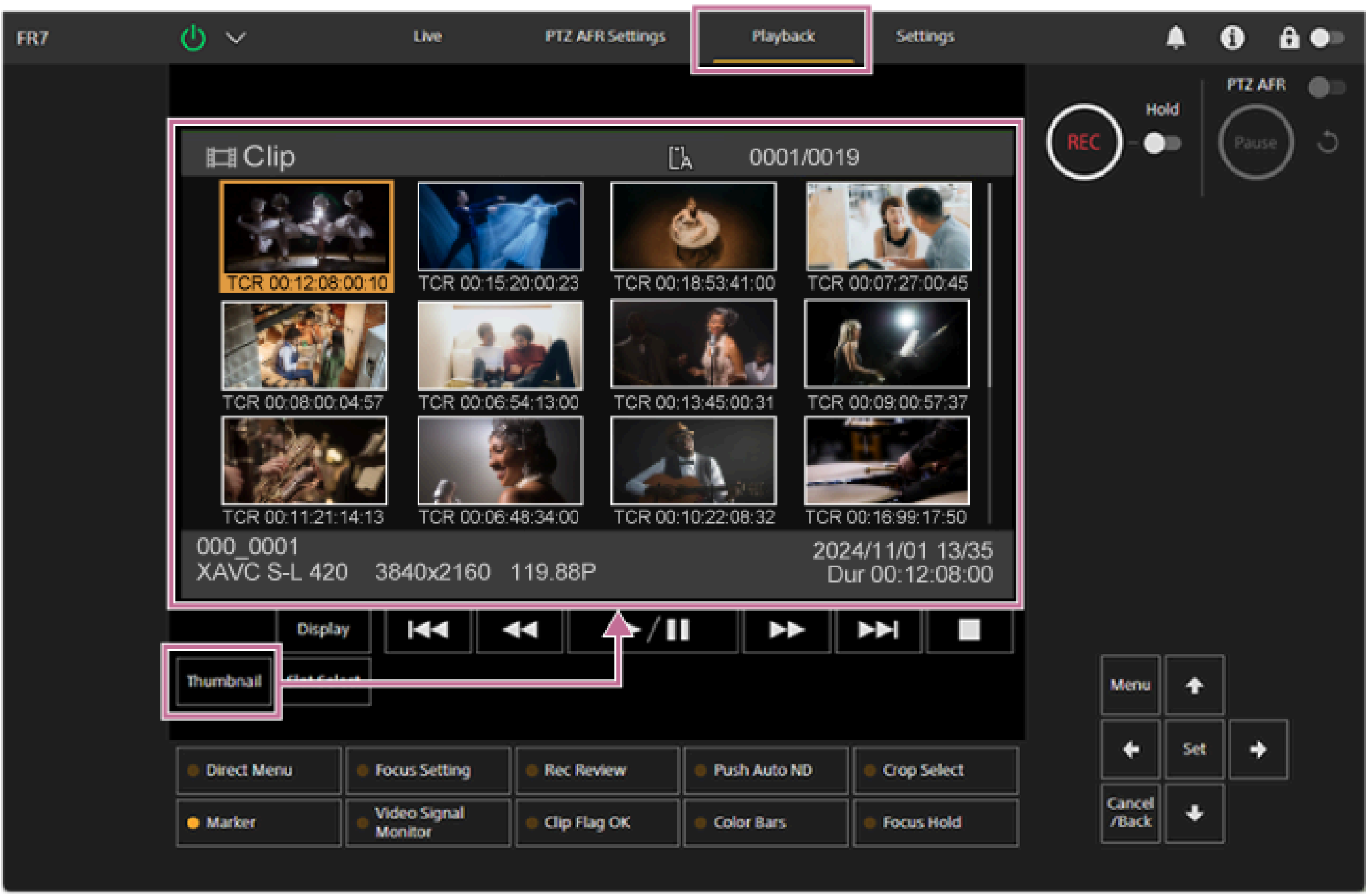
Press the [Stream now] button on the (Stream) tab of the live operation screen to start streaming. The button changes to [Stop stream], and the [Stream] icon appears at the top of the camera image panel.
Press the [Stop stream] button during streaming to stop streaming. The button changes back to [Stream now], and the [Stream] icon at the top of the camera image panel disappears.

Note

- Playback in all applications or devices is not guaranteed.

Thumbnail Screen

When you press the [Thumbnail] button on the playback operation screen or the THUMBNAIL button on the infrared remote control, clips recorded on the memory card are displayed in the camera image panel. This display on the camera image panel is referred to as the thumbnail screen.
You can select a clip on the thumbnail screen and start playback of that clip.
Pressing the [Thumbnail] button during thumbnail screen display closes the thumbnail screen and returns to the shooting image display.

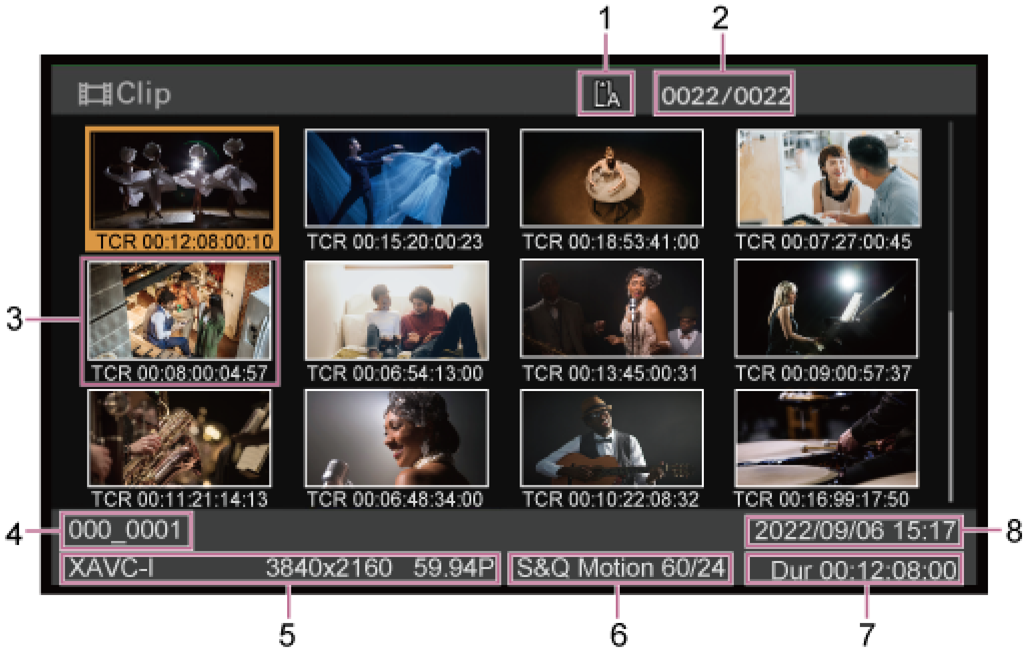


Note

- Only the clips recorded in the currently selected recording format are displayed on the thumbnail screen. If an expected recorded clip is not displayed, check the recording format. Take special note of this fact before formatting (initializing) media.

Screen layout

The thumbnail of a selected clip is displayed with an orange background.
Information for the selected clip is displayed at the bottom of the screen.



1. **Selected memory card**
   A lock icon appears on the right if the memory card is write-protected.

2. **Clip number/total number of clips**

3. **Thumbnail (index picture)**
   Displays the index picture of a clip. When a clip is recorded, its first frame is automatically set as the index picture. Clip/frame information is displayed below the thumbnail. You can change the information displayed using [Thumbnail] > [Customize View] > [Thumbnail Caption] in the camera menu.

4. **Clip name**
   Displays the name of the selected clip.

5. **Recording format**
   Displays the file format of the selected clip.

6. **Special recording information**
   Displays the recording mode only if the clip was recorded using a special recording mode.
   For Slow & Quick Motion clips, the frame rate is displayed on the right.

7. **Clip duration**

8. **Creation date**

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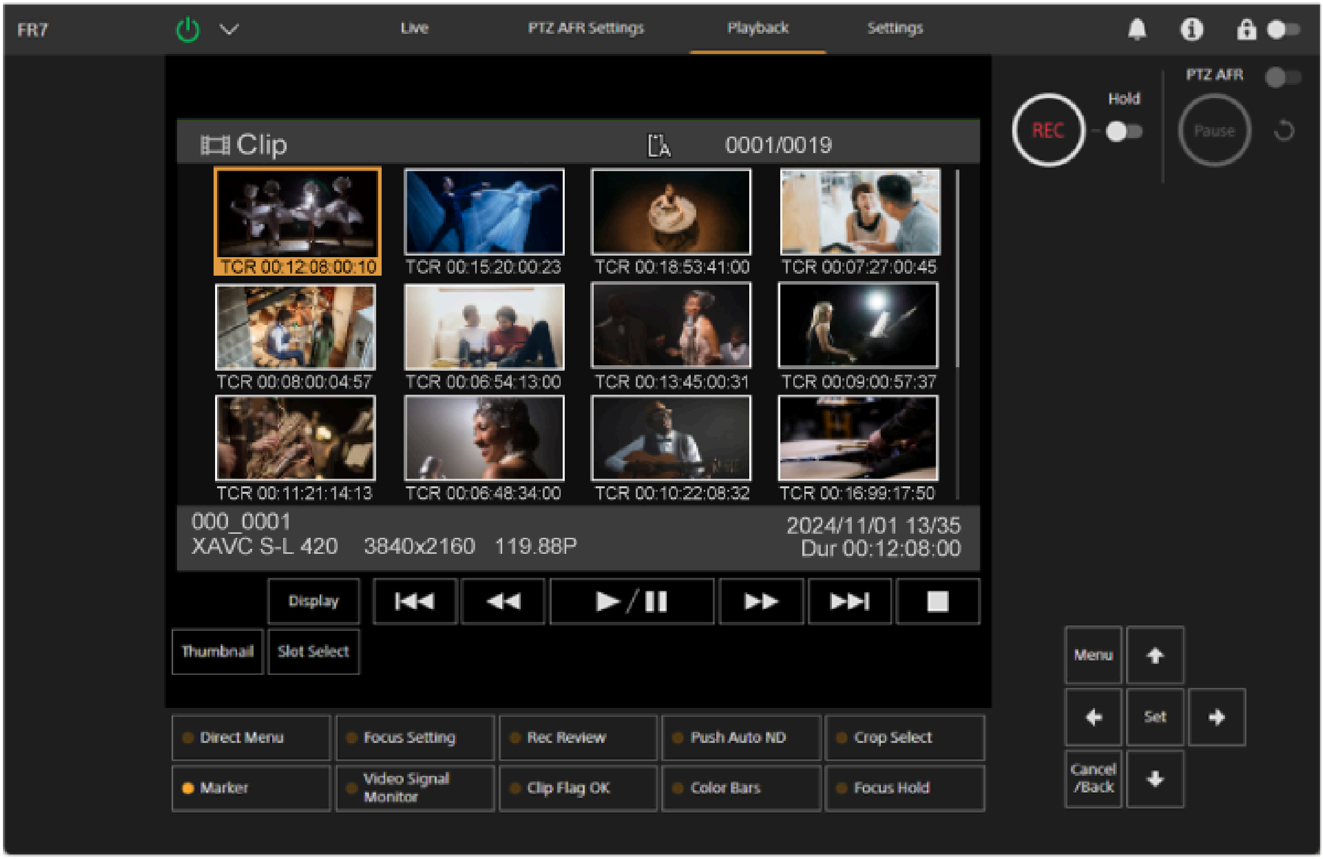
Playing Recorded Clips

You can play recorded clips when the unit is in recording standby (Stby) mode.
This topic describes how to play recorded clips using the GUI control panel.

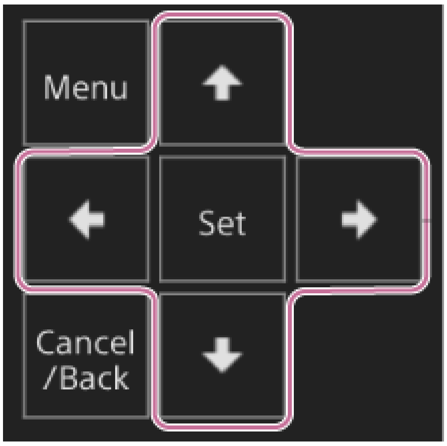
1. **Insert the memory card to play.**

2. **Press the [Thumbnail] button.**

   The clip thumbnails appear.



3. **Use the arrow buttons in the GUI control panel to move the cursor to the thumbnail for the clip you want to play.**



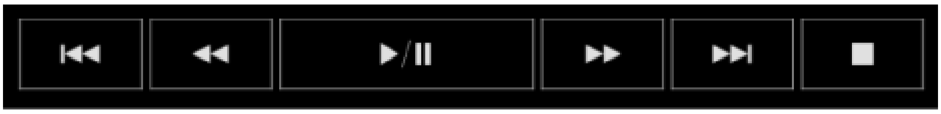
Note

- Clips cannot be selected by touch operation.

4 **Press the [Set] button in the GUI control panel.**

Playback begins from the start of the selected clip.

5 **Operate the playback control panel as required.**



Button	Function
▶/II (Play/Pause) button	Plays a clip. During playback, pauses the clip.
▶▶ (Fast Forward) button, ◀◀ (Fast Reverse) button	Plays a clip at high speed. When the button is pressed, the playback speed changes in three steps.
|◀◀ (Previous) button, ▶▶| (Next) button	Jumps to start of clip or the previous/next clip.
■ (Stop) button	Stops playback and switches to the shooting screen.

Hint

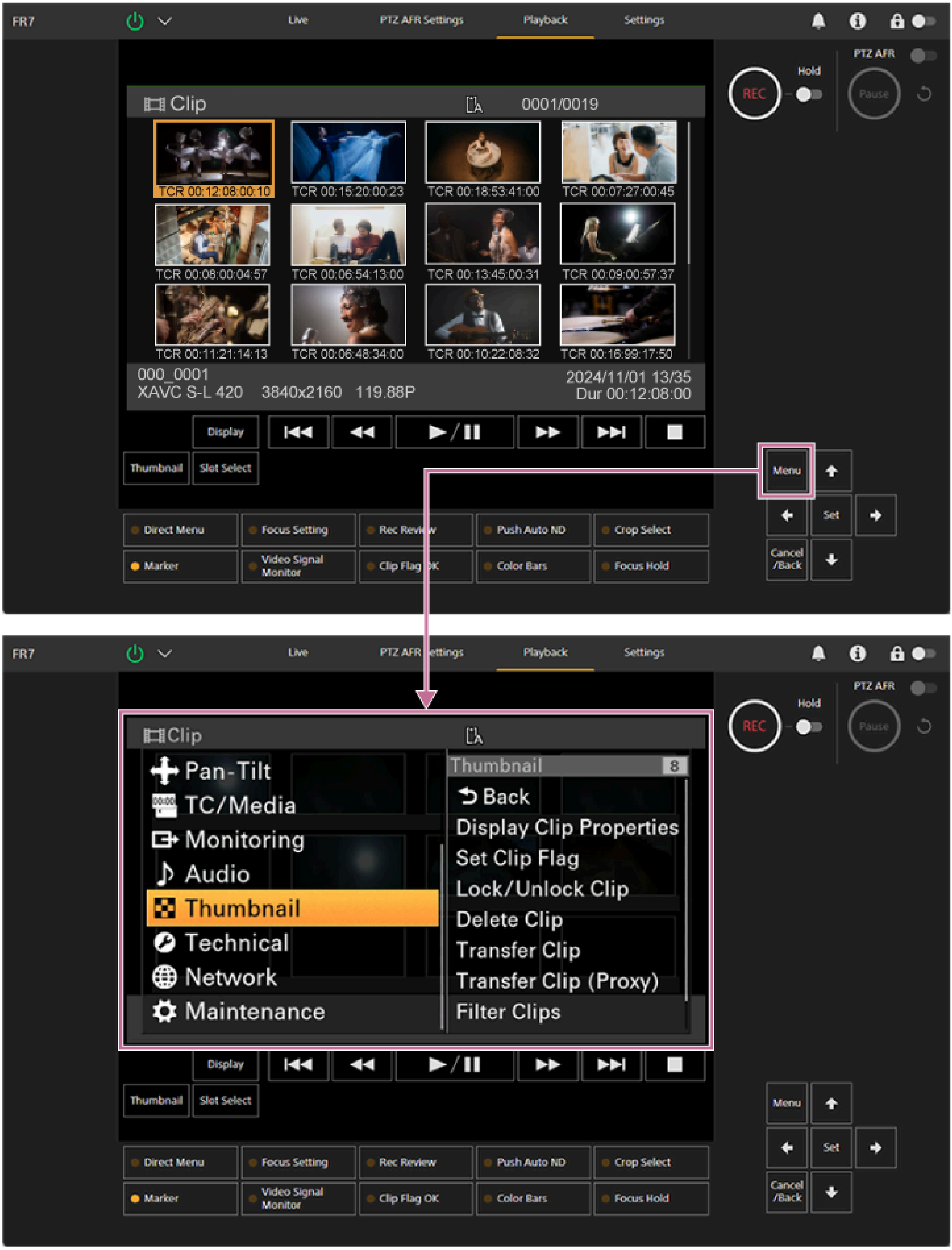
- You can also control operation using the GUI control panel.
  - Play: Press the [Set] button.
  - Playback pause: Press the [Set] button during playback. Press again to return to normal playback.
  - Jump to start of clip/start of next clip: Press the left button/right button.
  - Fast forward/reverse: Press and hold the left button/right button. The playback returns to normal speed when you release the button.
  - Stop playback: Press the [Cancel/Back] button.

Note

- There may be momentary picture breakup or still image display at the boundary between clips. You cannot operate the unit during this period.
- When you select a clip in the thumbnail screen and begin playback, there may be momentary picture distortion at the start of the clip. To view the start of the clip without distortion, pause playback, press the |◀◀ (Previous) button to return to the start of the clip, and start playback again.

Operations on Recorded Clips

On the thumbnail screen, you can operate the clips or check clip properties using the [Thumbnail] menu in the camera menu.
Press the [Menu] button on the playback operation screen to display the camera menu in the camera image panel.
You can perform the following operations using the [Thumbnail] menu in the camera menu.



Hint

- You can also press the [Menu] button on the live operation screen to display the camera menu.

Operations using the [Thumbnail] menu in the camera menu

Select a function to operate using the arrow buttons in the GUI control panel and press the [Set] button.

Press the [Cancel/Back] button to return to the previous screen.

Note

- Some items cannot be selected, depending on the state when the menu was displayed.

Menu items for clip operations

The [Thumbnail] menu in the camera menu has the following menu items related to clip operations.
[Display Clip Properties]
[Set Clip Flag]
[Lock/Unlock Clip]
[Delete Clip]
[Transfer Clip]
[Transfer Clip (Proxy)]
[Filter Clips]
[Customize View]

- For details about each menu item, see the “[Thumbnail] menu.”

To display the clip properties screen

Select [Thumbnail] > [Display Clip Properties] in the camera menu to display the clip properties screen.
Press the ⏮ (Previous) button or ⏭ (Next) button to jump to the previous/next clip.

To add clip flags

You can add clip flags (OK, NG, or KP marks) to clips to filter the display of clips based on the clip flags.
Select the thumbnail for the clip to which you want to add a clip flag, then select the clip flag using [Thumbnail] > [Set Clip Flag] in the camera menu.

Setting	Added clip flag
[Add OK]	OK
[Add NG]	NG
[Add KEEP]	KP

Hint

- You can also use an assignable button assigned with the clip flag function to add clip flags.

To display the filtered clip thumbnail screen

Select [Thumbnail] > [Filter Clips] in the camera menu, and select a clip flag type to display only those clips that have the specified flag.
To display all clips, select [All].
You can also press the [Display] button to sort the thumbnail display by flags.

To delete clips

You can delete clips from memory cards.
Select [Thumbnail] > [Delete Clip] > [Select Clip] or [All Clips] in the camera menu.
[Select Clip]: Deletes the selected clip. Multiple clip selection is supported.
[All Clips]: Deletes all of the displayed clips.

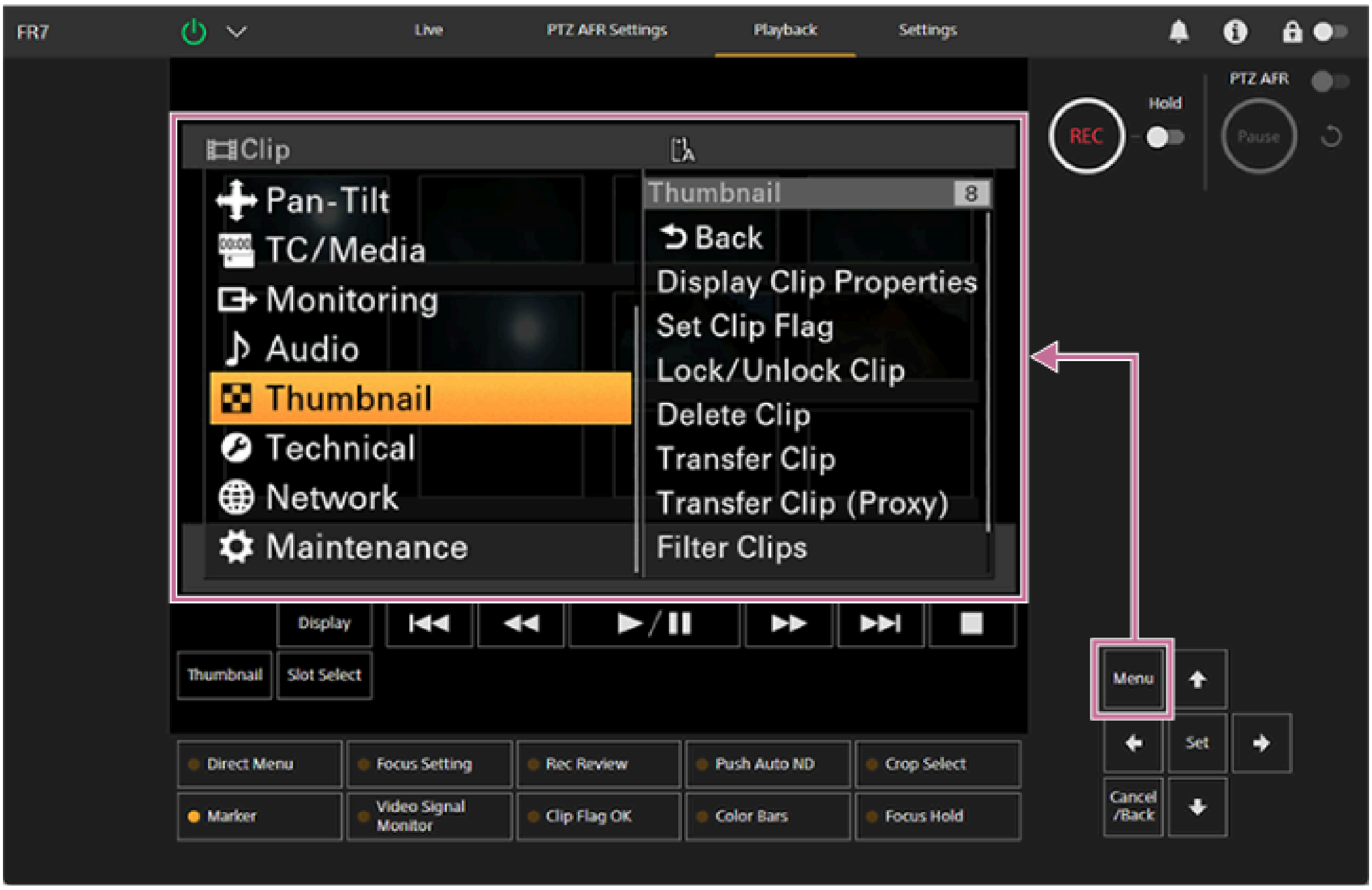
To change the information displayed on the thumbnail screen

You can change the clip/frame information displayed below the thumbnail.
Select [Thumbnail] > [Customize View] > [Thumbnail Caption] in the camera menu, and select the information to display.

[Date Time]: Displays the date and time the clip was created and last modified.
[Time Code]: Displays the timecode.
[Duration]: Displays the duration of the clip.
[Sequential Number]: Displays a sequential number on each thumbnail.

Camera Menu Configuration

When the [Menu] button in the GUI control panel or the MENU button on the infrared remote control is pressed, the camera menu for configuring the various required settings for shooting and playback is displayed in the camera image panel.



The menu comprises the following menus.

Menu configuration

[User] menu
Contains menu items configured by the user.
Can be edited using [Edit User Menu].
[Edit User] menu
Contains menu items for editing the [User] menu.
[Shooting] menu
Contains settings related to shooting.
[Project] menu
Contains basic project settings.
[Paint/Look] menu
Contains settings related to image quality.
[Pan-Tilt] menu
Contains settings related to the pan/tilt.
[TC/Media] menu
Contains settings related to timecodes and recording media.
[Monitoring] menu

Contains settings related to video output and the screen display.

[Audio] menu

Contains settings related to audio.

[Thumbnail] menu

Contains settings related to thumbnail display.

[Technical] menu

Contains settings for technical items.

[Network] menu

Contains settings related to networks.

[Maintenance] menu

Contains devices settings, such as the clock and language.

Camera menu configuration and hierarchy

Level 1	Level 2
User (Factory settings)	Base Setting
	Focus
	S&Q Motion
	LUT On/Off
	Simul Rec
	Proxy Rec
	Interval Rec
	Picture Cache Rec
	Assignable Button
	Scene File
	Base Look
	P/T Acceleration
	Clip Name Format
	Format Media
	Video Signal Monitor
	Marker
	Zoom
	Lens
	Edit User Menu

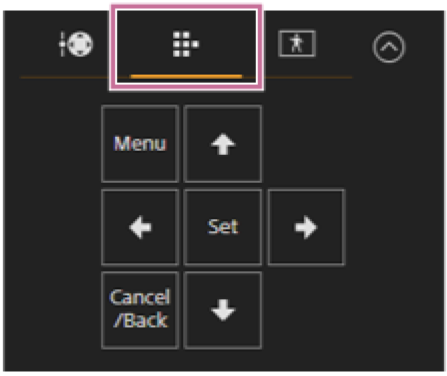
Level 1	Level 2
Shooting	ISO/Gain/EI
	ND Filter
	Shutter
	Iris
	Auto Exposure
	White
	White Setting
	Offset White
	Focus
	S&Q Motion
	LUT On/Off
	Noise Suppression
	Flicker Reduce
	SteadyShot
Project	Base Setting
	Rec Format
	Cine EI/Flex.ISO Set
	Simul Rec
	Proxy Rec
	Interval Rec
	Picture Cache Rec
	SDI/HDMI Rec Control
	Assignable Button
Paint/Look	Scene File
	Base Look
	Reset Paint Settings
	Black
	Knee
	Detail
	Matrix
	Multi Matrix

Level 1	Level 2
Pan-Tilt	P/T Acceleration
TC/Media	Timecode
	TC Display
	Users Bit
	HDMI TC Out
	Clip Name Format
	Update Media
	Format Media
	Media Life
Monitoring	Output Format
	Display On/Off
	Video Signal Monitor
	Marker
Audio	Audio Input
	Audio Output
Thumbnail	Display Clip Properties
	Set Clip Flag
	Lock/Unlock Clip
	Delete Clip
	Transfer Clip
	Transfer Clip (Proxy)
	Filter Clips
	Customize View
Technical	Color Bars
	Genlock
	Tally
	Rec Review
	Zoom
	Lens
	APR

Level 1	Level 2
Network	Wired LAN
	File Transfer
Maintenance	Language
	Clock Set
	Hours Meter

Operating the Camera Menu

When the [Menu] button in the GUI control panel or the MENU button on the infrared remote control is pressed, the camera menu for configuring the various required settings for shooting and playback is displayed in the camera image panel.
The menu is operated using buttons in the GUI control panel.



[Menu] button: Press to display the camera menu. Press again while the camera menu is displayed to hide the menu.
Arrow buttons: Press the arrows buttons to move the cursor up/down/left/right in the camera menu to select menu items or settings.
[Set] button: Press to apply the selected item.
[Cancel/Back] button: Press to return to the previous menu. An uncompleted change is canceled.

Note

- Some items cannot be selected, depending on the state when the menu was displayed.

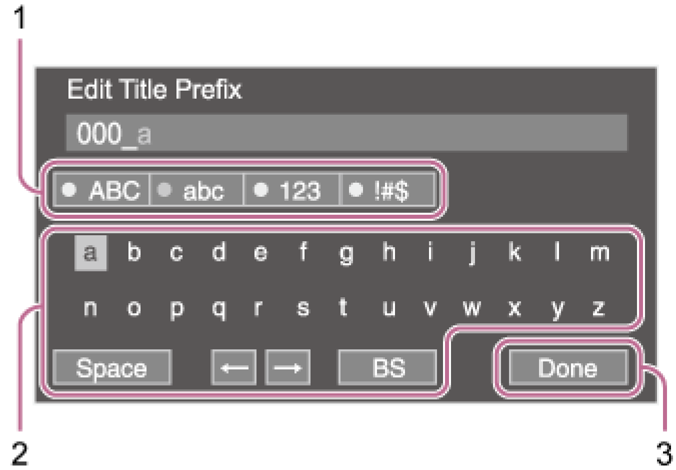
Setting Menu Items

Move the cursor to the item you want to set using the arrow buttons in the GUI control panel and press the [Set] button to apply the setting.

- The menu item selection area displays up to eight lines. If the available options for an item cannot be displayed at the same time, scroll the display by moving the cursor up/down.
- For sub-items with a large settings range (for example, −99 to +99), the settings area is not displayed. The current setting is highlighted to indicate that the value can be changed.
- Selecting [Execute] for a function will execute the corresponding function.
- Selecting an item that requires confirmation before execution will temporarily hide the menu and display a confirmation message. Check the message, and then select whether to execute or cancel the function.

Entering a Character String

When you select an item, such as a file name, which requires character entry, the character entry screen appears.



1. **Press the arrow buttons in the GUI control panel to select the character type and apply the setting.**

   [ABC]: Uppercase alphabetic characters
   [abc]: Lowercase alphabetic characters
   [123]: Numeric characters
   [!#$]: Special characters

2. **Select a character and press the [Set] button to apply the setting.**

   The cursor moves to the next field.
   [Space]: Enters a space character at the cursor position.
   [←] [→]: Moves the position of the cursor.
   [BS]: Deletes the character on the left of the cursor (backspace).

3. **When finished, press the [Done] button to apply the setting.**

   The character string is confirmed and the character entry screen disappears.

User

This topic describes the function and settings of each menu item.

Item	Description
Base Setting	Project > Base Setting item
Focus	Shooting > Focus item
S&Q Motion	Shooting > S&Q Motion item
LUT On/Off	Shooting > LUT On/Off item
Simul Rec	Project > Simul Rec item
Proxy Rec	Project > Proxy Rec item
Interval Rec	Project > Interval Rec item
Picture Cache Rec	Project > Picture Cache Rec item
Assignable Button	Project > Assignable Button item
Scene File	Project > Scene File item
Base Look	Paint/Look > Base Look item
P/T Acceleration	Pan-Tilt > P/T Acceleration item
Clip Name Format	TC/Media > Clip Name Format item
Format Media	TC/Media > Format Media item
Video Signal Monitor	Monitoring > Video Signal Monitor item
Marker	Monitoring > Marker item
Zoom	Technical > Zoom item
Lens	Technical > Lens item
Edit User Menu	Displays the Edit User menu.

Note

- You can add and remove menu items in the [User] menu using the [Edit User] menu. Up to 20 items can be configured.

Edit User

The [Edit User] menu is displayed at the top level when [Edit User Menu] is selected in the [User] menu.

Item	Sub-item setting	Factory default	Description
Add Item Add an item to the [User] menu	–	–	Adds a level 2 menu item to the [User] menu.
Customize Reset Reset the items in the [User] menu	–	–	Restores the menu items registered in the [User] menu to the factory default.
Level 2 menu item selected during editing	Delete	–	Deletes the registered level 2 menu item from the [User] menu.
	Move	–	Rearranges the registered menu items within the [User] menu.
	Edit Sub Item	–	Edits (register/delete) the registered level 3 menu sub-item in the [User] menu.

ISO/Gain/EI

Sets gain settings.

Item	Sub-item setting	Factory default	Description
Mode	ISO/dB	dB	Selects the gain setting mode.
ISO/Gain<L>	- For details about settings, see "ISO/Gain Settings and Default Values."	–	Sets the <L> gain preset value.
Exposure Index<L>	**When Base ISO is set to ISO 800:** 200EI / 4.0E 250EI / 4.3E 320EI / 4.7E 400EI / 5.0E 500EI / 5.3E 640EI / 5.7E 800EI / 6.0E 1000EI / 6.3E 1250EI / 6.7E 1600EI / 7.0E 2000EI / 7.3E 2500EI / 7.7E 3200EI / 8.0E **When Base ISO is set to ISO 12800:** 3200EI / 4.0E 4000EI / 4.3E 5000EI / 4.7E 6400EI / 5.0E 8000EI / 5.3E 10000EI / 5.7E 12800EI / 6.0E 16000EI / 6.3E 20000EI / 6.7E 25600EI / 7.0E 32000EI / 7.3E 40000EI / 7.7E 51200EI / 8.0E	**When Base ISO is set to ISO 800:** 800EI / 6.0E **When Base ISO is set to ISO 12800:** 12800EI / 6.0E	Sets the Exposure Index<L> value.
Shockless Gain	On / Off	Off	Turns the shockless gain function on/off.
Base Sensitivity	High / Low	Low	Sets the base sensitivity for Custom mode.
Base ISO	ISO 12800 / ISO 800	ISO 800	Sets the base ISO sensitivity for Cine EI/Flexible ISO mode.

Related Topic

- ISO/Gain Settings and Default Values

ND Filter

Sets the preset values for the ND filter.

Item	Sub-item setting	Factory default	Description
Mode	Preset / Variable	Variable	Selects the ND filter mode.
Preset1	1/4 / 1/8 / 1/16 / 1/32 / 1/64 / 1/128	1/4	Sets the preset 1 value for the ND filter.
Preset2	1/4 / 1/8 / 1/16 / 1/32 / 1/64 / 1/128	1/16	Sets the preset 2 value for the ND filter.
Preset3	1/4 / 1/8 / 1/16 / 1/32 / 1/64 / 1/128	1/64	Sets the preset 3 value for the ND filter.

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Shutter

Sets electronic shutter operation.
Used for shooting fast-moving subjects clearly.

Item	Sub-item setting	Factory default	Description
Mode	Speed / Angle	Speed	Selects the mode for setting the shutter speed in seconds (Speed) or as a shutter angle (Angle).
Shutter Speed On/Off	On / Off	Off	Sets whether the exposure time when Speed mode is selected follows the [Shutter Speed] value or is set for full exposure.
Shutter Speed	64F to 1/8000 The available settings vary depending on the frame frequency of the selected video format. **59.94P:** 64F / 32F / 16F / 8F / 7F / 6F / 5F / 4F / 3F / 2F / 1/50 / 1/60 / 1/100 / 1/120 / 1/125 / 1/250 / 1/500 / 1/1000 / 1/2000 / 1/4000 / 1/8000 **50P:** 64F / 32F / 16F / 8F / 7F / 6F / 5F / 4F / 3F / 2F / 1/50 / 1/60 / 1/100 / 1/120 / 1/125 / 1/250 / 1/500 / 1/1000 / 1/2000 / 1/4000 / 1/8000 **29.97P:** 64F / 32F / 16F / 8F / 7F / 6F / 5F / 4F / 3F / 2F / 1/30 / 1/40 / 1/50 / 1/60 / 1/100 / 1/120 / 1/125 / 1/250 / 1/500 / 1/1000 / 1/2000 / 1/4000 / 1/8000 **25P:** 64F / 32F / 16F / 8F / 7F / 6F / 5F / 4F / 3F / 2F / 1/25 / 1/33 / 1/50 / 1/60 / 1/100 / 1/120 / 1/125 / 1/250 / 1/500 / 1/1000 / 1/2000 / 1/4000 / 1/8000 **24P/23.98P:** 64F / 32F / 16F / 8F / 7F / 6F / 5F / 4F / 3F / 2F / 1/24 / 1/32 / 1/48 / 1/50 / 1/60 / 1/96 / 1/100 / 1/120 / 1/125 / 1/250 / 1/500 / 1/1000 / 1/2000 / 1/4000 / 1/8000	**59.94P:** 1/60 **50P:** 1/50 **29.97P:** 1/30 **25P:** 1/25 **24P/23.98P:** 1/24	Sets the shutter speed when Speed mode is selected.
Shutter Angle	64F / 32F / 16F / 8F / 7F / 6F / 5F / 4F / 3F / 2F / 360.0° / 300.0° / 270.0° / 240.0° / 216.0° / 210.0° / 180.0° / 172.8° / 150.0° / 144.0° / 120.0° / 90.0° / 86.4° / 72.0° / 45.0° / 30.0° / 22.5° / 11.25° / 5.6°	180.0°	Sets the shutter angle when Angle mode is selected.
ECS On/Off	On / Off	Off	Turns the Extended Clear Scan function on/off.

Item	Sub-item setting	Factory default	Description
ECS Frequency	23.99 to 8000 The available settings vary depending on the frame frequency of the selected recording format.	**59.94P:** 60.00 **50P:** 50.00 **29.97P:** 30.00 **23.98P:** 23.99 **25P:** 25.02 **24P:** 24.02	Sets the ECS frequency when Mode is set to ECS.

Iris

Sets iris settings.

Item	Sub-item setting	Factory default	Description
Bokeh Control	On / Off	Off	Turns the bokeh control function on/off.

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Auto Exposure

Sets automatic exposure adjustment settings.

Item	Sub-item setting	Factory default	Description
Level	+3.0 / +2.75 / +2.5 / +2.25 / +2.0 / +1.75 / +1.5 / +1.25 / +1.0 / +0.75 / +0.5 / +0.25 / ±0 / −0.25 / −0.5 / −0.75 / −1.0 / −1.25 / −1.5 / −1.75 / −2.0 / −2.25 / −2.5 / −2.75 / −3.0	±0	Sets the brightness level for the automatically detected exposure.
Mode	Backlight / Standard / Spotlight	Standard	Sets the operating mode of auto exposure adjustment. **Backlight:** Backlight mode (mode for reduced darkening of a subject when the subject is backlit) **Standard:** Standard mode **Spotlight:** Spotlight mode (mode for reduced clipped whites when subject is lit by spotlighting)
Speed	−99 to +99	±0	Sets the adjustment speed of auto exposure adjustment.
AGC	On / Off	Off	Turns the AGC (auto gain control) function on/off.
AGC Limit	● For details about settings, see “AGC Limit Settings and Default Values.”	–	Sets the maximum gain of the AGC function.
AGC Point	F2.8 / F4 / F5.6	F2.8	Sets the F-number of the iris where AGC operation starts when the AGC function is On.
Auto Shutter	On / Off	Off	Turns the auto shutter control function on/off.
A.SHT Limit	1/100 / 1/150 / 1/200 / 1/250 / 1/2000	1/2000	Sets the fastest shutter speed of the auto shutter function.
A.SHT Point	F5.6 / F8 / F11 / F16	F11	Sets the F-number of the iris where auto shutter operation starts.
Clip High light	On / Off	Off	Turns the function that ignores brightest areas to provide a flatter response at high luminance on/off.

Item	Sub-item setting	Factory default	Description
Detect Window	1 / 2 / 3 / 4 / 5 / 6 / Custom	1	Sets the light metering range for automatically adjusting the exposure according to the brightness of the subject. (Not available when adjusting exposure manually)
Detect Window Indication	On / Off	Off	Turns the light metering range indication on/off.
Custom Width	40 to 999	500	Sets the width of the light metering range.
Custom Height	70 to 999	500	Sets the height of the light metering range.
Custom H Position	−479 to +479	±0	Sets the horizontal position of the light metering range.
Custom V Position	−464 to +464	±0	Sets the vertical position of the light metering range.

Related Topic

- AGC Limit Settings and Default Values

White

Sets white balance settings.

Item	Sub-item setting	Factory default	Description
Preset White	2000K to 15000K	3200K	Sets the white balance preset value.
Color Temp <A>	2000K to 15000K	3200K	Sets the white balance color temperature saved in memory A. **Note** - Since Color Temp is clipped at 2000K and 15000K during R Gain/B Gain operation, it may not be possible to display the correct Color Temp value for the R Gain/B Gain value.
Tint<A>	−99 to +99	±0	Sets the white balance tint value saved in white memory A. **Note** - Since Tint is clipped at ±99 during R Gain/B Gain operation, it may not be possible to display the correct tint value for the R Gain/B Gain value.
R Gain <A>	−99.0 to +99.0	±0.0	Sets the white balance R gain value saved in memory A.
B Gain <A>	−99.0 to +99.0	±0.0	Sets the white balance B gain value saved in memory A.

White Setting

Adjusts white balance settings.

Item	Sub-item setting	Factory default	Description
Shockless White	Off / 1 / 2 / 3	2	Sets the white balance response speed when switching white balance mode. **Off:** Switches instantaneously. **1 to 3:** Switches more slowly the higher the number.
ATW Speed	1 / 2 / 3 / 4 / 5	3	Sets the response speed in ATW mode. The fastest response speed is 1, and the slowest response speed is 5.

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Offset White

Sets white balance offset settings.

Item	Sub-item setting	Factory default	Description
Offset White <A>	On / Off	Off	Selects whether to add (On) or not to add (Off) an offset value to the white balance in memory A.
Offset Color Temp<A>	−99 to +99	±0	Sets the color temperature offset to be added to the white balance in memory A when [Offset White <A>] is set to On.
Offset Tint<A>	−99 to +99	±0	Sets the tint value offset to be added to the white balance in memory A when [Offset White <A>] is set to On.
Offset White<ATW>	On / Off	On	Selects whether to add (On) or not to add (Off) an offset value to the ATW white balance.
Offset Color Temp<ATW>	−99 to +99	±0	Sets the color temperature offset to be added to the ATW white balance when [Offset White<ATW>] is set to On.
Offset Tint<ATW>	−99 to +99	±0	Sets the tint value offset to be added to the ATW white balance when [Offset White<ATW>] is set to On.

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Focus

Sets focus settings.

Item	Sub-item setting	Factory default	Description
AF Transition Speed	1(Slow) / 2 / 3 / 4 / 5 / 6 / 7(Fast)	5	Sets the speed of the focus drive for when the subject changes during auto focus.
AF Subj. Shift Sens.	1(Locked On) / 2 / 3 / 4 / 5(Responsive)	5(Responsive)	Sets the sensitivity for changing subject focus during auto focus.
Focus Area	Wide / Zone / Flexible Spot	Wide	Sets the target area for auto focus and push auto focus (AF). ● See “Adjusting the Focus Automatically (Auto Focus)” and “Setting the Auto Focus Area/Position (Focus Area).” **Wide:** Searches for a subject over a wide angle of the image when focusing. **Zone:** Automatically searches for a focus point within the specified zone. **Flexible Spot:** Focuses on a specified position in the image.
Focus Area (AF-S)	Flexible Spot	Flexible Spot	Sets the target area for push auto focus (AF-S).
Face/Eye Detection AF	Face/Eye Only AF / Face/Eye Priority AF / Off	Face/Eye Priority AF	Enables/disables face detection AF. ● See “Tracking Using Face and Eye Detection (Face/Eye Detection AF).”
Push AF Mode	AF / Single-shot AF(AF-S)	AF	Sets the push auto focus mode.
Touch Function in MF	Tracking AF / Spot Focus	Tracking AF	Sets the operation when the camera image is touched on the Web App live operation screen in MF mode.
AF Assist	On / Off	On	When set to On, allows you to temporarily override auto focus and set focus manually. ● See “Setting the Auto Focus Target Manually (AF Assist) Using the Web App” and “Focusing Manually During Auto Focus Using the Supplied Infrared Remote Control.”

Related Topic

- Setting the Auto Focus Area/Position (Focus Area)

- Tracking Using Face and Eye Detection (Face/Eye Detection AF)
- Setting the Auto Focus Target Manually (AF Assist) Using the Web App
- Focusing Manually During Auto Focus Using the Supplied Infrared Remote Control

S&Q Motion

Sets Slow & Quick Motion mode settings (see “Slow & Quick Motion”).

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Turns the Slow & Quick motion mode on/off.
Frame Rate	1fps to 60fps / 100fps / 120fps / 150fps / 180fps / 200fps / 240fps	–	Sets the frame rate for Slow & Quick Motion shooting. **Note** - The available settings vary depending on the selected system frequency, codec, and video format.

Related Topic

- Slow & Quick Motion

LUT On/Off

Sets LUT settings.

Item	Sub-item setting	Factory default	Description
SDI	MLUT On / MLUT Off	MLUT Off	Selects whether to apply Monitor LUT to the SDI output video.
HDMI/Stream	MLUT On / MLUT Off	MLUT Off	Selects whether to apply Monitor LUT to the HDMI and streaming output video.
Proxy	MLUT On / MLUT Off	MLUT Off	Selects whether to apply Monitor LUT to the proxy recording video.
Internal Rec	MLUT On / MLUT Off	MLUT Off	Selects whether to apply Monitor LUT to the main recording video.
LUT On/Off Button Target	SDI / HDMI/Stream / SDI & HDMI/Stream	HDMI/Stream	Sets the target output controlled by an assignable button assigned with LUT On/Off.

Noise Suppression

Sets noise suppression settings.

Hint

- The [Setting(Custom)] and [Level(Custom)] settings are reflected in the [Target Display] setting.

Item	Sub-item setting	Factory default	Description
Setting(Custom)	On / Off	On	Turns the noise suppression function on/off in Custom mode.
Level(Custom)	Low / Mid / High	Mid	Sets the noise suppression level in Custom mode.
Setting (Cine EI/Flex. ISO)	On / Off	Off	Turns the noise suppression function on/off in Log shooting mode.
Level (Cine EI/Flex. ISO)	Low / Mid / High	Mid	Sets the noise suppression level in Log shooting mode.

Flicker Reduce

Sets flicker correction settings.

Item	Sub-item setting	Factory default	Description
Mode	Auto / On / Off	Off	Sets the flicker correction mode.
Frequency	50Hz / 60Hz	60Hz	Sets the frequency of the power source supplying the lighting that is causing the flicker.

SteadyShot

Sets image stabilization settings.

Item	Sub-item setting	Factory default	Description
Setting	Active / Standard / Off	Off	Sets the image stabilization function. **Note** - Enabled when a compatible lens is attached. - When set to Active or Standard, unexpected behavior may occur during pan/tilt operation.

Base Setting

Sets base settings.

Item	Sub-item setting	Factory default	Description
Shooting Mode	Custom / Flexible ISO / Cine EI Quick / Cine EI	Custom	Sets the shooting mode. • See “Setting the shooting mode” in “Configuring Basic Operation.”
Target Display	SDR(BT.709) / HDR(HLG)	SDR(BT.709)	Sets the color gamut of the recording/output in Custom mode.

Related Topic

- Configuring Basic Operation

Rec Format

Sets recording format settings.

Item	Sub-item setting	Factory default	Description
Frequency	59.94 / 50 / 29.97 / 25 / 24 / 23.98	59.94	Selects the system frequency.
Imager Scan Mode	FF / S35	FF	Selects the imager size.
Codec	RAW / RAW & XAVC-I / XAVC-I / XAVC-L	XAVC-I	Sets the clip recording/playback codec. **Note** When [Imager Scan Mode] is set to [S35], [RAW] and [RAW & XAVC-I] cannot be selected.
RAW Output Format	The available settings vary depending on the [Frequency] setting. See “[RAW Output Format] settings” below.	–	Sets the size of the RAW image to output to an external RAW recorder. **Note** When [Codec] is set to [RAW & XAVC-I], the [Video Format] setting switches in link with the [RAW Output Format] setting.
Video Format	The available settings vary depending on the [Frequency], [Imager Scan Mode], and [Codec] settings. See “[Video Format] settings” below.	–	Sets the image size and bit rate.

[RAW Output Format] settings

Frequency	Imager Scan Mode	Codec	Setting
59.94 / 50 / 29.97 / 25 / 23.98	FF	RAW / RAW & XAVC-I	4096×2160 **3840×2160**
24	FF	RAW / RAW & XAVC-I	**4096×2160**

- Default values are shown in bold.
- The conditions under which [RAW Output Format] cannot be set have been omitted.

[Video Format] settings

Frequency	Imager Scan Mode	Codec	Setting
59.94 / 50 / 29.97 / 25 / 23.98	FF	RAW	–
		RAW & XAVC-I	4096×2160P **3840×2160P**
		XAVC-I	4096×2160P **3840×2160P** 1920×1080P
		XAVC-L	**3840×2160P** 1920×1080P 50 1920×1080P 35
	S35	XAVC-I	**1920×1080P**
		XAVC-L	**1920×1080P 50** 1920×1080P 35
24	FF	RAW	–
		RAW & XAVC-I / XAVC-I	**4096×2160P**

- Default values are shown in bold.

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Cine EI/Flex.ISO Set

Sets Log shooting mode settings (see “Setting the shooting mode” in “Configuring Basic Operation”).

Item	Sub-item setting	Factory default	Description
Color Gamut	S-Gamut3/SLog3 / S-Gamut3.Cine/SLog3	S-Gamut3.Cine/SLog3	Sets the color gamut for Log shooting modes ([Flexible ISO], [Cine EI Quick], [Cine EI]).
Embed LUT File	On / Off	On	Turns 3D LUT file (CUBE file) metadata recording on/off.

Related Topic

- Configuring Basic Operation

Simul Rec

Sets 2-slot simultaneous recording mode settings (see “Recording to Memory Cards A and B Simultaneously (2-slot Simul Rec)”).

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Turns 2-slot simultaneous recording mode on/off.
Rec Button Set	Rec Button:<Slot A> <Slot B> 2nd Rec Button:<Slot A> <Slot B> / Rec Button:<Slot A> 2nd Rec Button:<Slot B> / Rec Button:<Slot B> 2nd Rec Button:<Slot A>	Rec Button:<Slot A> <Slot B> 2nd Rec Button:<Slot A> <Slot B>	Assigns the record buttons used to control each recording media.

Proxy Rec

Sets proxy recording mode settings (see “Proxy Recording”).

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Turns proxy recording mode on/off.
Audio Channel	CH1/CH2 / CH3/CH4	CH1/CH2	Selects the audio channel to record to proxy data.

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Interval Rec

Sets interval recording mode settings (see “Recording Video Intermittently (Interval Rec)”).

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Turns interval recording mode on/off. (Setting this mode to On will set all other special modes to Off.)
Interval Time	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 15 / 20 / 30 / 40 / 50 (sec) 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 15 / 20 / 30 / 40 / 50 (min) 1 / 2 / 3 / 4 / 6 / 12 / 24 (hour)	1	Sets the interval between recordings in Interval Rec recording mode (when Interval Rec is set to On).
Number of Frames	1frame / 2frames / 3frames / 6frames / 9frames / 12frames The available settings vary depending on the frame frequency of the selected video format. **59.94P/50P:** 2frames / 6frames / 12frames **29.97P/25P/24P/23.98P:** 1frame / 3frames / 6frames / 9frames	**59.94P/50P:** 2frames **29.97P/25P/24P/23.98P:** 1frame	Sets the number of frames to record per take in Interval Rec recording mode (when Interval Rec is set to On).

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Picture Cache Rec

Sets picture cache recording mode settings (see “Recording Cached Pictures (Picture Cache Rec)”).

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Turns the picture cache function on/off.
Cache Size	Short / Medium / Long / Max	Max	Sets the time for accumulation of images in picture cache memory (picture cache recording time).
Cache Rec Time	–	–	Displays the time for accumulation of images in picture cache memory (picture cache recording time).

Related Topic

- Recording Cached Pictures (Picture Cache Rec)

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SDI/HDMI Rec Control

Sets SDI/HDMI recording control settings.

Item	Sub-item setting	Factory default	Description
Setting	Off / SDI/HDMI Remote I/F / Parallel Rec	Off	Sets recording start/stop control of an external connected device via the SDI/HDMI output signal. **Off:** Do not use remote control. **SDI/HDMI Remote I/F:** Record stop/start control of an external connected device, when there is no media inserted in the unit. Not synchronized with frame accuracy to media in the unit. **Parallel Rec:** Record stop/start control of an external connected device, when media is inserted in the unit. Synchronized with frame accuracy to media in the unit. **Note** - For control using the HDMI output signal, set [TC/Media] > [HDMI TC Out] > [Setting] to [On] in the camera menu.

Assignable Button

Sets function assignments to assignable buttons (<1> to <9>) and [Focus Hold Button].
The following functions can be assigned.
[Off]: No function assignment.
[Base ISO/Sensitivity]: Switches the base sensitivity of the image sensor.
[AGC]: Turns the AGC function on/off.
[Push AGC]: Enables the AGC function while the button is pressed.
[ND Filter]

- In variable mode: Adjusts the ND filter transmittance. Press and hold to switch between Clear/Manual/Auto.
- In preset mode: Press and hold to switch presets.

[ND Filter Position]: Switches ND filters.
[Auto ND Filter]: Turns the auto ND filter function on/off.
[Push Auto ND]: Enables the auto ND filter function while the button is pressed.
[Auto Iris]: Turns the iris function on/off.
[Push Auto Iris]: Enables the auto iris function while the button is pressed.
[Bokeh Control]: Turns the bokeh control mode on/off.
[Auto Shutter]: Turns the auto shutter function on/off.
[AE Level/Mode]: Adjusts the AE level. Press and hold to switch the AE mode.
[Backlight]: Switches between Backlight and Standard.
[Spotlight]: Switches between Spotlight and Standard.
[Preset White Select]: Switches the white balance preset mode value.
[ATW]: Turns the ATW function on/off.
[ATW Hold]: Pauses ATW function operation.
[AF Speed/Sens.]: Switches the AF transition speed setting and AF subject shift sensitivity setting.
[Focus Setting]: Sets the focus area.
[Face/Eye Detection AF]: Switches the face detection AF settings.
[Push AF Mode]: Switches the Push AF mode setting.
[Push AF/MF]: In MF focus mode, activates AF while the button is pressed. In AF focus mode, activates MF while the button is pressed.
[Focus Hold]: In AF focus mode, focus is fixed while the button is pressed.
[S&Q Motion]: Turns the Slow & Quick Motion function on/off. Sets the shooting frame rate if pressed and held.
[LUT On/Off]: Turns the LUT function on/off. The switching target is set using [Shooting] > [LUT On/Off] > [LUT On/Off Button Target].
[SteadyShot]: Switches between Active, Standard, and Off.
[Crop Select]: Switches Imager Scan Mode. Switching enabled within the range without changing the recording format.
[Rec]: Starts/stops recording.
[Picture Cache Rec]: Turns picture cache recording mode on/off.
[Rec Review]: Turns the recording review function on/off.
[Clip Flag OK]: Executes Add OK. Press twice to execute Delete Clip Flag.
[Clip Flag NG]: Executes Add NG. Press twice to execute Delete Clip Flag.
[Clip Flag Keep]: Executes Add KEEP. Press twice to execute Delete Clip Flag.
[Slot Select]: Switches between memory slot (A) and (B).
[Color Bars]: Turns the color bars on/off.
[DURATION/TC/U-BIT]: Switches between Time Code, Users Bit, and Duration.
[Display]: Turns the screen indicators on/off.
[Lens Info]: Switches the depth-of-field indicator.
[Video Signal Monitor]: Switches the video signal monitor (such as a waveform monitor).
[Marker]: Turns the marker function on/off.

[Thumbnail]: Displays/exits the thumbnail screen.
[Auto Upload (Proxy)]: Turns proxy file auto transfer on/off.
[Direct Menu]: Displays/exits the direct menu.
[User Menu]: Displays/exits the User menu.

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Scene File

Sets settings related to scene files (see “Shooting with the Desired Look”).

Item	Sub-item setting	Factory default	Description
Recall	–	–	Loads a scene file stored in internal memory and applies the settings as the current image quality settings.
Store	–	–	Saves the current image quality state as a scene file in internal memory.
Delete	–	–	Deletes a scene file stored in internal memory.
Preset Recall	**When Shooting Mode is set to Custom and Target Display is set to SDR(BT.709):** S-Cinetone / Standard / Still / ITU709/ 709tone **When Shooting Mode is set to Custom and Target Display is set to HDR(HLG):** HLG Live / HLG Natural	–	Applies preset image quality settings (non-rewritable) as the current image quality settings.

Base Look

Sets settings related to the base look.

Item	Sub-item setting	Factory default	Description
Select	**When Shooting Mode is set to Custom and Target Display is set to SDR(BT.709):** S-Cinetone / Standard / Still / ITU709 / 709tone / User1 to User16 **When Shooting Mode is set to Custom and Target Display is set to HDR(HLG):** HLG Live / HLG Natural / User1 to User16 **When Shooting Mode is set to Log shooting modes:** s709 / 709(800) / S-Log3 / User1 to User16	**When Shooting Mode is set to Custom and Target Display is set to SDR(BT.709):** S-Cinetone **When Shooting Mode is set to Custom and Target Display is set to HDR(HLG):** HLG Live **When Shooting Mode is set to Log shooting modes:** s709	Selects a base look.
Delete	–	–	Deletes the selected base look.
Delete All	–	–	Deletes all base looks.
Input	S-Gamut3/SLog3 / S-Gamut3.Cine/SLog3	S-Gamut3.Cine/SLog3	Sets the input gamut for the base look selected using [Select].
Output	BT.709 / HLG	BT.709	Sets the output color gamut for the base look selected using [Select].
AE Level Offset	0EV / 1/3EV / 2/3EV / 1EV / 4/3EV / 5/3EV / 2EV	0EV	Sets the exposure reference value for the base look selected using [Select].

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Reset Paint Settings

Resets the [Paint/Look] menu settings, excluding the base look.

Item	Sub-item setting	Factory default	Description
Reset without Base Look	Execute / Cancel	–	Resets the [Paint/Look] menu settings, excluding the base look. **Execute:** Execute function.

Black

Sets black settings.

Item	Sub-item setting	Factory default	Description
Master Black	−99.0 to +99.0	±0.0	Sets the master black level.
R Black	−99.0 to +99.0	±0.0	Sets the R black level.
B Black	−99.0 to +99.0	±0.0	Sets the B black level.

Knee

Sets knee correction settings.

Item	Sub-item setting	Factory default	Description
Setting	**When Target Display is set to SDR(BT.709):** On / Off / --- **When Target Display is set to HDR(HLG):** On / Off / ---	**When Target Display is set to SDR(BT.709):** Off **When Target Display is set to HDR(HLG):** Off	Turns the knee correction function on/off. **Note** - Enabled only when [Base Look] > [Select] is set to [Standard], [ITU709], [709tone], [HLG Live], or [HLG Natural].
Auto Knee	**When Target Display is set to SDR(BT.709):** On / Off / --- **When Target Display is set to HDR(HLG):** On / Off / ---	**When Target Display is set to SDR(BT.709):** On **When Target Display is set to HDR(HLG):** Off	Turns the auto knee function on/off. **Note** - Enabled only when [Base Look] > [Select] is set to [Standard], [ITU709], or [709tone].
Point	75% to 109%	90%	Sets the knee point.
Slope	−99 to +99	±0	Sets the knee slope.

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Detail

Sets detail adjustment settings.

Item	Sub-item setting	Factory default	Description
Setting	On / Off	On	Turns the detail function on/off.
Level	−7 to +7	±0	Sets the detail level.
Manual Setting	On / Off / ---	Off	Turns the detail manual adjustment function on/off.
H/V Ratio	−2 to +2	±0	Sets the balance between horizontal (H) detail and vertical (V) detail for detail manual adjustment. **Note** This item varies depending on the software version.[*1]
B/W Balance	Type1 / Type2 / Type3 / Type4 / Type5	Type3	Sets the balance between black (B) detail for low-luminance areas and white (W) detail for high-luminance areas for detail manual adjustment.
Limit	0 to 7	7	Sets the limit level of the detail for detail manual adjustment.
Crispening	0 to 7	0	Sets the crispening level for detail manual adjustment.
High Light Detail	0 to 4	0	Sets the detail level of high-luminance areas for detail manual adjustment.

[*1] In software version 1.00, the menu item is [V/H Balance]. In software version 1.10 or later, the menu item is [H/V Ratio]. The setting range is unchanged from −2 to 0 to +2, however, the effect on the image quality is different.
Software version 1.00: The higher the set value, the higher the horizontal (H) detail.
Software version 1.10 or later: The higher the set value, the higher the vertical (V) detail.
After updating from software version 1.00 to 1.10 or later, the [All File], [Scene File], and other settings are inherited but with inverted polarity (picture quality is maintained).
If you have registered the [V/H Balance] menu item in the [User] menu, it will be replaced with the [H/V Ratio] menu item in the [User] menu automatically after updating the software.

Matrix

Sets matrix correction settings.

Item	Sub-item setting	Factory default	Description
User Matrix	On / Off	Off	Turns the user matrix correction function on/off.
User Matrix Level	−99 to +99	±0	Adjusts the color saturation of the entire image.
User Matrix Phase	−99 to +99	±0	Adjusts the color tone (phase) of the entire image.
User Matrix R-G	−99 to +99	±0	Sets a user-defined R-G user matrix.
User Matrix R-B	−99 to +99	±0	Sets a user-defined R-B user matrix.
User Matrix G-R	−99 to +99	±0	Sets a user-defined G-R user matrix.
User Matrix G-B	−99 to +99	±0	Sets a user-defined G-B user matrix.
User Matrix B-R	−99 to +99	±0	Sets a user-defined B-R user matrix.
User Matrix B-G	−99 to +99	±0	Sets a user-defined B-G user matrix.

Multi Matrix

Sets multi matrix correction settings.

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Turns the multi matrix correction function on/off.
Area Indication	On / Off	Off	Turns on/off the display function that identifies the target area corresponding to the target color axis for adjustment selected in [Axis]. The parts of the captured image outside the target area are displayed in monotone. **Hint** - On the multi matrix correction setup screen, you can turn [Area Indication] on/off using the [Display] button. **Note** - [Area Indication] is applied to all video outputs. Be aware of this fact when using a video output signal as the main signal.
Area Indication Control	Menu Only / Menu & RCP	Menu Only	Sets the interface that can control [Area Indication].
Reset	Execute / Cancel	–	Resets the hue and saturation of each axis color to the default values.
Axis	B / B+ / MG− / MG / MG+ / R / R+ / YL− / YL / YL+ / G− / G / G+ / CY / CY+ / B−	B	Selects the axis.
Hue	−99 to +99	±0	Sets the hue of the color used for multi matrix correction.
Saturation	−99 to +99	±0	Sets the saturation of the color used for multi matrix correction.

P/T Acceleration

Sets settings related to acceleration for pan/tilt operations.

Item	Sub-item setting	Factory default	Description
Ramp Curve	1 to 9	8	Selects the acceleration/deceleration for pan/tilt operations. The larger the number, the higher the acceleration.

Timecode

Sets timecode settings.

Item	Sub-item setting	Factory default	Description
Mode	Preset / Regen / Clock	Preset	Sets the timecode running mode. **Preset:** Starts running from a preset value. **Regen:** Starts running from the timecode of the end of the previous clip. **Clock:** Uses the internal clock as the timecode.
Run	Rec Run / Free Run	Rec Run	**Rec Run:** Runs only when recording. **Free Run:** Always running, regardless of recording operation.
Setting	–	–	Sets the timecode to an arbitrary value. **Set:** Set the value.
Reset	Execute / Cancel	–	Resets the timecode to 00:00:00:00. **Execute:** Execute function.
TC Format	DF / NDF	DF	Sets the timecode format. **DF:** Drop Frame **NDF:** Non-Drop Frame

TC Display

Sets time data display settings.

Item	Sub-item setting	Factory default	Description
Display Select	Timecode / Users Bit / Duration	Timecode	Switches the time data display.

Users Bit

Sets settings related to user bits.

Item	Sub-item setting	Factory default	Description
Mode	Fix / Time	Fix	Sets the user bit mode. **Fix:** Uses an arbitrary fixed value in user bits. **Time:** Uses the current hour, minute, and second in user bits.
Setting	–	–	Sets the user bits to an arbitrary value.

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HDMI TC Out

Sets settings related to timecode output when using HDMI.

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Sets whether to output the timecode to devices for other purposes, using HDMI.

Clip Name Format

Sets settings related to clip naming and deletion.
When [Auto Naming] is set to [Cam ID + Reel#], the first four characters of clip names are determined for each recording media. When new recording media is inserted, or when the last clip on the recording media does not match the [Camera ID] or [Reel Number] settings, the clip name blinks to notify you.
When [Auto Naming] is set to [Title], you can use an arbitrary character string as the first part of clip names.

Item	Sub-item setting	Factory default	Description
Auto Naming	Cam ID + Reel# / Title		Selects the clip naming format. **Cam ID + Reel#:** Camera ID + Reel Number + Shot Number + date + random string **Title:** Arbitrary string specified by [Title Prefix] + clip number
Camera ID	A to Z	A	Sets the camera ID used when generating clip names. **Note** • Configurable only when [Auto Naming] is set to [Cam ID + Reel#].
Reel Number	001 to 999	001	Sets the reel number portion used when generating clip names. **Note** • Configurable only when [Auto Naming] is set to [Cam ID + Reel#].
Camera Position	C / L / R	C	Sets the first character portion of the Shot Number used when generating clip names. **Note** • Configurable only when [Auto Naming] is set to [Cam ID + Reel#].
Title Prefix	nnn_(nnn is the last 3 digits of the serial number) (Max. 7-digit display)	nnn	Sets the title part (4 to 46 characters) of the clip name. Opens a character string entry screen. • For details about setting titles and the character entry screen, see “To set the title” below and “Entering a Character String.” **Note** • Configurable only when [Auto Naming] is set to [Title].

Item	Sub-item setting	Factory default	Description
Number Set	0001 to 9999	0001	Sets the 4-digit number suffix of the clip name. **Note** Configurable only when [Auto Naming] is set to [Title].

To set [Title Prefix]

1. **Select the character to insert at the cursor position in the [Title Prefix] area from the character selection area using the arrow buttons in the GUI control panel (character is highlighted), and press the [Set] button in the GUI control panel.**

   The selected character is inserted, and the cursor moves to the right.

2. **Repeat step 1 to set the title.**

   Use [BS] as required.

3. **After setting the title, press the [Done] button to close the character entry screen.**

   - For detail about operation on the character entry screen, see “Entering a Character String.”

   The following characters can be selected.
   !#$%()+,-.;=@[ ]^_~ space
   0123456789
   abcdefghijklmnopqrstuvwxyz
   ABCDEFGHIJKLMNOPQRSTUVWXYZ

Related Topic

- Entering a Character String

Update Media

Updates the management file on memory cards (see “Restoring Memory Cards”).

Item	Sub-item setting	Factory default	Description
Media(A)	Execute / Cancel	–	Updates the management file on the memory card in slot A. **Execute:** Execute function.
Media(B)	Execute / Cancel	–	Updates the management file on the memory card in slot B. **Execute:** Execute function.

Related Topic

- Restoring Memory Cards

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Format Media

Formats (initializes) memory cards (see “Formatting (Initializing) Memory Cards”).

Item	Sub-item setting	Factory default	Description
Media(A)	Full Format / Quick Format / Cancel	–	Formats the memory card in slot A.
Media(B)	Full Format / Quick Format / Cancel	–	Formats the memory card in slot B.

Related Topic

- Formatting (Initializing) Memory Cards

Media Life

Displays the remaining life of the memory cards.

Item	Sub-item setting	Factory default	Description
Media(A)	–	–	Displays the remaining life of the memory card in slot A.
Media(B)	–	–	Displays the remaining life of the memory card in slot B.

Note

- Requires memory cards that support remaining media life display.

Output Format

Sets output format settings.

Item	Sub-item setting	Factory default	Description
SDI	For details about settings, see “Output Formats and Limitations.”	–	Sets the SDI and HDMI output resolution.
HDMI		–	

Related Topic

- Output Formats and Limitations

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Display On/Off

Sets display item settings.
To show a display item, select On. To hide a display item, select Off.

Item	Sub-item setting	Factory default
File Transfer Status	On / Off	On
Rec/Play Status	On / Off	On
RAW Output Control Status	On / Off	On
Tally	On / Off	On
Focus Mode	On / Off	On
Focus Position	On / Off	On
Focus Area Indicator	On / Off	On
Focus Area Ind.(AF-S)	On / Off	On
Face/Eye Detection Frame	On / Off	On
Lens Info	On / Off	Off
Imager Scan Mode	On / Off	On
Rec Format	On / Off	On
Frame Rate	On / Off	On
Zoom Position	On / Off	On
SteadyShot	On / Off	On
Base Look/Rec Look	On / Off	On
SDI/HDMI Rec Control	On / Off	On
Monitoring Look	On / Off	On
Proxy Status	On / Off	On
Base ISO/Sensitivity	On / Off	On
Media Status	On / Off	On
Clip Name	On / Off	On
White Balance	On / Off	On
Scene File	On / Off	On
Focus Indicator	On / Off	On

Item	Sub-item setting	Factory default
Auto Exposure Mode	On / Off	On
Auto Exposure Level	On / Off	On
Timecode	On / Off	On
ND Filter	On / Off	On
Iris	On / Off	On
ISO/Gain/EI	On / Off	On
Shutter	On / Off	On
Level Gauge	On / Off	On
Audio Level Meter	On / Off	On
Video Level Warning	On / Off	On
Clip Number	On / Off	On
Notice Message	On / Off	On

Video Signal Monitor

Sets video signal monitor settings.

Item	Sub-item setting	Factory default	Description
Setting	Off / Waveform / Vector / Histogram	Off	Sets the type of video signal monitor.
Level Marker 1	0% to 109%	70%	Sets the level of luminance level marker 1.
Level Marker 2	0% to 109%	100%	Sets the level of luminance level marker 2.

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Marker

Sets marker display settings.

Item	Sub-item setting	Factory default	Description
Setting	On / Off	On	Turns the display of all markers on/off.
Color	White / Yellow / Cyan / Green / Magenta / Red / Blue	White	Selects the marker signal color.
Center Marker	1 / 2 / 3 / 4 / Off	Off	Selects the center marker.
Safety Zone	On / Off	Off	Turns the safety zone marker on/off.
Safety Area	80% / 90% / 92.5% / 95%	90%	Selects the size of the safety zone marker (as a percentage of total screen size).
Aspect Marker	Line / Mask / Off	Off	Selects the type of aspect marker.
Aspect Mask	0 to 15	12	Sets the level of the video signal outside the marker.
Aspect Safety Zone	On / Off	Off	Turns the aspect safety zone marker on/off.
Aspect Safety Area	80% / 90% / 92.5% / 95%	90%	Selects the size of the aspect safety zone marker (as a percentage of total screen size).
Aspect Select	1:1 / 4:3 / 13:9 / 14:9 / 15:9 / 16:9 / 17:9 / 1.66:1 / 1.85:1 / 2.35:1 / 2.39:1 / Custom	2.39:1	Sets the mode when displaying the aspect marker.
Custom Aspect Ratio	Enter an arbitrary value.	01.00:01.00	Sets the aspect ratio to an arbitrary value. **Note** - Enabled when [Aspect Select] is set to [Custom].
Guide Frame	On / Off	Off	Turns the guide frame display on/off.
100% Marker	On / Off	Off	Turns the 100% marker on/off.
User Box	On / Off	Off	Turns the user box marker display on/off.
User Box Width	3 to 479	240	Sets the user box marker width (distance from the center to the left and right edges).

Item	Sub-item setting	Factory default	Description
User Box Height	3 to 269	135	Sets the user box marker height (distance from the center to the top and bottom edges).
User Box H Position	−476 to +476	0	Sets the horizontal position of the center of the user box marker.
User Box V Position	−266 to +266	0	Sets the vertical position of the center of the user box marker.

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Audio Input

Sets audio input settings.

Item	Sub-item setting	Factory default	Description
AUDIO IN Select	MIC / LINE	MIC	Selects the type of device connected to the AUDIO IN connector.
Phantom Power +48V	On / Off	Off	Displays the status of the +48 V phantom power supply.
CH1 Input Select	AUDIO IN CH1	AUDIO IN CH1	Displays the input source for recording on channel 1.
CH2 Input Select	AUDIO IN CH1 / AUDIO IN CH2	AUDIO IN CH2	Switches the input source for recording on channel 2.
CH3 Input Select	Off / AUDIO IN CH1	AUDIO IN CH1	Switches the input source for recording on channel 3.
CH4 Input Select	Off / AUDIO IN CH1 / AUDIO IN CH2	AUDIO IN CH2	Switches the input source for recording on channel 4.
AUDIO IN CH1 MIC Ref.	−80dB / −70dB / −60dB / −50dB / −40dB / −30dB	−50dB	Sets the reference recording level for XLR microphone input from AUDIO IN CH1.
AUDIO IN CH2 MIC Ref.	−80dB / −70dB / −60dB / −50dB / −40dB / −30dB	−50dB	Sets the reference recording level for XLR microphone input from AUDIO IN CH2.
Line Input Reference	+4dB / 0dB / −3dB / EBUL	+4dB	Selects the reference input level when [AUDIO IN Select] is set to LINE.
Reference Level	−20dB / −18dB / −16dB / −12dB / EBUL	−20dB	Selects the recording level of the 1 kHz reference tone signal.
CH1 Wind Filter	On / Off	Off	Enables/disables the wind reduction filter for channel 1 recording.
CH2 Wind Filter	On / Off	Off	Enables/disables the wind reduction filter for channel 2 recording.
CH3 Wind Filter	On / Off	Off	Enables/disables the wind reduction filter for channel 3 recording.
CH4 Wind Filter	On / Off	Off	Enables/disables the wind reduction filter for channel 4 recording.
CH1 Level Control	Auto / Manual	Auto	Selects audio input level automatic adjustment or manual adjustment for recording channel 1.

Item	Sub-item setting	Factory default	Description
CH2 Level Control	Auto / Manual	Auto	Selects audio input level automatic adjustment or manual adjustment for recording channel 2.
CH3 Level Control	Auto / Manual	Auto	Selects audio input level automatic adjustment or manual adjustment for recording channel 3.
CH4 Level Control	Auto / Manual	Auto	Selects audio input level automatic adjustment or manual adjustment for recording channel 4.
CH1 Input Level	0 to 99	49	Sets the input level for recording channel 1.
CH2 Input Level	0 to 99	49	Sets the input level for recording channel 2.
CH3 Input Level	0 to 99	49	Sets the input level for recording channel 3.
CH4 Input Level	0 to 99	49	Sets the input level for recording channel 4.
Master Input Level	0 to 99	99	Sets the master audio input level.
Limiter Mode	Off / −6dB / −9dB / −12dB / −15dB / −17dB	Off	Selects the limiter characteristic for large input signals when adjusting the audio input level manually.
CH1&2 AGC Mode	Mono / Stereo	Stereo	Sets the auto level adjustment mode for recording channel 1 and channel 2. When set to Stereo, the AGC is linked between channels.
CH3&4 AGC Mode	Mono / Stereo	Stereo	Sets the auto level adjustment mode for recording channel 3 and channel 4. When set to Stereo, the AGC is linked between channels.
AGC Spec	−6dB / −9dB / −12dB / −15dB / −17dB	−6dB	Selects the AGC characteristic.
1kHz Tone on Color Bars	On / Off	Off	Turns the 1 kHz reference tone signal on/off when displaying color bars. **Note** When set to [On], the 1 kHz reference tone signal is set for recording on channel 3 and channel 4, even if [CH3 Input Select] and [CH4 Input Select] are set to [Off].

Audio Output

Sets audio output settings.

Item	Sub-item setting	Factory default	Description
HDMI/Stream Output CH	CH1/CH2 / CH3/CH4	CH1/CH2	Sets the combination of audio channels for the HDMI/streaming output.

Display Clip Properties

Displays the clip properties screen.

Item	Sub-item setting	Factory default	Description
Display Clip Properties	–	–	Displays the clip properties screen.

Set Clip Flag

Sets clip flag settings.

Item	Sub-item setting	Factory default	Description
Add OK	–	–	Adds an OK flag.
Add NG	–	–	Adds an NG flag.
Add KEEP	–	–	Adds a KEEP flag.
Delete Clip Flag	–	–	Deletes all flags.

Lock/Unlock Clip

Sets clip protection settings.

Item	Sub-item setting	Factory default	Description
Select Clip	–	–	Selects and locks/unlocks a clip.
Lock All Clips	–	–	Locks all clips.
Unlock All Clips	–	–	Unlocks all clips.

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Delete Clip

Deletes clips.

Item	Sub-item setting	Factory default	Description
Select Clip	–	–	Deletes the selected clip.
All Clips	–	–	Deletes all clips.

Transfer Clip

Transfers clips.

Item	Sub-item setting	Factory default	Description
Select Clip	–	–	Transfers selected clips.
All Clips	–	–	Transfers all clips. **Note** - Up to 200 transfer jobs can be registered.

Transfer Clip (Proxy)

Transfers proxy clips.

Item	Sub-item setting	Factory default	Description
Select Clip	–	–	Transfers proxy clips corresponding to the selected clips.
All Clips	–	–	Transfers proxy clips corresponding to all the clips. **Note** - Up to 200 transfer jobs can be registered.

Filter Clips

Sets settings of clips to display.

Item	Sub-item setting	Factory default	Description
OK	–	–	Display only clips that have an OK flag.
NG	–	–	Display only clips that have an NG flag.
KEEP	–	–	Display only clips that have a KEEP flag.
None	–	–	Display only clips that have no flag.
All	–	–	Displays all clips, regardless of whether there are any flags.

Customize View

Switches the thumbnail screen view.

Item	Sub-item setting	Factory default	Description
Thumbnail Caption	Date Time / Time Code / Duration / Sequential Number	Time Code	Switches the information displayed below thumbnails.

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Color Bars

Sets color bar settings.

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Turns the color bars on/off.
Type	ARIB / 100% / 75% / SMPTE	ARIB	Selects the color bar type.

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Genlock

Configures the genlock status display (see “Synchronizing the Phase of the Video Signal (Genlock)”).

Item	Sub-item setting	Factory default	Description
Reference	Internal / External(HD) / External(SD)	–	Displays the type of genlock reference signal.

Related Topic

- Synchronizing the Phase of the Video Signal (Genlock)

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Tally

Sets recording/tally lamp settings (see “Connecting a Tally Signal”).

Item	Sub-item setting	Factory default	Description
Tally Lamp Brightness	High / Low / Off	High	Sets the brightness of the recording/tally lamp.
G Tally Lamp	Enable / Disable	Enable	Enables/disables the G tally lamp.
Tally Control	External / Internal / PTZ AFR	Internal	Selects the target for accepting the recording/tally lamp control information of the unit. **External:** Tally control from outside the camera. **Internal:** Control via camera recording operation. **PTZ AFR:** Control via PTZ AFR operating status.

Related Topic

- Connecting a Tally Signal

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Rec Review

Sets recording review settings (see “Reviewing the Recording (Rec Review)”).

Item	Sub-item setting	Factory default	Description
Setting	3s / 10s / Clip	3s	Sets the time for playback of clips just recorded for recording review.

Related Topic

- Reviewing the Recording (Rec Review)

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Zoom

Sets the zoom settings (“Adjusting the Zoom”).

Item	Sub-item setting	Factory default	Description
Zoom Type	Optical Zoom Only / On(Clear Image Zoom)	Optical Zoom Only	Sets the type of zoom.

Lens

Sets settings related to lenses.

Item	Sub-item setting	Factory default	Description
Lens Calibration	Execute / Cancel	–	Executes the function that corrects for differences in the zoom position due to differences in individual lenses when using a power zoom lens.
Zoom Ring Direction	Left(W)/Right(T) / Right(W)/Left(T)	Left(W)/Right(T)	Sets the direction of zoom ring operation. **Note** - Enabled only when using an E-mount lens that supports zoom ring direction switching.
Shading Compensation	Auto / Off	Auto	Sets the automatic shading compensation.
Chroma Aberration Comp.	Auto / Off	Auto	Sets the automatic chromatic aberration compensation.
Distortion Comp.	Auto / Off	Auto	Sets the automatic distortion compensation.
Breathing Compensation	Auto / Off	Off	Sets the lens breathing compensation. - See “Breathing Compensation.”
Distance Display	Meter / Feet	Meter	Sets the display units for lens information and focus position.
Zoom Position Display	Focal Length / Number / Bar	Focal Length	Sets the display format for the zoom position.

Related Topic

- Breathing Compensation

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APR

Executes APR.

Item	Sub-item setting	Factory default	Description
APR	Execute / Cancel	–	Runs APR (Automatic Pixel Restoration) for image sensor auto adjustment. **Execute:** Execute function. **Note** - Always attach the lens cap before running APR.

Wired LAN

Sets settings related to wired LAN connections.

Item	Sub-item setting	Factory default	Description
HTTP Port	–	80	Displays the HTTP access port.
Detail Settings	–	–	Displays properties of the wired LAN connection.
	DHCP On / Off	On	Displays whether DHCP is enabled (On) or disabled (Off).
	IP Address	–	Displays the IP address of the unit when [DHCP] is set to [Off].
	Subnet Mask	–	Displays the subnet mask of the unit when [DHCP] is set to [Off].
	Gateway	–	Displays the default gateway when [DHCP] is set to [Off].
	DNS Auto On / Off	On	Displays the DNS auto acquisition setting.

File Transfer

Sets settings related to file transfers (see “About File Transfer”).

Item	Sub-item setting	Factory default	Description
Auto Upload (Proxy)	On / Off	Off	Turns proxy file auto upload on/off.
Default Upload Server	Server Settings1 to 3 > Display Name	–	Selects the upload server for files. The server selected here becomes the auto upload destination for proxy files, and the upload destination for files from the thumbnail screen. Displays the [Display Name] settings configured in [Server Settings1 to 3].
Clear Completed Jobs	Execute / Cancel	–	Clears completed transfer jobs from the list. **Execute:** Execute function.
Clear All Jobs	Execute / Cancel	–	Clears all transfer jobs from the list. **Execute:** Execute function.
View Job List	–	–	Displays the transfer job list.

Related Topic

- About File Transfer

Interchangeable Lens Digital Camera
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Language

Sets the display language.

Item	Sub-item setting	Factory default	Description
Select	–	–	Sets the display language. **Set:** Set the value.

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Clock Set

Sets internal clock settings.

Note

- When this setting is changed from the camera menu, turn off the power supply to the unit and restart the unit. Unexpected behavior may occur if power standby is initiated using the infrared remote control or Web App.

Item	Sub-item setting	Factory default	Description
Time Zone	UTC − 12:00 to UTC + 14:00	–	Sets the time difference from UTC in 30-minute units.
Date Mode	YYMMDD / MMDDYY / DDMMYY	YYMMDD	Selects the display format for dates. **YYMMDD:** Year, month, day **MMDDYY:** Month, day, year **DDMMYY:** Day, month, year
12H/24H	12H / 24H	24H	Selects the clock display format. **12H:** 12-hour mode **24H:** 24-hour mode
Date	–	–	Sets the current date. **Set:** Set the value.
Time	–	–	Sets the current time. **Set:** Set the value.

Hours Meter

Displays the accumulated running time.

Item	Sub-item setting	Factory default	Description
Hours(System)	–	–	Displays the accumulated hours of use (cannot be reset).
Hours(Reset)	–	–	Displays the accumulated hours of use (can be reset).
Reset	Execute / Cancel	–	Resets the accumulated running time to 0. **Execute:** Execute function.

ISO/Gain Settings and Default Values

The range of [ISO/Gain<L>] settings and default values vary depending on the [Mode], [Base Look] > [Select], and [Base Sensitivity] settings.
Default values in the tables are shown in bold.

When [Mode] is set to [ISO]

When [Base Look] > [Select] is set to [S-Cinetone], [Standard], [ITU709], [709tone], or [Still]

When [ISO/Gain/EI] > [Base Sensitivity] is set to [Low]	When [ISO/Gain/EI] > [Base Sensitivity] is set to [High]
ISO 320 ISO 400 ISO 500 ISO 640 ISO 800 ISO 1000 ISO 1250 ISO 1600 ISO 2000 ISO 2500 ISO 3200 ISO 4000 ISO 5000 ISO 6400 ISO 8000 ISO 10000 ISO 12800 ISO 16000 ISO 20000 ISO 25600	**ISO 5000** ISO 6400 ISO 8000 ISO 10000 ISO 12800 ISO 16000 ISO 20000 ISO 25600 ISO 32000 ISO 40000 ISO 51200 ISO 64000 ISO 80000 ISO 102400 ISO 128000 ISO 160000 ISO 204800 ISO 256000 ISO 320000 ISO 409600

When [Base Look] > [Select] is set to [HLG Live] or [HLG Natural]

When [ISO/Gain/EI] > [Base Sensitivity] is set to [Low]	When [ISO/Gain/EI] > [Base Sensitivity] is set to [High]
ISO 800	**ISO 128000**
ISO 1000	ISO 16000
ISO 1250	ISO 20000
ISO 1600	ISO 25600
ISO 2000	ISO 32000
ISO 2500	ISO 40000
ISO 3200	ISO 51200
ISO 4000	ISO 64000
ISO 5000	ISO 80000
ISO 6400	ISO 102400
ISO 8000	ISO 128000
ISO 10000	ISO 160000
ISO 12800	ISO 204800
ISO 16000	ISO 256000
ISO 20000	ISO 320000
ISO 25600	ISO 409600

When [Base Look] > [Select] is set to [User1] to [User16]

When [ISO/Gain/EI] > [Base Sensitivity] is set to [Low]	When [ISO/Gain/EI] > [Base Sensitivity] is set to [High]
ISO 800	**ISO 12800**
ISO 1000	ISO 16000
ISO 1250	ISO 20000
ISO 1600	ISO 25600
ISO 2000	ISO 32000
ISO 2500	ISO 40000
ISO 3200	ISO 51200
ISO 4000	ISO 64000
ISO 5000	ISO 80000
ISO 6400	ISO 102400
ISO 8000	ISO 128000
ISO 10000	ISO 160000
ISO 12800	ISO 204800
ISO 16000	ISO 256000
ISO 20000	ISO 320000
ISO 25600	ISO 409600

When [Mode] is set to [dB]

A value in the range −3dB to +30dB in 1dB increments can be configured.
The default value is 0dB.

AGC Limit Settings and Default Values

The range of [AGC Limit] menu settings and default values vary depending on the [Mode], [Base Look] > [Select], and [Base Sensitivity] settings.
Default values in the tables are shown in bold.

When [Mode] is set to [ISO]

When [Base Look] > [Select] is set to [S-Cinetone], [Standard], [ITU709], [709tone], or [Still]

When [ISO/Gain/EI] > [Base Sensitivity] is set to [Low]	When [ISO/Gain/EI] > [Base Sensitivity] is set to [High]
ISO 400 ISO 500 ISO 640 ISO 800 ISO 1000 ISO 1250 ISO 1600 **ISO 2000** ISO 2500 ISO 3200 ISO 4000 ISO 5000 ISO 6400 ISO 8000 ISO 10000 ISO 12800 ISO 16000 ISO 20000 ISO 25600	ISO 6400 ISO 8000 ISO 10000 ISO 12800 ISO 16000 ISO 20000 ISO 25600 **ISO 32000** ISO 40000 ISO 51200 ISO 64000 ISO 80000 ISO 102400 ISO 128000 ISO 160000 ISO 204800 ISO 256000 ISO 320000 ISO 409600

When [Base Look] > [Select] is set to [HLG Live] or [HLG Natural]

When [ISO/Gain/EI] > [Base Sensitivity] is set to [Low]	When [ISO/Gain/EI] > [Base Sensitivity] is set to [High]
ISO 1000 ISO 1250 ISO 1600 ISO 2000 ISO 2500 ISO 3200 ISO 4000 **ISO 5000** ISO 6400 ISO 8000 ISO 10000 ISO 12800 ISO 16000 ISO 20000 ISO 25600	ISO 16000 ISO 20000 ISO 25600 ISO 32000 ISO 40000 ISO 51200 ISO 64000 **ISO 80000** ISO 102400 ISO 128000 ISO 160000 ISO 204800 ISO 256000 ISO 320000 ISO 409600

When [Base Look] > [Select] is set to [User1] to [User16]

When [ISO/Gain/EI] > [Base Sensitivity] is set to [Low]	When [ISO/Gain/EI] > [Base Sensitivity] is set to [High]
ISO 1000 ISO 1250 ISO 1600 ISO 2000 ISO 2500 ISO 3200 ISO 4000 **ISO 5000** ISO 6400 ISO 8000 ISO 10000 ISO 12800 ISO 16000 ISO 20000 ISO 25600	ISO 16000 ISO 20000 ISO 25600 ISO 32000 ISO 40000 ISO 51200 ISO 64000 **ISO 80000** ISO 102400 ISO 128000 ISO 160000 ISO 204800 ISO 256000 ISO 320000 ISO 409600

When [Mode] is set to [dB]

Select from 3dB / 6dB / 9dB / 12dB / 15dB / 18dB / 21dB / 24dB / 27dB / 30dB.
The default value is 15dB.

Image Quality Settings Saved for Each Shooting Mode

The current status of configuration items related to image quality are saved for each of the following shooting modes. When you change the shooting mode, the corresponding settings that are saved for the target shooting mode are applied.

- Custom mode SDR(BT.709) target display
- Custom mode HDR(HLG) target display
- Log shooting (Cine EI, Cine EI Quick, Flexible ISO)

The configuration items related to image quality which are saved for each shooting mode are shown in the following tables.
“Yes” indicates a setting that is saved, and “No” indicates a setting that is not saved. “Yes” spanning multiple columns indicates common settings.

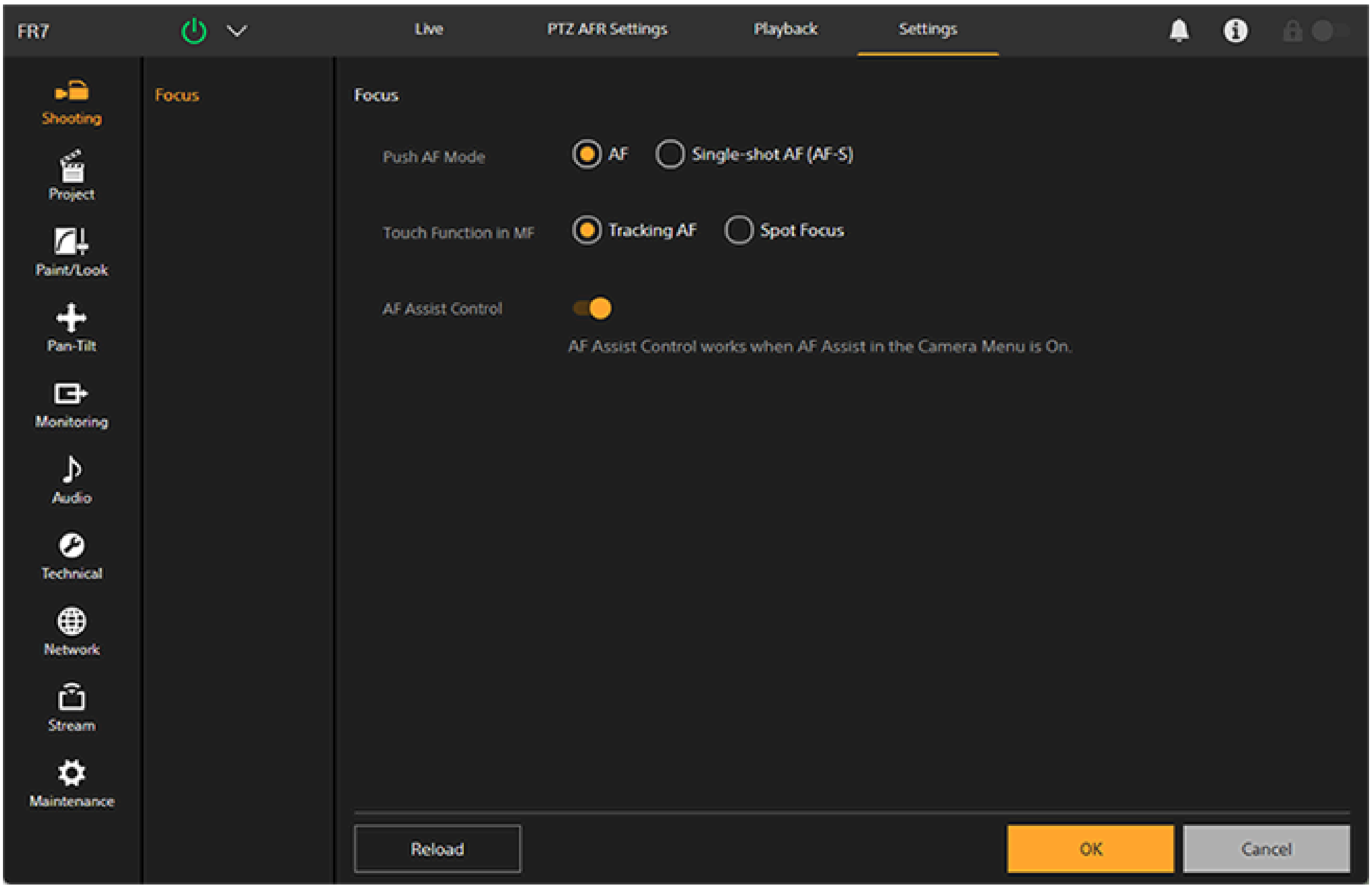
Item			**Shooting mode**				
			Custom		**Flexible ISO**	**Cine EI Quick**	**Cine EI**
			SDR(BT.709)	**HDR(HLG)**			
Shooting menu	ISO/Gain/EI	ISO/Gain	Yes1)		Yes	No	
		Exposure Index	No		No	Yes	Yes
		Base Sensitivity	Yes		No		
		Base ISO	No		Yes4)	No3)	Yes4)
	White	Preset White	Yes		Yes		
		Other than above	Yes				
	White Setting		Yes				
	Offset White		Yes		No		
	LUT On/Off		No		Yes		
	Noise Suppression	Setting(Custom)	Yes	Yes	No		
		Level(Custom)	Yes	Yes	No		
		Setting (Cine EI/Flex. ISO)	No		Yes		
		Level (Cine EI/Flex. ISO)	No		Yes		

Item			Shooting mode				
			Custom		Flexible ISO	Cine EI Quick	Cine EI
			SDR(BT.709)	HDR(HLG)			
Paint/Look menu	Base Look	Select	Yes	Yes	Yes		
		Input2)	Yes				
		Output2)	Yes				
		AE Level Offset2)	Yes				
	Black		Yes	Yes	No		
	Knee	Auto Knee	Yes	No	No		
		Other than above	Yes	Yes	No		
	Detail		Yes	Yes	No		
	Matrix		Yes	Yes	No		
	Multi Matrix		Yes	Yes	No		

1) Separate ISO sensitivity settings are saved for both Custom mode SDR(BT.709) and HDR(HLG).
2) Settings are saved for each Base Look, and do not depend on the shooting mode.
3) The base ISO sensitivity changes in conjunction with the Exposure Index setting.
4) Common setting value in Flexible ISO and Cine EI shooting modes.

Web Menu Configuration

Press the [Settings] operation screen switching tab to display the settings screen.
Use the settings screen to configure the various setup items of the unit, including initial settings, network settings, shooting/playback settings using the web menu.



Push AF Mode: ● AF ○ Single-shot AF (AF-S)

Touch Function in MF: ● Tracking AF ○ Spot Focus

AF Assist Control: On

AF Assist Control works when AF Assist in the Camera Menu is On.

The menu comprises the following menus.

Menu configuration and hierarchy

Level 1	Level 1 description	Level 2
Shooting	Contains settings related to shooting.	Focus

Level 1	Level 1 description	Level 2
Project	Contains basic project settings.	Base Setting
		Rec Format
		Simul Rec
		Proxy Rec
		Interval Rec
		Picture Cache Rec
		All File
Paint/Look	Contains settings related to image quality.	Base Look
Pan-Tilt	Contains settings related to the pan/tilt.	P/T Speed
		P/T Acceleration
		P/T Range Limit
		P/T Direction
		P/T Preset
Monitoring	Contains settings related to video output and the screen display.	Output Format
		Output Display
Audio	Contains settings related to audio.	Audio
Technical	Contains settings for technical items.	Tracking Data Output
		Tracking Data
		Tally
		IR Remote
		RCP/MSU
		Lens Controller

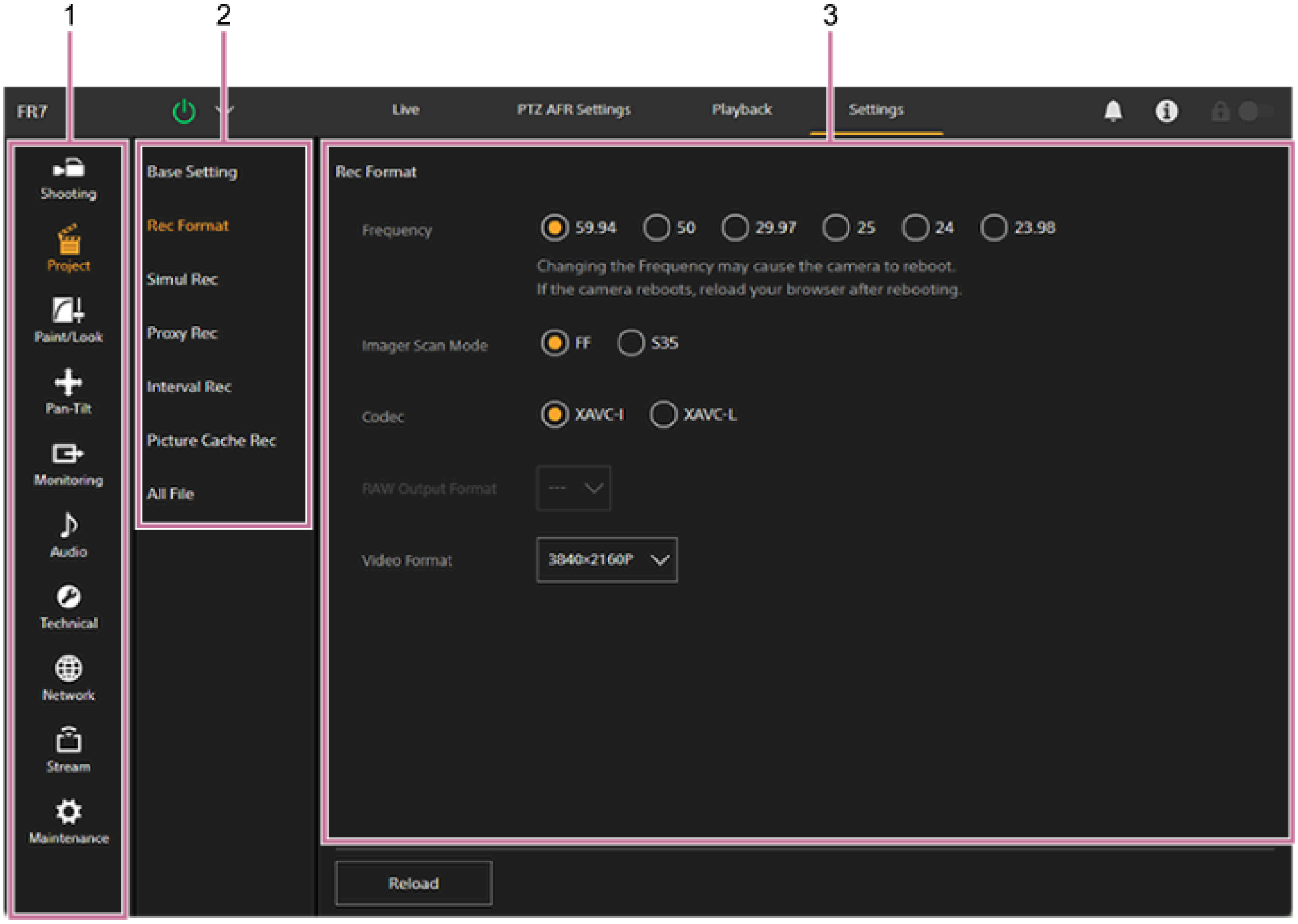
Level 1	Level 1 description	Level 2
Network	Contains settings related to networks.	Camera Name
		User
		Wired LAN
		File Transfer
		FTP Server 1
		FTP Server 2
		FTP Server 3
		SSL
		SSH
		Referer Check
		Brute Force Attack Protection
Stream	Contains settings related to streaming.	Stream
		Video Stream
		Audio Stream
Maintenance	Contains devices settings, such as the clock and language.	Language
		Accessibility
		Clock Set
		Reset
		Information
		System Log
		HTTP Access Log
		Service
		Software

Note

- [Accessibility] is only available on models for North America.

Web Menu Operations

Press the [Settings] operation screen switching tab to display the settings screen to configure the various setup items of the unit, including initial settings, network settings, shooting/playback settings using the web menu.
Configure settings in the web menu on a tablet using touch operation or on a computer using mouse operation.
Press the menu for the items you want to configure to display the setup items and their settings in that menu.



Rec Format

Frequency ● 59.94 ○ 50 ○ 29.97 ○ 25 ○ 24 ○ 23.98

Changing the Frequency may cause the camera to reboot.
If the camera reboots, reload your browser after rebooting.

Imager Scan Mode ● FF ○ S35

Codec ● XAVC-I ○ XAVC-L

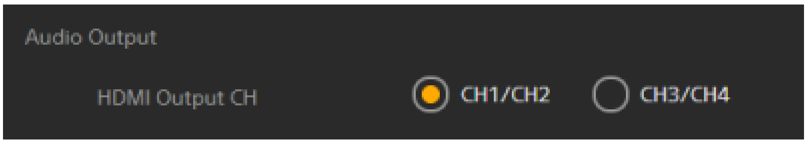
RAW Output Format ---

Video Format 3840×2160P

1. Menu (level 1)
2. Menu (level 2)
3. Setting

Configuration method

Value selection

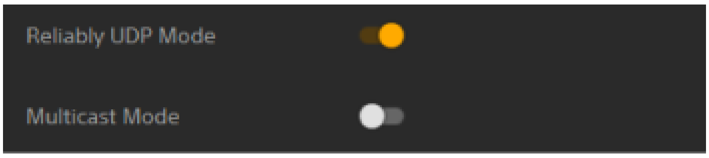


Audio Output

HDMI Output CH ● CH1/CH2 ○ CH3/CH4

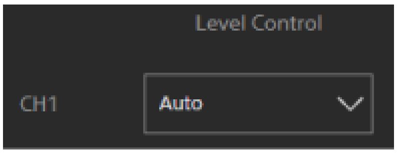
Press the radio button for an item. The radio button for a selected item is displayed in orange.

Item on/off



Press the switch to turn the item on/off. The switch is orange when the item is turned on, and white when turned off.

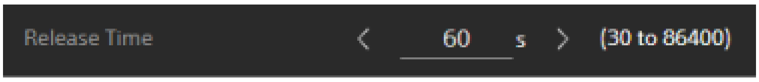
Value selection from a list



CH1 Auto

Press the drop-down button and select an item from the displayed list.

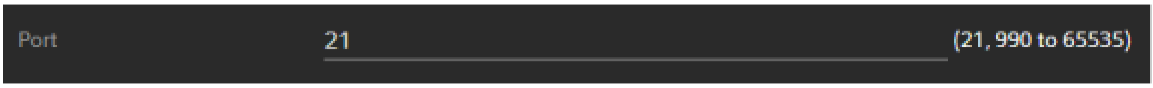
Numeric value selection



Release Time < 60 s > (30 to 86400)

Press < or > to change the numeric value. If the numeric value is underlined, you can also enter a numeric value directly.

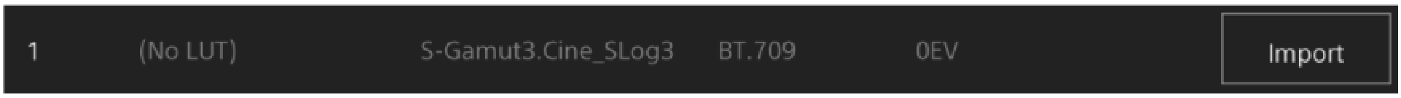
Character/number entry



Port 21 (21, 990 to 65535)

Configuration on separate screen

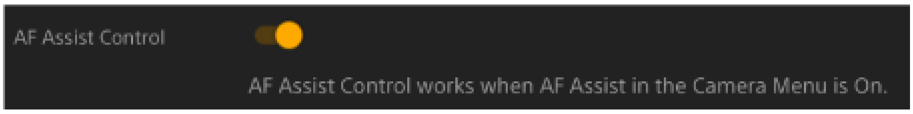
Press the button to perform setup operations on a separate screen.



1 (No LUT) S-Gamut3.Cine_SLog3 BT.709 0EV

Guidance message

Information that helps you to configure some settings and messages that call attention to the user are displayed.



AF Assist Control works when AF Assist in the Camera Menu is On.

Saving a setting

When finished configuring a setting, press the [OK] button to save the setting.
Press the [Cancel] button to discard changes to a setting and revert to the previous setting.
Press the [Reload] button to update the screen display.

Note

- If you press the [Reload] button before saving a setting, changes to the setting will be discarded.
- If you move to a different page before saving a setting, changes to the setting will be discarded.

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Focus

Sets focus settings.

Item	Sub-item setting	Factory default	Description
Push AF Mode	AF / Single-shot AF(AF-S)	AF	Sets the push auto focus mode.
Touch Function in MF	Tracking AF / Spot Focus	Tracking AF	Sets the operation when the camera image screen is touched in MF mode.
AF Assist Control	On / Off	On	When set to [On], you can use the focus slider in the Web App during auto focus to adjust the focus position. • For details, see “Setting the Auto Focus Target Manually (AF Assist) Using the Web App.” **Note** • This item is enabled only when [AF Assist] is set to [On] in the camera menu.

Related Topic

- Setting the Auto Focus Target Manually (AF Assist) Using the Web App

Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

Base Setting

Sets base settings.

Item	Sub-item setting	Factory default	Description
Shooting Mode	Custom / Flexible ISO / Cine EI Quick / Cine EI	Custom	Sets the shooting mode. - See “Shooting mode” in “Configuring Basic Operation.”
Target Display	SDR(BT.709) / HDR(HLG)	SDR(BT.709)	Sets the color gamut of the recording/output in Custom mode.

Related Topic

- Configuring Basic Operation

Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

Rec Format

Sets recording format settings.

Item	Sub-item setting	Factory default	Description
Frequency	59.94 / 50 / 29.97 / 25 / 24 / 23.98	59.94	Selects the system frequency. **Note** - If the frequency is changed, the camera will reboot. After rebooting, reload the page in the web browser.
Imager Scan Mode	FF / S35	FF	Selects the imager size.
Codec	RAW / RAW & XAVC-I / XAVC-I / XAVC-L	XAVC-I	Sets the clip recording/playback codec. **Note** - When [Imager Scan Mode] is set to [S35], [RAW] and [RAW & XAVC-I] cannot be selected.
RAW Output Format	The available settings vary depending on the [Frequency] setting. - See “[RAW Output Format] settings” below.	–	Sets the size of the RAW image to output to an external RAW recorder. **Note** - When [Codec] is set to [RAW & XAVC-I], the [Video Format] setting switches in link with the [RAW Output Format] setting.
Video Format	The available settings vary depending on the [Frequency], [Imager Scan Mode], and [Codec] settings. - See “[Video Format] settings” below.	–	Sets the image size.

[RAW Output Format] settings

Frequency	Imager Scan Mode	Codec	Setting
59.94 / 50 / 29.97 / 25 / 23.98	FF	RAW / RAW & XAVC-I	4096×2160 **3840×2160**
24	FF	RAW / RAW & XAVC-I	**4096×2160**

- Default values are shown in bold.
- The conditions under which [RAW Output Format] cannot be set have been omitted.

[Video Format] settings

Frequency	Imager Scan Mode	Codec	Setting
59.94 / 50 / 29.97 / 25 / 23.98	FF	RAW	–
		RAW & XAVC-I	4096×2160P **3840×2160P**
		XAVC-I	4096×2160P **3840×2160P** 1920×1080P
		XAVC-L	**3840×2160P** 1920×1080P 50 1920×1080P 35
	S35	XAVC-I	**1920×1080P**
		XAVC-L	**1920×1080P 50** 1920×1080P 35
24	FF	RAW	–
		RAW & XAVC-I / XAVC-I	**4096×2160P**

- Default values are shown in bold.

Simul Rec

Sets 2-slot simultaneous recording mode settings (see “Recording to Memory Cards A and B Simultaneously (2-slot Simul Rec)”).

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Turns the simultaneous recording function on/off and sets the recording destination media.
Rec Button	Slot A / Slot B / Slot A/Slot B	Slot A/Slot B	Displays the record button assignment for each recording media. Set [Project] > [Simul Rec] > [Rec Button Set] in the camera menu.
2nd Rec Button	Slot A / Slot B / Slot A/Slot B	Slot A/Slot B	

Related Topic

- Recording to Memory Cards A and B Simultaneously (2-slot Simul Rec)

Proxy Rec

Sets proxy recording mode settings (see “Proxy Recording”).

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Turns proxy recording mode on/off.

Interval Rec

Sets interval recording mode settings (see “Recording Video Intermittently (Interval Rec)”).

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Turns interval recording mode on/off. (Setting this mode to On will set all other special modes to Off.)
Interval Time	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 15 / 20 / 30 / 40 / 50 (sec) 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10 / 15 / 20 / 30 / 40 / 50 (min) 1 / 2 / 3 / 4 / 6 / 12 / 24 (hour)	1	Sets the interval between recordings in Interval Rec recording mode (when Interval Rec is set to On).
Number of Frames	1frame / 2frames / 3frames / 6frames / 9frames / 12frames The available settings vary depending on the frame frequency of the selected video format. **59.94P/50P:** 2frames / 6frames / 12frames **29.97P/25P/24P/23.98P:** 1frame / 3frames / 6frames / 9frames	**59.94P/50P:** 2frames **29.97P/25P/24P/23.98P:** 1frame	Sets the number of frames to record per take in Interval Rec recording mode (when Interval Rec is set to On).

Related Topic

- Recording Video Intermittently (Interval Rec)

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Picture Cache Rec

Sets picture cache recording mode settings (see “Recording Cached Pictures (Picture Cache Rec)”).

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Turns the picture cache function on/off.
Cache Size	Short / Medium / Long / Max	Max	Sets the time for accumulation of images in picture cache memory (picture cache recording time).
Cache Rec Time	–	–	Displays the time for accumulation of images in picture cache memory (picture cache recording time).

Related Topic

- Recording Cached Pictures (Picture Cache Rec)

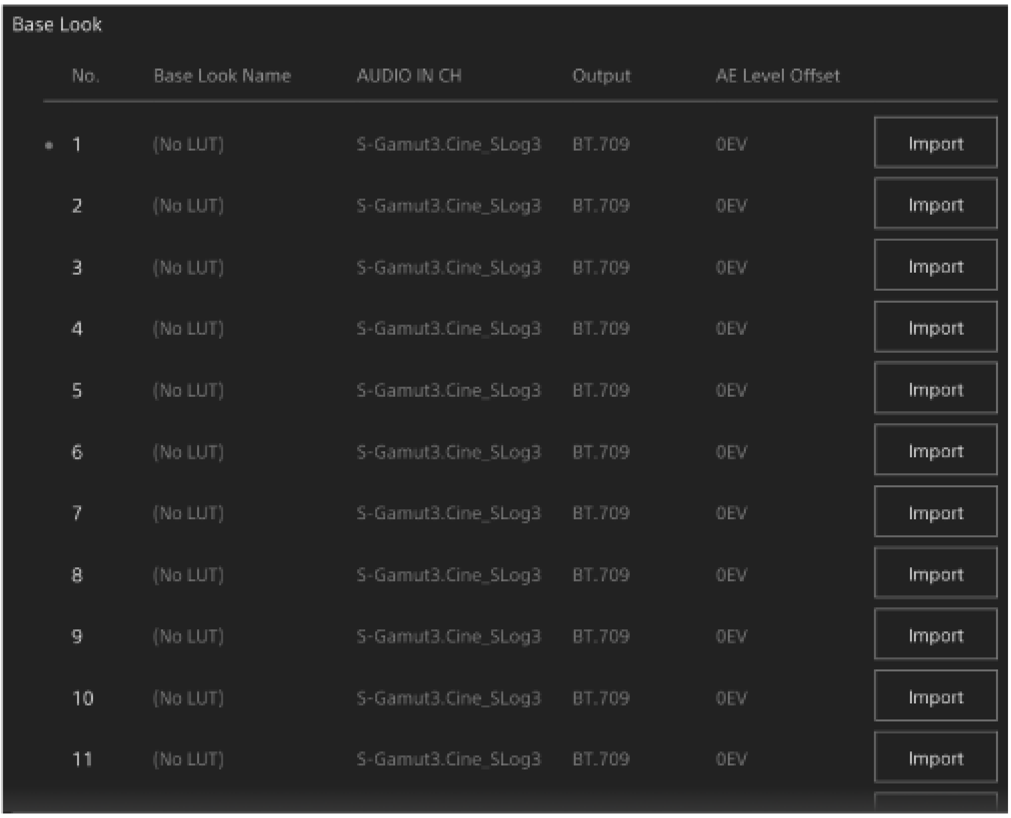
All File

Performs ALL file operations (see “Saving and Loading Configuration Data”).

Item	Sub-item setting	Factory default	Description
Load All File	–	–	Load an ALL file into the unit from the device running the Web App. **Note** • When an ALL file is loaded into the unit, the unit will reboot. After rebooting, reload the page in the web browser. • An ALL file cannot be loaded during PTZ auto framing operation. Turn PTZ auto framing off and then load an ALL file.
Save All File	–	–	Save the settings of the unit to the device running the Web App as an ALL file. **Note** • An ALL file cannot be saved during PTZ auto framing operation. Turn PTZ auto framing off and then save an ALL file.

Base Look

You can load a base look into the unit.
A list of available base looks is displayed on the screen. The currently applied base look is indicated by a ● marker on the left of the base look number.



Base Look

	No.	Base Look Name	AUDIO IN CH	Output	AE Level Offset	
●	1	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
	2	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
	3	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
	4	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
	5	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
	6	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
	7	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
	8	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
	9	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
	10	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import
	11	(No LUT)	S-Gamut3.Cine_SLog3	BT.709	0EV	Import

[No.]: Base look number
[Base Look Name]: Base look name
[Input]: Base look input signal
[Output]: Base look output signal
[AE Level Offset]: Base look exposure reference offset value

To add a base look

Press the [Import] button to import a new base look. Follow the on-screen instructions.
After importing, set appropriate values for [Input], [Output], and [AE Level Offset]. For details, see “Importing a Desired Base Look.”

Related Topic

- Importing a Desired Base Look

P/T Speed

Sets settings related to the pan/tilt speed.

Item	Sub-item setting	Factory default	Description
Speed Step	Normal / Extended	Extended	Sets the number of speed steps of the pan/tilt drive. **Normal:** Speed can be specified using 24-step range. Use this setting for compatibility with existing Sony remote cameras. **Extended:** Speed can be specified using 50-step range.
Speed Mode	Normal / Slow	Normal	Sets the speed mode of the pan/tilt drive. Enabled only when [Speed Step] is set to [Normal]. **Normal:** Operates in normal-speed range (minimum to maximum (60 degrees/second)). **Slow:** Operates in low-speed range (minimum to maximum (40 degrees/second)).

P/T Acceleration

Sets settings related to the pan/tilt speed.

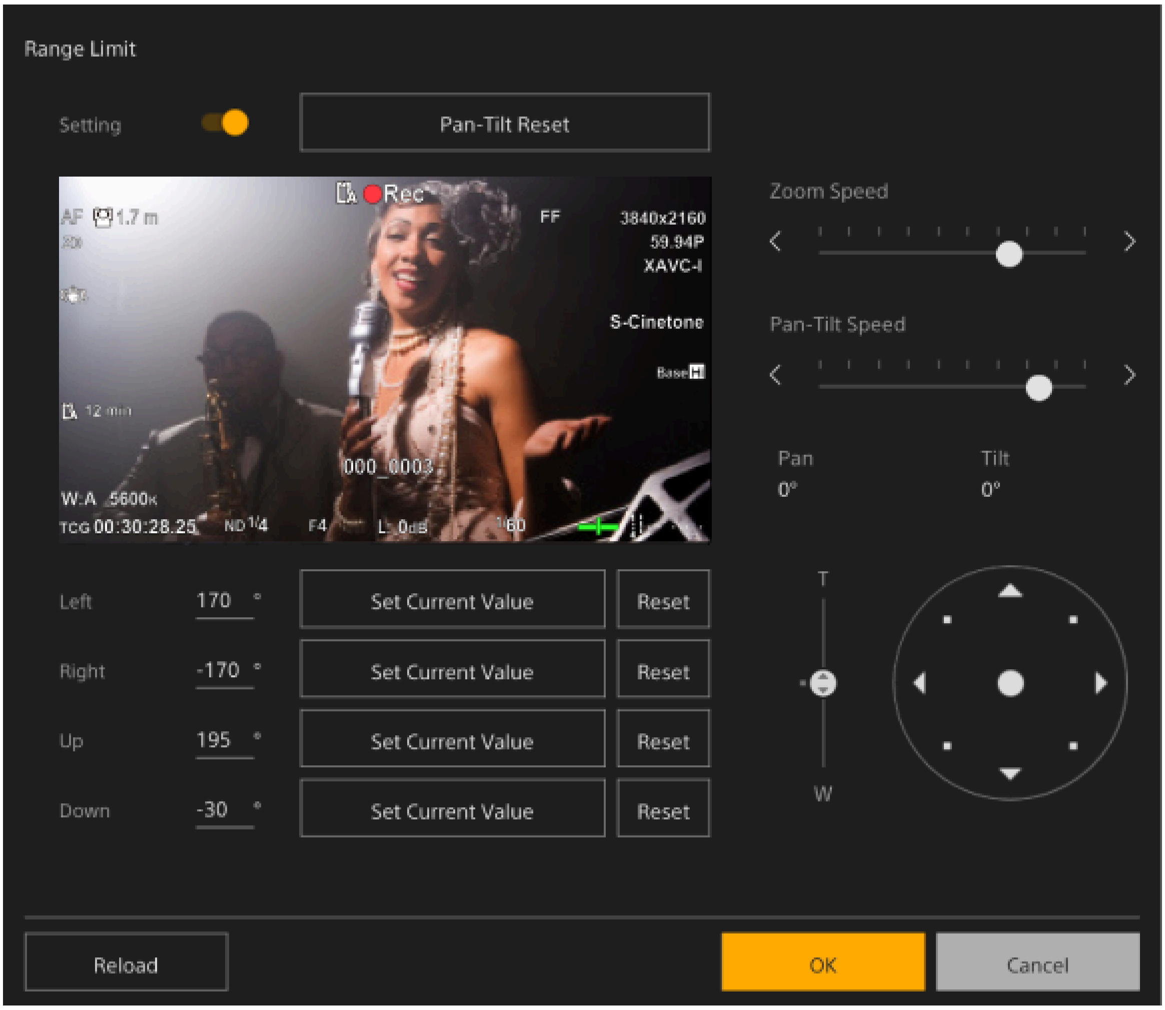
Item	Sub-item setting	Factory default	Description
Acceleration	1 to 9	8	Selects the acceleration/deceleration for pan/tilt operations. The larger the number, the higher the acceleration.

P/T Range Limit

Sets settings related to limiting the pan/tilt operating range.
Set the pan/tilt operating range limits using the following screen.

Note

- When the unit is turned on or pan/tilt reset is executed, this range limit setting is ignored. This function cannot be used to avoid obstacles near the unit.



Left 170 °
Right -170 °
Up 195 °
Down -30 °
Pan 0°
Tilt 0°

1. **Set the [Setting] switch to the on position.**

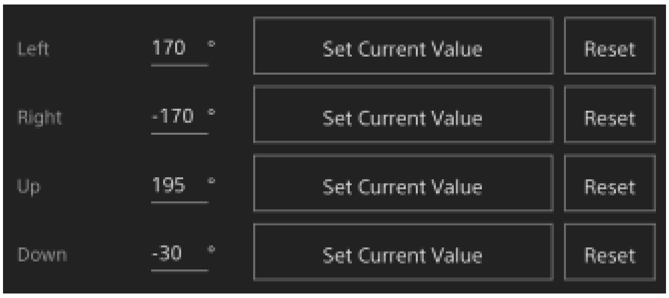
   The pan-tilt operating range limit function becomes enabled.

2. **Check the image using the pan/tilt controls of the camera.**

3. **To set the positions at which to limit operation, press the [Left], [Right], [Up], [Down] > [Set Current Value] button at those positions.**

   [Left]: Left side of camera
   [Right]: Right side of camera
   [Up]: Top side of camera

[Down]: Bottom side of camera



Left 170 °

Right -170 °

Up 195 °

Down -30 °

The limit positions are set and are displayed as numeric values (angle).
To cancel a limit, press the [Reset] button for the individual positions.

4 **Press the [OK] button.**

The pan/tilt operation is restricted to stay within the configured limit positions.

Note

- Camera positions outside the limit positions cannot be saved as a preset.
- If the [Pan-Tilt] > [P/T Direction] > [Ceiling] setting is changed, the configured limit position settings are returned to the factory defaults.
- The setting cannot be changed during playback, during thumbnail display, when a pan/tilt error occurs, when pan/tilt is not initialized, and when pan/tilt is locked.

P/T Direction

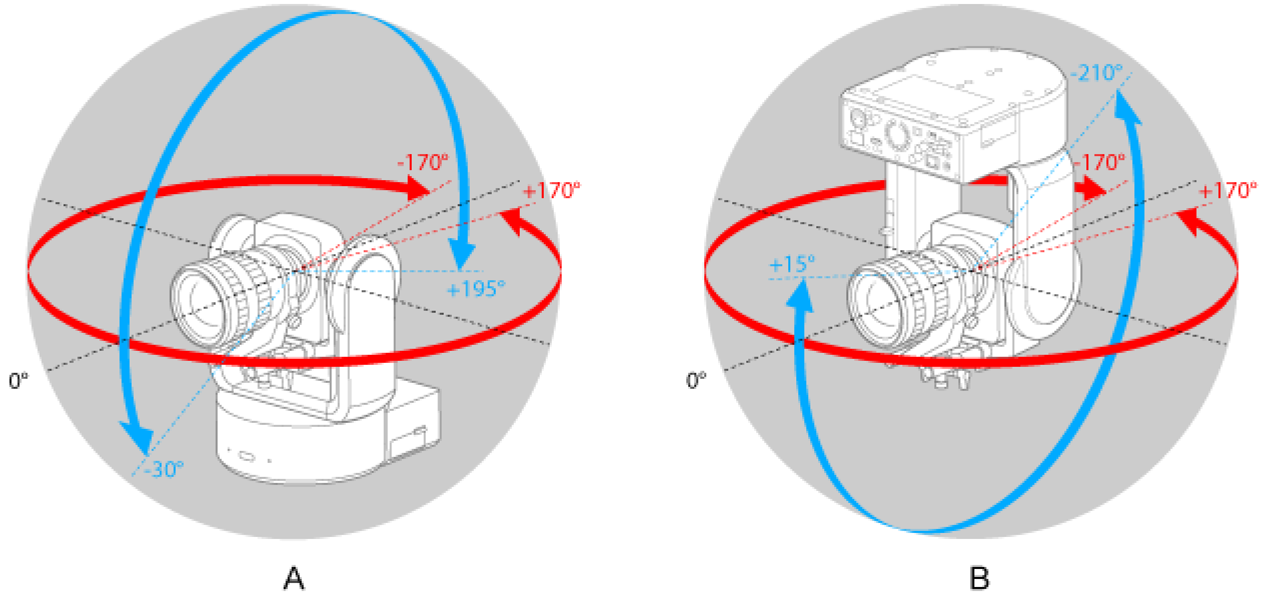
Sets settings related to the pan/tilt direction.

Item	Sub-item setting	Factory default	Description
Ceiling	On / Off	Off	When the unit is mounted on a desktop, set to [Off]. When the unit is mounted on a ceiling, set to [On]. When [Ceiling] is set to [On], [Pan Direction] is automatically set to [Opposite].
Pan Direction	Normal / Opposite	Normal	Sets the pan drive direction. When the setting is changed, the drive direction reverses.
Tilt Direction	Normal / Opposite	Normal	Sets the tilt drive direction. When the setting is changed, the drive direction reverses.

Note

- When a changed [Ceiling] setting is applied, all preset positions are deleted since the pan/tilt coordinates would become inverted.

The pan/tilt drive range changes as shown in the following diagram depending on the [Ceiling] setting.



A: When [Ceiling] is set to [Off]
B: When [Ceiling] is set to [On]

P/T Preset

Sets settings related to camera presets.

Pan-Tilt

Sets the speed for presets.

Item	Sub-item setting	Factory default	Description
Pan-Tilt Speed Setting Way	Separate / Common	Separate	Sets whether preset speeds are configured separately or use a common setting.
Pan-Tilt Speed for Common	1 to 50	50	Sets the common speed for presets. **Note** - A maximum drive speed of 24 is used if a value of 25 or higher is set when [Pan-Tilt] > [P/T Speed] > [Speed Step] is set to [Normal].

Default

Sets the default values that are configured when a preset position is saved.

Item	Sub-item setting	Factory default	Description
Pan-Tilt Speed Unit	Speed Table / Time	Speed Table	Sets whether preset position speed units are configured using a speed table or as a time when restoring preset positions.
Pan-Tilt Speed for Separate	1 to 50	50	Sets the speed for presets when the preset speed selection method is set to [Separate].
Pan-Tilt Time for Separate	1.0 to 99.0	1	Sets the speed for presets when [Pan-Tilt Speed Unit] is set to [Time].
Zoom Sync	On / Off	On	Sets whether pan/tilt operation and zoom operation are synchronized when restoring a preset position.
Zoom Speed	0 to 32767	32767	Sets the zoom speed.
Focus Recall	On / Off	On	Sets whether focus settings are restored.
MF Speed	0 to 32767	32767	Sets the focus speed for manual focus.

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Output Format

Sets output format settings.

Item	Sub-item setting	Factory default	Description
SDI	For details about settings, see “Output Formats and Limitations.”	–	Sets the SDI and HDMI output resolution.
HDMI		–	

Related Topic

- Output Formats and Limitations

Output Display

Sets settings related to output signals.

Item	Sub-item setting	Factory default	Description
SDI	On / Off	Off	Sets whether the menu and status are embedded in the SDI output signal.
HDMI/Stream	On / Off	On	Sets whether the menu and status are embedded in the HDMI output signal. **Note** This setting is also applied to the HDMI output signal image, streaming output image, and the image in the Web App camera image panel.

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Audio Input

Sets settings related to CH1 to CH4 audio input.

Item	Sub-item setting	Factory default	Description
Level Control	Auto / Manual	Auto	Selects audio input level automatic adjustment or manual adjustment.
Level	0 to 99	49	Sets the input level.
Input Select	AUDIO IN CH1 / AUDIO IN CH2 / Off	**CH1 and CH3:** AUDIO IN CH1 **CH2 and CH4:** AUDIO IN CH2	Sets the audio input source. **Note** - CH1 is set to [AUDIO IN CH1] (fixed).
Wind Filter	On / Off	Off	Turns the wind noise reduction filter on/off.

Sets the master audio input level. The master audio input level is used for all channels 1 to 4.

Item	Sub-item setting	Factory default	Description
Master	0 to 99	99	Sets the master input level.

Audio Output

Sets settings related to audio output.

Item	Sub-item setting	Factory default	Description
HDMI/Stream Output CH	CH1/CH2 / CH3/CH4	CH1/CH2	Sets the combination of audio channels for the HDMI/streaming output.

Note

- This setting is also applied to the streaming output audio.

Tracking Data Output

Sets settings related to tracking information output.

Destinations

Item	Sub-item setting	Factory default	Description
IPv4 Address	IPv4 address	–	Sets the tracking information destination IP address.
Port	1024 to 65534	40000	Sets the tracking information destination port number.
Output	On / Off	Off	Turns tracking information output on/off.

Tracking Data

Sets settings related to tracking information content.

Camera ID

Item	Sub-item setting	Factory default	Description
Camera ID	0 to 255	255	Sets the ID of the unit.

Camera Position

Item	Sub-item setting	Factory default	Description
X	−131072.0 to 131071.9	0.0	Sets the X coordinate of the camera (Unit: 1 mm)
Y	−1310720 to 1310719	0.0	Sets the Y coordinate of the camera (Unit: 1 mm)
Z	−1310720 to 1310719	0.0	Sets the Z coordinate of the camera (Unit: 1 mm)

Tally

Sets recording/tally lamp settings (see “Connecting a Tally Signal”).

Tally

Sets settings related to the recording/tally lamp.

Item	Sub-item setting	Factory default	Description
Tally Lamp Brightness	High / Low / Off	High	Sets the brightness of the recording/tally lamp.
G Tally Lamp	Enable / Disable	Enable	Enables/disables the G tally lamp.
Tally Control	External / Internal / PTZ AFR	Internal	Selects the target for accepting the recording/tally lamp control information of the unit.

TSL UMD

Sets the tally control method using the TSL UMD protocol.

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Turns tally control using the TSL UMD protocol on/off.
Index	0 to 65534	1	Sets the index number for receiving tally control using the TSL UMD protocol.
Port Number	1024 to 65534	8900	Sets the port number for receiving tally control using the TSL UMD protocol.

Related Topic

- Connecting a Tally Signal

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IR Remote

Sets settings related to the infrared remote control.

Item	Sub-item setting	Factory default	Description
Setting	On / Off	On	Enables/disables operation of the unit from the infrared remote control.
Pan-Tilt Speed	Normal / Max	Normal	Sets the speed of pan/tilt operations sent from the infrared remote control.

RCP/MSU

Configures setting when an RCP/MSU (option) is connected.
For details, see “Connecting a RCP/MSU (option).”

Item	Sub-item setting	Factory default	Description
CNS Mode	Off / Bridge / MCS / PC Control	Off	Sets the connection mode for the RCP/MSU.
Master IP Address	IPv4 address	0.0.0.0	Sets the IP address of the master device when building a LAN-based multi-camera system.
Camera No.	Camera No. (1 to 96)	1	Sets a unique camera number within the system when building a LAN-based multi-camera system.

Note

- Configure settings on the RCP/MSU as required.
- An MSU is required for a multi-camera system.
- When using multiple MSU units, set one MSU unit as the master and set all other MSU units as clients.

Lens Controller

Sets settings for a connected lens controller (option).
For details, see “Connecting a Lens Controller.”

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Sets whether to use the lens controller (option).
Mode	0 to 15	0	Sets the operating mode of the lens controller (option). Values in the range 0 to 15 are available, but the actual values that can be selected will vary depending on the lens controller (option). For details, refer to the operating instructions of the lens controller.
Reverse	On / Off	Off	Reverses the direction of rotation of the lens controller (option).
Initialize	–	–	Initializes the lens controller (option).

Note

- When [Setting] is changed, the unit will reboot. Reload the page in the web browser.

Hint

- When using PTZ auto framing, set the acceleration/deceleration to maximum. Also, note that the accuracy will vary depending on the lens. Check the operation before use.

Camera Name

Sets settings related to the camera name (unit name).

Item	Sub-item setting	Factory default	Description
Camera Name	–	FR7	Sets the camera name.

Up to eight (0 to 8) of the following characters can be entered for Camera Name.
Alphanumeric characters
Symbols (space !#$`*+-./;<=>?@[\]^_`{|})

User

Sets settings related to user access of the unit.

Settings related to administrator users (Administrator) (required)

Item	Sub-item setting	Factory default	Description
User Name	–	admin	Sets the user name.
Current Password	–	–	When changing the password, enter the current password.
New Password	–	–	Enter the new password.
Re-Type Password	–	–	Enter the new password again for confirmation.

Settings related to general users (User 1 to User 9) (optional)

Item	Sub-item setting	Factory default	Description
User Name	–	–	Sets the user name.
Current Password	–	–	When changing the password, enter the current password.
New Password	–	–	Enter the new password.
Re-Type Password	–	–	Enter the new password again for confirmation.

Wired LAN

Status

Displays the network status.

Item	Sub-item setting	Factory default	Description
Host Name	–	–	Displays the host name.
MAC Address	–	–	Displays the MAC address of the unit.
Ethernet Status	–	–	Displays the current communication speed.
IP Address	–	–	Displays the IP address of the unit.
Subnet Mask	–	–	Displays the subnet mask of the unit.
Gateway	–	–	Displays the IPv4 default gateway of the unit.
Primary DNS Server	–	–	Displays the primary DNS server of the unit.
Secondary DNS Server	–	–	Displays the secondary DNS server of the unit.
IPv6 Address 1	–	–	Displays IPv6 address 1 of the unit.
IPv6 Address 2	–	–	Displays IPv6 address 2 of the unit.
IPv6 Gateway	–	–	Displays the IPv6 default gateway of the unit.
Link-local IPv6 Address	–	–	Displays the IPv6 link-local address of the unit.

IPv4

Sets settings related to the IPv4 network.

Item	Sub-item setting	Factory default	Description
DHCP	On / Off	On	Turns the [DHCP] function on/off.
IP Address	–	–	Sets the IPv4 address when [DHCP] is set to Off.
Subnet Mask	–	–	Sets the subnet mask when [DHCP] is set to Off.
Gateway	–	–	Sets the IPv4 default gateway when [DHCP] is set to Off.

IPv6

Sets settings related to the IPv6 network.

Item	Sub-item setting	Factory default	Description
Obtain an IP Address Automatically	On / Off	On	Turns auto IPv6 address acquisition on/off.
IP Address	–	–	Sets the IPv6 address when [Obtain an IP Address Automatically] is set to Off.
Prefix Length	–	–	Sets the prefix when [Obtain an IP Address Automatically] is set to Off.
Gateway	–	–	Sets the IPv6 default gateway when [Obtain an IP Address Automatically] is set to Off.

Common

Sets settings common to IPv4/IPv6 networks.

Item	Sub-item setting	Factory default	Description
HTTP Port	80, 1024 to 65534	80	Sets the HTTP port number.
DNS Auto	On / Off	On	Sets whether to obtain the DNS addresses from the DHCP server.
Primary DNS Server	IPv4/IPv6 address	–	Sets the primary DNS server when [DNS Auto] is set to Off.
Secondary DNS Server	IPv4/IPv6 address	–	Sets the secondary DNS server when [DNS Auto] is set to Off.

File Transfer

Sets settings related to file transfers.

Item	Sub-item setting	Factory default	Description
Auto Upload (Proxy)	On / Off	Off	Turns proxy file auto upload on/off.
Default Upload Server	Server Settings1 to 3 > Display Name	Server Settings1	Selects the upload server for files. The server selected here becomes the auto upload destination for proxy files, and the upload destination for files from the thumbnail screen. Displays the [Display Name] settings configured in [Server Settings1 to 3].

FTP Server 1 to 3

Sets settings related to file FTP transfers.
The settings are common for FTP Server 1 to 3.

Item	Sub-item setting	Factory default	Description
Display Name	–	–	Sets the display name shown in the transfer destination setup menu.
Service	–	–	Displays the type of server.
Host Name	–	–	Sets the host name of the transfer destination server.
Port	21, 990, 1024 to 65534	21	Sets the port number of the transfer destination server.
User Name	–	–	Sets the user name for authentication of the transfer destination server connection.
Password	–	–	Sets the authentication password of the transfer destination server connection.
Passive Mode	On / Off	Off	Turns passive mode on/off.
Destination Directory	–	–	Sets the name of the transfer destination directory.
Using Secure Protocol	On / Off	Off	Sets whether to use (On) or not use (Off) secure FTP transfer.
Root Certificate	–	–	Loads the root certificate for secure FTP transfer. Press the [Load] button and select a root certificate on the displayed screen. Press the [Delete] button to delete the loaded root certificate.
Root Certificate Status	–	–	Displays the load status of the root certificate.
Reset	–	–	Resets the [Server Settings] settings to the defaults.

SSL

Sets settings related to SSL.

SSL

Enables/disables the SSL function.

Item	Sub-item setting	Factory default	Description
Function	Disable / Enable / Enable (Allow HTTP connection for some clients)	Disable	Enables/disables the SSL function.

SSL Server Authentication

Sets settings related to SSL server authentication.

Item	Sub-item setting	Factory default	Description
Certificate Options	Use a self-signed certificate (For test use) / Use an external certificate	–	Sets the installation method of the SSL server certificate.
Status	–	–	Displays the validity of the SSL server certificate when [Certificate Options] is set to [Use a self-signed certificate (For test use)].
Issuer DN	–	–	Displays the distinguished name of the issuer of the SSL server certificate when [Certificate Options] is set to [Use a self-signed certificate (For test use)].
Subject DN	–	–	Displays the distinguished name of the subject of the SSL server certificate when [Certificate Options] is set to [Use a self-signed certificate (For test use)].
Available Period	–	–	Displays the valid period of the SSL server certificate when [Certificate Options] is set to [Use a self-signed certificate (For test use)].
Extended Key Usage	–	–	Displays the extended key usage method when [Certificate Options] is set to [Use a self-signed certificate (For test use)].
Delete	–	–	This button is displayed when [Certificate Options] is set to [Use a self-signed certificate (For test use)]. Deletes the installed SSL server certificate.
Import	–	–	Installs an external SSL server certificate from a list when [Certificate Options] is set to [Use an external certificate].

Item	Sub-item setting	Factory default	Description
Private Key Password	–	–	Sets the password for the private key information of the SSL server certificate when [Certificate Options] is set to [Use an external certificate].
Reset	–	–	This button clears the private key password display for entry of a new password.
Self-Signed Certificate Generation	–	–	Press the [Generate] button to generate a self-signed certificate when [Certificate Options] is set to [Use a self-signed certificate (For test use)].

SSH

Sets settings related to SSH.

Note

- SSH must be enabled to use the unit in applications using the Camera Remote SDK. Enable only for applications that you trust. Sony shall not be liable for any loss arising from the operation of the application.

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Turns the SSH function on/off.
User Name	–	–	Sets/displays the user name.
Password	–	–	Sets the password.

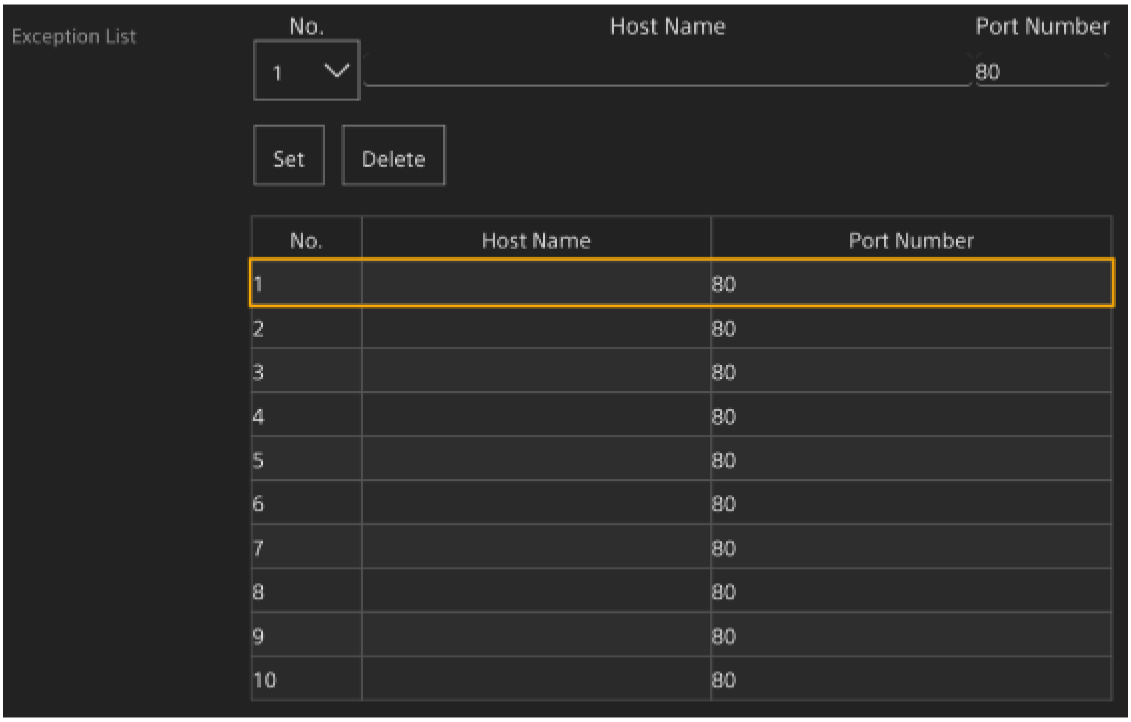
Referer Check

Sets settings related to Referer checks.

Item	Sub-item setting	Factory default	Description
Setting	On / Off	On	Enables/disables the Referer check function.

Exception List

Sets settings related to the Referer check exception list.



No.	Host Name	Port Number
1		80
2		80
3		80
4		80
5		80
6		80
7		80
8		80
9		80
10		80

Item	Sub-item setting	Factory default	Description
No.	1 to 10	–	Sets the exception number from the list.
Host Name	–	–	Sets the host name of the exception.
Port Number	–	–	Sets the port number of the exception.
Set	–	–	Press to register the configured exception in the exception list.
Delete	–	–	Select an exception that you want to delete and press the button to delete the registered exception from the exception list.

Brute Force Attack Protection

Sets settings related to brute force attack prevention.

Item	Sub-item setting	Factory default	Description
Setting	On / Off	On	Turns the [Brute Force Attack Protection] function on/off.
Count	3 to 100	8	Sets the number of attempts that will be considered as an attack. Enabled when [Setting] is set to On.
Release Mode	Always / Timer	Timer	Sets the release condition. Enabled when [Setting] is set to On. **Always:** Do not delete from attacker list. **Timer:** Delete from attacker list after the release time set using [Release Time] has elapsed.
Release Time	30 to 86400 s	60	Sets the release time. Enabled when [Setting] is set to On. When Release Mode is set to [Timer], entries are deleted from the attacker list after the release time has elapsed.

When an attacker is detected, the attacker list information is displayed.

Stream

Sets streaming settings (see “About Streaming”).

Stream Setting

Sets settings related to the streaming protocol.

Item	Sub-item setting	Factory default	Description
Setting	RTSP / RTMP / SRT-Caller / SRT-Listener / NDI|HX / Off	RTSP	Selects the streaming protocol.

Note

- To use RTMP, set [Stream] > [Audio Stream] > [Setting] to [On] beforehand.

RTSP

The following items are displayed when [Stream Setting] is set to [RTSP].
Sets settings related to RTSP streaming.

Item	Sub-item setting	Factory default	Description
Port Number	554, 1024 to 65534	554	Sets the RTSP port number.
Time Out	0 to 600	60	Sets the timeout of the Keep Alive command for RTSP streaming.
Authentication	On / Off	On	Turns the RTSP authentication function on/off.
Video Port Number 1	1024 to 65534	51000	Sets the port number for sending video 1 for RTSP unicast streaming.
Video Port Number 2	1024 to 65534	53000	Sets the port number for sending video 2 for RTSP unicast streaming.
Audio Port Number	1024 to 65534	57000	Sets the port number for sending audio for RTSP unicast streaming.

RTMP

The following items are displayed when [Stream Setting] is set to [RTMP].
Sets settings related to RTMP streaming.

Item	Sub-item setting	Factory default	Description
Server URL	–	–	Sets the RTMP or RTMPS connection destination URL.
Stream Key	–	–	Sets the stream key obtained from the RTMP server side.

Item	Sub-item setting	Factory default	Description
Root Certificate	–	–	Loads the root certificate required for connection with the RTMP server. Press the [Load] button and select a root certificate on the displayed screen. Press the [Delete] button to delete the loaded root certificate. The status is displayed in [Root Certificate Status].

SRT

The following items are displayed when [Stream Setting] is set to [SRT-Caller] or [SRT-Listener].
Sets settings related to SRT streaming.

Item	Sub-item setting	Factory default	Description
Destination	–	–	Sets the connection destination URL when the unit is operating as a caller.
Port Number	1024 to 65534	4201	Sets the port number for listening when the unit is operating as a listener.
Latency	20 to 8000 ms	120	Sets the latency.
TTL	1 to 255	64	Sets the TTL value.
Encryption	Off / AES128 / AES256	Off	Enables/disables encryption and sets the encryption method.
Passphrase	0 or string of 10 to 79 characters	0	Sets the passphrase used for encryption. Press Reset to clear the entered passphrase.
ARC	On / Off	On	Turns the Adaptive Rate Control function on/off.

NDI|HX

The following items are displayed when [Stream Setting] is set to [NDI|HX].
Sets settings related to NDI|HX.

Item	Sub-item setting	Factory default	Description
License	–	–	Displays the installation state of the NDI license key.
Source Name	–	–	Displays the NDI source name.
Group	On / Off	Off	Turns the NDI grouping function on/off.
Group Name	–	–	Displayed when the NDI grouping function is set to On. Sets the group name.
Discovery Server 1	–	–	Sets NDI discovery server 1.
Discovery Server 2	–	–	Sets NDI discovery server 2.

Item	Sub-item setting	Factory default	Description
Multicast Mode	On / Off	Off	Turns multicast streaming on/off.
Multicast Prefix	239.255.0.0	239.255.0.0	Displayed when [Multicast Mode] is set to On. Sets the prefix to use for multicast streaming.
Multicast Netmask	255.255.0.0	255.255.0.0	Displayed when [Multicast Mode] is set to On. Sets the netmask that determines the multicast address range.
Multicast TTL	1 to 255	3	Displayed when [Multicast Mode] is set to On. Sets the TTL value for multicast streaming.
Multi-TCP Mode	On / Off	Off	Turns Multi-TCP mode on/off.
Unicast UDP Mode	On / Off	On	Turns Unicast UDP mode on/off.

Related Topic

- About Streaming

Video Stream

Sets settings related to the streaming video codecs.

Video Stream 1

Sets settings related to video codec 1.

Item	Sub-item setting	Factory default	Description
Codec 1	H.264 / H.265	H.264	Sets the codec of image 1.
Size 1	4096×2160 / 3840×2160 / 2048×1080 / 1920×1080 / 1280×720 / 640×360	1920×1080	Sets the picture size of image 1.
Frame Rate 1	- For details about supported frame rates, see “Setting the Video Codec for Streaming.”	–	Sets the frame rate of image 1.
I-Picture Mode 1	Time / Frame	Time	Sets the IDR-Frame insertion interval for image 1 as a time or number of frames.
I-Picture Interval 1	1 / 2 / 3 / 4 / 5 s	1	Displayed when [I-Picture Mode 1] is set to Time. Sets the IDR-Frame insertion interval for H.264 and H.265 as a time.
I-Picture Ratio 1	15 to 300 frames	30	Displayed when [I-Picture Mode 1] is set to Frame. Sets the IDR-Frame insertion interval for H.264 and H.265 as a number of frames.
Profile 1	**H.264:** high / main / baseline **H.265:** main / main10	**H.264:** high	Sets the H.264 or H.265 profile.
Bit Rate Compression Mode 1	CBR / VBR	VBR	Sets the bit rate compression mode of image 1.
Bit Rate 1	512 / 768 / 1000 / 2000 / 3000 / 4000 / 5000 / 6000 / 7000 / 8000 / 16000 / 24000 / 32000 / 50000 / 64000 / 80000 kbps	16000	Displayed when [Bit Rate Compression Mode 1] is set to On. Sets the bit rate target value when the bit rate compression mode is set to CBR.
Quality 1	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10	6	Sets the H.264 or H.265 quality.

Video Stream 2

Sets settings related to video codec 2.

Item	Sub-item setting	Factory default	Description
Codec 2	H.264 / H.265 / Off	Off	Sets the codec of image 2.
Size 2	4096×2160 / 3840×2160 / 2048×1080 / 1920×1080 / 1280×720 / 640×360 / 512×270	1920×1080	Sets the picture size of image 2.
Frame Rate 2	- For details about supported frame rates, see “Setting the Video Codec for Streaming.”	–	Displayed when [Codec 2] is not set to Off. Sets the frame rate of image 2.
I-Picture Mode 2	Time / Frame	Time	Displayed when [Codec 2] is not set to Off. Sets the IDR-Frame insertion interval for image 2 as a time or number of frames.
I-Picture Interval 2	1 / 2 / 3 / 4 / 5 s	1	Displayed when both [Codec 2] is not set to Off and [I-Picture Mode 2] is set to [Time]. Sets the IDR-Frame insertion interval for H.264 and H.265 as a time.
I-Picture Ratio 2	15 to 300 frames	30	Displayed when both [Codec 2] is not set to Off and [I-Picture Mode 2] is set to [Frame]. Sets the IDR-Frame insertion interval for H.264 and H.265 as a number of frames.
Profile 2	**H.264:** high / main / baseline **H.265:** main	–	Sets the H.264 or H.265 profile.
Bit Rate Compression Mode 2	CBR / VBR	VBR	Displayed when [Codec 2] is not set to Off. Sets the bit rate compression mode of image 2.
Bit Rate 2	512 / 768 / 1000 / 2000 / 3000 / 4000 / 5000 / 6000 / 7000 / 8000 / 16000 / 24000 / 32000 / 50000 / 64000 / 80000 kbps	8000	Displayed when both [Codec 2] is not set to Off and [Bit Rate Compression Mode 2] is set to [On]. Sets the bit rate target value when the bit rate compression mode is set to CBR.
Quality 2	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10	6	Displayed when both [Codec 2] is set to H.264 and [Bit Rate Compression Mode 2] is set to Off. Sets the H.264 or H.265 quality.

Video Stream 3

Sets settings related to video codec 3.

Item	Sub-item setting	Factory default	Description
Codec 3	JPEG	JPEG	Sets the codec of image 3.
Size 3	1280×720 / 1024×540 / 640×360	1280×720	Sets the picture size of image 3.
Frame Rate 3	- For details about supported frame rates, see “Setting the Video Codec for Streaming.”	–	Sets the frame rate of image 3.
Quality 3	1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10	6	Sets the quality.

Related Topic

- Setting the Video Codec for Streaming

Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

Audio Stream

Sets settings related to the streaming audio codec.

Item	Sub-item setting	Factory default	Description
Setting	On / Off	Off	Turns audio streaming output on/off.
Codec	AAC (128kbps) / AAC (256kbps)	AAC (128kbps)	Displayed when [Setting] is set to On. Sets the audio codec for streaming.

Language

Sets the display language.

Item	Sub-item setting	Factory default	Description
Language	–	–	Sets the display language.

Note

- The available languages may vary depending on the country or region.

Accessibility

Sets settings related to audio reading (text to speech).

Item	Sub-item setting	Factory default	Description
Screen Reader	On / Off	Off	Turns the screen reader function in the camera image panel of the Web App on/off.
Speech Rate	Slow2 / Slow1 / Normal / Fast1 / Fast2 / Fast3 / Fast4	Normal	Sets the speed of the screen reader function. A sample passage is read aloud at the configured speed.
Speech Volume	1 to 15	7	Sets the volume of the screen reader function of the Web App. A sample passage is read aloud at the configured volume.

Note

- This function is only available on models sold in North America. The screen reader function can only be used when the language is set to English (as of the release date).
- Enable the screen reader function of the web browser on the device running the Web App.

Clock Set

Sets internal clock settings.

Item	Sub-item setting	Factory default	Description
Current Date & Time	–	–	Displays the current time configured on the unit.
PC Clock	–	–	Displays the current time of the tablet or computer used for configuration.
Date & Time Format	yyyy-mm-dd hh:mm:ss / mm-dd-yyyy hh:mm:ss / dd-mm-yyyy hh:mm:ss	yyyy-mm-dd	Sets the display format of the date and time.
12 h / 24 h	12 h / 24 h	24 h	Sets the time to 12-hour/24-hour display format.
Time Setting	Keep current setting / Synchronize with PC / Manual setting / Synchronize with NTP	–	Sets the configuration method of the date and time.
yy-mm-dd hh:mm:ss	yy: 19 to 37 mm: 01 to 12 dd: 01 to 31 hh: 00 to 23 mm: 00 to 59 ss: 00 to 59 (seconds)	–	Displayed when [Time Setting] is set to Manual setting. Sets the date and time manually.
NTP Auto	On / Off	Off	Displayed when [Time Setting] is set to Synchronize with NTP. Sets whether to obtain the IP address of the NTP server from the DHCP server.
NTP Server	IPv4/IPv6 address or host name	–	Displayed when both [Time Setting] is set to [Synchronize with NTP] and [NTP Auto] is set to Off. Specifies the NTP server used for time synchronization.
Time Zone	UTC − 12:00 to UTC + 14:00	–	Selects the time zone.

Reset

Initializes the unit.

Reboot

Reboots the unit.

Item	Sub-item setting	Factory default	Description
Reboot	Execute	–	Reboots the unit. **Execute:** Execute function. **Note** - After rebooting, reload the page in the web browser.

Reset

Resets the settings of the unit.

Item	Sub-item setting	Factory default	Description
All Reset (except for Network Settings)	Execute	–	Resets the settings of the unit (excluding the network settings). **Execute:** Execute function. **Note** - Imported base looks and LUT files are note deleted.
Network Reset	Execute	–	Resets the network settings of the unit. **Execute:** Execute function. **Note** - After executing Network Reset, the unit will reboot. After rebooting, reload the page in the web browser.
Factory Default	Execute	–	Returns the settings of the unit to the factory default state. **Execute:** Execute function. **Note** - After executing Factory Default, the unit will reboot. After rebooting, reload the page in the web browser.

Information

Displays camera and lens information. Also used to update software.

Camera

Displays camera information and updates software.

Item	Sub-item setting	Factory default	Description
Model Name	–	–	Displays the model name of the camera.
Serial Number	–	–	Displays the serial number of the camera.
Version Number	–	–	Displays the software version of the camera.
Version Up	–	–	Press the [Choose File] button and follow the on-screen instructions to update the camera software. **Note** - After updating, the unit will reboot. After rebooting, reload the page in the web browser.

Lens

Displays lens information and updates software.

Item	Sub-item setting	Factory default	Description
Model Name	–	–	Displays the model name of the lens.
Serial Number	–	–	Displays the serial number of the lens.
Version Number	–	–	Displays the software version of the lens.
Version Up	–	–	Press the [Choose File] button and follow the on-screen instructions to update the lens software. - For details, see “Updating E-Mount Lens Software.” **Note** - After updating the lens, the unit will reboot. After rebooting, reload the page in the web browser.

Related Topic

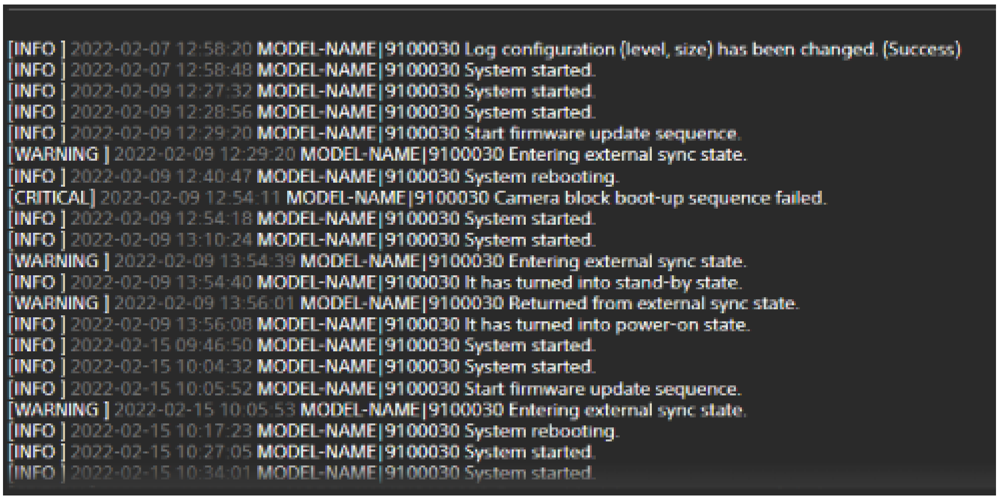
- Updating E-Mount Lens Software

System Log

Sets settings related to the system log.

Item	Sub-item setting	Factory default	Description
Log Level	Critical, Warning & Info / Critical & Warning / Critical	Critical, Warning & Info	Sets the level for adding a record to the system log.
Log Size	200 to 1024	1024	Sets the size of the log to save in the system log.
Download as File	–	–	Press the [Download] button and save the system log to a tablet or computer from the displayed screen.

The acquired log is displayed as shown below.



```
[INFO ] 2022-02-07 12:58:20 MODEL-NAME|9100030 Log configuration (level, size) has been changed. (Success)
[INFO ] 2022-02-07 12:58:48 MODEL-NAME|9100030 System started.
[INFO ] 2022-02-09 12:27:32 MODEL-NAME|9100030 System started.
[INFO ] 2022-02-09 12:28:56 MODEL-NAME|9100030 System started.
[INFO ] 2022-02-09 12:29:20 MODEL-NAME|9100030 Start firmware update sequence.
[WARNING ] 2022-02-09 12:29:20 MODEL-NAME|9100030 Entering external sync state.
[INFO ] 2022-02-09 12:40:47 MODEL-NAME|9100030 System rebooting.
[CRITICAL] 2022-02-09 12:54:11 MODEL-NAME|9100030 Camera block boot-up sequence failed.
[INFO ] 2022-02-09 12:54:18 MODEL-NAME|9100030 System started.
[INFO ] 2022-02-09 13:10:24 MODEL-NAME|9100030 System started.
[WARNING ] 2022-02-09 13:54:39 MODEL-NAME|9100030 Entering external sync state.
[INFO ] 2022-02-09 13:54:40 MODEL-NAME|9100030 It has turned into stand-by state.
[WARNING ] 2022-02-09 13:56:01 MODEL-NAME|9100030 Returned from external sync state.
[INFO ] 2022-02-09 13:56:08 MODEL-NAME|9100030 It has turned into power-on state.
[INFO ] 2022-02-15 09:46:50 MODEL-NAME|9100030 System started.
[INFO ] 2022-02-15 10:04:32 MODEL-NAME|9100030 System started.
[INFO ] 2022-02-15 10:05:52 MODEL-NAME|9100030 Start firmware update sequence.
[WARNING ] 2022-02-15 10:05:53 MODEL-NAME|9100030 Entering external sync state.
[INFO ] 2022-02-15 10:17:23 MODEL-NAME|9100030 System rebooting.
[INFO ] 2022-02-15 10:27:05 MODEL-NAME|9100030 System started.
[INFO ] 2022-02-15 10:34:01 MODEL-NAME|9100030 System started.
```

Related Topic

- Updating E-Mount Lens Software

HTTP Access Log

Sets settings related to the HTTP access log.

Item	Sub-item setting	Factory default	Description
Log Level	Critical, Warning & Info / Critical & Warning / Critical	Critical, Warning & Info	Sets the level for adding a record to the HTTP access log.
Log Size	200 to 1024	1024	Sets the size of the log to save in the HTTP access log.
Download as File	–	–	Press the [Download] button and save the HTTP access log to a tablet or computer from the displayed screen.

Service

Obtains device information about the unit. Use when contacting your Sony service representative.

Item	Sub-item setting	Factory default	Description
I agree to download device information.	–	–	Place a check mark here to agree to acquire device information, and press the [OK] button. Press the displayed [Download] button. The web browser will download a file named deviceinformation.dat momentarily. **Note** - After downloading, the unit will reboot. Reboot manually if the unit does not reboot automatically. After rebooting, reload the page in the web browser.

Software

Displays the software license.

Connecting External Monitors and Recording Devices

To display recorded/playback pictures on an external monitor, set the video output type for the external monitor and use an appropriate cable for the monitor to be connected.
You can also connect an external recorder and record the output signal from the unit.
You can display the same information that is visible in the camera image panel, such as status information and menus, on an external monitor. Set the desired system type for screen display to On using [Monitoring] > [Output Display] in the web menu.

Note

- If a monitor connected to the HDMI connector does not support the HDMI output format configured using the [Monitoring] menu in the web menu or camera menu, the camera image will not be output to the Web App. Streaming video also cannot be output. PTZ auto framing also does not operate.
- You can set both [Output Display] > [SDI] and [HDMI/Stream] to [Off], but that will prevent use of the camera menu and functions that depend on the screen display. In addition, error notifications of the unit will be limited to the lamps (lit or blinking) of the unit and the display of the notification mark at the top right in the Web App. To see the detailed status, set [Output Display] to [On].

Hint

- [Output Display] > [SDI] is set to [Off] and [HDMI/Stream] is set to [On] by factory default. To use streaming as the main video, set [SDI] to [On] and [HDMI/Stream] to [Off], and monitor the camera status on an SDI monitor.

SDI OUT connector (BNC type)

Set the output format using the [Monitoring] menu in the web menu or camera menu.
Use a commercially available 75 Ω coaxial cable for connection.

Note

- Check that the connection between the unit and the external device is grounded before turning the devices on.

It is recommended that the unit and external device be turned on after connecting the 75 Ω coaxial cable.
If the external device must be connected to the unit while the unit is on, connect the 75 Ω coaxial cable to the external device first and then connect it to the unit.

To start recording on the unit and external device simultaneously

With SDI signal output enabled, set [Project] > [SDI/HDMI Rec Control] > [Setting] to [SDI/HDMI Remote I/F] or [Parallel Rec] in the camera menu to enable output of a REC trigger signal to the external device connected to the SDI OUT connector. This will synchronize recording on the external device with the unit.

Note

- If a connected external device does not support a REC trigger signal, the device cannot be operated.
- When [Project] > [SDI/HDMI Rec Control] > [Setting] is set to [SDI/HDMI Remote I/F] in the camera menu, only the REC trigger signal is output when there is no recording media currently inserted and the record START/STOP button is operated.

HDMI OUT connector (Type A connector)

Set the output On/Off setting and the output format in the [Monitoring] menu in the camera menu.

To start recording on the unit and external device simultaneously

With HDMI signal output enabled, set [TC/Media] > [HDMI TC Out] > [Setting] to [On] and [Project] > [SDI/HDMI Rec Control] > [Setting] to [SDI/HDMI Remote I/F] or [Parallel Rec] in the camera menu to enable output of a REC trigger signal to the external device connected to the HDMI OUT connector. This will synchronize recording on the external device with the unit.

Note

- If a connected external device does not support a REC trigger signal, the device cannot be operated.
- When [Project] > [SDI/HDMI Rec Control] > [Setting] is set to [SDI/HDMI Remote I/F] in the camera menu, only the REC trigger signal is output when there is no recording media currently inserted and the record START/STOP button is operated.

Connecting with an RCP/MSU/CNA-2

Some of the functions of the unit can be controlled remotely by connecting a remote control panel (RCP) such as the RCP-3500/3501, a master setup unit (MSU) such as the MSU-3500, or a camera control network adapter such as the CNA-2 to the unit via a LAN cable.
The connection method will vary depending on the configuration of related devices and the application.

- For details about a one-to-one connection between the unit and an RCP, see “One-to-One Connection Between the Unit and an RCP.”
- For details about connecting multiple cameras using an MSU or camera control software, see “Using the Unit in a Multi Camera Environment with an MSU/Camera Remote Control Software.”

Related Topic

- One-to-One Connection Between the Unit and an RCP
- Using the Unit in a Multi Camera Environment with an MSU/CNA-2/Camera Remote Control Software

Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

One-to-One Connection Between the Unit and an RCP

Note

- Refer to “List of Supported Functions” and configure the unit so that it meets the operating conditions for the functions you want to use, then enable the connection with an RCP using the following procedure.

1. **Turn each device on.**
2. **Set [Technical] > [RCP/MSU] > [CNS Mode] to [Bridge] in the web menu of the camera.**
3. **Configure the following settings on the RCP.**
    1. Set the connection mode to Bridge mode.
    2. Register the IP address of the camera.

    For details about configuration, refer to the operating instructions of the RCP.

Related Topic

- List of Supported Functions

Using the Unit in a Multi Camera Environment with an MSU/CNA-2/Camera Remote Control Software

You can connect multiple cameras using an MSU or camera remote control software.

Note

- Refer to “List of Supported Functions” and configure the unit so that it meets the operating conditions for the functions you want to use, then enable the connection with an MSU or camera remote control software using the following procedure.

1. **Turn each device on.**

2. **Configure system network settings using the MSU or camera remote control software.**

   For details about configuration, refer to the operating instructions of the MSU or camera remote control software.

3. **Configure the following settings using [Technical] > [RCP/MSU] in the web menu of the camera.**

   1. If using an MSU or CNA-2, set [CNS Mode] to [MCS]. If using camera remote control software, set [CNS Mode] to [PC Control].
   2. Set the IP address of the master MSU or camera remote control software in [Master IP Address].
   3. Set the camera number for which the camera will be registered in [Camera No.].

Related Topic

- List of Supported Functions

List of Supported Functions

The following table shows the supported functions and their corresponding operating conditions.

Operation panel	Functions of the unit	Operating conditions
IRIS	Adjusting the iris manually	–
AUTO IRIS	Switching Auto Iris on/off	–
ND	Variable ND mode transmittance adjustment and preset position switching	–
MASTER GAIN	Adjusting the gain manually (3 dB units)	Enabled when both the shooting mode is set to Custom mode and [Shooting] > [ISO/Gain/EI] > [Mode] is set to [dB] in the camera menu.
WHITE (R/B)	Adjusting the white balance (R Gain/B Gain) manually	Enabled when [White Mode] is set to [Memory A (R/B)] or [Memory A (T/T)].
WHITE (Color Temp)	Adjusting the white balance (color temperature/tint) manually - RCP > [Color Temp]: White balance color temperature - RCP > [Balance]: White balance tint value	
AWB	White balance automatic adjustment	–
ATW	Switching the ATW (Auto Tracing White Balance) function on/off	Enabled when the shooting mode is set to Custom mode.
BLACK R/B	Adjusting the black balance	Enabled when the shooting mode is set to Custom mode.

Operation panel	Functions of the unit	Operating conditions
MASTER BLACK	Adjusting the master black level	- Enabled when the shooting mode is set to Custom mode. - H/V Ratio and Crispening are enabled when [Paint/Look] > [Detail] > [Manual Setting] is set to [On] in the camera menu. - To enable/disable the display function that distinguishes between the areas that are the target of multi matrix correction from an RCP, set [Paint/Look] > [Multi Matrix] > [Area Indication Control] to [Menu & RCP] in the camera menu. - The display function that distinguishes between the areas that are the target of multi matrix correction and BARS only operate in Bridge mode.
DETAIL	- Switching the detail function on/off - Setting the detail level - Setting H/V Ratio - Setting Crispening	
User Matrix	- Switching the user matrix correction function on/off - Setting matrix correction values (R-G/R-B/G-R/G-B/B-R/B-G)	
Multi Matrix	- Switching the multi matrix correction function on/off - Setting the hue and saturation of the color used for multi matrix correction - Switching the display function between the areas that are the target of multi matrix correction on/off	
Knee	Switching the knee correction function on/off Switching the auto knee function on/off Setting the knee point and knee slope	
BARS	Switching the color bars on/off	
SHUTTER	- Switching the shutter function on/off - Setting the shutter speed value (Switching auto shutter on/off, setting angle shutter, setting slow shutter, setting ECS not supported.) **Note** - The RCP shutter settings may not be displayed depending on the configured shutter speed value. - The RCP shutter settings may not be displayed correctly if the shutter cannot be operated from the RCP.	When auto shutter is on, auto shutter will continue to operate even if you turn the shutter on/off or change the shutter speed value from the RCP. When the shutter is set to [Angle], turning the shutter on/off or changing the shutter speed setting from the RCP is not supported.

Operation panel	Functions of the unit	Operating conditions
CALL/Tally	Supports display of CALL/Tally function	Enabled when [Technical] > [Tally] > [Tally Control] is set to [External] in the web menu.

Note

- After configuring the unit to satisfy the operating conditions of the function you want to use, enable the connection between the unit and the RCP/MSU/CNA-2. If the operating conditions are adjusted after the connection is enabled, unintended behavior may occur.

Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

About Operation Using an RM-IP500 Remote Controller (option)

You can operate the unit using a Sony RM-IP500 Remote Controller running software version 2.2 or later. The devices communicate using VISCA over IP (LAN).
Depending on the target item to operate, you may need to view the screen display of the unit. Prepare a monitor that can be used to check the screen display.
The following operations are supported from an RM-IP500 Remote Controller.

- Selecting the target camera
- Adjusting the framing (pan, tilt, zoom)
- Adjusting the focus (excludes touch operation)
- Registering and recalling preset positions
- Operating the menu of the unit (excluding the web menu)
- Adjusting the brightness
- Adjusting the white balance
- Adjusting the black balance
- Adjusting the audio input level
- Starting/stopping recording
- Executing assignable button functions of the unit
- Lens controller initialization operations
- PTZ auto framing operation
  * Function in RM-IP500 version 2.30 and later.

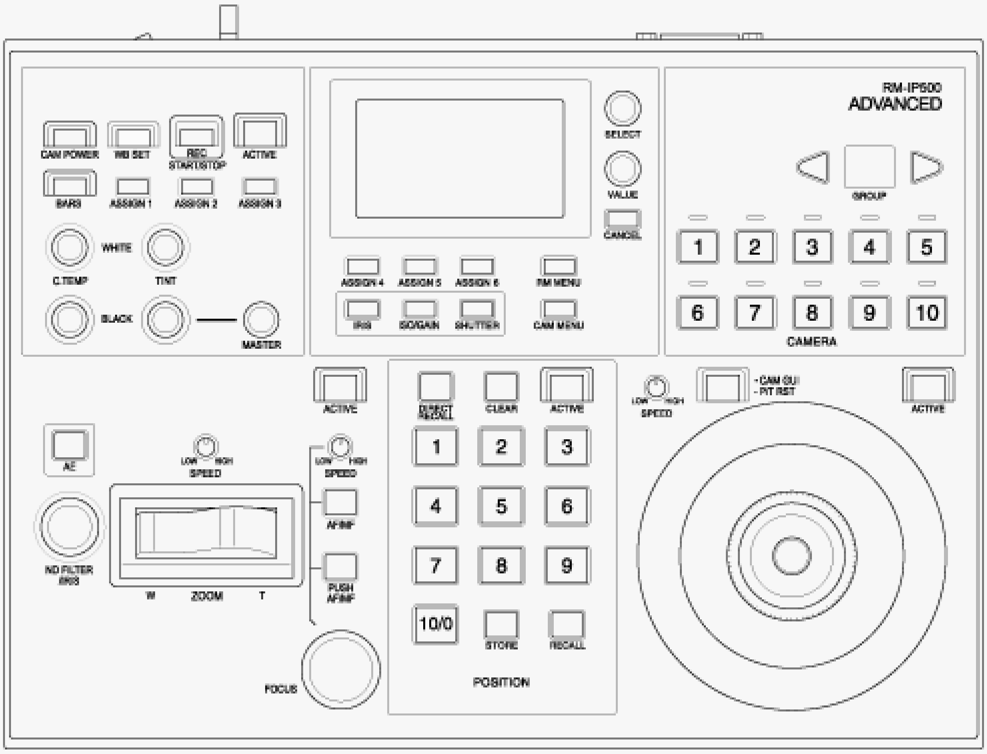
For details about RM-IP500 operation, refer to the operating instructions for the RM-IP500.

Note

- When the PRESET button is pressed during auto framing pan/tilt operation, the first press pauses auto framing. Make sure that pan/tilt operations have stopped, and then press the PRESET button again to recall a preset.

Hint

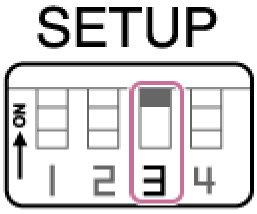
- When using an RM-IP500, use the panel sheet for this unit that is supplied with the RM-IP500.



RM-IP500 (using panel sheet for this unit)

Connecting an RM-IP500 Remote Controller

1. **Set SETUP switch 3 of the unit to the ON position to enable VISCA over IP communication.**



Note

- The switch setting is applied when the unit is next turned on.

2. **Connect the RM-IP500 to the same network as the unit.**

3. **Follow the procedure in the RM-IP500 operating instructions to configure VISCA over IP (LAN) connection on the RM-IP500.**

   Assign this unit using RM menu > AUTO IP SETUP > ASSIGN CAM.

4. **Assign functions of this unit to buttons and knobs, as required, using the following RM menu items of the RM-IP500.**

   SW ASSIGN
   AE CONFIG2
   WB MODE

- For details about assigning functions, refer to the operating instructions for the RM-IP500.

About the Camera Remote SDK

The Camera Remote SDK (Software Development Kit) is a development environment provided for software developers to develop solutions and applications using Sony cameras. Using this SDK allows developers to remotely control Sony cameras from a host PC and to develop unique applications for shooting and image transfer. The SDK also provides many functions, such as changing camera settings, record start/stop, live view monitoring, and more.
For details, visit the following web page.
https://www.sony.net/CameraRemoteSDK/

About Synchronizing with an External Device

When shooting using multiple units, the units can be synchronized to a specific reference signal or timecode via the GENLOCK connector of the units.

- For details about genlock, see “Synchronizing the Phase of the Video Signal (Genlock).”
- For details about synchronizing timecodes, see “Locking the Timecode to Other Devices.”

Related Topic

- Synchronizing the Phase of the Video Signal (Genlock)
- Locking the Timecode to Other Devices

Synchronizing the Phase of the Video Signal (Genlock)

You can supply a reference signal to the GENLOCK connector to enable genlock.
The input reference signals that can be used vary depending on the system frequency of the selected recording format.

System frequency of recording format	Supported input reference signals
59.94P	1920×1080 59.94i 720×486 59.94i
50P	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 24PsF 1920×1080 24P
23.98P	1920×1080 23.98PsF 1920×1080 23.98P
59.94i	1920×1080 59.94i 720×486 59.94i
50i	1920×1080 50i 720×576 50i

You can check the external sync status using [Technical] > [Genlock] > [Reference] in the camera menu.

Note

- If the reference signal is unstable, genlock cannot be achieved.
- The subcarrier is not synchronized.
- When using external synchronization in a noisy environment, tri-level sync is recommended due to its strong noise immunity.

Locking the Timecode to Other Devices

Set the unit that supplies the timecode to a mode in which the timecode output keeps running (such as Free Run or Clock).

1. **Set the following in [TC/Media] > [Timecode] in the camera menu.**

   Set [Mode] to [Preset].
   Set [Run] to [Free Run].

2. **Press an assignable button assigned with the [DURATION/TC/U-BIT] function to display the timecode on the screen.**

3. **Supply an HD or SD reference video signal to the GENLOCK connector and the reference timecode to the TC IN connector.**

   The timecode generator of the unit acquires lock with the reference timecode, and “EXT-LK” appears on the screen. Once about ten seconds have elapsed after the timecode locks, the external lock state is maintained even if the external reference timecode source is disconnected.

Note

- Check that the supplied reference timecode and the reference video signal are in a phase relationship that complies with the SMPTE timecode standard.
- When operating with external lock, the timecode instantly acquires lock with the external timecode and the external timecode value appears in the time data display area. However, do not start recording immediately. Wait for a few seconds until the timecode generator stabilizes before recording.
- If the frequency of the reference video signal and the frame frequency on the unit are not the same, lock cannot be acquired and the unit will not operate properly. If this occurs, the timecode will not acquire successful lock with the external timecode.
- If the external timecode source is disconnected, the timecode may shift by one frame per hour with respect to the reference timecode.

To release external lock

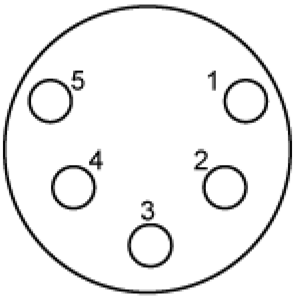
Change the [TC/Media] > [Timecode] setting in the camera menu.
External synchronization is also released if the system frequency is changed and when you start recording in a special recording mode (Slow & Quick Motion or Interval Rec).

Connecting an External Microphone or External Audio Device

You can input the signal from an external microphone or external audio device and embed the audio in the recorded video or output video of the unit.

1. **Connect an external microphone or external audio device using an XLR cable.**

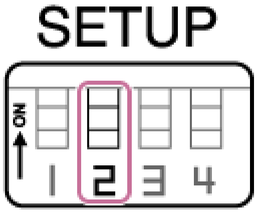
   When the audio is set to [LINE] using [Audio] > [Audio Input] > [AUDIO IN Select] in the camera menu, the AUDIO IN connector functions as the AUDIO IN CH-1 connector and AUDIO IN CH-2 connector.



Pin No.	Function
1	GND
2	AUDIO IN CH-1+ (HOT)
3	AUDIO IN CH-1− (COLD)
4	AUDIO IN CH-2+ (HOT)
5	AUDIO IN CH-2− (COLD)

2. **Turn off the unit and connect the XLR cable to the AUDIO IN connector.**

3. **Set SETUP switch 2 to enable the phantom power supply as required.**



Switch the +48 V power supply (phantom power) as described below.
Switch 2
Sets whether the +48 V power supply (phantom power) is turned on/off when an audio input device is connected.

Setting	Description
OFF (default)	This turns off the +48 V phantom power supply and sets the LINE or MIC input as the CH-1 and CH-2 audio source.

Setting	Description
ON	This turns on the +48V phantom power supply and sets the phantom power supply compatible microphone as the CH-1 and CH-2 audio source.

Note

- Setting this switch to the ON position and connecting a microphone that is not compatible with a +48 V source may damage the connected device. Check the setting before connecting the device.

4. **Turn on the unit and set the type of connected device using [Audio] > [Audio Input] > [AUDIO IN Select] in the camera menu.**

Managing/Editing Clips Using a Computer

You can manage/edit clips using a computer.

Importing clips using a card reader (option)

Connect a CFexpress Type A card reader or SD card reader to your computer and use software that supports the recording format of this unit, such as Catalyst Browse, to import the clips.

Using a nonlinear editing system

In a nonlinear editing system, editing software (option) that supports the formats recorded by the unit is required.

Outputting an Optical Fiber Signal

You can output an SDI signal converted to an optical signal by connecting an SFP+ module (option) to the OPTICAL connector of the unit. Use an SFP+ module that matches the signal band of each format.

Signal band

- 4K (59.94p, 50p): 12G
- 4K (other than 59.94p, 50p): 6G
- HD (59.94p, 50p): 3G
- HD (other than 59.94p, 50p): 1.5G

Note

- Use a module that complies with the following standards.
  - SFF standards
    SFF-8083/SFF-8418/SFF-8419*/SFF-8432/SFF-8433/SFF-8071/SFF-8472
    * Power Level I (1.0 W)
  - SDI standards
    ST297/ST292/ST424/ST425/ST2081/ST2082
- The same signal as the SDI output connector is output to the SFP+ module.
- The unit does not support optical fiber signal input.
- Use an SFP+ module for optical fiber signal output. For details about verified SFP+ modules, contact your dealer or Sony service representative.

Connecting a Tally Signal

This topic describes tally signal control.

Lighting the tally lamp using a signal from a remote controller

You can light up the tally lamp using a VISCA over IP command from an external device, such as the RM-IP500.
Set [Technical] > [Tally] > [Tally Control] to [External] in the web menu or camera menu.

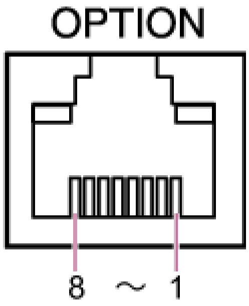
Lighting the tally lamp from an external device

You can light up the tally lamp of the unit red or green from an external device, such as the RM-IP500 or a switcher. You can control the tally using commands transmitted over the network or using a tally signal input on the OPTION connector of the unit.
Set [Technical] > [Tally] > [Tally Control] to [External] in the web menu or camera menu.
When inputting a tally signal on the OPTION connector, short-circuit pin 7 to GND (either pin 4 or 5) to light up the tally lamp green, or pin 8 to GND (either pin 4 or 5) to light up the tally lamp red.

Note

- When [Tally Control] is set to [External], the recording status of the unit is not indicated by the tally lamp.
- When a red tally and green tally are input simultaneously, the tally lamp of the unit lights up red.

OPTION connector pin specifications



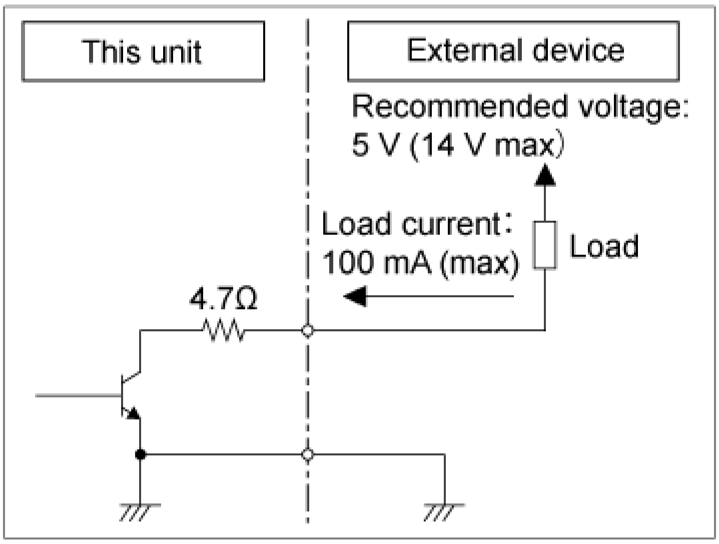
Pin No.	Signal direction	Signal specifications
1	–	RS-232C TX signal (for lens controller)
2	–	RS-232C RX signal (for lens controller)
3	OUT	Green tally lamp output Low-level output when green tally lamp is lit. Hi-Z (open-drain output) when green tally lamp is not lit.
4	–	GND (Ground)
5	–	GND (Ground)

Pin No.	Signal direction	Signal specifications
6	OUT	- Red tally lamp output - Low-level output when red tally lamp is lit. - Hi-Z (open-drain output) when red tally lamp is not lit.
7	IN	Green tally external control input Short-circuit to ground (pin 4 or 5) causes the tally lamp of the unit to light up green.
8	IN	Red tally external control input Short-circuit to ground (pin 4 or 5) causes the tally lamp of the unit to light up red.

Lighting the tally lamp of an external device using a signal from the unit

You can light up the tally lamp of an external device using a signal from the unit by connecting pin 3 and pin 6 of the OPTION connector as shown below.

OPTION connector pins 3 and 6 connection example


This unit
External device
Recommended voltage: 5 V (14 V max)
Load current: 100 mA (max)
Load
4.7Ω

Note

- Do not apply a voltage to pins 7 and 8.
- Do not connect an external device that can apply voltage to the OPTION connector.
- If an inrush or reverse voltage that exceeds the rating is applied to pin 3 or 6, it may cause a malfunction, smoke, or fire.
- Set the output signal using [Technical] > [Tally] > [Tally Control] in the web menu or camera menu.
  [Internal]: Recording operation status of the unit
  [External]: Logical-OR of red/green tally signals received by the unit via the IN signals and remote controllers.

Outputting Tracking Data

The unit can output pan/tilt/zoom, focus and iris tracking information synchronized to a sync signal.
This function outputs the industry-standard free-d protocol.

1. **Access the Web App.**
2. **Set the tracking data output method.**
    1. Set the ID of the unit in [Technical] > [Tracking Data] > [Camera ID] in the web menu.
    2. Specify the output destination IP address in [Destinations] > [1] > [IPv4 Address].
    3. Specify the output destination port number in [Destinations] > [1] > [Port].
    4. Set [Destinations] > [1] > [Output] to [On].
    5. Press the [OK] button.

Hint

- To set two or more output destinations, repeat step 2 substeps 3 to 6 for [Destinations] > [2], [3], and [4] for each additional output destination.
- Tracking data output destinations can be configured using IPv4 only.
- You can set camera coordinates for the tracking data XYZ position using [Tracking Data] > [Camera Position] > [X][Y][Z].

Data output format

Hint

- Technical details are provided in the “free-d Integration manual for AR/VR systems.” Contact a Sony sales representative.

The tracking data that is output by the unit comprises the data according to the format specified in Type D1 of the free-d protocol.

Note

- Tracking data may be delayed or values may not be updated in the following situations:
    - When S&Q Motion is on
    - When displaying the camera menu
    - When displaying the thumbnail screen
    - When playing recorded clips
    - When displaying the web menu
- Set [Output] to [Off] for destinations to which tracking data does not need to be sent.
- When being output to multiple clients, a constant delay will occur in the transmission timing to the second and any subsequent destinations with respect to the genlock signal. (The delay increases for each subsequent client. The latency may increase depending on the network environment.)

Connecting a Lens Controller

You can operate the zoom of a manual zoom lens from the Web App, RM-IP500 (option), or the infrared remote control by connecting a commercially available lens controller (option) that is compatible with this unit.
For details about connecting a lens controller, refer to the operating instructions of the lens controller.
For details about adjusting the zoom using a lens controller, see “Adjusting the Zoom Using a Lens Controller.”

Note

- Before using a lens controller, read the operating instructions of the lens controller carefully and make sure you fully understand its use. Sony will not be liable for any claims of any kind resulting from the use of a lens controller.
- Clear Image Zoom is not available when a lens controller is enabled. It is recommended that you set the Clear Image Zoom ratio to 1.0× or disable Clear Image Zoom.
- When the lens controller is enabled, camera framing operations cannot be recorded or played back.

Related Topic

- Adjusting the Zoom Using a Lens Controller

Adjusting the Zoom Using a Lens Controller

Use the following procedure to attach a lens controller (option) and adjust the zoom.

1. **Connect a lens controller to the OPTION connector on the connector block of the unit.**

   For details about attachment, refer to the operating instructions of the lens controller.

2. **Set up the lens controller for your zoom lens.**

   For details, refer to the operating instructions of the lens controller.

3. **Lock the pan/tilt of the unit and attach the zoom lens.**

   For details, see “Attaching a Lens.”

4. **Adjust the lens controller so that it can operate the zoom lens.**

5. **Maintain the forward/rearward balance of the camera head so that the slide base is horizontal.**

   For details, refer to the operating instructions of the lens controller and “Attaching a Lens.”

6. **Set [Technical] > [Lens Controller] > [Setting] to [On] in the web menu and press the [OK] button.**

   The unit will reboot. Wait until the pan/tilt reset operation has completed.

7. **Press the Initialize (Initialize lens controller) button on the ··· (Others) tab in the camera control panel on the live operation screen of the Web App.**

   The lens controller moves to detect the zoom range. For details, refer to the operating instructions of the lens controller.
   When the (Lens controller error) indication changes to (Lens controller ready) in the top left of the camera image panel, the preparation is completed.

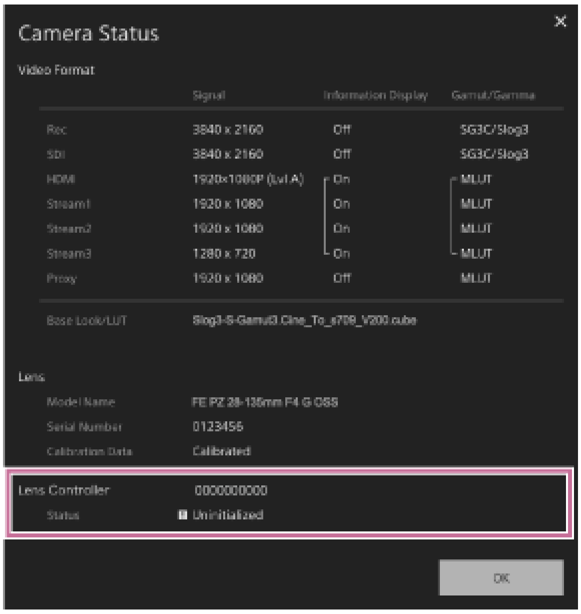
   Note

   - Note the operating range of the lens when initializing the lens controller.

8. **Adjust the zoom using the [Zoom] slider in the Web App or the zoom control buttons of the infrared remote control.**

To check the lens controller status

Press the ⓘ (Camera status) button in the common area of the Web App screen to display the camera status screen.



Camera Status

Video Format

	Signal	Information Display	Gamut/Gamma
Rec	3840 x 2160	Off	SG3C/Slog3
SDI	3840 x 2160	Off	SG3C/Slog3
HDMI	1920x1080P (Lvl A)	On	MLUT
Stream1	1920 x 1080	On	MLUT
Stream2	1920 x 1080	On	MLUT
Stream3	1280 x 720	On	MLUT
Proxy	1920 x 1080	Off	MLUT

Base Look/LUT: Slog3-S-Gamut3.Cine_To_s709_V200.cube

Lens

Model Name: FE PZ 28-135mm F4 G OSS

Serial Number: 0123456

Calibration Data: Calibrated

Lens Controller: 0000000000

Status: Uninitialized

You can check the lens controller status on this screen.

Status	Description
Off	Use the power zoom in an E-mount lens.
Communication Error	A communication error occurred between the unit and lens controller. Check the connection between the unit and lens controller, then refer to the lens controller operating instructions and initialize the lens controller.
Uninitialized	Execute initialization.
Initializing	Wait until the initialization has completed.
Initialization Failed	Check the connection between the unit and lens controller, then refer to the lens controller operating instructions and initialize the lens controller.
Working	Control the zoom using the lens controller.
Rotation Error	The stored zoom movement range and the lens movement range may not match. Initialize the lens controller.
System Error	Check the connection between the unit and lens controller, refer to the lens controller operating instructions and initialize the lens controller, or power cycle the unit and lens controller.
Unknown Error	

Note

- When you exchange the lens, initialize the lens controller.
- Clear Image Zoom is not available when a lens controller is enabled. It is recommended that you set the Clear Image Zoom ratio to 1.0× or disable Clear Image Zoom.

Hint

- When using PTZ auto framing, set the acceleration/deceleration to maximum. Also, note that the accuracy will vary depending on the lens. Check the operation before use.

Usage Precautions

Privacy notification

The tracking function of the camera uses AI and facial recognition technology to automatically identify subjects and control the pan, tilt, and zoom functions to keep the subject in the image. This function processes facial “biometric” data of subjects selected as the tracking targets by the user. This recognition data is stored within the camera for a fixed interval and is not sent to Sony. No other captured skeletal or facial information is stored within the camera. This recognition data can be deleted by turning the camera off, putting it into standby state, or stopping the tracking function. By using this camera function, you agree that you are responsible for the collection and use of images and data of subjects in accordance with applicable data protection laws. It is recommended that you inform subjects of the tracking and facial recognition technology used by this camera before shooting. If you have any queries, contact Sony Customer Support.

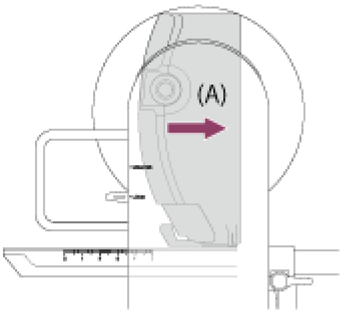
Usage notes

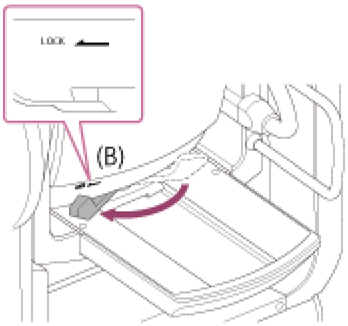
- When shooting using this camera, respect the privacy of others and comply with all local privacy laws, regulations, and moral standards for the locations where you are shooting.
- Do not use this camera for any illegal or improper purpose.
- Do not use this camera to defame, abuse, harass, stalk, threaten, or violate the legal rights of others, including rights of privacy and publicity.
- This camera is not intended for military or law enforcement applications.

Precautions when transporting and packing

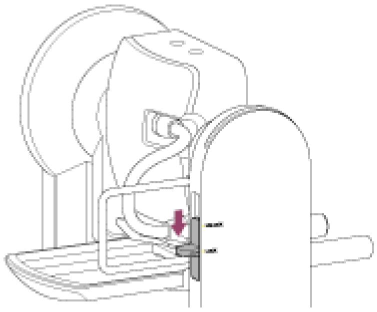
When transporting or packing the unit, maintain the following conditions and avoid subjecting it to strong vibration or shock.

- Remove the lens and attach the body cap.
- After moving the camera head (A) to the front, turn the camera head lock lever (B) in the direction of the arrow to lock the camera head.





- Orient the camera head so that it faces the front and lock using the pan/tilt lock lever.



- Remove the connection cables.

Condensation

If the unit is suddenly taken from a cold to a warm location, or if ambient temperature suddenly rises, moisture may form on the outer surface of the unit and/or inside of the unit. This is known as condensation. If condensation occurs, turn off the unit and wait until the condensation clears before operating the unit. Operating the unit while condensation is present may damage the unit.

Camera CMOS image sensor phenomena

Note

- The following phenomena that may occur in images are specific to image sensors. They do not indicate a malfunction.

- **White flecks**
  Although the 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 image sensors and is not a malfunction. Execute APR regularly.
  The white flecks especially tend to be seen in the following cases:
  - When operating at a high environmental temperature
  - When you have raised the gain (sensitivity)

- **Flicker**
  If shooting under lighting produced by fluorescent lights, sodium lamps, mercury-vapor lamps, or LEDs, the screen may flicker or colors may vary.

Lens and pan/tilt drive units

If the lens and pan/tilt drive mechanism is not operated for an extended period, the viscosity of the grease applied inside may increase, preventing the mechanism from moving. Operate the lens and pan/tilt mechanism regularly.

On consumable parts

- The fan and built-in rechargeable battery are consumable parts that will need periodic replacement.
  When operating at room temperature, a normal replacement cycle will be about 5 years. However, this replacement cycle represents only a general guideline and does not imply that the life expectancy of these parts is guaranteed.
  For details on parts replacement, contact your dealer.

- The life expectancy of the AC adaptor and the electrolytic capacitor is about 5 years under normal operating temperatures and normal usage (8 hours per day; 25 days per month). If usage exceeds the above normal usage frequency, the life expectancy may be reduced correspondingly.

Periodic inspections are recommended to keep the unit working properly and to prolong its usable lifetime. Contact a Sony service representative for more information about inspections.

About the built-in rechargeable battery

The unit has a built-in rechargeable battery for storing the date, time, and other settings even when the unit is turned off. The built-in rechargeable battery will be charged after 24 hours have elapsed if the unit is connected to a power outlet using the AC adaptor or if powered via PoE++, regardless of whether the unit is turned on/off. The rechargeable battery will be fully discharged in about 2 months if the AC adaptor is not connected to a power supply. Use your unit after charging the battery. However, even if the rechargeable battery is not charged, the unit operation will not be affected as long as you do not need to record the date.

Usage and storage locations

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

- Locations exposed to rain or water (including under eaves)
- Outdoors and locations that exceed 40 °C (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).
- Locations colder than 0 °C (32 °F).
- In damp or dusty locations. Locations where the unit may be exposed to rain
- Locations subject to vibration or shock
- Locations where radiation, X-rays, and strong magnetic fields are generated.
- Close to radio or TV transmitters producing strong electromagnetic fields.
- In direct sunlight or close to heaters for extended periods

Note on laser beams

Laser beams may damage the CMOS image sensor. If you shoot a scene that includes a laser beam, be careful not to let the laser beam be directed into the CMOS image sensor of the camera. Specifically, high-power laser beams from medical devices or other devices may cause damage due to reflected light and scattered light.

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.

Do not place this product close to medical devices

This product (including accessories) has magnet(s) which may interfere with pacemakers, programmable shunt valves for hydrocephalus treatment, or other medical devices. Do not place this product close to persons who use such medical devices. Consult your doctor before using this product if you use any such medical device.

Security precautions

- SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND RESULTING FROM A FAILURE TO IMPLEMENT PROPER SECURITY MEASURES ON TRANSMISSION DEVICES, UNAVOIDABLE DATA LEAKS RESULTING FROM TRANSMISSION SPECIFICATIONS, OR SECURITY PROBLEMS OF ANY KIND.
- Depending on the operating environment, unauthorized third parties on the network may be able to access the unit. When connecting the unit to the network, be sure to confirm that the network is protected securely.
- From a safety standpoint, when using the unit connected with the network, it is strongly recommended to access the control window via a Web browser and change the access limitation settings from the factory preset values. Also, it is recommended that you set a password with a sufficiently long character string that is hard to guess by others, and that you store it safely.
- When connecting this product to a network, connect via a system that provides a protection function, such as a router or firewall. If connected without such protection, security issues may occur.

Power supply

- The unit is not equipped with a power switch. To turn off the unit, check that all operations have ended and the unit is in power standby state, then disconnect the AC adaptor. When using PoE++ power delivery, disconnect the LAN cable.
- Where possible, use a power source from a place where it is easy to insert and remove the power plug.
- If you use an outlet in a dusty place, clean the area around the outlet regularly to prevent tracking.
- Disconnect the power supply when not in use.

Precautions for moving parts

- Make sure that foreign matter does not enter moving parts.

- Do not apply an excessive load when moving parts by hand. Doing so may cause a malfunction.
- Do not interfere with the operation of moving parts during movement. Doing so may cause an injury or malfunction.
- Moving parts may not operate normally if the unit is not used for an extended period of time. Regularly operate the pan/tilt functions of the unit.

Precautions for continuous operation

- The unit can be powered 24 hours per day, 365 days per year (power standby state).
- Always perform a shooting test and verify that the unit operates normally.
    - Shooting continuously for periods in excess of 24 hours is not guaranteed.
    - If shooting for longer than 24 hours, place the unit in power standby state and then restart the unit.
- Note that Sony will not be liable for compensation of any kind for the content of images if you are unable to shoot due to any malfunction while using this unit.
- 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.
- SONY WILL NOT BE LIABLE FOR CLAIMS OF ANY KIND MADE BY USERS OF THIS UNIT OR MADE BY THIRD PARTIES.
- SONY WILL NOT BE LIABLE FOR THE TERMINATION OR DISCONTINUATION OF ANY SERVICES RELATED TO THIS UNIT THAT MAY RESULT DUE TO CIRCUMSTANCES OF ANY KIND.

Precautions for the recording function

- Always make a test recording, and verify that it was recorded successfully. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF FAILURE OF THIS UNIT OR ITS RECORDING MEDIA OR ANY OTHER MEDIA OR STORAGE SYSTEMS TO RECORD CONTENT OF ANY TYPE.
- 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.
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Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

Output Formats and Limitations

This topic describes the output formats and limitations.

Note

- The resolution of the output format is limited by the [Project] > [Rec Format] > [Frequency], [Codec], and [Video Format] settings in the web menu or camera menu.
- The resolution of the output format is also limited by the combination with the S&Q frame rate. In addition to the table of SDI OUT/HDMI OUT connector output formats below, the HDMI output changes to Full HD or lower when all the following conditions are met.
  - [Shooting] > [S&Q Motion] > [Setting] is set to [On]
  - [Shooting] > [S&Q Motion] > [Frame Rate] is higher than 60fps
- When the conditions above are met, the HDMI output 4096×2160P and 3840×2160P selection options for [Monitoring] > [Output Format] > [SDI/HDMI] are grayed out and cannot be selected.
- The image is not output if a higher resolution than the playback image resolution is configured.

SDI OUT/HDMI OUT connector output formats

When the system frequency is 50/59.94 Hz

Setting		Selectable output format	
Recording/playback mode	RAW output resolution/ Internal recording resolution	SDI	HDMI
RAW RAW & XAVC-I	4096×2160 (RAW)	(4096×2160 RAW)	4096×2160P 3840×2160P 1920×1080P (default) 1920×1080i
	3840×2160 (RAW)	(3840×2160 RAW)	3840×2160P 1920×1080P (default) 1920×1080i

Setting		Selectable output format	
Recording/playback mode	**RAW output resolution/ Internal recording resolution**	**SDI**	**HDMI**
XAVC-I XAVC-L	4096×2160	4096×2160 (2SI)[1]	4096×2160P 1920×1080P 1920×1080i
		3840×2160 (2SI)	3840×2160P 1920×1080P 1920×1080i
		1920×1080P (Level A) (default)	1920×1080P (default) 1920×1080i
		1920×1080P (Level B)	1920×1080P 1920×1080i
	3840×2160	3840×2160 (2SI)	3840×2160P 1920×1080P 1920×1080i
		1920×1080P (Level A) (default)	1920×1080P (default) 1920×1080i
		1920×1080P (Level B)	1920×1080P 1920×1080i
		1920×1080i	1920×1080i
	1920×1080	1920×1080P (Level A) (default)	1920×1080P (default) 1920×1080i
		1920×1080P (Level B)	1920×1080P 1920×1080i
		1920×1080i	1920×1080i
		(Output stopped)	720×480P[2] 720×576P[3]

[1] The screen display cannot be overlaid.

[2] When the system frequency is 59.94

[3] When the system frequency is 50

When the system frequency is 25/29.97 Hz

Setting		Output Format (output resolution)	
Recording/playback mode	RAW output resolution/ Internal recording resolution	SDI	HDMI
RAW RAW & XAVC-I	4096×2160 (RAW)	(4096×2160 RAW)	4096×2160P 3840×2160P 1920×1080P 1920×1080i (default)
	3840×2160 (RAW)	(3840×2160 RAW)	3840×2160P 1920×1080P 1920×1080i (default)
XAVC-I XAVC-L	4096×2160	4096×2160 (2SI)	4096×2160P 1920×1080P
		3840×2160 (2SI)	3840×2160P 1920×1080P
		1920×1080P	1920×1080P
		1920×1080PsF (default)	1920×1080i (default)
	3840×2160	3840×2160 (2SI)	3840×2160P 1920×1080P
		1920×1080P	1920×1080P
		1920×1080PsF (default)	1920×1080i (default)
	1920×1080	1920×1080P 1920×1080PsF	1920×1080P 1920×1080i

When the system frequency is 23.98 Hz

Setting		Output Format (output resolution)	
Recording/playback mode	RAW output resolution/ Internal recording resolution	SDI	HDMI
RAW RAW & XAVC-I	4096×2160 (RAW)	(4096×2160 RAW)	4096×2160P 3840×2160P 1920×1080P (default)
	3840×2160 (RAW)	(3840×2160 RAW)	3840×2160P 1920×1080P (default)

Setting		Output Format (output resolution)	
Recording/playback mode	RAW output resolution/ Internal recording resolution	SDI	HDMI
XAVC-I XAVC-L	4096×2160	4096×2160 (2SI)	4096×2160P 1920×1080P
		3840×2160 (2SI)	3840×2160P 1920×1080P
		1920×1080P (default)	1920×1080P (default)
		1920×1080PsF	1920×1080P
	3840×2160	3840×2160 (2SI)	3840×2160P 1920×1080P
		1920×1080P (default)	1920×1080P (default)
		1920×1080PsF	1920×1080P
	1920×1080	1920×1080P (default)	1920×1080P (default)
		1920×1080PsF	1920×1080P

When the system frequency is 24 Hz

Setting		Output Format (output resolution)	
Recording/playback mode	RAW output resolution/ Internal recording resolution	SDI	HDMI
RAW RAW & XAVC-I	4096×2160 (RAW)	(4096×2160 RAW)	4096×2160P 1920×1080P (default)
XAVC-I	4096×2160	4096×2160 (2SI) 1920×1080P (default)	4096×2160P 1920×1080P (default)

Troubleshooting

Power supply

Symptom	Cause	Solution
Unit does not power on.	The AC adaptor is not connected to the DC IN connector firmly.	Insert the power cord firmly as far as it will go.
	The AC power cord is not inserted firmly into the AC adaptor or the AC outlet.	Insert the power cord firmly as far as it will go.
	The LAN cable is not connected firmly between the PoE++ power delivery device and the unit.	Check that the cable is inserted until it locks.
	The LAN cable is connected to the OPTION connector, but not to the LAN connector.	Connect the LAN cable to the LAN connector correctly.
	The unit is connected to a power delivery device that does not support PoE++ (IEEE802.3bt, Type 4, Class 8 compliant).	Connect to a power delivery device that supports PoE++ (IEEE802.3bt, Type 4, Class 8 compliant).
	The total power consumption exceeds the maximum rating of the PoE++ power delivery device.	Refer to the operating instructions for the PoE++ power delivery device.
	A network cable with category rating that does not support PoE++ power delivery is connected.	Use a Category 5e or higher network cable connected to the LAN connector.
	The camera, PoE++ power delivery device, and peripheral devices are not connected to ground.	Connect the camera, PoE++ power delivery device, and peripheral devices to ground.

Image output

Symptom	Cause	Solution
No image is output.	Connected devices are not connected correctly.	Connect the connected devices correctly.
	Initial setup was not completed.	Complete the initial setup using the Web App.
No image is output from the HDMI connector.	A signal that is not supported by the HDMI output destination device is configured.	Change the HDMI output format setting or use a device that supports the output signal.
	A cable that does not support the output HDMI standard is being used.	Use a cable that supports the output HDMI standard in use.

Symptom	Cause	Solution
No image is output from the SDI connector.	A cable that does not support the output SDI standard is being used.	Use a cable that supports the output SDI standard in use.
	The monitor connected to the SDI connector does not support the output signal.	Use a monitor that supports the output SDI standard.
	The recording format is set for RAW output.	Change the recording format to a setting other than RAW output.
	The HDMI output is set to SD resolution.	Set the HDMI output to a resolution other than SD.
No image is output from the optical fiber or the image is distorted.	The module being used does not comply with the SFF or SMPTE standards, or does not satisfy Power Level I (1.0 W).	See “Outputting an Optical Fiber Signal.”
No image is output or is distorted when using external sync.	An external sync signal suitable for the configured video signal format is not being input.	Input an external sync signal suitable for the configured video signal format.
There is noise in the audio.	The camera, PoE++ power delivery device, and peripheral devices are not connected to ground.	Connect the unit, PoE++ power delivery device, and peripheral devices to ground.
	The unit is being used in an environment with devices that generate strong electric and magnetic fields (such as TV/radio transmitter antennas, amateur radio transmitters, air conditioner motors, power supply transformers).	Keep away from devices that generate strong electric and magnetic fields.
	The lens, lens support, and drive unit are in contact with the unit or an object in the surrounding environment and an abnormal noise is emitted.	• Attach the lens correctly. • Check for any obstacles near the camera.

Remote controller

Infrared remote control

Symptom	Cause	Solution
Infrared remote control does not function when pressed.	Infrared remote control operation is disabled.	Set [Technical] > [IR Remote] > [Setting] to [On] in the web menu.
	The battery has been discharged or the battery polarity is incorrect.	Operate the infrared remote control near the IR sensor of the unit. If the Power LED blinks, replace the battery.
	Initial setup was not completed.	Complete the initial setup using the Web App.
Pan/tilt operating speed is slow.	The pan/tilt speed from the infrared remote control is set to normal mode.	Set [Technical] > [IR Remote] > [Pan-Tilt Speed] to [Max] in the web menu.

Symptom	Cause	Solution
Operation targeted a camera other than the intended camera.	The infrared signal was received by a camera other than the intended camera.	Set [Technical] > [IR Remote] > [Setting] to [Off] in the web menu of the camera you do not want to control.

RM-IP500

Symptom	Cause	Solution
Camera cannot be operated from the RM-IP500 Remote Controller.	The power supply for the camera is not connected.	Check that the POWER lamp of the unit lights up green or orange.
	The camera or remote controller is not connected to the network.	Check the unit and remote controller connections.
	Initial setup of the camera was not completed.	Complete the initial setup using the Web App.
	VISCA over IP communication is not enabled.	Set SETUP switch 3 to the ON position on the connector panel of the unit and reboot the unit.
	The IP address of the camera changed.	Check the IP address of the camera using [Network] > [Wired LAN] in the web menu or camera menu.
The IP address of the camera was changed using AUTO IP SETUP on the RM-IP500 Remote Controller.	At least 20 minutes has elapsed since the camera was started.	Reboot the unit. The IP address can be changed using AUTO IP SETUP within the first 20 minutes after starting the unit.

Web App

Symptom	Cause	Solution
Cannot connect using a web browser.	A category 5e or higher LAN cable is not connected.	Connect a Category 5e or higher LAN cable.
	Not connected to LAN correctly or connected network is not operating normally.	Check that the Link LED for the LAN connector is lit. If the Link LED is not lit, contact your network administrator.
	The power supply for the camera is not connected.	See the “Power supply” section above.
	A valid IP address is not configured for the unit.	Perform a network reset. - For details about resetting network settings, see “Resetting Unit Settings.”
		Set the unit to fixed IP address mode and connect it directly to a computer set to 192.160.0.200 or other unique address. Specify 192.160.0.100 in a web browser to open the Web App. - For details, see “Connecting the Unit to a Network Device Via Wired Connection.”
	The configured IP address is in use on another device.	Check that the IP addresses of peripheral devices are unique.
		First, connect the unit directly to a computer on which a web browser is open, and then start the unit in fixed IP address mode. - For details, see “Connecting the Unit to a Network Device Via Wired Connection.”
	An IP address conflict occurred because a device configured to fixed IP address mode was connected to the same network.	Set SETUP switch 4 (fixed IP address mode) to the OFF position on the unit and reboot the unit.
	The configured subnet mask does not match the used network subnet.	Perform a network reset. - For details about resetting network settings, see “Resetting Unit Settings.”
	The unit is being accessed on the same local network via a proxy server.	Change the configuration so that a proxy server is not used.
	The configured default gateway for the unit is incorrect.	Perform a network reset. - For details about resetting network settings, see “Resetting Unit Settings.”

Symptom	Cause	Solution
	The entered URL is incorrect.	Enter the correct URL and try again. - For the URL of the Web App, see “Accessing the Web App from a Web Browser.”
	The HTTP port is incorrect.	Display the camera menu on an external monitor and check the setting of [Network] > [Wired LAN] > [HTTP Port]. If a value other than 80 is configured, add the HTTP port number to the host name or IP address entered in the web browser. Example: If HTTP Port is set to 8080, enter http://<IP Address>:8080
	The HTTP port number of the unit is being filtered or blocked.	Change the HTTP port number of the unit to a port that is not being filtered or blocked.
	Old cache of the web browser is having an adverse effect.	Delete the cache from the web browser.
Cannot connect to the Web App using the 2D code (QR code).	The device being used does not support mDNS.	Use a device that supports mDNS. If using a device that does not support mDNS, enter the IP address directly into the web browser.
	The tablet or computer is connected to a different network than the camera.	Connect the tablet or computer to the same local network as the unit.
Cannot connect to the Web App by manually entering the URL.	The device being used does not support mDNS.	Use a device that supports mDNS.
	The tablet or computer is connected to a different network than the camera.	Connect the tablet or computer to the same local network as the unit.
The authentication screen is displayed continuously.	The correct user name or password was not entered.	Enter the registered user name and password. If you have forgotten the registered user information, see “RESET switch” in “Connector Block” to initialize the user information for network connection.
	The user name and password may have been changed by a user logged in using another web browser.	Check the correct user name and password with the unit administrator.

Symptom	Cause	Solution
Camera image is not displayed in the Web App.	The HDMI output of the camera is set to 720×480 or 720×576.	Change the resolution of the HDMI output of the unit.
	An HDMI monitor that does not support the HDMI output signal of the camera is connected.	Remove the HDMI monitor or use an HDMI monitor that supports the HDMI output settings.
	The unit was rebooted and the session was disconnected.	Wait about one minute and reload the web browser.
	Old cache of the web browser is having an adverse effect.	Delete the cache from the web browser.
Resolution of the camera image displayed in the Web App is low.	The resolution for video stream 3 used by the Web App is set low.	Increase the value using [Stream] > [Video Stream] > [Size 3] in the web menu.
Camera menu does not appear when you press the [Menu] button.	The camera menu is configured so that it is not being embedded in the HDMI output signal.	Set [Monitoring] > [Output Display] > [HDMI/Stream] to [On] in the web menu.
Value of a setting on the settings screen is not updated/displayed properly.	The settings screen of the Web App does not automatically reflect the settings changed in another Web App.	Press the [Reload] button at the bottom of the settings screen of the Web App. The values of the settings on the displayed setup screen are reloaded and updated.
	The settings of temporary Internet files are having an affect.	Delete the cache from the web browser.
Cannot download configuration file or log.	The download file function of the web browser is disabled.	Enable the download file function of the web browser.
Settings screen of the Web App is accessible, but cannot perform operations on the live operation screen and playback operation screen.	The Web App operation screen is locked.	Set the operation lock switch at the top right in the Web App to the 🔒● (Operation Unlock) position.
Web App screen takes some time to display.	The streaming image of the unit is being viewed by multiple users simultaneously.	Reduce the number of users that can access the Web App simultaneously.

Symptom	Cause	Solution
Image is distorted or jerky.	The video information is not transmitted properly due to congestion in the communications path.	Reduce the streaming bit rate, set [Video Stream 3] > [Size] to the smallest option, or reduce rate to create a margin in the communications band.
	Multiple web browsers are running on the tablet and are occupying memory.	Close any web browsers that are running in the background.
	Too many web browser tabs are open, slowing down operation.	Close any tabs not being used.
	Excessive accumulation of web browser cache and browsing history is slowing down operation.	Delete the cache of the web browser.

Shooting

Camera

Symptom	Cause	Solution
Image looks distorted at the start and end of pan/tilt operation.	The image may be distorted if the image stabilization function of the lens is turned on.	Turn off the image stabilization function of the lens.
Angle of view changed without user operation.	Lens breathing occurred.	See “Breathing Compensation.”
Cannot operate the focus, zoom, or iris.	The settings of switches on the lens may be incorrect.	See “Checking the Lens Switches.”

Pan/tilt

Symptom	Cause	Solution
Cannot reset the pan/tilt.	The pan/tilt lock lever is in the LOCK position.	Slide the pan/tilt lock lever to the UNLOCK position.
Camera does not stop in the expected position.	The camera block is out of balance.	Move the camera block forward/rearward to an appropriate position as described in “Attaching a Lens,” and then turn the unit on again.
	A lens that does not support pan/tilt is attached.	Refer to the lens compatibility information and attach a lens that supports pan/tilt, and then turn the unit on again.
	Cannot execute pan/tilt reset.	Execute a pan/tilt reset as described in “Resetting the Pan/Tilt.”
	An unexpected force was applied to the camera head, causing a pan/tilt control error.	

Symptom	Cause	Solution
Camera does not return to the front when the ✚ Home (Pan/tilt home) button is pressed.	Ceiling mount mode has been activated.	Set [Pan-Tilt] > [P/T Direction] > [Ceiling] in the web menu according to the actual installation, and then turn the unit on again. When mounted on a ceiling, the connector block will be at the front of the camera.
Pan/tilt operation is restricted.	Pan/tilt range limit is configured.	Clear the pan/tilt range limit settings, as required, as described in “P/T Range Limit.”
	An unexpected force was applied to the camera head, causing a pan/tilt error.	Execute a pan/tilt reset as described in “Resetting the Pan/Tilt.”
Pan/tilt operation moved in the opposite direction.	The ceiling mount mode setting is different than the actual mounting state.	Set [Pan-Tilt] > [P/T Direction] > [Ceiling] in the web menu according to the actual installation.
	Settings related to the pan/tilt direction were changed.	Check the [Pan-Tilt] > [P/T Direction] settings in the web menu.
Image does not move smoothly at the start and end of pan/tilt operation.	The pan/tilt operation acceleration/deceleration setting is too high.	Reduce the pan/tilt operation acceleration/deceleration setting to make the motion at the start and end of pan/tilt operation smoother using [Pan-Tilt] > [P/T Acceleration] > [Ramp Curve] in the web menu or camera menu. Note that this will mean that the lens takes longer to reach the maximum speed.
Pan/tilt operation stopped.	The camera block is out of balance.	Move the camera block forward/rearward to an appropriate position as described in “Attaching a Lens,” and then turn the unit on again.
	The ramp curve (acceleration/deceleration) setting is too high for the attached lens.	If a large lens is attached, reduce the value of [Pan-Tilt] > [P/T Acceleration] > [Ramp Curve] in the web menu or camera menu.
	A large lens is being used.	Contact your Sony support representative.
Unit is obstructed when the pan/tilt is operated.	The lens support pedestal attachment screw clamp lever hits the camera.	Turn the lens support pedestal attachment screw clamp lever so that it is pointing up.
	The lens support clamp lever hits the camera.	Turn the lens support clamp lever so that it is pointing up.
	The camera head lock lever hits the camera.	Check that the camera head lock lever is fully in the LOCK position.
Abnormal noise occurs during pan/tilt operation.	The camera is out of balance.	Move the camera head forward/rearward to an appropriate position so that the slide base is horizontal.
	The ramp curve (acceleration/deceleration) setting is too high for the attached lens.	If a large lens is attached, reduce the value of [Pan-Tilt] > [P/T Acceleration] > [Ramp Curve] in the web menu or camera menu.
	The camera head is not fixed in position and there is a moving noise during operation.	Set the camera head lock lever to the LOCK position.

Symptom	Cause	Solution
Framing is offset when playing back a preset position.	The temperature of the environment may have changed significantly between when a preset position was saved and when it is played back.	Save the preset position again.
	Lens calibration is not performed.	Run the calibration using [Technical] > [Lens] > [Lens Calibration] in the camera menu.
	A different lens is attached than the lens that was attached when the preset was saved. Or the zoom position for manual zoom is different.	Save the preset position again.
Pan/tilt and zoom are not synchronized when a preset position is recalled.	The lens zoom speed range is outside the pan/tilt movement speed range.	Adjust the pan/tilt movement speed or movement time so that the range falls within the zoom speed range.
The framing control panel of the Web App is grayed out and cannot be operated.	The pan/tilt operation is unavailable while the thumbnail screen is displayed and during playback.	Display the playback control screen and exit the thumbnail screen display or stop playback.
	The pan/tilt operation is unavailable when the camera image cannot be displayed in the Web App.	See “Web App” in “Troubleshooting.”
	The pan/tilt lock lever is in the LOCK position.	Slide the pan/tilt lock lever to the UNLOCK position.
“Execute Pan-Tilt Reset” is displayed below the framing control panel in the Web App.	An unexpected force was applied to the camera head, causing a pan/tilt error.	Execute a pan/tilt reset as described in “Resetting the Pan/Tilt.”

PTZ auto framing

Symptom	Cause	Solution
PTZ auto framing cannot be turned on.	An E-mount lens that can communicate with the unit is not attached.	Attach an E-mount lens that can communicate with the unit.
	The HDMI output format is higher than 1920×1080.	Change the HDMI format to 1920×1080 or lower.
	The stream setting is [RTSP] and [Video Stream] > [Codec 2] is set to other than [Off].	Set [Stream] > [Video Stream] > [Codec 2] to [Off] in the web menu.
	The stream setting is [NDI|HX] and [Video Stream] > [Frame Rate 2] is set higher than 10fps.	Set [Stream] > [Video Stream] > [Frame Rate 2] to 10fps or lower.
	Recording, playback, or formatting of a memory card was performed while using a PoE++ power supply.	Stop recording, playback, or formatting of a memory card and then perform the operation.
	Pan/tilt/zoom operation does not stop.	Turn on PTZ auto framing again after stopping the pan/tilt/zoom.
Tracking does not start.	A tracking target has not been selected.	Tap a person.
A person's face frame is green but is not tracked.	Operation is paused.	Press the [Resume] button in the PTZ AFR control panel or tap the person you want to track.
Image is slightly blurry.	[Speed Step] is set to [Normal].	Set [Speed Step] to [Extended].
Tracking response is sluggish. The start of movement is delayed.	[Ramp Curve] is set to 6 or lower.	Set [Ramp Curve] to 7 or higher.
Zoom response is sluggish when using a lens controller (option).	The operation mode of the lens controller (option) is set for gentle acceleration and deceleration.	Set the operation mode for maximum acceleration/deceleration using [Lens Controller] – [Mode].
Tracking is disrupted.	The person is too large in the composition.	Make the person smaller, for example, so there is more space in the direction of movement.
Tracking suddenly stops.	[Personal Identification] is turned on and facial recognition is functioning.	If the operation is unintentional, turn [Personal Identification] off.
Tracking switches to a person with a similar face when they appear on screen.	[Personal Identification] is turned on and facial recognition is functioning.	If the operation is unintentional, turn [Personal Identification] off.
Camera does not move to preset position	Auto tracking using PTZ auto framing is active.	When the PRESET button is pressed during auto framing pan/tilt operation, the first press pauses auto framing. Make sure that pan/tilt operations have stopped, and then press the PRESET button again to recall a preset.

Symptom	Cause	Solution
Cannot focus on the tracking target or other people due to multiple people within the field of view.	Auto focus is active.	Use manual focusing.

Recording / playback

Symptom	Cause	Solution
Recording does not start when you press the record START/STOP button.	The memory card is full.	Replace the memory card with one having sufficient space.
	The memory card needs restoration.	Restore the memory card as described in "Restoring Memory Cards."
	The recording/tally lamp is configured as a tally lamp, so the recording status cannot be determined by the lamp.	Configure the recording/tally lamp to function as a recording lamp as described in "Connecting a Tally Signal."
Audio recording is not possible.	A microphone is not connected.	Connect a microphone or audio device to the AUDIO IN connector on the connector block.
	The [Master Input Level] setting is at the minimum value.	Adjust [Master Input Level].
Recorded sound is distorted.	The audio input level setting is too high.	Adjust [CH1 Input Level] to [CH4 Input Level] and [Master Input Level].
		When using a microphone in a loud environment, such as a live music venue, first adjust [AUDIO IN CH1 MIC Ref.] and [AUDIO IN CH2 MIC Ref.].
Recorded sound has a high noise level.	The audio input level setting is too low.	Adjust [Audio Input Level] and [Audio] > [Audio] > [Audio Input] > [AUDIO IN CH1 MIC Ref.] or [AUDIO IN CH2 MIC Ref.] settings.
Clips cannot be played back.	The clip is being edited.	Clips cannot be played back if you have modified file names or folders, or if the clip is in use on a computer. This is not a malfunction.
	The clip was recorded using a camera other than this unit.	Clips recorded using a camera other than this unit may not be played back, or displayed in incorrect size. This is not a malfunction.

File transfer

Symptom	Cause	Solution
File uploading fails.	The user name and password on the server are not correct.	The user name and password on the server may not be correct. Enter the correct entries.

IP streaming

Symptom	Cause	Solution
Streaming not available.	The user name or password entered in the client application to view streaming from the unit is incorrect.	If the streaming format of the unit is set to [RTSP], [SRT-Listener], or [NDI|HX], it is necessary to enter the user name and password set for this unit in the client application. Enter the correct user name and password.
	The streaming protocol is not set.	Select the target protocol using [Stream] > [Stream Setting] in the web menu.
	Six or more RTSP sessions have been set.	Set the number of sessions to five or fewer.
	UDP port number is not set correctly.	Check the port number and other settings for the target protocol using [Stream] > [Stream] > [Stream Setting] in the web menu.
	UDP communication is blocked.	Check the security software settings.
Audio is not being streamed.	Audio output streaming is set to [Off].	Set [Stream] > [Audio Stream] > [Setting] to [On] in the web menu.
Streaming was disconnected.	The protocol setting or streaming codec settings were changed during streaming.	Set the protocol setting and streaming codec settings before starting streaming.
Picture size of [Video Stream 1] cannot be set to 4096×2160 or 3840×2160.	The picture size is 1920×1080 when [Output Format] is set to HDMI.	The picture size for streaming cannot be set higher than the HDMI picture size. Change the HDMI picture size using [Monitoring] > [Output Format] in the web menu.
Frame rate of [Video Stream 1] cannot be set to 60 FPS or 50 FPS.	The streaming frame rate is set to 29.97 or lower.	The frame rate used for streaming is limited by the system frequency. Change the system frequency using [Rec Format] > [Frequency] in the web menu.
[Video Stream 3] stream cannot be accessed.	[Video Stream 3] does not support RTSP/SRT/NDI.	Use [Video Stream 1] or [Video Stream 2].
RTSP/SRT screen is not updated/displayed properly.	The port number used for RTSP or SRT is being filtered or blocked.	Change the RTSP or SRT port number to a port that is not being filtered or blocked by devices receiving the stream. Or change the port number used for RTSP or SRT on the unit.
Image is distorted or jerky.	The video information is not transmitted properly due to congestion in the communications path.	Reduce the streaming bit rate or set the [Video Stream 2] codec ([Codec 2]) to [Off] to create a margin in the communications band.
	The order of video packets has changed within the communications channel.	Use the same Internet service provider on both the unit side and the receiver side.
Not detected as NDI device.	The streaming protocol is not set to NDI|HX.	The streaming protocol must be set to NDI|HX in order to detect the unit as an NDI device. Set [Stream] > [Stream Setting] to [NDI|HX] in the web menu.

Symptom	Cause	Solution
Cannot be used as an NDI device.	An NDI|HX license is not installed.	An NDI|HX license is pre-installed in software version 3.00 and later. If using a version earlier than 3.00, install the NDI|HX license. You can check whether there is an NDI|HX license using [Stream] > [Stream] > [Stream Setting] > [NDI|HX] > [License] in the web menu.

Connection with external devices

External synchronization

Symptom	Cause	Solution
Cannot synchronize to external source.	An external sync signal suitable for the configured video signal format is not being input.	Input an external sync signal suitable for the configured video signal format.
	Unit is double-terminated.	The unit has a built-in 75 Ω terminator. Connect directly to a signal source (one-to-one) or use a distributor (splitter).

Tally

Symptom	Cause	Solution
Tally lamp does not light up.	The tally lamp brightness is set to Off.	Set the appropriate brightness using [Technical] > [Tally] > [Tally Lamp Brightness] in the web menu.
	The recording/tally lamp is configured as a recording lamp.	Configure the recording/tally lamp to function as a tally lamp as described in “Connecting a Tally Signal.”
	RM-IP500 is connected and VISCA over IP is disabled.	Set SETUP switch 3 to the ON position on the connector block of the unit.
	The OPTION connector connection is incorrect or the target pin is not short-circuited to GND.	Short-circuit pin 7 or pin 8 of the OPTION connector to GND as described in “Connecting a Tally Signal.”

Lens controller

Symptom	Cause	Solution
[Communication Error] is displayed in ℹ (Camera status).	The camera cannot communicate with the lens controller.	Check the connection between the unit and lens controller, then power cycle the unit and lens controller.
[Rotation Error] is displayed in ℹ (Camera status).	A rotation error occurred in the lens controller.	The stored zoom movement range and the lens movement range may not match. Initialize the lens controller. If the problem persists, contact the representative of the lens controller manufacturer.

Symptom	Cause	Solution
[System Error] is displayed in ⓘ (Camera status).	A system error occurred in the lens controller.	Check the connection between the unit and lens controller, refer to the lens controller operating instructions and initialize the lens controller, or power cycle the unit and lens controller. If the problem persists, contact the representative of the lens controller manufacturer.
[Unknown Error] is displayed in ⓘ (Camera status).	An unknown error occurred in the lens controller.	Check the connection between the unit and lens controller, refer to the lens controller operating instructions and initialize the lens controller, or power cycle the unit and lens controller. If the problem persists, contact the representative of the lens controller manufacturer.
Clear Image Zoom cannot be used.	Clear Image Zoom is not available when a lens controller is enabled.	The Clear Image Zoom magnification freezes while using a lens controller. Temporarily turn off the lens controller and then adjust the Clear Image Zoom magnification.

Related Topic

- Accessing the Web App from a Web Browser
- Connecting the Unit to a Network Device Via Wired Connection
- Resetting Unit Settings
- Reset
- Outputting an Optical Fiber Signal
- Connector Block
- Breathing Compensation
- Checking the Lens Switches
- Attaching a Lens
- Resetting the Pan/Tilt
- P/T Range Limit
- Restoring Memory Cards
- Connecting a Tally Signal

Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

Error/Warning Messages

If a warning, caution, or operating condition that requires confirmation occurs on the unit, a message is displayed in the camera image panel, and the POWER lamp and NETWORK lamp on the front panel and the recording/tally lamp start blinking red.

Note

- The recording/tally lamp blinking indication is enabled only when both [Technical] > [Tally] > [Tally Control] is set to [Internal] and [Tally Lamp Brightness] is not set to [Off] in the web menu or camera menu.
- The PTZ auto framing status is indicated when the recording/tally lamp is blinking green. For details, see “Checking the PTZ Auto Framing Status Remotely.”

Error messages

If the POWER lamp and NETWORK lamp are blinking as described below, take the following measures.

POWER lamp	NETWORK lamp	Cause and solution
Blinking orange slowly	Blinking green slowly	The unit cannot operate normally. For details, see [Maintenance] > [System Log] in the web menu. If the problem persists even after putting the unit in standby mode or turning the power off and then on again, contact your Sony service representative.
Blinking orange rapidly	Blinking green rapidly	A malfunction occurred on the unit. Contact your Sony service representative.

The unit will stop operation when the following display occurs.

Message display	Recording/tally lamp	Cause and solution
E + error code	High-speed blinking	Indicates an abnormality in the unit. Recording stops, even if ●REC is displayed in the camera image panel. Turn off the unit, and check for any problem with connected devices, cables, or media. If the error persists when the unit is turned on again, contact your Sony service representative. An error display or warning sound may not occur depending on the status of the unit.

Warning messages

Follow the instructions provided if the following display occurs.

Message display	Recording/tally lamp	Cause and solution
Temperature High	Blinking	The internal temperature is high. Turn off the camcorder and allow it to cool down before operating it again.
Media Temperature High	Blinking	The temperature of the CFexpress card is high. Replace the card or allow it to cool down before using it again.
Voltage Low	Blinking	The DC IN voltage is low (level 1). Check the power source.
Insufficient Voltage	High-speed blinking	The DC IN voltage is too low (level 2). Recording is disabled. Connect a different power source.
Media Near Full	Blinking	The remaining capacity on the memory card is getting low. Replace at the earliest convenience.
Media Full	High-speed blinking	Clips could not be recorded or copied because there is no remaining capacity on the memory card. Replace immediately.
Clips Near Full	Blinking	The number of additional clips that can be recorded on a memory card is getting low. Replace at the earliest convenience.
Clips Full	High-speed blinking	The maximum number of clips that can be recorded on the memory card has been reached. Recording or copying more clips is not possible. Replace immediately.
Last Clip Recording	Blinking	The clip currently recording is the last clip that can be recorded, as the maximum number of clips has been reached. Prepare a new memory card.
Media(A) Life Near End[1)]	Blinking	The memory card is approaching the end of its life. Replace at the earliest convenience.
Media(A) Life End[1)]	High-speed blinking	The memory card has reached the end of its life. Replace immediately.
Media(A) Near Full[1)]	Blinking	When using the Simul Rec function
Media(A) Full[1)]	High-speed blinking	When using the Simul Rec function
Media(A) Clips Near Full[1)]	Blinking	When using the Simul Rec function
Media(A) Clips Full[1)]	High-speed blinking	When using the Simul Rec function
Media(A) Last Clip Rec[1)]	Blinking	When using the Simul Rec function
(No display)	Blinking	An unknown error occurred in the lens controller. Check the status in the camera status in the Web App. For detailed information, check the system log in the Web App.

[1)] “(B)” is displayed for the card in slot B.

Caution and operation messages

The following caution and operation messages may appear in the center of the screen. Follow the instructions provided to resolve the issue.

Display message	Cause and solution
Backup Battery End Please Change	The remaining capacity of the backup battery is insufficient. Connect the unit to a power supply for at least 24 hours to charge the backup battery.
Unknown Media(A)[1)] Please Change	A memory card that has been partitioned or a memory card containing more clips that can be handled by the unit was inserted. The card cannot be used in the unit, and must be replaced.
Cannot Use Media(A)[1)] Unsupported File System	A card using a different file system or an unformatted card was inserted. The card cannot be used in the unit, and must be replaced or formatted using the unit.
Media Error Media(A) Needs to be Restored[1)]	An error occurred on the memory card, and the card must be restored. Restore the memory card.
Media Error Cannot Record to Media(A)[1)]	The memory card may be damaged, and can no longer be used for recording. Playback is possible, so making a copy and replacing the memory card is recommended.
Media Error Cannot Use Media(A)[1)]	The memory card may be damaged, and can no longer be used for recording or playback. The card cannot be used in the unit, and must be replaced.
Media(A) Error[1)] Recording Halted Playback Halted	Recording and playback was stopped because an error occurred while using the memory card. If the problem persists, replace the memory card.
Media Reached Rewriting Limit Change Media(A)[1)]	The memory card has reached the end of its life. Make a backup, and replace the card immediately. If you continue using the card, the card may not be able to record or play. For details, refer to the operating instructions for the memory card.
The specified address is invalid.	The specified address is invalid. Check that the setting is correct.
Cannot Use Specified Port Number	The specified port number is invalid. Check that the setting is correct.
Lens I/F Error(xx:xx)	A lens error was detected in the lens I/F communication when an E-mount lens was attached. Check the status of the connection with the E-mount lens. If the problem persists, contact your Sony service representative with the error code (five characters in parentheses).
Cannot add auto upload job of Proxy file because maximum number of upload jobs was reached.	The maximum number of transfer jobs has been reached. Clear any unwanted jobs. The auto upload destination setting for proxy files may also be incorrect. Check that the setting is correct.

Display message	Cause and solution
Fan Stopped	Fan has stopped running. Check that there is no dust or foreign matter. If the error persists after removing any dust or foreign matter, contact your Sony service representative.

[1] “(B)” is displayed for the card in slot B.

RTMP streaming error information

The following error information may be displayed on the unit. Perform the following actions, as required.

Error code		Description	Solution
RTMP	RTMPS		
1002 1004	2002 2004	Cannot connect to RTMP server.	Check that the server URL setting is correct. Check the network connection.
1003	2003	Cannot resolve the domain name.	Check that the server URL setting is correct. Check the DNS server connection.
–	2005 2008	CRL error	Check that the server URL setting is correct. Check that the connection destination is a trusted site.
	2006	CA certificate error	Check that the clock setting is correct. Check that the CA certificate is correct.
–	2007	A CA certificate is not installed. Server certificate authentication error.	Install an CA certificate. Check that the connection destination is a trusted site.
4002		RTMP session was disconnected.	The unit may have been disconnected on the RTMP server side. Check that the settings match the recommended codec parameter of the service.
4003		The network connection quality is low.	Check the network connection.
Other		Other errors.	

SRT streaming error information

The following error information may be displayed on the unit. Perform the following actions, as required.

Error code	Description	Solution
SRT-Caller		
1001	Unexpected error	The unit may not be operating normally. Power cycle the unit.
1002	Communication disconnected due to change in settings	Communication was disconnected because the settings were changed. Re-establish the connection.

Error code	Description	Solution
SRT-Caller		
5001	Unexpected error	The unit may not be operating normally. Power cycle the unit.
5005	Connection failure	Check that the connection destination setting is correct.
5006	Encryption error	Check that the encryption setting is correct.
5007	Unexpected error	The unit may not be operating normally. Power cycle the unit.
5008	Unexpected error	
5009	Transmission failure	The unit was disconnected during communication. Check the network connection.

Interchangeable Lens Digital Camera
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List of Menu Items

The following tables list the menu items of the unit.

Legend

- “Camera menu” and “web menu”
  ●: Available
  ▲: Some items available
  –: Not available

- “All File” and “Scene File”
  Yes: Item saved in an ALL file or scene file
  No: Item not saved

- “All Reset (except for Network Settings)”
  When [Reset]> [Reset] > [All Reset (except for Network Settings)] in the web menu is executed:
  Yes: Initialized item (excludes network settings)
  No: Not applicable

- “Network Reset”
  When [Reset]> [Reset] > [Network Reset] in the web menu is executed:
  Yes: Initialized item (network setting)
  No: Not applicable

- “Factory Default”
  Yes: Item reset to factory default
  No: Not applicable

Shooting

Item (level 2)	Camera menu	Web menu	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
ISO/Gain/EI	●	–	Yes	Yes	Yes	Yes	Yes
ND Filter	●	–	Yes	Yes[*1]	Yes	No	Yes
Shutter	●	–	Yes	Yes	Yes	No	Yes
Iris	●	–	Yes	Yes	Yes	No	Yes
Auto Exposure	●	–	Yes	Yes[*2]	Yes	No	Yes
White	●	–	Yes	No	Yes	No	Yes
White Setting	●	–	Yes	No	Yes	No	Yes
Offset White	●	–	Yes	No	Yes	No	Yes
Focus	●	▲	Yes	No	Yes	No	Yes
S&Q Motion	●	–	Yes	No	Yes	No	Yes

Item (level 2)	Camera menu	Web menu	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
LUT On/Off	●	–	Yes	No	Yes	No	Yes
Noise Suppression	●	–	Yes	Yes	Yes	No	Yes
Flicker Reduce	●	–	Yes	No	Yes	No	Yes
SteadyShot	●	–	Yes	No	Yes	No	Yes

[1] [Mode] not applicable

[2] [Clip High light], [Detect Window], [Average Peak Level Ratio], [Custom Width], [Custom H Position], [Custom V Position] not applicable

Project

Item (level 2)	Camera menu	Web menu	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
Base Setting	●	●	Yes	No	Yes	No	Yes
Rec Format	●	●	Yes	No	Yes[1]	No	Yes
Cine EI/Flex.ISO Set	●	–	Yes	No	Yes	No	Yes
Simul Rec	●	●	Yes	No	Yes	No	Yes
Proxy Rec	●	▲	Yes	No	Yes	No	Yes
Interval Rec	●	●	Yes[2]	No	Yes	No	Yes
Picture Cache Rec	●	●	Yes	No	Yes	No	Yes
SDI/HDMI Rec Control	●	–	Yes	No	Yes	No	Yes
Assignable Button	●	–	Yes	No	Yes	No	Yes
All File	–	●	No	No	No	No	No

[1] [Frequency] not applicable

[2] [Setting] not applicable

Paint/Look

Item (level 2)	Camera menu	Web menu	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
Scene File	●	–	No	No	No	No	No
Base Look	●	▲	Yes[1]	No	Yes[1]	No	Yes[1]
Reset Paint Settings	●	–	No	No	No	No	No
Black	●	–	Yes	Yes	Yes	No	Yes

Item (level 2)	Camera menu	Web menu	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
Knee	●	–	Yes	Yes	Yes	No	Yes
Detail	●	–	Yes	No	Yes	No	Yes
Matrix	●	–	Yes	Yes	Yes	No	Yes
Multi Matrix	●	–	Yes[*2]	Yes[*2]	Yes	No	Yes

[*1] LUT data imported as base look not applicable

[*2] [Axis] not applicable

Pan-Tilt

Item (level 2)	Camera menu	Web menu	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
P/T Speed	–	●	No	No	Yes	No	Yes
P/T Acceleration	●	●	No	No	Yes	No	Yes
P/T Range Limit	–	●	No	No	Yes	No	Yes
P/T Direction	–	●	No	No	Yes	No	Yes
P/T Preset	–	●	No	No	Yes	No	Yes

TC/Media

Item (level 2)	Camera menu	Web menu	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
Timecode	●	–	Yes[*1]	No	Yes	No	Yes
TC Display	●	–	Yes	No	Yes	No	Yes
Users Bit	●	–	Yes[*1]	No	Yes	No	Yes
HDMI TC Out	●	–	Yes	No	Yes	No	Yes
Clip Name Format	●	–	*2	No	Yes	No	Yes
Update Media	●	–	No	No	No	No	No
Format Media	●	–	No	No	No	No	No
Media Life	●	–	No	No	No	No	No

[*1] [Setting] not applicable

[*2] [Auto Naming] applicable, [Camera ID] not applicable

Monitoring

Item (level 2)	Camera menu	Web menu	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
Output Format	●	●	Yes	No	Yes	No	Yes
Output Display	–	●	Yes	No	Yes	No	Yes
Display On/Off	●	–	Yes	No	Yes	No	Yes
Video Signal Monitor	●	–	Yes	No	Yes	No	Yes
Marker	●	–	Yes	No	Yes	No	Yes

Audio

Item (level 2)	Camera menu	Web menu	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
Audio Input	●	▲	Yes	No	Yes	No	Yes
Audio Output	●	▲	Yes	No	Yes	No	Yes

Thumbnail

Item (level 2)	Camera menu	Web menu	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
Display Clip Properties	●	–	No	No	No	No	No
Set Clip Flag	●	–	No	No	No	No	No
Lock/Unlock Clip	●	–	No	No	No	No	No
Delete Clip	●	–	No	No	No	No	No
Transfer Clip	●	–	No	No	No	No	No
Transfer Clip (Proxy)	●	–	No	No	No	No	No
Filter Clips	●	–	No	No	No	No	No
Customize View	●	–	Yes	No	Yes	No	Yes

Technical

Item (level 2)	Camera menu	Web menu	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
Color Bars	●	–	*1	No	*1	No	Yes

Item (level 2)	Camera menu	Web menu	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
Genlock	●	–	No	No	No	No	No
Tracking Data Output	–	●	Yes	No	Yes	No	Yes
Tracking Data	–	●	Yes	No	Yes	No	Yes
Tally	●	●	Yes	No	Yes	No	Yes
Rec Review	●	–	Yes	No	Yes	No	Yes
Zoom	●	–	Yes	No	Yes	No	Yes
IR Remote	–	●	No	No	Yes	No	Yes
RCP/MSU	–	●	Yes	No	Yes	No	Yes
Lens Controller	–	●	No	No	Yes[2]	No[2]	Yes[2]
Lens	●	–	Yes	No	Yes	No	Yes
APR	●	–	No	No	No	No	No

[1] [Type] applicable, [Setting] not applicable

[2] [Setting] only applicable

Network

Item (level 2)	Camera menu	Web menu	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
Camera Name	–	●	No	No	No	No	Yes
User	–	●	No	No	No	Yes	Yes
Wired LAN[1]	▲	●	No	No	No	Yes	Yes
File Transfer	●	▲	No	No	Yes	Yes	Yes
FTP Server 1	–	●	No	No	Yes	No	Yes
FTP Server 2	–	●	No	No	Yes	No	Yes
FTP Server 3	–	●	No	No	Yes	No	Yes
SSL	–	●	No	No	No	Yes	Yes
SSH	–	●	No	No	No	Yes	Yes
Referer Check	–	●	No	No	No	Yes	Yes
Brute Force Attack Protection	–	●	No	No	No	Yes	Yes

[1] Not configurable using the camera menu (display only)

Stream

Item (level 2)	Camera menu	Web menu	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
Stream Setting	–	●	No	No	Yes[*1]	No	Yes[*1]
Video Stream	–	●	Yes	No	Yes	No	Yes
Audio Stream	–	●	Yes	No	Yes	No	Yes

[*1] [NDI|HX] > [License] not applicable

Maintenance

Item (level 2)	Camera menu	Web menu	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
Language	●	●	No	No	Yes	No	Yes
Accessibility	–	●	Yes	No	No	No	Yes
Clock Set	●	●	No	No	Yes[*2]	No	Yes
Reset	–	●	No	No	No	No	No
Hours Meter	●	–	No	No	No	No	No
Information	–	●	No	No	No	No	No
System Log	–	●	No	No	No	No	Yes
HTTP Access Log	–	●	No	No	No	No	Yes
Service	–	●	No	No	No	No	No
Software	–	●	No	No	No	No	No

[*1] Date and time information not applicable

[*2] [Time Zone], date, and time information not applicable

PTZ AFR settings screen

Settings screen	Target function	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
Initial Setup	All	No	No	No	No	No
Framing	All	No	No	Yes	No	Yes
Tracking Operation	All	Yes	No	Yes	No	Yes
Start Position	Setting the start position	No	No	Yes	No	Yes
Detection Settings	All	Yes	No	Yes	No	Yes

Settings screen	Target function	All File	Scene File	All Reset (except for Network Settings)	Network Reset	Factory Default
Others	All	Yes	No	Yes	No	Yes

Preset Position Saved Items

“Yes” indicates a setting that is saved for the preset position, and “No” indicates a setting that is not saved.

Pan/tilt items

Display location	Item	Save target
Framing control panel of live operation screen	Pan/tilt position	Yes
	[Pan-Tilt Speed]	No
[Pan-Tilt] in the web menu	[P/T Speed]	No
	[P/T Acceleration]	No
	[P/T Range Limit]	No
	[P/T Direction]	No
	[P/T Preset] > [Pan-Tilt]	No
	[P/T Preset] > [Default] > [Pan-Tilt Speed Unit]	Yes[1)]
	[P/T Preset] > [Default] > [Pan-Tilt Speed for Separate]	Yes[1)]
	[P/T Preset] > [Default] > [Pan-Tilt Time for Separate]	Yes[1)]

[1)] The values of settings when saving a preset position are saved as the values of that preset position. After values are saved, the values can be changed for each preset position. For details, see “Changing the Transition Speed (Pan-Tilt/Zoom/Focus) When Restoring a Preset Position.”

Zoom items

Display location	Item	Save target
Framing control panel of live operation screen	Zoom position (focus distance)	Yes
	[Zoom Speed]	No
[Pan-Tilt] > [P/T Preset] > [Default] in the web menu	[Zoom Sync]	Yes[1)]
	[Zoom Speed]	Yes[1)]
[Technical] > [Zoom] in the camera menu	[Zoom Type]	No

[1)] The values of settings when saving a preset position are saved as the values of that preset position. After values are saved, the values can be changed for each preset position. For details, see “Changing the Transition Speed (Pan-Tilt/Zoom/Focus) When Restoring a Preset Position.”

Focus items

Display location	Item	Save target
Camera image panel of live operation screen	Tracking target specified for realtime tracking AF	No
	Specified coordinates for spot focus	No
AF MF (Focus) tab of live operation screen	[Touch Focus] switch	No
	[Auto Focus] switch	Yes
	[Focus Hold] button state	No
	[Push AF/MF] button state	No
	[Face/Eye Detection AF]	Yes
	[AF Subj. Shift Sens.]	Yes
	[AF Transition Speed]	Yes
	Focus position	Yes1)
[Shooting] > [Focus] in the web menu	[Push AF Mode] (including settings using assignable buttons)	No
	[Touch Function in MF]	No
	[AF Assist Control]	No
[Pan-Tilt] > [P/T Preset] > [Default] in the web menu	[Focus Recall]	Yes2)
	[MF Speed]	Yes2)
[Shooting] > [Focus] in the camera menu	Focus area size and position set using [Focus Area]	Yes
	Focus area position set using [Focus Area (AF-S)]	Yes

1) Not restored when the [Auto Focus] switch is set to the on position. Restored when set to off.

2) The values of settings when saving a preset position are saved as the values of that preset position. After values are saved, the values can be changed for each preset position. For details, see “Changing the Transition Speed (Pan-Tilt/Zoom/Focus) When Restoring a Preset Position.”

Related Topic

- Changing the Transition Speed (Pan-Tilt/Zoom/Focus) When Restoring a Preset Position

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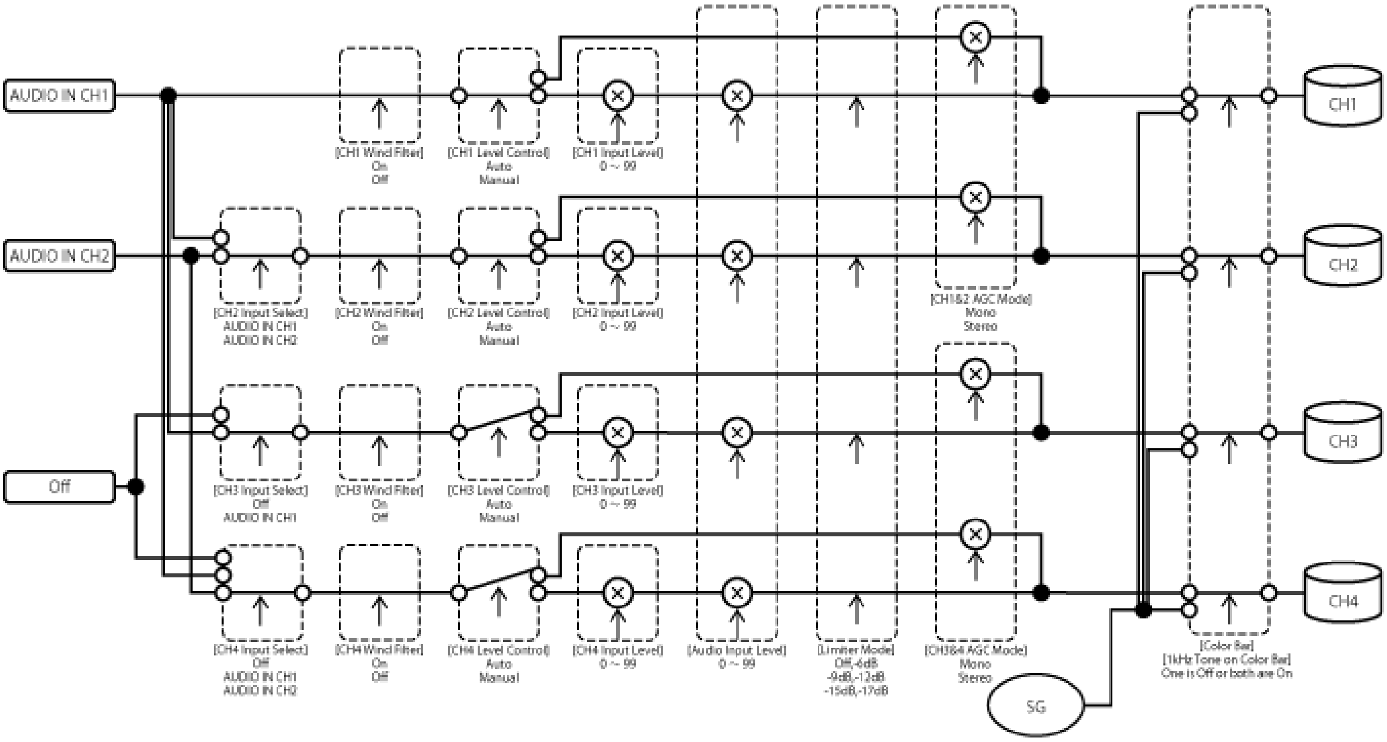
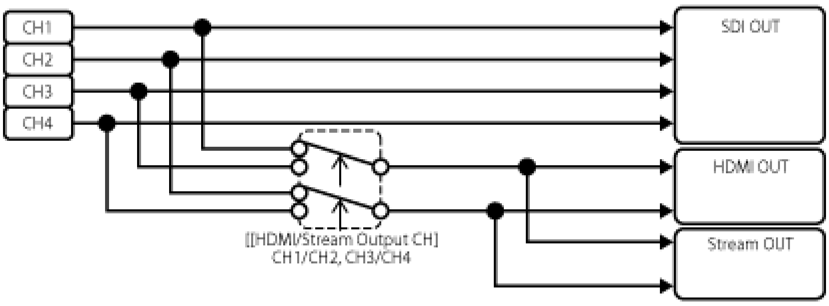
Block Diagrams

Audio Input



Audio Output



Updating E-Mount Lens Software

You can update the software of an E-mount lens using the unit.
Refer to the web site for the lens for lenses that can be updated and the corresponding software.
Software is updated using the web menu.

1. **Attach an E-mount lens to the unit.**
2. **Check [Maintenance] > [Information] > [Lens] > [Model Name] and [Version Number] in the web menu.**

   The software version number of the E-mount lens is displayed on the side.
   Check the software version number and then update the software as required.
3. **Download the lens software update file for Windows (.exe extension) to the device running the Web App.**
4. **In [Maintenance] > [Information] > [Lens] > [Version Up], press the [Choose File] button and select the downloaded update file.**
5. **Follow the on-screen instructions.**

Note

- Do not perform the following actions until the update has been completed.
  - Disconnecting the network
  - Removing a lens
  - Turning off the power
- If a message indicating that the update failed is displayed, check the displayed description and try to update again.

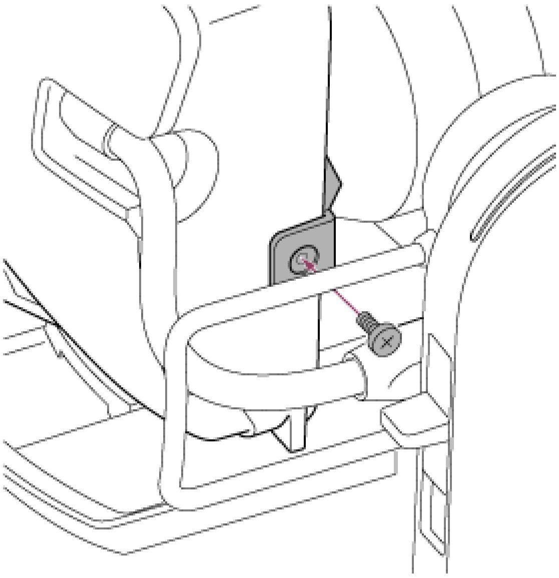
Attaching the Lens Release Button Cover

You can prevent unintentional removal of the lens by attaching the lens release button cover supplied with the CIB-PCM1 Ceiling Bracket (option) to the lens release button.

1. **Attach a lens.**

   For details about attaching a lens, see “Attaching a Lens.”

2. **Slide the pan/tilt lock lever to the LOCK position to lock the pan/tilt of the camera head.**
3. **Move the camera block to a position so the lens eject cover can be attached.**
4. **Attach the lens eject cover so that it covers the lens release button.**
5. **Secure the lens eject cover using the lens eject cover retaining screw.**



Note

- This does not prevent the lens from completely being removed.

Related Topic

- Attaching a Lens

Licenses

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Interchangeable Lens Digital Camera
ILME-FR7 / ILME-FR7K

Specifications

General

Mass

- Approx. 4.6 kg (10 lb 2.3 oz) (body only)
- Approx. 6.0 kg (13 lb 3.6 oz) (including SELP28135G lens)

Dimensions

See “External dimensions.”

Power requirements

- 19.5 V DC
- PoE++ (IEEE802.3bt, Type 4, Class 8 compliant)

Power consumption

- 19.5 V DC: 80.0 W (max)
- PoE++: 71.3 W (max)

Operating temperature

- 0 °C to 40 °C (32 °F to 104 °F)

Storage temperature

- −20 °C to +60 °C (−4 °F to +140 °F)

Recording format (video)

- XAVC Intra
  XAVC-I 4K/QFHD mode: VBR, 600 Mbps (max) bit rate, MPEG-4 AVC/H.264
  XAVC-I HD mode: CBG, 223 Mbps (max), MPEG-4 AVC/H.264

- XAVC Long
  XAVC-L QFHD mode: VBR, 150 Mbps (max) bit rate, MPEG-4 H.264/AVC
  XAVC-L HD 50 mode: VBR, 50 Mbps (max), MPEG-4 H.264/AVC
  XAVC-L HD 35 mode: VBR, 35 Mbps (max), MPEG-4 H.264/AVC

Recording format (audio)

- LPCM 24-bit, 48 kHz, 4-channel

Recording frame rate

- XAVC Intra
  XAVC-I 4K mode: 4096×2160/59.94P, 50P, 29.97P, 25P, 24P, 23.98P
  XAVC-I QFHD mode: 3840×2160/59.94P, 50P, 29.97P, 25P, 23.98P
  XAVC-I HD mode: 1920×1080/59.94P, 50P, 29.97P, 25P, 23.98P

- XAVC Long
  XAVC-L QFHD mode: 3840×2160/59.94P, 50P, 29.97P, 25P, 23.98P
  XAVC-L HD 50 mode: 1920×1080/59.94P, 50P, 29.97P, 25P, 23.98P

XAVC-L HD 35 mode: 1920×1080/59.94P, 50P, 29.97P, 25P, 23.98P

Recording/playback time

- XAVC Intra
  XAVC-I QFHD mode: 59.94P, Approx. 30 minutes (using CEA-G160T)
  XAVC-I HD mode: 59.94P, Approx. 78 minutes (using CEA-G160T)

- XAVC Long
  XAVC-L QFHD mode: 59.94P, Approx. 115 minutes (using CEA-G160T)
  XAVC-L HD 50 mode: 59.94P, Approx. 155 minutes (using CEA-G80T)
  XAVC-L HD 35 mode: 59.94P, Approx. 210 minutes (using CEA-G80T)

Note

- The recording/playback time may vary due to usage conditions and memory characteristics. The recording and playback times are for a continuous recording as a single clip. The actual times may be shorter, depending on the number of clips recorded.

Pan/tilt drive section

- Minimum pan speed: 0.02 deg./s
- Minimum tilt speed: 0.02 deg./s
- Maximum pan speed: 60 deg./s
- Maximum tilt speed: 60 deg./s
- Pan range: −170 deg. to + 170 deg.
- Tilt range: −30 deg. to +195 deg.
- Noise criterion rating: NC35 or lower
- Preset positions: 100

Camera section

Imaging device

- 35mm full frame (35.6 × 23.8 mm), Exmor R CMOS sensor

Number of pixels

- Approx. 12.9 megapixels (total pixels)
- Approx. 10.3 megapixels (effective pixels)

Auto focus

- Detection method: Phase detection/contrast detection

Internal ND filters

- CLEAR: OFF
- 1: 1/4ND
- 2: 1/16ND
- 3: 1/64ND
- Linearly variable ND: 1/4ND to 1/128ND

ISO sensitivity

- ISO 800/12800 (Cine EI mode, D55 Light source)

Lens mount

- E-mount

Latitude

- 15+ stop

Shutter speed

- 64F to 1/8000 sec. (23.98P)

Shutter angle

- 5.6° to 360°, 2 to 64 frames

Slow & Quick Motion

- XAVC QFHD: 1 fps to 120 fps
- XAVC HD: 1 fps to 240 fps
- XAVC 4K: 1 fps to 60 fps
- XAVC HD (S35): 1 fps to 120 fps

White balance

- 2000 K to 15000 K

Gain

- −3 dB to +30 dB (1 dB increments)

Base look

- S-Cinetone, Standard, Still, ITU709, 709tone, s709, 709(800%), S-Log3, HLG Live, HLG Natural

Audio section

Sampling frequency

- 48 kHz

Quantization

- 24-bit

Frequency response

- XLR input MIC mode: 20 Hz to 20 kHz (±3 dB or less)
- XLR input LINE mode: 20 Hz to 20 kHz (±3 dB or less)

Dynamic range

- XLR input MIC mode: 80 dB (Typical)
- XLR input LINE mode: 90 dB (Typical)

Distortion

- XLR input MIC mode: 0.08% or lower (−40 dBu input level)
- XLR input LINE mode: 0.08% or lower (+14 dBu input level)

Input/output section

Inputs

DC IN

- EIAJ compliant, 19.5 V DC

AUDIO IN

- XLR type, 5-pin, female
  LINE / MIC / MIC+48V switchable
  MIC: Reference −30 dBu to −80 dBu

GENLOCK IN

- BNC connector, 1.0 Vp-p, 75 Ω

TC IN

- BNC connector

Outputs

SDI OUT

- BNC connector, 12G-SDI, 6G-SDI, 3G-SDI (Level A/B), HD-SDI

HDMI

- Type-A connector

OPTICAL output connector

- SFP+ compliant
  * The unit does not support optical signal input.

Input/output

LAN connector

- RJ-45, 1000BASE-T

OPTION connector

- RJ-45 tally input/output connector

Media slot section

- CFexpress Type A / SD card slot (2)

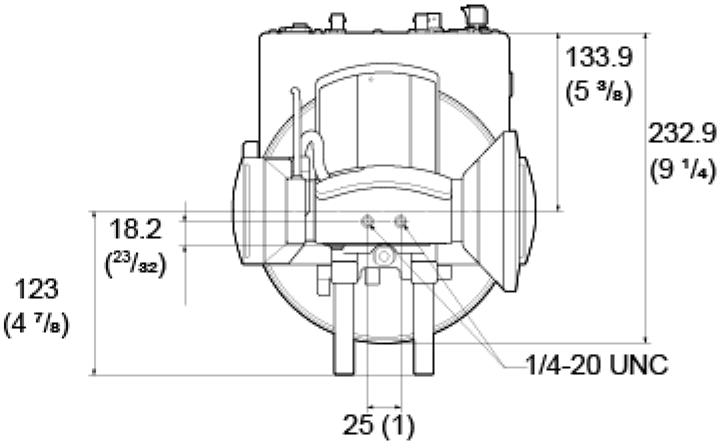
Supplied accessories

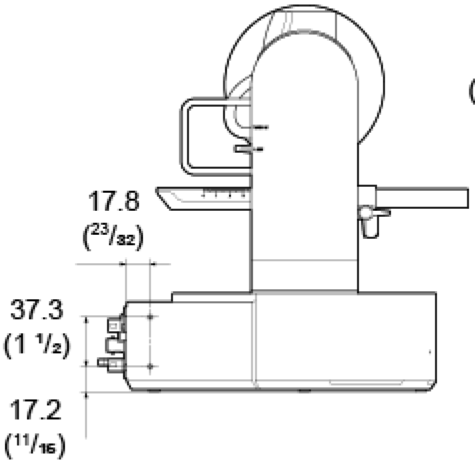
- AC adaptor (1)
- Power cord (1)
- Infrared remote control (1)
- Body cap (1) (attached to the unit)
- HDMI cable retaining plate (1)
- Before Using This Unit (1)
- Warranty booklet (1)

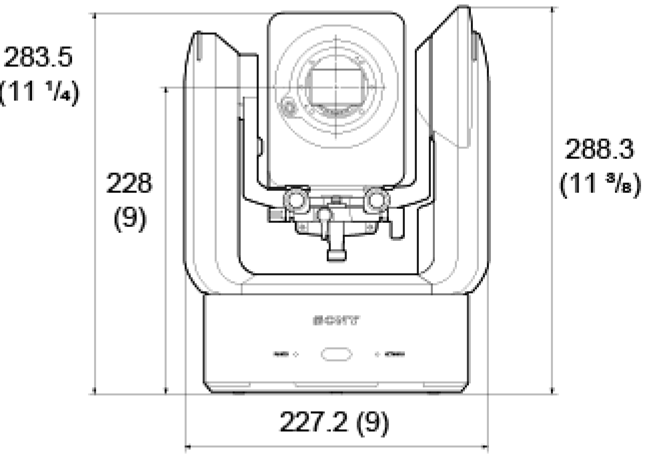
External dimensions

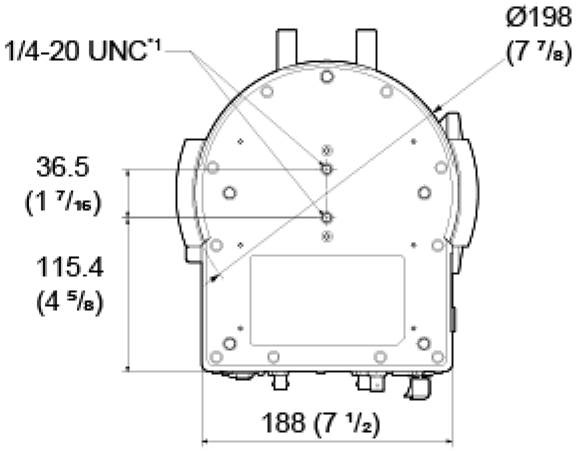
Dimensions are approximate values.
Unit: mm (inches)

Camera body



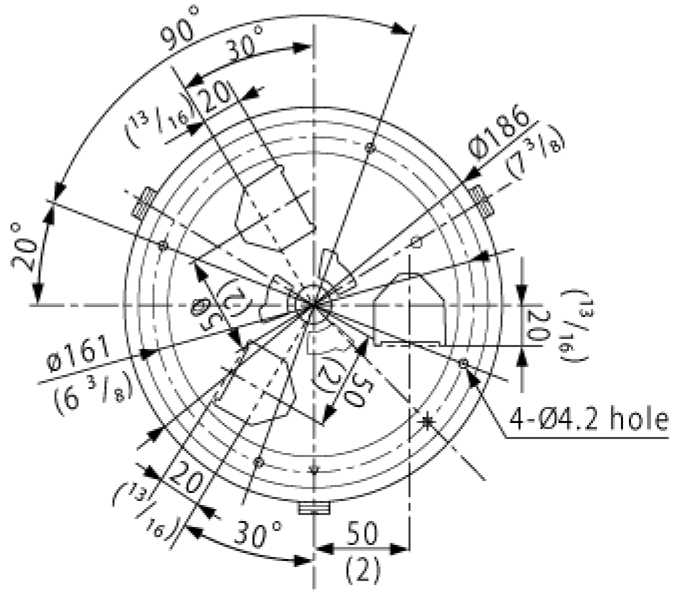


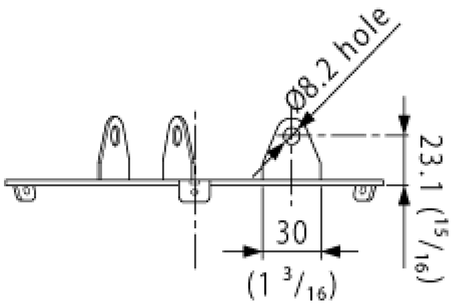




[*1] Tripod screw

Ceiling bracket


90°
30°
(13/16)
20
Ø186
(7 3/8)
20°
50
(2)
ø161
(6 3/8)
20
(13/16)
50
(2)
4-Ø4.2 hole
(13/16)
20
30°
50
(2)


Ø8.2 hole
23.1 (15/16)
30
(1 3/16)

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