

Panasonic®

Operating Instruction

Operations and Settings

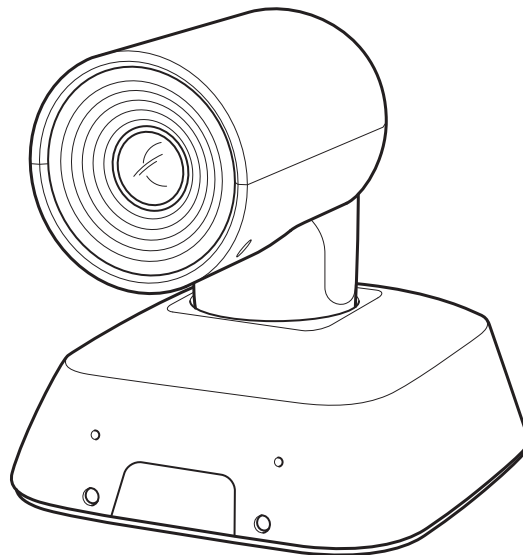
4K Integrated Camera

Model No.

AW-UE5KG

Model No.

AW-UE5WG



HEVC Advance™
Covered by patents at patentlist.accessadvance.com

HDMI™

Operations and Settings
Operating Instructions

This "Operations and Settings" describes how to operate the unit and how to establish its settings.

For more information on how to perform basic operation and installation, refer to the Operating Instructions "Basics".

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Abbreviations

For the purposes of this manual, the model numbers of the units are given as listed in the table below.

Model number of unit	Model number given in manual
AW-UE5KG, AW-UE5WG	AW-UE5
AW-RP60G	AW-RP60

Illustrations and screen displays featured in the manual

What is shown in the manual's illustrations and screen displays may differ from how it is actually appears.

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Getting Started

Required Personal Computer Environment

CPU	7th Generation Intel® Core™ (Kaby Lake or later) recommended
Memory	For Windows: 4 GB or more For Mac: 4 GB or more
Network function	100BASE-T/TX or 1000BASE-T, RJ-45 connector
Image display	Resolution: 1920 x 1080 pixels or more Color generation: True Color 24-bit or more
Supported operating systems and web browsers	For Windows: Microsoft® Windows® 11 Microsoft Edge Google Chrome
	For Mac: macOS 15 macOS 14 macOS 13 Safari Google Chrome
Other	Adobe® Reader® (for viewing the operating instructions available on the website)

IMPORTANT

Failure to provide the required personal computer environment may slow down the delineation of the images on the screen, making it impossible for the web browser to work and cause other kinds of problems.

<NOTE>

- Depending on the software version of the unit, an update may be necessary.
- For the latest information on compatible operating systems and web browsers, visit the support site at the website:
<https://pro-av.panasonic.net/>

Network security

As you will use the unit connected to a network, your attention is called to the following security risks.

- ① Leakage or theft of information through the unit
- ② Use of the unit for illegal operations by persons with malicious intent
- ③ Interference with or stoppage of the unit by persons with malicious intent

It is your responsibility to take precautions such as those described below to protect yourself against the above network security risks.

- Enable user authentication from web screen.
- Use the unit in a network secured by a firewall, etc.
- If the unit is connected to a network that includes personal computers, make sure that the system is not infected by computer viruses or other malicious entities (using a regularly updated antivirus program, anti-spyware program, etc.).
- Protect your network against unauthorized access by restricting users to those who log in with an authorized user name and password.
- After accessing the unit as an administrator, be sure to close all web browsers.
- Change the administrator password periodically.
- To avoid passwords that can be guessed easily by third parties, set a password of at least 8 characters in length, including at least 3 different types of characters, such as upper case, lower case, numbers, and symbols
- Restrict access to the unit by authenticating the users, for example, to prevent setting information stored on the unit from leaking over the network.
- Do not install the camera in locations where the camera or the cables can be destroyed or damaged by persons with malicious intent.
- Avoid connections that use public lines.

<NOTE>

- **Notes on user authentication**

User authentication on the unit can be performed via digest authentication or basic authentication. If basic authentication is used without the use of a dedicated authentication device, password leaks may occur. We recommend using digest authentication.

- **Usage restrictions**

Use of the same segment is recommended for the network in which the unit and personal computer are connected.

If the equipment uses connections with different segments, events based on the settings inherent to the network equipment, for instance, may occur, so check this thoroughly prior to operation.

Characteristics

Overview

This 4K camera features single focus, ultra-wide angle 121.8° lens, and uses a 1/2.8" type MOS sensor and supports wider video output in various formats including 4K/60p output.

A single cable solution with one Ethernet cable is enabled, and compatibility with remote cameras is enhanced by protocol support such as RTMP. Connecting a controller enables smooth camera operation by IP control. In addition, it is equipped with a USB camera function that can be easily connected and applied to various applications.

Characteristics

Multi-format support You can switch between the following formats via the menus or a web browser. [4K format] 2160/59.94p, 2160/60p, 2160/50p 2160/29.97p, 2160/30p, 2160/25p [HD format] 1080/59.94p, 1080/60p, 1080/50p, 1080/29.97p, 1080/30p, 1080/25p 720/59.94p, 720/60p, 720/50p 1/2.8" MOS sensor and ultra-wide angle 121.8° fixed focus lens With the ultra-wide-angle (121.8° horizontal) lens, you can capture a wider space video, and you can reproduce clear images for a wide range of applications. Storage of up to 100 positions in the preset memory. Single cable solution By supporting PoE power supply, we have realized a single cable solution that enables video signal / control signal / power supply with one Ethernet cable. IP image output functions It supports 4K60p output with RTMP (Real-Time Messaging Protocol), which can upload video directly to live distribution service, and it demonstrates high operability in live production use. Energy-savings achieved by the compact main unit design The main unit is lightweight and compact at less than 0.5 kg, and low 15 W energy consumption means multiple cameras can be connected easily.	Affinity with remote camera By supporting PoE power supply and RTMP / RTSP support, the affinity with the remote camera series is further enhanced. USB camera It can also be used as a USB camera. Simply connect it to your computer using a single USB cable (please use the included cable), which also provides power. Use of easy-to-operate wireless remote control (optional) is possible A wireless remote control capable of operating up to four units can be used. It can easily be used to set the various functions or switch between them while viewing the menu screens. Flexible camera layout enabled by simple connection and installation IP control, lightweight body and simple up/down and inverse mechanism result in outstanding DIY (indoor applications only) connectivity and installation ease. Remember that this unit is designed to be used indoors only: It cannot be used outdoors. Easy connections and settings courtesy of IP controller Up to two hundred units can be operated by IP connection from a Panasonic controller (AW-RP60). (The maximum length of the LAN cables is 100 meters (328 ft).) Network connection with AW-RP60 requires setup of an initial account. When an initial account is not setup, AW-RP60 can detect but cannot control this unit.
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<NOTE>

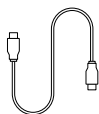
- For information on compatible controllers and control functions, visit the following website.
<https://pro-av.panasonic.net/>

Accessories

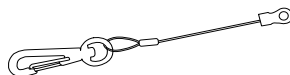
Check that the following accessories are present and accounted for.

After removing the product from its container, dispose of packing materials in an appropriate manner.

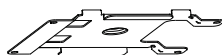
USB cable



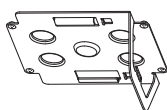
Drop-prevention wire



Ceiling mount bracket



Base plate



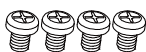
M4 screw

10 mm length (4 screws)



M4 screw

5 mm length (4 screws)



Screw for mounting tripod

(1/4"-20UNC, 5.5 mm length)



Optional Accessories

- Wireless remote control AW-RM50AG (Size “AA” dry battery x 2, obtained separately)
- Direct ceiling mount bracket WV-Q105AUX

<NOTE>

For details on optional accessories, refer to the catalog or consult your local dealer.

Operating Precautions

■ Shoot under the proper lighting conditions.

To produce pictures with eye-pleasing colors, shoot under the proper lighting conditions. The pictures may not appear with their proper colors when shooting under fluorescent lights. Select the proper lighting as required.

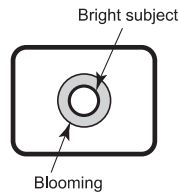
■ To ensure a stable performance in the long term

Using the unit for prolonged periods in locations where the temperature and humidity levels are high will cause its parts to deteriorate, resulting in a reduction of its service life. (Recommended temperature: Max. 35°C (95°F))

Ensure that a cooling unit or heating unit will not blow any air directly toward the installation location.

■ Do not point the camera at strong lights.

When parts of the MOS sensor are exposed to spotlights or other strong lights, blooming (a phenomenon where the edges of strong lights become blurred) may occur.



■ What happens with high-brightness subjects

Flare may occur if an extremely bright light source is pointed at the lens. In a case like this, change the angle or take some other remedial action.

■ Concerning the Image distortion

Due to the characteristics of the lens, the edge of the image is distorted.

■ Color bars

Color bars are used to adjust the color phase, and the widths and positions of these bars may differ from other models.

■ Concerning PoE power supply

The unit complies with the IEEE802.3af standard. Use a compatible Ethernet hub and PoE injector to use a PoE power supply.

■ Turn off the power before connecting or disconnecting the cables.

Always be sure to turn off the power before connecting or disconnecting the cables.

■ Operating temperature range

Avoid using the unit in cold locations where the temperature drops below 0°C (32°F) or hot locations where the temperature rises above 40°C (104°F) since these temperatures downgrade the picture quality and adversely affect the internal parts. Also, it may take a few minutes to stabilize the image when used in low temperatures. We recommend that you turn on this unit before use.

■ Concerning the HDMI interface standard

This unit has been certified as HDMI-compatible, but on rare occasions images may not be displayed depending on the HDMI device which has been connected to the unit.

■ When the unit is not in use

Turn off the unit's power when it is not in use. When the unit is no longer going to be used, do not leave it lying around, but be absolutely sure to dispose of it properly.

■ Do not touch the optical system.

Under no circumstances must they be touched. In the unlikely event that they have become dusty, remove the dust by using a camera blower or by wiping them gently with a lens cleaning paper.

■ Do not point the camera directly at the sun or a laser beam.

Taking images of the sun, laser beams, or other brightly lit subjects for prolonged periods of time may damage the MOS sensor.

■ Personal computer used

If the same image is displayed for a prolonged period on a PC monitor, the monitor may be damaged. Use of a screen saver is recommended.

■ Concerning the IP address setting

Do not use the Media Production Suite or similar software on multiple personal computers to simultaneously set the IP address for a single camera.

Otherwise, you will be unable to complete the proper procedure and set the IP address correctly.

■ **When using the automatic functions**

In the [Scene] such as the camera menu, the initial settings on some items has been set to auto, making it impossible for these items to be operated manually. To operate them manually, switch from the auto settings to the manual settings as required. When using the ATW (auto tracking white adjustment) function under fluorescent lights, the white balance may vary.

■ **H.264/H.265 patent pool licensing**

This product is licensed based on the AVC Patent Portfolio License, and the license does not extend beyond uses by users, who engage in the acts described below, for their own personal and non-profit applications.

- (1) Recoding of image information in compliance with the AVC standard (hereafter, "AVC videos")
- (2) Playing of AVC videos recorded by consumers engaging in personal activities or AVC videos acquired from licensed providers

For details, visit Via LA website (<https://via-la.com/>).

■ **Handle the unit carefully.**

Do not drop the unit or subject it to strong impact or vibration. Doing so may cause the unit to malfunction.

■ **Keep the unit away from water**

Avoid all direct contact with water. Otherwise, problems may occur.

■ **Disposal of the unit**

When the unit has reached the end of its service life and is to be disposed of, asks a qualified contractor to dispose of the unit properly in order to protect the environment.

■ **Maintenance**

Turn off the unit's power before proceeding with maintenance. Otherwise, you may injure yourself. Wipe the surfaces using a soft dry cloth. Avoid all contact with benzene, paint thinners and other volatile substances, and avoid using these substances. Otherwise, the casing may become discolored.

■ **Use the unit in an environment with minimal moisture and dust.**

Avoid using the unit in an environment with high concentration of moisture or dust since these conditions will damage the internal parts.

■ **Information on software used with this product**

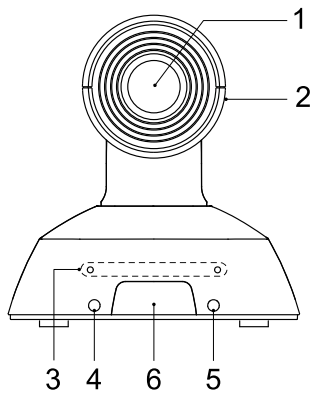
- (1) This product includes software developed independently by or for Panasonic Holdings Corporation.
- (2) This product includes software owned by third party and licensed to Panasonic Holdings Corporation.
- (3) This product includes GNU General Public License (GPL) and GNU Lesser General Public License (LGPL) licensed software, and the customer is entitled to obtain, modify, or redistribute the source code for the software.
- (4) This product includes MIT licensed software.
- (5) This product includes BSD licensed software.
- (6) This product includes Apache, fdk-aac, and BSL licensed software.

For details on obtaining the source codes, visit the following website.

<https://pro-av.panasonic.net/en/>

However, do not contact Panasonic for questions regarding obtained source codes.

Parts and Functions



1. Lens
2. Camera head
3. Internal microphone
4. Power status indicator

Color	Status
Amber	Start-up / Standby
Green	Operational
Flashing green	Receiving signal from remote control, with matching [Wireless ID]
Flashing amber	Receiving signal from remote control, with mismatched [Wireless ID]
Fast flashing amber	Receiving signal from remote control, but [Wireless Control] is disabled via the web screen
Flashing red	Firmware update in progress
Red	Error (e.g., firmware update failure)

5. Tally lamp

Color	Status
Red	Receiving tally command (PGM)
Green	Receiving tally command (PVM)
Yellow or amber (select on the menu)	AI Framing
Blue	Streaming video or audio via USB

<NOTE>

Tally lamp priority:

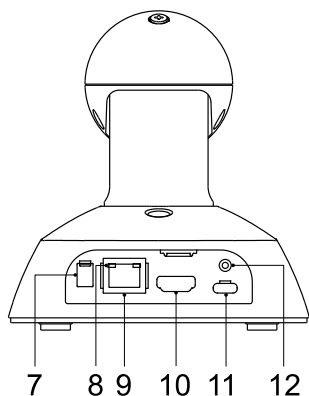
No.1: Red

No.2: Green

No.3: AI Framing

No.4: Blue

6. Wireless remote control signal light-sensing area



7. Service switch

Reset system configurations, including image, network, and AI settings. You must restart the camera for the change to take effect.

	Default Mode: Normal operating mode.
	Initialization 1: Resets the username and password for the web screen.
	Initialization 2: Restores the unit to its factory default settings.

When initializing the unit, set the switches as described above, then turn on the power.

<NOTE>

Once initialization is complete, the status indicator light will flash green. Return the service switches to their default settings (SW1 and SW2 to OFF), then turn on the power.

8. LAN indicator <LINK/ACT>

Lights up when data is transmitted/received via LAN.

9. LAN connector

Use a category 5e or above LAN cable with a maximum length of 100 m (328 ft.)

10.HDMI terminal

11.USB terminal <•••••>

The unit can be powered via USB-C (5V/3A).

12.Screw hole for USB cable

13.Tilt lock screw

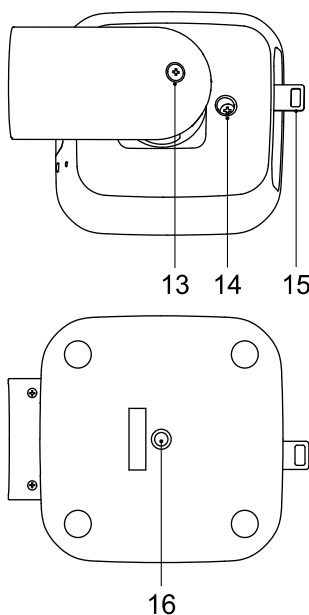
14.Pan lock screw

15.Drop-prevention wire mounting portion

16.Mount hole for tripod

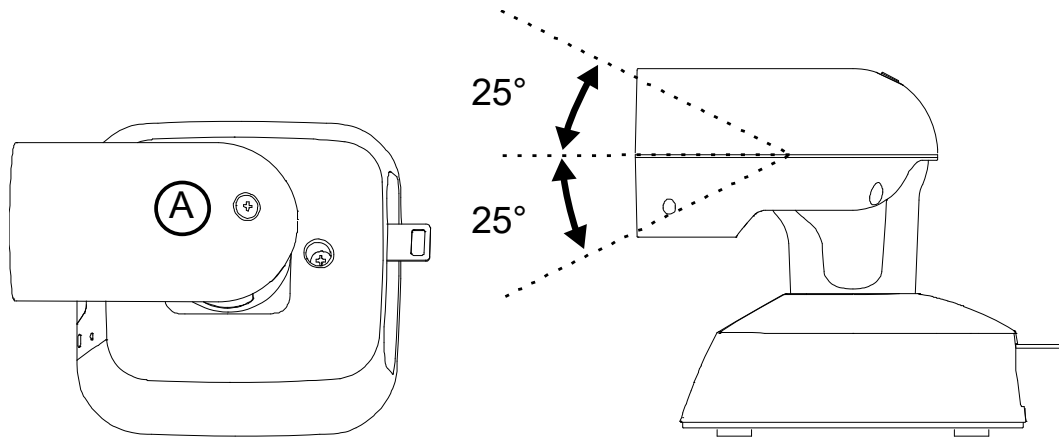
Screw: I-head type, 1/4 x 20 UNC

Clamping torque: 1.47 N · m(15kgf · cm)



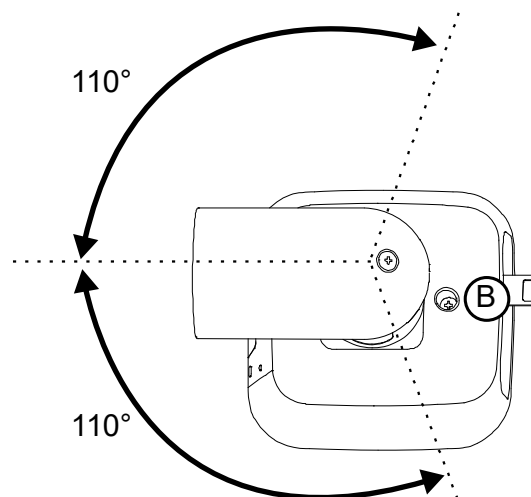
Tilting the Camera Up and Down

Loosen the tilt lock screw (A) to tilt the camera up or down by approximately 25°. Once you've positioned the camera, tighten the screw firmly to lock it in place.



Panning the Camera Right and Left

Loosen the pan lock screw (B) to pan the camera left or right by approximately 110°. Once you've positioned the camera, tighten the screw firmly to lock it in place.

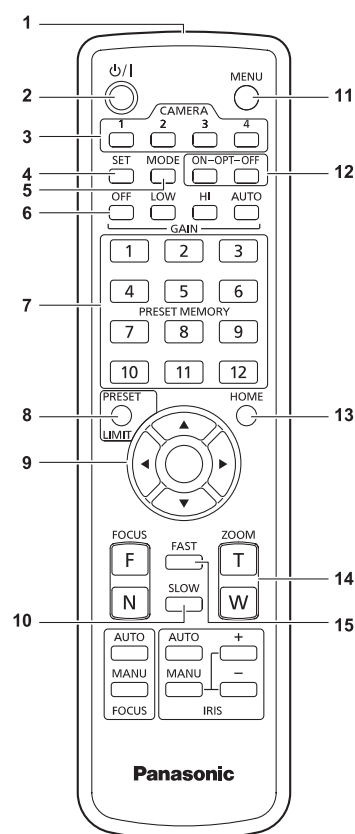


Wireless Remote Control (Optional Accessory)

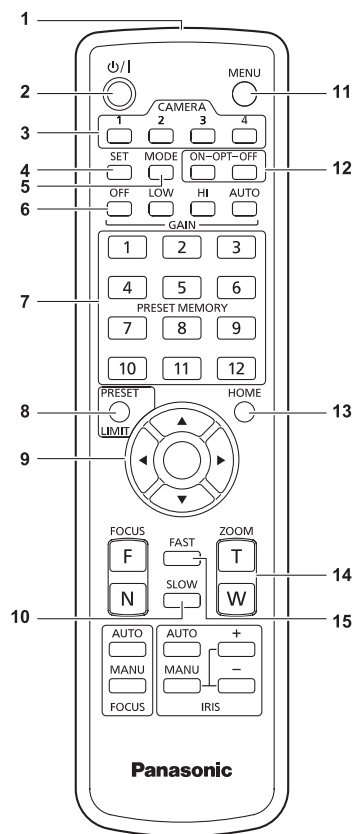
You can operate the unit with the optional wireless remote control (AW-RM50AG).

Consult your dealer concerning the purchase of a wireless remote control.

Buttons used for operating this unit are described.



1	Signal transmission window
2	ON/STANDBY button Each time this is pressed for 2 seconds, operation switches between turning on the unit's power and establishing the standby status.
3	CAMERA1~CAMERA4 buttons Select a camera to be operated. Once a button has been selected, the unit corresponding to the selected button can be operated.
4	SET button If this button is pressed when the [AWB A] memory or [AWB B] memory has been selected for the white balance adjustment, the white balance is automatically adjusted and registered in the selected memory.
5	MODE button Press and hold for 2 seconds to switch the output signal. Each time you press the button, the display switches between the color bar signal output and the camera feed.
6	GAIN buttons <OFF> <LOW> <HI> <AUTO> These are used to set the gain. Only available when scene mode is set to [Manual]. The gain increase can be set in three steps using the <OFF>, <LOW> and <HI> buttons. <OFF > is set to 0 dB, <LOW> is set to 9 dB, and <HI> is set to 18 dB. <AUTO> is unavailable.
7	1 to 12 buttons These are used to call the information on the unit's directions and other settings, which have been registered in the units preset memories No.1 to No.12, and reproduce those settings. Setting in preset memories No.13 and above cannot be called from the wireless remote control
8	PRESET button Press this button and any of the buttons from 1 to 12 simultaneously to register a preset memory.



9	Pan-tilt buttons and menu operation buttons (1) Use these buttons to move the image of the unit. Use the <▲> and <▼> buttons to tilt the image up and down, and use the <◀> and <▶> buttons to pan the image left and right. The <○> button does not work during tilting and panning. Pressing the <▲> or <▼> button simultaneously with the <◀> or <▶> buttons moves the image diagonally. (2) When the camera menu is displayed, you can use these buttons to navigate the menu. Use the <▲> and <▼> buttons to select the menu items. If an item has a sub-menu, press the <○> or <▶> button to display the sub-menu. When the bottom-level menu is displayed, pressing <○> or <▶> button confirms the new setting.
10	SLOW button Changes the pan/tilt or zoom speed to low speed.
11	MENU button Press and hold for 2 seconds to display the camera menu of the unit.
12	OPT button <ON> <OFF> Turn the AI function on or off. <ON> button: Press and hold for 2 seconds to turn on the AI function. <OFF> button: Press and hold for 2 seconds to turn off the AI function.
13	HOME button Press and hold for 2 seconds to change the zoom ratio to x1.
14	ZOOM button <T> <W> These are used to adjust the digital zoom. The zoom is adjusted in the wide-angle using the <W> button and in the telephoto using the <T> button.
15	FAST button Changes the pan/tilt or zoom speed to high speed.

■ Precautions for Using the Wireless Remote Control

Please note the following when using the wireless remote control.

- **Point the wireless remote control at the unit's wireless remote control signal light-sensing area (front side), and operate it within a range of 10 meters (32.8 ft.) from the area.**
- **Refer to <Layout of wireless remote control signal light-sensing areas> on the below.**

- **The signal sensing distance is reduced if the angle at which the wireless remote control signals are sensed is increased.**

The light-sensing sensitivity is reduced to about one-half when the wireless remote control is pointed at an angle of 40 degrees from each position in front of a wireless remote control signal light-sensing area (front panel or back panel).

If the remote control is operated from the behind the unit, it may be either difficult or impossible to perform the desired operations.

- **If the unit is installed near fluorescent lights, plasma monitors or other such products or if the unit is exposed to sunlight, the effects of the light may make it impossible for the unit to be operated using the wireless remote control.**

Be sure to follow the steps below for installation and use.

- Take steps to ensure that the wireless remote control signal light-sensing area will not be exposed to the light from fluorescent lights, plasma monitors or other such products or from the sun.
- Install the unit away from fluorescent lights, plasma monitors and other such products.

- **For about 10 minutes even after the batteries have been removed from the wireless remote control, the selection of the operation to be performed (the CAMERA<1>, <2>, <3>, <4> button which was pressed last) will remain stored in the memory.**

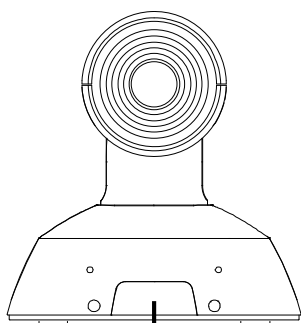
When a longer period of time elapses, however, the selection is reset to the status established when the CAMERA <1> button was pressed.

- **When the [Wireless Control] in the web screen menu is set to [Off], you cannot operate with the wireless remote control. In this case, if the unit receives a signal from the infrared remote control, the power status indicator will flash rapidly (5 Hz) in orange.**

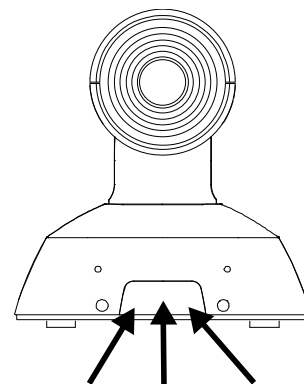
To operate the unit using the wireless remote control, set [Wireless Control] to [On] in the web screen menu.

<Layout of wireless remote control signal light-sensing areas>

<NOTE> The arrows in the figure below show the light-sensing directions in which the wireless remote control signals travel.



Wireless remote control signal
light-sensing area(front side)



Network Settings

Using the EasyIP Setup Tool Plus function in the Media Production

Suite to establish the unit's settings

You can use the EasyIP Setup Tool Plus function in the Media Production Suite to make network related settings for this unit, display the camera images, and update the firmware.

The app determines PTZ cameras for which updates are available and does the necessary operations from downloading the firmware to updating the version.

You can download the Media Production Suite installer (Setup.exe) from the following website:

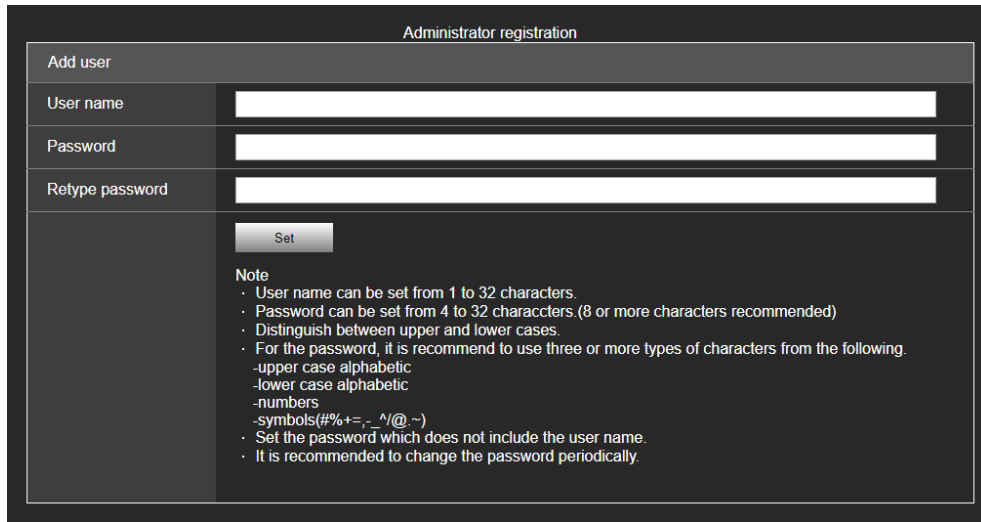
<https://pro-av.panasonic.net/en/software/mps/>

Refer to the Help page for the EasyIP Setup Tool Plus function of the Media Production Suite for setting details.

Setting the Initial Account

1. Set the initial account.

In the initial state, the initial account setting screen is displayed when the web screen is displayed.
Set a user name and password.

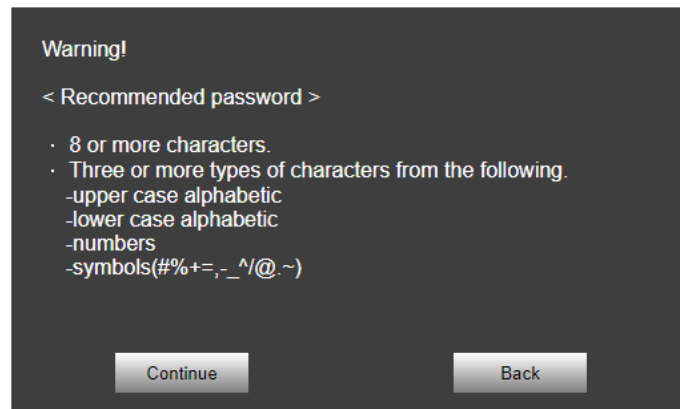


The image shows a dark-themed 'Administrator registration' window. It contains a form with three input fields: 'User name', 'Password', and 'Retype password'. Below these fields is a 'Set' button. A 'Note' section provides guidelines for password creation, including character requirements and a list of allowed symbols.

Administrator registration	
Add user	
User name	
Password	
Retype password	
Set Note · User name can be set from 1 to 32 characters. · Password can be set from 4 to 32 characters.(8 or more characters recommended) · Distinguish between upper and lower cases. · For the password, it is recommend to use three or more types of characters from the following. -upper case alphabetic -lower case alphabetic -numbers -symbols(#%+=, - _ ^ / @ . ~) · Set the password which does not include the user name. · It is recommended to change the password periodically.	

<NOTE>

- The usable symbols for user name is following (# % + = , - _ ^ / @ . ~)
- Do not set character strings that can be easily guessed by third parties.
- Change the password at regular intervals.
- The password must use at least 3 of the following 4 character types and be 8 characters or longer.
 - Alphabet upper cases
 - Alphabet lower cases
 - Numerals
 - Symbols (# % + = , - _ ^ / @ . ~)
- When a password is set that does not adhere to the above policy, take responsibility for use of the device with due consideration for the security risks in the installation environment, etc.
- A warning is displayed if the set password goes against the recommended setting policy. When changing the password, click the [Back] button and set the password again.
- When continuing with the setting with full understanding of the security risks, click [Continue] to complete the setting.
- If you forget your account information, use the service switch to perform [Initialization 1], then set up your account again.



The image shows a 'Warning!' dialog box with a list of recommended password criteria. At the bottom, there are 'Continue' and 'Back' buttons.

Warning!

< Recommended password >

- 8 or more characters.
- Three or more types of characters from the following.
 - upper case alphabetic
 - lower case alphabetic
 - numbers
 - symbols(#%+=, - _ ^ / @ . ~)

Continue Back

2. Completing registration of the initial account

After completing registration of the initial account, the live screen [Live] is automatically displayed after a few seconds.
This completes the process of registering the initial account.

Basic Shooting Operation

With the basic operations, it is assumed that the white balance will be adjusted automatically (as per the factory settings).

1. **Make sure the subject brightness is in the appropriate level.**
2. **Make sure the unit and all devices are well connected and power on.**
3. **Press one of the CAMERA<1> to <4> buttons on the wireless remote control to select the unit if using the wireless remote control.**

Even when using only one unit, it must still be selected from the wireless remote control or controller.

4. **Select the scene (shooting) mode.**

Select one of the three (Full Auto, Shutter Priority, and Manual) scene modes, each of which corresponds to a set of circumstances in which the subject will be shot.

Select the mode that satisfies the shooting conditions and suits your preferences.

When continuing to shoot in the same circumstances, there is no need to select another mode.

5. **Start shooting.**

<NOTE>

Due to the characteristics of the lens, the edge of the image is distorted.

Power on and Power off the Camera Unit

Power on the Camera Unit

When performing the operations using the wireless remote control.

1. Power on all connected devices.

- This unit does not have a power switch.

When power is supplied to it, the power status indicator will light green, and the unit is set to the Power ON mode. In this case, there is no need to perform Step 2 and beyond.

<NOTE>

- Under factory default conditions, the unit will be in Power ON mode when power is supplied for the first time. (Power status indicator: Lit green)
- When the power supply is cut off while the unit is in Standby mode, the unit will be in Standby mode the next time power is supplied. (Power status indicator: Lit orange)
- When the power supply is cut off while the unit is in Power ON mode, the unit will be in Power ON mode the next time power is supplied. (Power status indicator: Lit green)

2. Press one of the CAMERA <1> to <4> buttons on the wireless remote control to select the unit.

3. Press the <⏻/▶> button on the wireless remote control for about 2 seconds.

The Power ON mode is established, images are output, and control can be exercised.

- The unit's power status indicator now lights up green.

<NOTE>

- The initial startup process may take approximately 30 seconds to 1 minute per unit. During this time, the unit cannot be operated. (Power status indicator: Lit orange)

4. If a multiple number of units are going to be used, repeat steps 2 and 3 as required.

The unit's power status indicator blinks green when a signal matched by the remote control ID has been received, and it blinks orange when a signal that is not matched by the remote control ID has been received.

When performing the operations using the controller (AW-RP60).

For details, refer to the operating instructions for the controller.

Power off the Camera Unit

When performing the operations using the wireless remote control

1. Press one of the **CAMERA <1> to <4>** buttons on the wireless remote control to select the unit.
2. Press the **<⏻/>** button on the wireless remote control for 2 seconds.
The unit enters STANDBY mode.
 - The unit's power status indicator now lights up orange.
3. If a multiple number of units are used, repeat steps 1 and 2 as required.

When performing the operations using the controller (AW-RP60).

For details, refer to the operating instructions for the controller.

Priority Mode

Priority Mode lets you choose between two operational profiles optimized for high-quality video performance or advanced AI functions.

4K High Frame Rate: Prioritizes 4K resolution output at a high frame rate.

- Supports 4K (3840x2160) video at up to 60p via HDMI, USB, and IP.
- Disables all AI functions and digital PTZ to support high-bandwidth video.

ePTZ/AI: Prioritizes digital PTZ and AI functions.

- Supports AI functions such as digital PTZ and Group Framing.
- Limits 4K (3840×2160) video to 30p via HDMI, USB, and IP to support AI processing.

Output Format and Resolution

4K High Frame Rate

Frequency	Format	HDMI	UVC (3.0) ^{*1}	UVC (2.0) ^{*1}	IP Stream (RTSP/RTMP/NDI HX)	Web (MJPEG)	NDI 2nd	Remarks
60Hz	2160/60p	2160/60p	[MJPEG] 2160/60p, 30p, 15p, 5p 1080/60p, 30p, 15p, 5p 720/60p, 30p, 15p, 5p 360/60p, 30p, 15p, 5p	[MJPEG] 2160/30p, 15p, 10p, 5p 1080/60p, 30p, 15p, 5p 720/60p, 30p, 15p, 5p 360/60p, 30p, 15p, 5p	[H.264/H.265] 2160/60p, 30p, 15p, 5p 1080/60p, 30p, 15p, 5p 720/60p, 30p, 15p, 5p 360/60p, 30p, 15p, 5p	720/30p	360/30p	No AI and digital PTZ
59.94Hz	2160/59.94p	2160/59.94p	[YUV] 720/60p, 30p, 15p 360/60p, 30p, 15p	[YUV] 360/30p, 15p	[H.264/H.265] 2160/59.94p, 29.97p, 14.99p, 5p 1080/59.94p, 29.97p, 14.99p, 5p 720/59.94p, 29.97p, 14.99p, 5p 360/59.94p, 29.97p, 14.99p, 5p	720/29.97p	360/29.97p	
50Hz	2160/50p	2160/50p	[MJPEG] 2160/50p, 25p, 10p, 5p 1080/50p, 25p, 10p, 5p 720/50p, 25p, 10p, 5p 360/50p, 25p, 10p, 5p [YUV] 720/50p, 25p, 10p 360/50p, 25p, 10p	[MJPEG] 2160/25p, 12.5p, 10p, 5p 1080/50p, 25p, 10p, 5p 720/50p, 25p, 10p, 5p 360/50p, 25p, 10p, 5p [YUV] 360/25p, 10p	[H.264/H.265] 2160/50p, 25p, 10p, 5p 1080/50p, 25p, 10p, 5p 720/50p, 25p, 10p, 5p 360/50p, 25p, 10p, 5p	720/25p	360/25p	

*1: The supported file formats vary depending on the USB standard of the connected device.

ePTZ/AI

Frequency	Format	HDMI	UVC (3.0) ^{*1}	UVC (2.0) ^{*1}	IP Stream (RTSP/RTMP/NDI HX)	Web (MJPG)	NDI 2nd	Remarks	
60Hz	2160/30p	2160/30p	[MJPG] 2160/30p, 15p, 10p, 5p	[MJPG] 2160/30p, 15p, 10p, 5p	[H.264/H.265] 2160/30p, 15p, 5p	720/30p	360/ 30p	Supports AI and digital PTZ	
	1080/60p	1080/60p	1080/60p, 30p, 15p, 5p	1080/60p, 30p, 15p, 5p	1080/60p, 30p, 15p, 5p				
	1080/30p	1080/30p	720/60p, 30p, 15p, 5p	720/60p, 30p, 15p, 5p	720/60p, 30p, 15p, 5p				
	720/60p	720/60p	360/60p, 30p, 15p, 5p	360/60p, 30p, 15p, 5p	360/60p,30p,15p,5p				
59.94Hz			[YUV] 720/60p, 30p, 15p	5p					
	2160/29.97p	2160/29.97p	360/60p, 30p, 15p	[YUV] 360/30p, 15p	[H.264/H.265] 2160/29.97p, 14.99p, 5p	720/29.97p	360/29.97p		
	1080/59.94p	1080/59.94p			1080/59.94p, 29.97p, 14.99p, 5p				
	1080/29.97p	1080/29.97p			720/59.94p, 29.97p, 14.99p, 5p				
720/59.94p	720/59.94p			360/59.94p, 29.97p, 14.99p, 5p					
50Hz	2160/25p	2160/25p	[MJPG] 2160/25p, 12.5p 10p, 5p	[MJPG] 2160/25p, 12.5p 10p, 5p	[H.264/H.265] 2160/25p,10p, 5p	720/25p	360/25p		
	1080/50p	1080/50p	1080/50p, 25p, 10p, 5p	1080/50p, 25p, 10p, 5p	1080/50p, 25p, 10p, 5p				
	1080/25p	1080/25p	720/50p, 25p, 10p, 5p	720/50p, 25p, 10p, 5p	720/50p, 25p, 10p, 5p				
	720/50p	720/50p	360/50p, 25p,10p, 5p	360/50p, 25p, 10p, 5p	360/50p, 25p, 10p, 5p				
			[YUV] 720/50p, 25p, 10p	[YUV] 360/25p, 10p					
			360/50p, 25p, 10p						

*1: The supported file formats vary depending on the USB standard of the connected device.

Selecting the Camera Unit

When performing the operations using the wireless remote control

Press the **CAMERA <1>** to **<4>** button.

The camera unit's status indicator LED blinks green when a signal matched by the remote control ID has been received, and it blinks orange when a signal that is not matched by the remote control ID has been received.

When performing the operations using the controller (AW-RP60).

For details, refer to the operating instructions for the controller.

Network connection with AW-RP60 requires setup of an initial account. When an initial account is not set up, AW-RP60 can detect but cannot control this unit.

Selecting the Scene Mode

Scene Mode Type

The unit has three preset scene modes, each of which corresponds to a set of circumstances in which the subject will be shot. Select the mode that satisfies the shooting conditions and suits your preferences. The settings can be changed by menu operations.

White balance and other settings are saved in memory for each scene mode. Be sure to select a scene mode before making any adjustments.

■ Full Auto

You can adjust the Picture Level, AGC Max. Gain, and Slow Shutter under Brightness.

■ Shutter Priority

You can adjust the Picture Level, AGC Max. Gain, and Shutter Speed under Brightness.

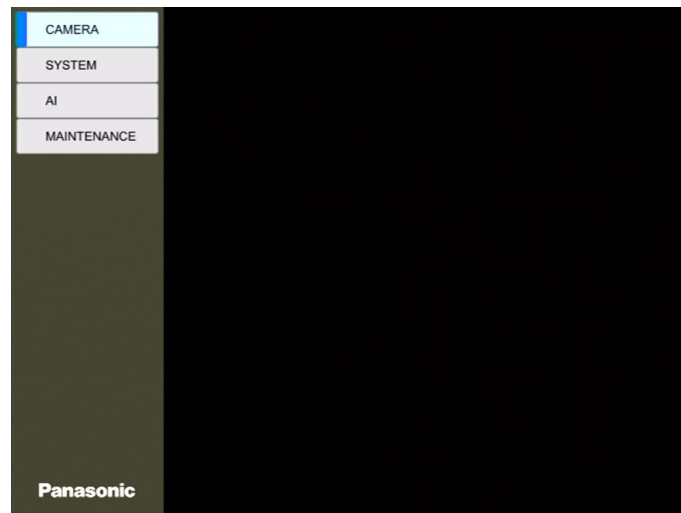
■ Manual

You can adjust the Shutter Speed and Gain under Brightness.

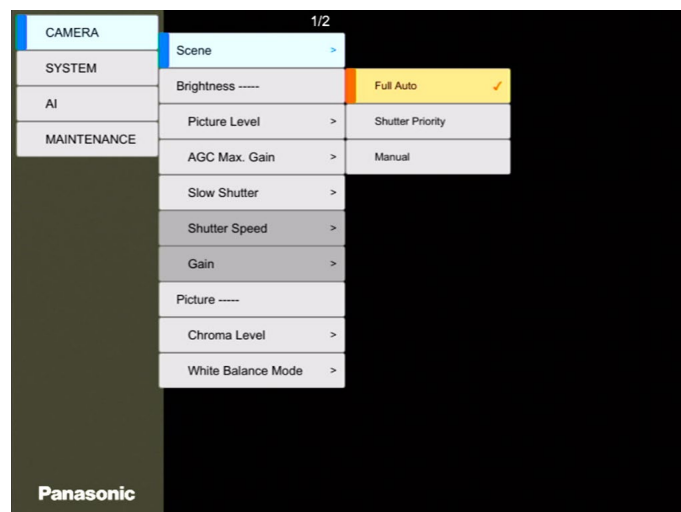
How to Select the Scene Mode

When performing the operations using the wireless remote control

1. Press the CAMERA <1> to <4> button to select the unit.
2. Press the <MENU> button for 2 seconds.
The menu is displayed.
3. Press the <▲> or <▼> button to bring the highlight to [CAMERA].



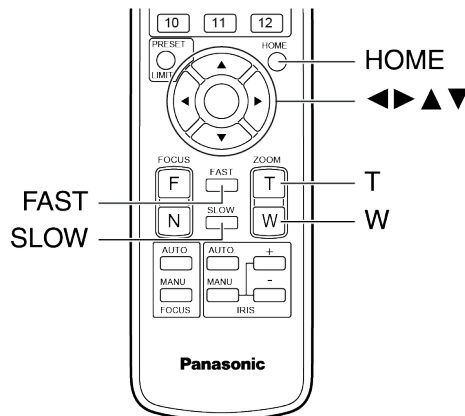
4. Press the <○> button.
The CAMERA sub-menu is displayed on the monitor.
5. Press the <▲> or <▼> button to bring the highlight to [Scene].
6. Press the <○> button.
7. Press the <▲> or <▼> button to select the scene mode (Full Auto, Shutter Priority, or Manual) and press the <○> button to confirm the selection. The selected scene mode has a mark sign within.



8. Press <◀> to leave from scene mode menu.
9. Press the [MENU] button for 2 seconds to exit the menu.

Operating the Camera unit

When performing the operations using the wireless remote control



Control the Picture's Direction (using the wireless remote control)*1

- Moving the picture toward the left or right (panning): Press the <◀> or <▶> button.
- Moving the picture up or down (tilting): Press the <▲> or <▼> button.
- Moving the picture diagonally: Press the <▲> or <▼> button and <◀> or <▶> button at the same time.
- Returning the picture to the reference position: Press the <HOME> button for 2 seconds.

Zoom In/Out Function (using the wireless remote control)*1

- Zooming in (the subject becomes magnified in size): Press the <T> button of <ZOOM>.
- Zooming out (the subject becomes reduced in size): Press the <W> button of <ZOOM>.

Switch the Direction or Zoom Speed (using the wireless remote control)*1

- Changing the direction or zoom at high speed: Press the <FAST> button.
- Changing the direction or zoom at low speed: Press the <SLOW> button.

When performing the operations using the controller (AW-RP60)

Control the Picture's Direction (using the controller)*1

- Moving the picture toward the left or right (panning): Tilt the <PAN/TILT> lever toward L or R.
- Moving the picture up or down (tilting): Tilt the <PAN/TILT> lever toward UP or DOWN.
- Moving the picture diagonally: Tilt the <PAN/TILT> lever diagonally.

Zoom In/Out Function (using the controller)*1

- Zooming in (the subject becomes magnified in size): Tilt the <ZOOM> lever toward the TELE direction.
- Zooming out (the subject becomes reduced in size): Tilt the <ZOOM> lever toward the WIDE direction.

Switch the Direction or Zoom Speed (using the controller)

For details, refer to the operating instructions for the controller.

*1: Does not work when Priority Mode is set to 4K High Frame Rate

What to do when Encountering Problems in the Basic Shooting Operations

If the trouble is not resolved by taking the action suggested below, refer to “Troubleshooting” section.

When performing the operations using the wireless remote control

■ The unit does not move.

- Press the CAMERA <1> to <4> button to select the unit which is to be operated.
- If only one unit is being used, it is normally selected using the CAMERA<1> button.
- Check that the [Wireless ID] matches the <CAMERA> number you are pressing on the wireless remote control.
- If the unit's power status indicator is off or lights up orange, the unit is not turned on. Refer to “Power on the Camera Unit” section.
- If the unit's status display lamp does not blink even when the wireless remote control is operated near the unit's wireless remote control signal light-sensing area, it means that the wireless remote control's batteries have run down. Replace the batteries.

■ Multiple color bands (color bars) are displayed.

Press and hold the <MODE> button for 2 seconds to switch to the camera image.

■ The menu screen is displayed.

Press and hold the <MENU> button for 2 seconds to exit the camera menu.

■ Something is wrong with the coloring of the pictures.

Refer to “Auto Tracking White Balance Adjustment (ATW)” and switch to [ATW].

When performing operations from a controller (AW-RP60).

■ The unit does not move.

- Select the unit to be operated by referring to the operating instructions for the controller.
- If the unit's status display lamp is off or lights up orange, it means that the unit's power is not on. Refer to “Power on the Camera Unit” and turn on the power.
- Check that the account settings for this unit have been set correctly.
- Network connection with AW-RP60 requires setup of an initial account. When an initial account is not set up, AW-RP60 can detect but cannot control this unit.

■ Multiple color bands (color bars) are displayed.

Switch to the camera image by pressing the <BARS> button.

■ Something is wrong with the coloring of the camera pictures.

Refer to “Auto Tracking White Balance Adjustment (ATW)”, and switch to [ATW].

Advanced Operations

The following describes additional operations and settings of the camera unit.

Preset Memories

The camera unit enables up to 100 settings for the camera direction (panning and tilting), zoom to be registered in its preset memories, and called. However, the number of settings that can be registered and called depends on the type of wireless remote control or controller that is used for operation.

<NOTE>

- If you try to call a preset number that has no preset value registered, nothing will happen.

When performing the operations using the wireless remote control

Twelve settings (preset No.1 to No.12) can be registered and called using the wireless remote control.

The <1> to <12> buttons correspond to the unit's preset memories No.1 to No.12.

■ Registering the settings in the preset memories

1. **Display the picture to be shot on the monitor. Operate the pan, tilt or zoom buttons to determine the camera view.**
2. **While holding down the <PRESET> button, press the button corresponding to the preset memory number.**
If a preset memory number with an already registered setting has been selected, the existing setting will be erased and replaced with the new one.

■ Calling the settings of the preset memories

Press the button in which the preset memory setting has been registered.

When performing operations from a controller (AW-RP60).

Up to 100 entries can be registered/recalled.

For details, refer to the operating instructions for the controller.

Adjust the White Balance

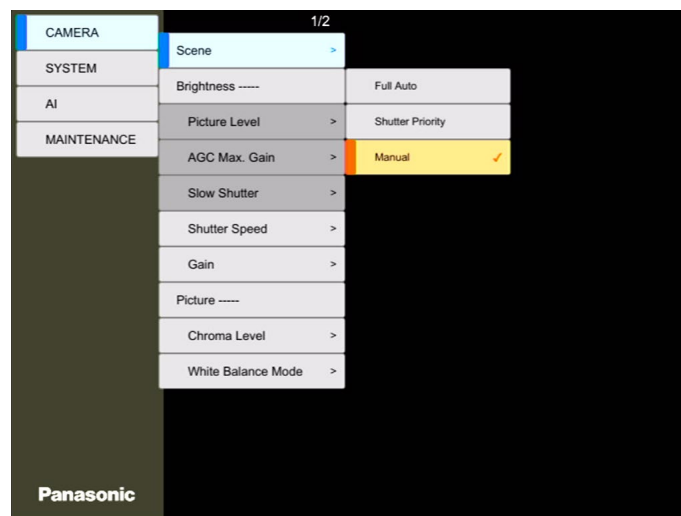
In order for the white to be reproduced accurately, the ratio between the three primary colors (RGB) is adjusted. If the white balance has shifted out of adjustment, not only will the white be reproduced poorly but the color tones of the entire screen will also be degraded.

- This adjustment must be performed when using the unit for the first time or when the unit has not been used for a prolonged period.
- It must be performed when the lighting conditions or brightness has changed.
- Once you have adjusted the AWB settings, you can save them to two memory slots—A and B—when you select [AWB A] or [AWB B] in the White Balance menu.
- To use the unit under the same conditions as the current settings, you only need to make the adjustment once. After that, you can complete the setup by selecting the option from the menu or the [Setup] screen on the web screen, or by pressing the controller button. No further setup is required.
- Once a new setting is entered, the previous setting will be erased.

Automatic Adjustment (AWB: AWB A or AWB B)

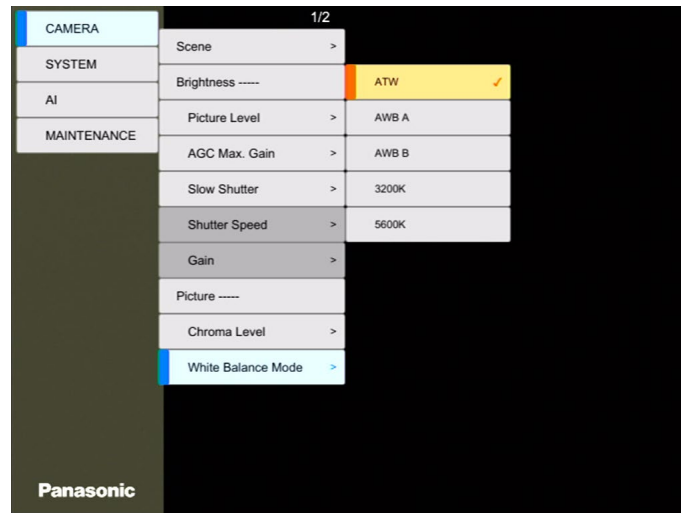
When performing the operations using the wireless remote control

1. Shoot a white subject (such as a white wall or handkerchief) so that it fills the screen.
Do not shoot shiny or very bright objects.
2. Set the scene mode to [Manual] by following the steps in “Selecting the Scene Mode” section.
<NOTE> Steps 2 through 6 represent the procedure for selecting the [AWB A] or [AWB B] memory. They need not be taken if a selection has already been made.



3. Press the <▲> or <▼> button to bring the highlight to [White Balance Mode]. Press the <○> button to enter White Balance mode menu.

4. Press the <▲> or <▼> button to change the White Balance Mode to [AWB A] or [AWB B], and press the <○> button to confirm the selection. A mark will appear next to the selection.



5. Press the <MENU> button for 2 seconds to exit from menu.

6. Press the <SET> button.

The auto white balance adjustment (AWB) is performed, and the white balance setting is entered.

<NOTE>

- The white balance cannot be adjusted when color bars are displayed. Press the <MODE> button to switch to the camera picture.
- White balance may not be correctly set if the lighting of the object is too weak.
- The camera features built-in memory that saves your white balance settings even after powering off. There's no need to reset them unless your lighting conditions or the subject's color temperature change.

When performing the operations using the controller (AW-RP60).

For details, refer to the operating instructions for the controller.

Auto Tracking White Balance Adjustment (ATW)

When white balance mode is set to [ATW], the white balance will be corrected automatically, even if the light source or color temperature changes.

This function works when [ATW] is selected instead of [AWB A] or [AWB B] by following the steps for “Automatic adjustment” in “Automatic Adjustment (AWB: AWB A or AWB B)”.

<NOTE>

- ATW might not function properly when high brightness light (ex. fluorescent lamp) beams into a screen.
- White balance may not be accurately set if there is no white object in the scene being shot.
- The white balance may shift out of adjustment when a different kind of light source such as sunlight or fluorescent lighting applies.

3200K and 5600K Presets

When you select [3200K] or [5600K] in White Balance Mode, the white balance is set using a color temperature of 3200K (equivalent to halogen light) or 5600K (equivalent to daylight), respectively.

This function works when [3200K] or [5600K] is selected instead of [AWB A] or [AWB B] in the “Automatic adjustment” procedure in “Automatic Adjustment (AWB: AWB A or AWB B)”.

Menu Operation

To configure this unit, connect it to a monitor using an HDMI cable and display the menu.

To perform basic operations in the camera menu, select an item from the main menu to open a sub-menu and adjust the settings.

Some sub-menus also include advanced settings.

Navigate the camera menu using the wireless remote, or go to the web screen's [Live] screen and select [OSD Menu Operation].

Here are the basic steps for changing camera menu items using the wireless remote control.

Wireless Remote Control Operations

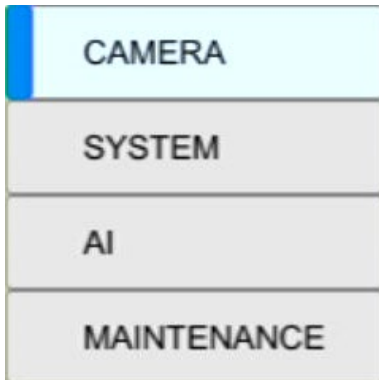
Menu operation	Wireless remote control
Selecting a camera to operate	Press the CAMERA <1>, <2>, <3>, or <4> button.
Displaying the main menu	Press and hold the <MENU> button for about 2 seconds.
Selecting items	Press the <▲>, <▼>, <◀>, or <▶> button.
Displaying sub-menus	Press the <○> button.
Returning to the previous menu	Move the highlight to [Return], and press the <○> button.
Changing settings	Move the highlight to the item you want to change, and press the <○> button to select it. Change the value using the <▲>, <▼>, <◀>, or <▶> button, and press the <○> button to confirm.
Canceling setting change	Press the <MENU> button (for less than 2 seconds) before the setting is confirmed.
Exiting menu operations	Press and hold the <MENU> button for about 2 seconds.

<NOTE>

- When AW-RP60 is connected, refer to the operating instructions for the controller.

Menu Items

Main Menu Screen



Camera

Select to open the Camera menu to configure image settings.

System

Select to open the System menu to configure system format settings.

AI

Select to open the AI menu to enable AI functions and configure framing settings.

Maintenance

Select to open the Maintenance menu to check the camera's firmware version or initialize its settings.

<NOTE>

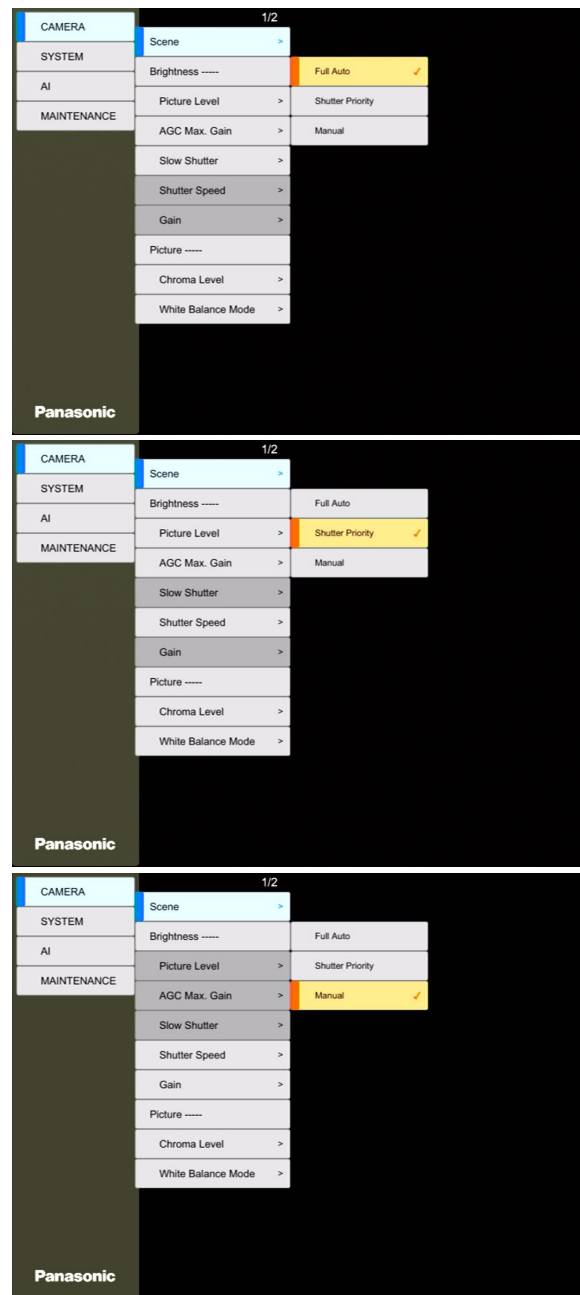
- The main Menu does not have a [Return].

Camera Menu

Scene

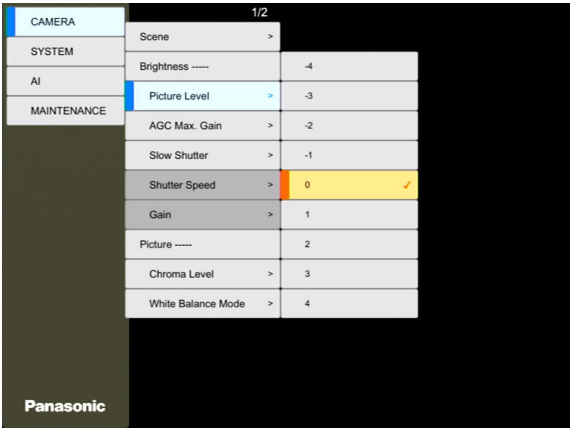
There are three scene modes – Full Auto, Shutter Priority, and Manual.

- **Full Auto:** Automatically adjust camera settings for optimal image quality based on shooting conditions. You can still adjust [Picture Level], [AGC Max. Gain], and [Slow Shutter] values under [Brightness].
- **Shutter Priority:** When you set the shutter speed, the camera automatically adjusts other settings for optimal brightness. You can adjust [Picture Level], [AGC Max. Gain], and [Shutter Speed] values under [Brightness].
- **Manual:** Manually adjust brightness. You can adjust [Shutter Speed] and [Gain] values under [Brightness].



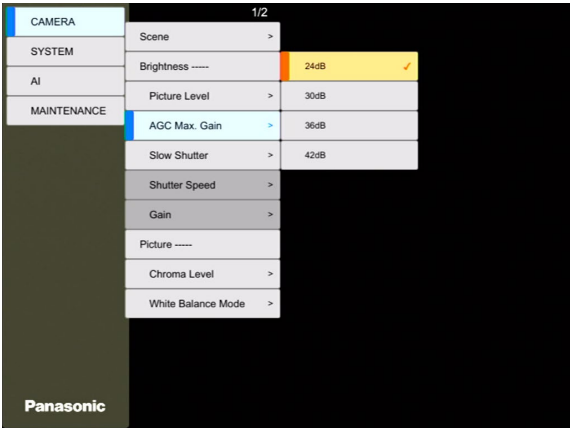
Picture Level

Adjust the brightness level when the scene mode is set to [Full Auto] or [Shutter Priority].



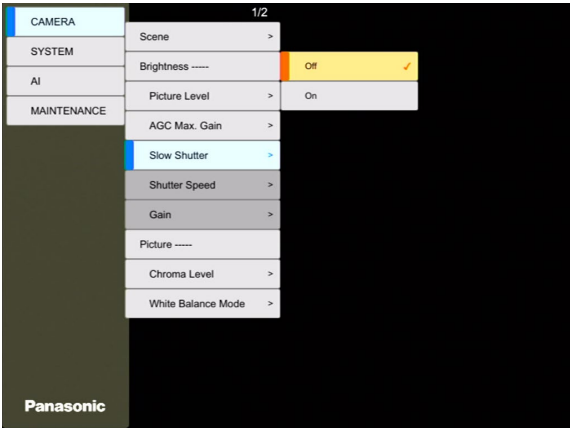
AGC Max. Gain

Set the maximum gain boost when the scene mode is set to [Full Auto] or [Shutter Priority].



Slow Shutter

Turn slow shutter on or off.
This setting is available only when the scene mode is set to [Full Auto].



Shutter Speed

Adjust the shutter speed. Selecting a faster shutter speed reduces motion blur in fast-moving subjects but results in a darker image. This setting is available only when the scene mode is set to a mode other than [Full Auto].

CAMERA		1/2
SYSTEM	Scene	>
	Brightness -----	1/1
	Picture Level	>
	AGC Max. Gain	>
	Slow Shutter	>
	Shutter Speed	>
	Gain	>
	Picture -----	1/60
	Chroma Level	>
	White Balance Mode	>
MAINTENANCE		1/480
		1/1000
		1/2000
		1/4000

Gain

Adjust the gain. Increase the gain in low-light environments, and decrease it in overly bright conditions. When a scene mode other than [Manual] is selected, the camera automatically optimizes the exposure. This setting is available only when the scene mode is set to [Manual].

Higher gain levels increase image noise.

CAMERA		1/2	
SYSTEM	Scene	>	
	Brightness -----		0dB ✓
MAINTENANCE	Picture Level	>	3dB
	AGC Max. Gain	>	6dB
	Slow Shutter	>	9dB
	Shutter Speed	>	12dB
	Gain	>	15dB
	Picture -----		18dB
	Chroma Level	>	21dB
	White Balance Mode	>	24dB
			27dB
			30dB
		33dB	
		36dB	

Panasonic

Chroma Level

Set the color intensity (chroma level) of the images.

CAMERA		1/2	
SYSTEM	Scene	>	
	Brightness -----		0
MAINTENANCE	Picture Level	>	1
	AGC Max. Gain	>	2
	Slow Shutter	>	3
	Shutter Speed	>	4
	Gain	>	5
	Picture -----		6
	Chroma Level	>	7
	White Balance Mode	>	8
		9	
		10	

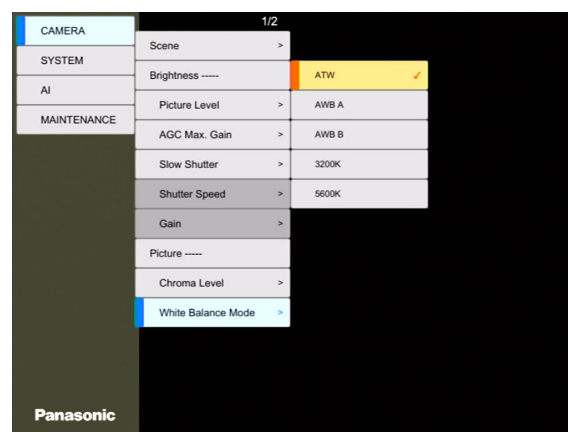
White Balance Mode

Set the white balance mode.

Select the mode when the coloring is not natural because of the nature of the light source or other factors.

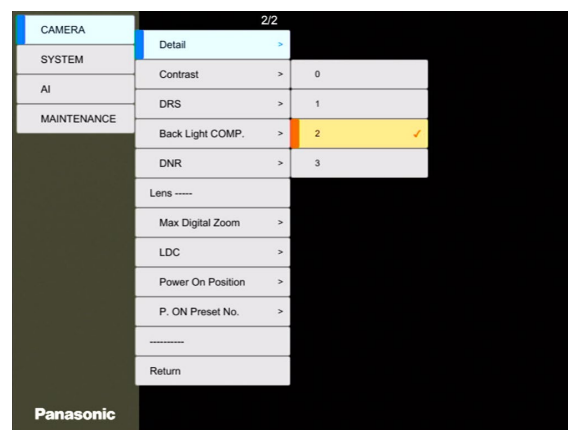
If the white color serving as the reference can be recognized, subjects can be shot with natural coloring.

ATW	In this mode, the white balance is compensated for automatically, even if changes occur in the light source or color temperature, by a process of continuous and automatic adjustment.
AWB A AWB B	When [AWB A] or [AWB B] is selected and the automatic white balance is executed, the adjustment results obtained are stored in the memory selected. When [AWB A] or [AWB B] is then selected, the white balance stored in the selected memory can be recalled.
3200K	This is the white balance mode which is ideal when a 3200K halogen light is used as the light source.
5600K	This is the white balance mode which is ideal when 5600K sunlight or fluorescent lighting is used as the light source.



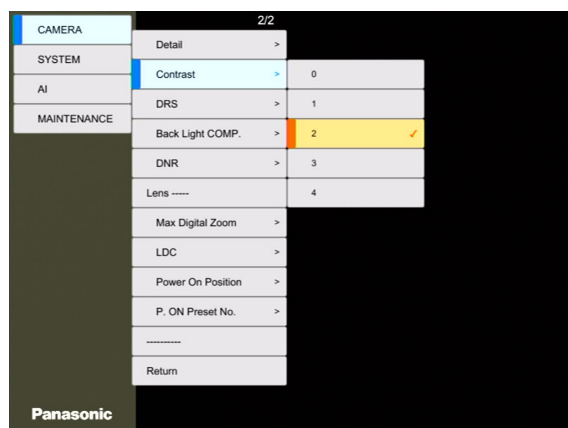
Detail

Adjust the sharpness of the image.



Contrast

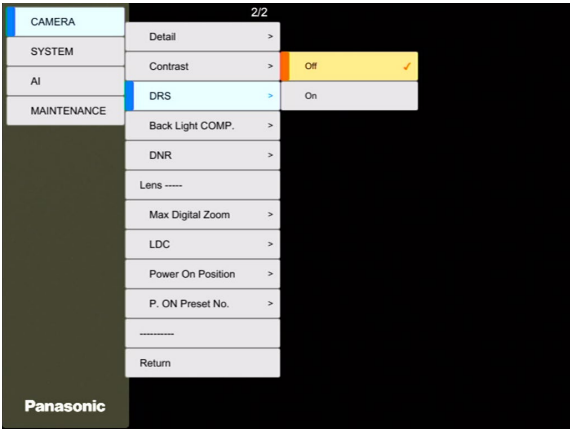
Adjust the contrast level of the image.



DRS

Set here is the DRS function which provides just the right amount of compensation when images with significant light/dark differences are displayed.

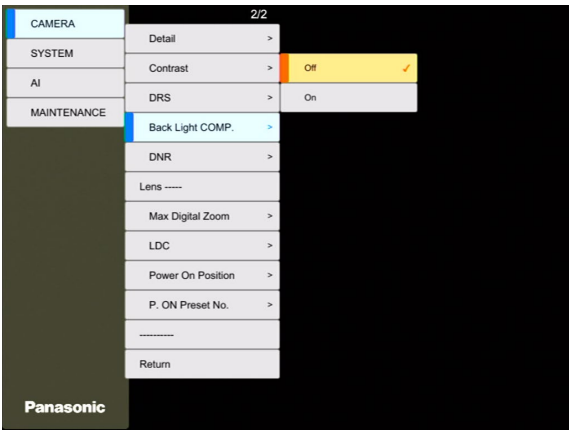
Depending on the shooting conditions, however, the picture quality may drop with increased noise.



Back Light COMP.

Turn backlight compensation on or off.

Under backlight conditions, the function prevents darkening as a result of light striking the backs of subjects, and makes it possible to shoot images in shade or shadow more brightly.

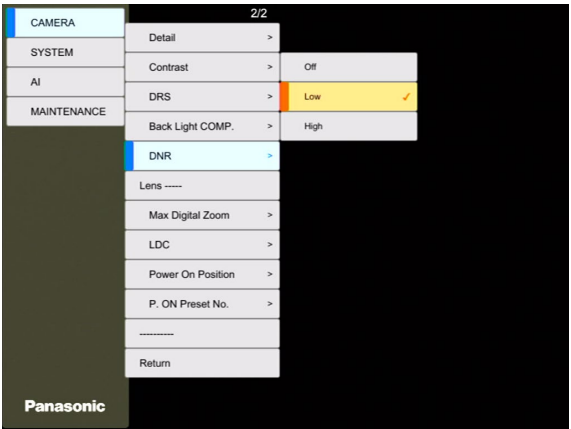


DNR

Set the digital noise reduction level for outputting bright, clear images without noise, even at night and low-light conditions.

When [Low] or [High] is selected, noise can be eliminated.

However, image lag may increase.

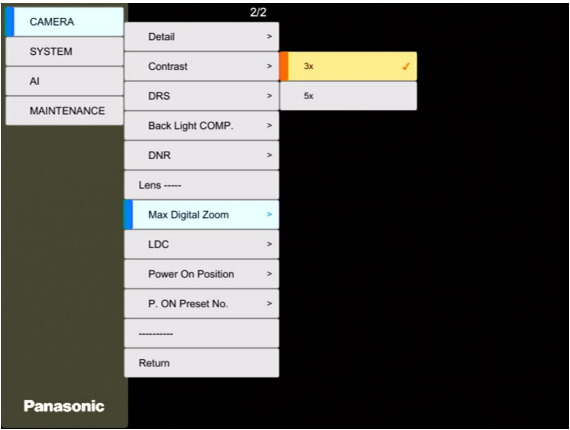


Max Digital Zoom

Set the maximum digital zoom magnification.

<NOTE>

- Higher digital zoom magnifications will result in coarser images.

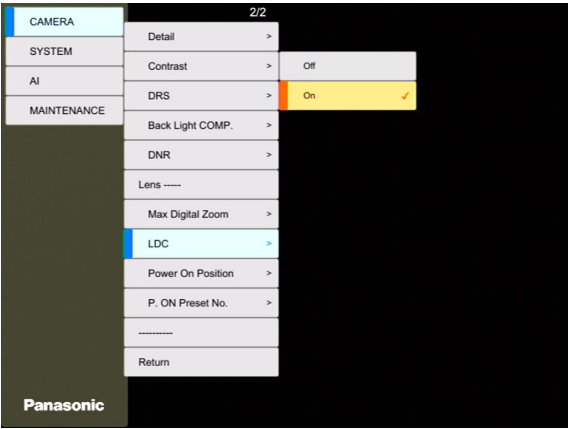


LDC

Turn LDC (Lens Distortion Correction) on or off.

<NOTE>

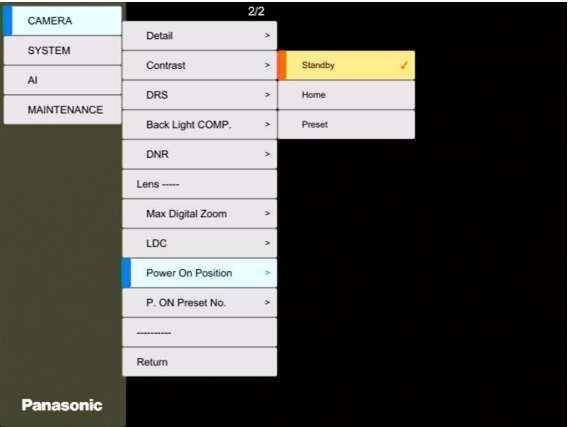
- When you set the LDC setting to [On], the bent line at the edge of the image turns to a straight line, but the area is stretched.



Power On Position

Select the initial positions for Pan/Tilt/Zoom when the power is turned on.

Standby	Move to the Pan/Tilt/Zoom positions they were in the last time the camera was switched to Standby mode.
Home	Pan/Tilt move to their home positions (front) and Zoom goes to the Wide end.
Preset	Preset playback is performed at the preset position specified with [P. ON Preset No.].



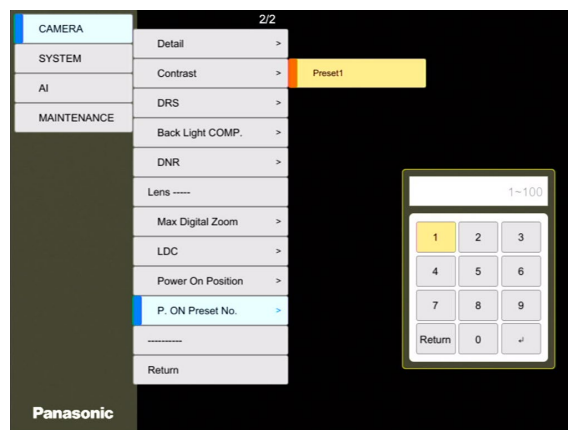
P. ON Preset No.

Preset Number [001 to 100] are available.

Specify a number for preset playback when the power turns ON when [Preset] is set in [Power On Position].

<NOTE>

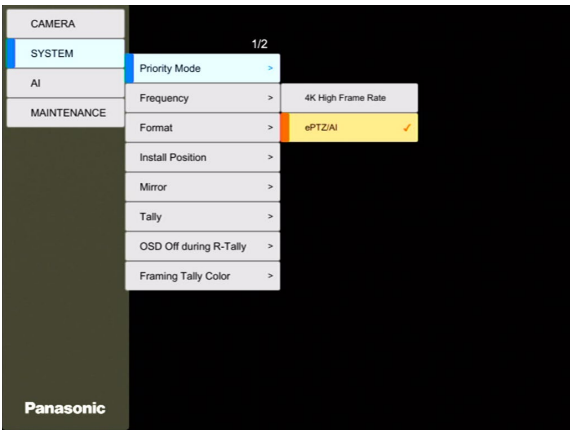
- If an unregistered preset number is set, preset playback is not performed and the operation is the same as [Standby].



System Menu

Priority Mode

Select a mode based on the image quality and AI functions you want to use. For each mode's detailed output format, refer to "Priority Mode."



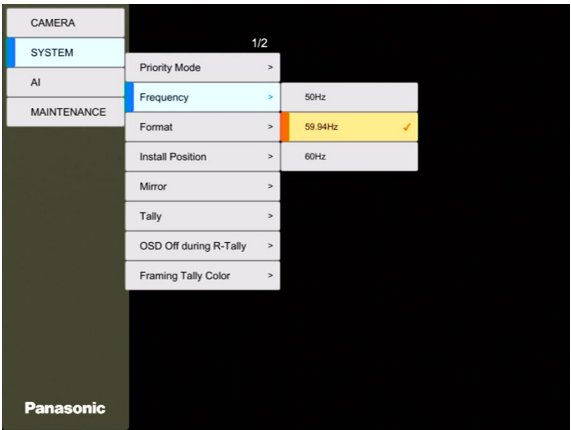
Frequency

Set the frame frequency to 50Hz, 59.94Hz, or 60Hz. The available options for [Format] vary depending on the selected [Frequency].

When changing the frequency, select [OK] to confirm the change.

<NOTE>

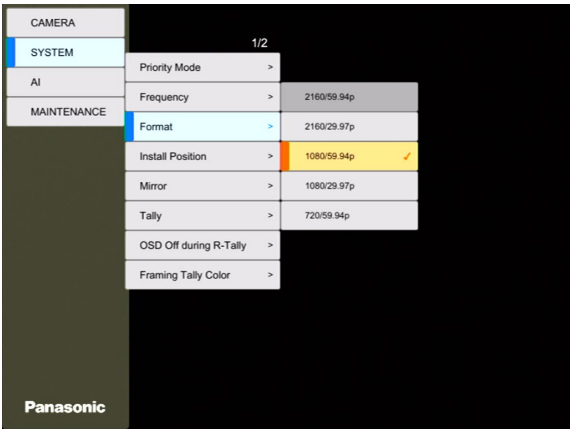
- If your monitor does not support 50 Hz, 59.94 Hz, or 60 Hz, the image may disappear after changing the frequency. Before changing the frequency, please verify that your monitor supports the new frequency.



Format

Change the video format. The available options for [Format] vary depending on the selected [Frequency] and [Priority Mode]. For details, refer to "Priority Mode."

When changing the format, select [OK] to confirm the change.



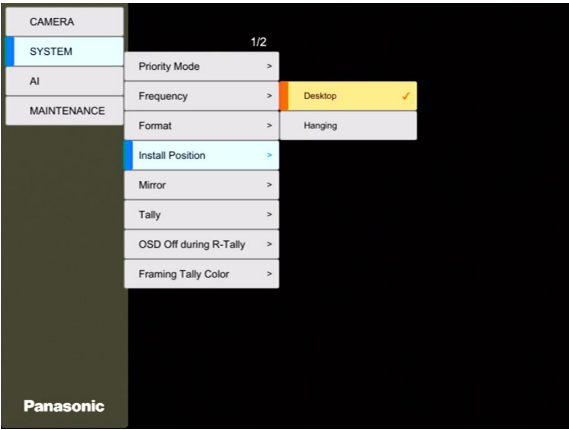
Install Position

[Desktop] or [Hanging] is selected here as the method used to install the unit.

Desktop	Stand-alone installation
Hanging	Suspended installation

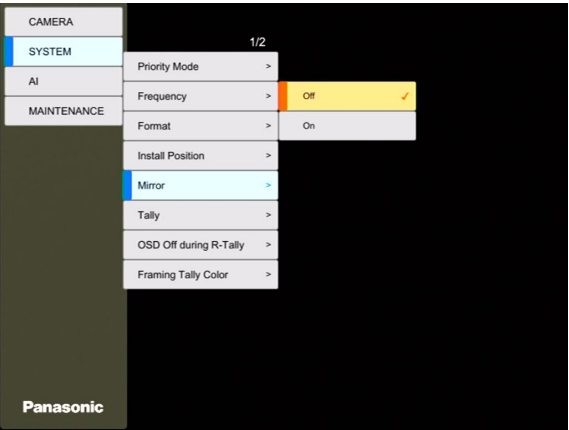
<NOTE>

- When [Hanging] has been selected, the image will be flipped vertically. To flip the image horizontally, set [Mirror] to [On] on the [SYSTEM] screen.



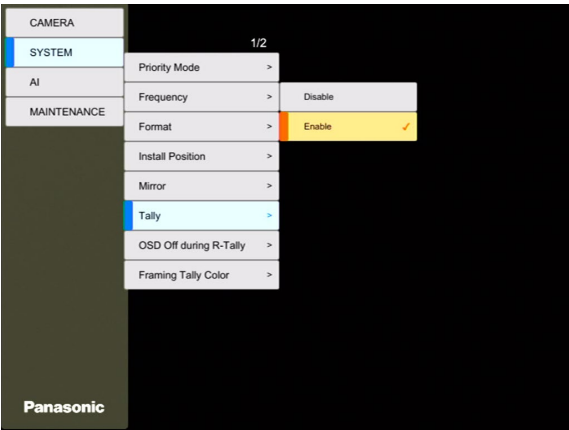
Mirror

Turn image flip on or off.



Tally

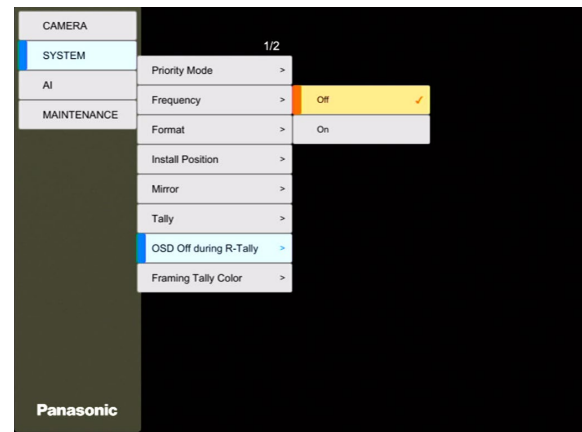
[Disable] or [Enable] is set here for the function which turns on or turns off the tally lamp using the tally control signal.



OSD Off during R-Tally

Off or on the function that turns off camera menu, status, and other displays when red tally signals are received via commands or contacts.

When the red tally signal releases, the camera menu display will return.

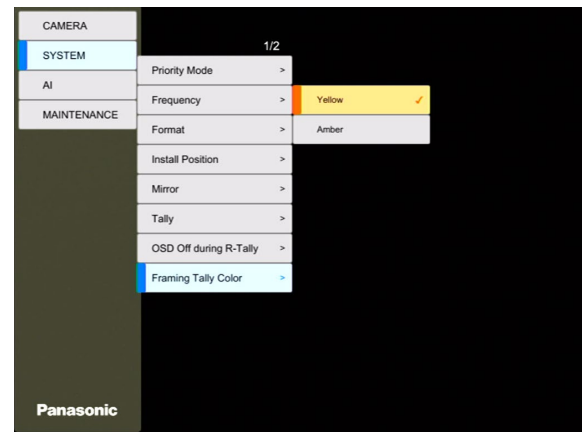


Framing Tally Color

Set the color in which the tally lamp lights to indicate the framing status of group framing.

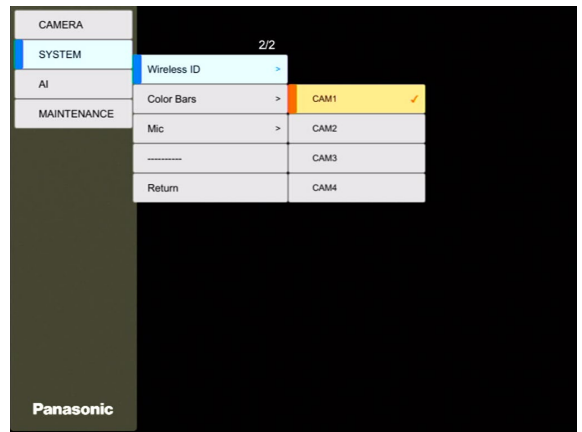
Lights in the specified color (yellow/amber)	Group framing in progress. ([Framing Status] is [Framing] or [Preset Framing])
Blinks in the specified color (yellow/amber)	Group framing has started, but a framing target has not been detected. ([Framing Status] is [Lost])
Off	Group framing has not started. ([Framing Status] is [Not Framing] or [Subject Near Edge])

For details, refer to the AI screen on the web screen.



Wireless ID

Configure the unit's remote control ID. The settings for this item correspond to the CAMERA<1> to <4> buttons on the wireless remote control.

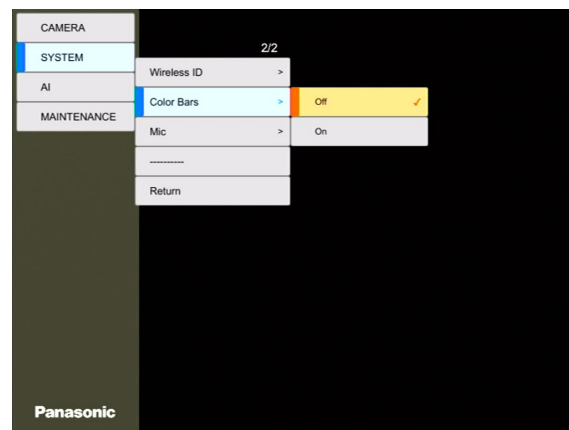


Color Bars

Switch between camera images and color bars.

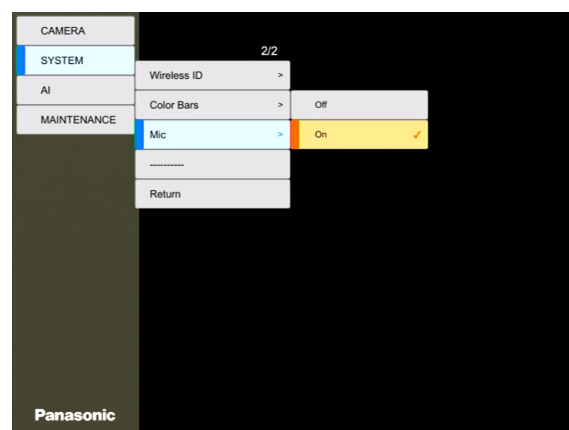
<NOTE>

- Only HDMI can output color bar. IP and USB cannot output color bar.
- The camera displays different color bars based on the selected [Frequency] (59.94/60Hz vs. 50Hz).



Mic

Turn the microphone on or off.

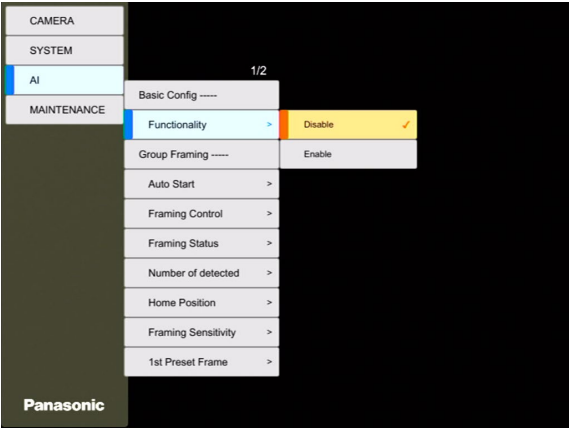


AI Menu

For details, refer to the AI screen on the web screen.

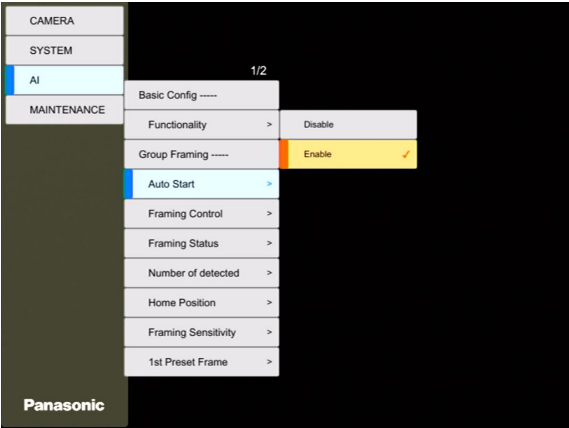
Functionality

Enable or disable AI functions.



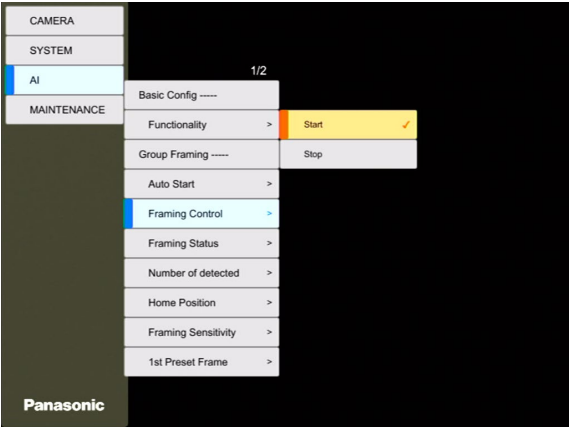
Auto Start

Set whether framing starts automatically.
If both [Functionality] and [Auto Start] are set to [Enable], framing will start immediately upon startup.



Framing Control

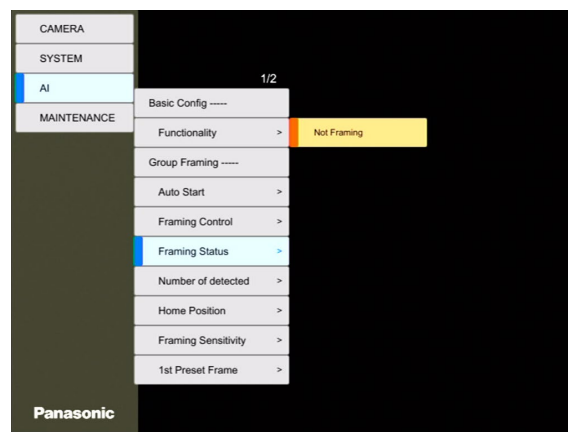
Enable or disable group framing manually.
<NOTE>
• [Functionality] must also be enabled.
• When [Auto Start] is set to [Enable], you cannot use this function to start group framing.



Framing Status

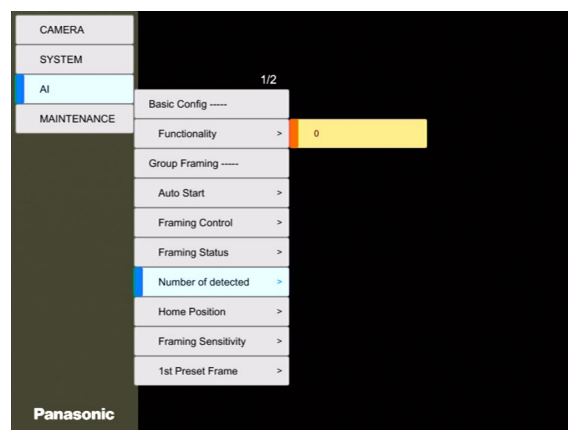
Displays the status of group framing.

Not Framing	Framing has not started.
Framing	Framing in progress.
Lost	Target cannot be detected. Framing will begin once the subject is detected.
Subject Near Edge	Group framing is unavailable because the subject is near the edge of the frame. Framing will begin once the subject is detected.
Preset Framing	Preset framing in progress.



Number of Detected

Displays the number of people detected.

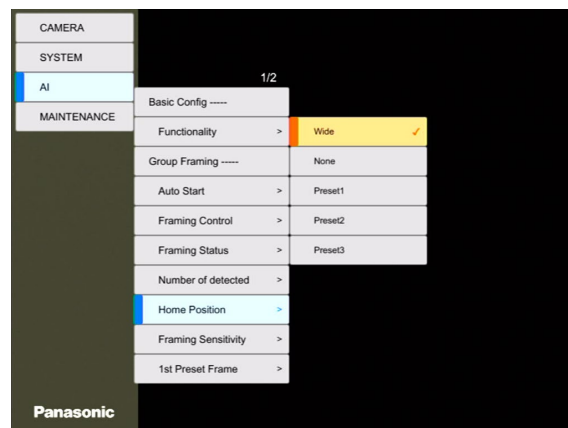


Home Position

Set the behavior when the framing target is lost for a period of time.

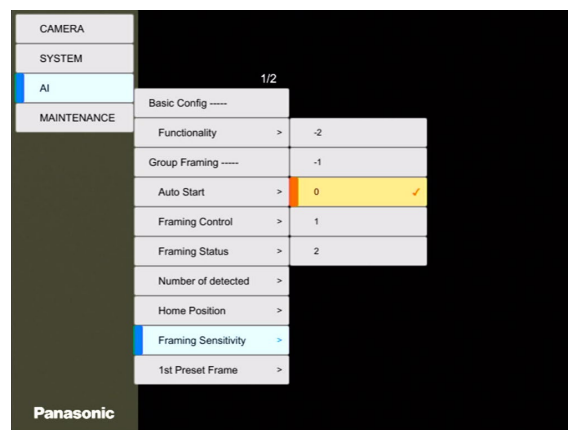
Wide	Reset the camera to 1x digital zoom (wide end) after the framing target is lost.
None	Camera position is not changed after the framing target is lost.
Preset1 to 3	Camera returns to a specified preset position after the framing target is lost.

Framing restarts if the framing target is detected during any of the above operations.



Framing Sensitivity

Adjust framing sensitivity to subject movement. Range: -2 (more stable) to +2 (more sensitive).

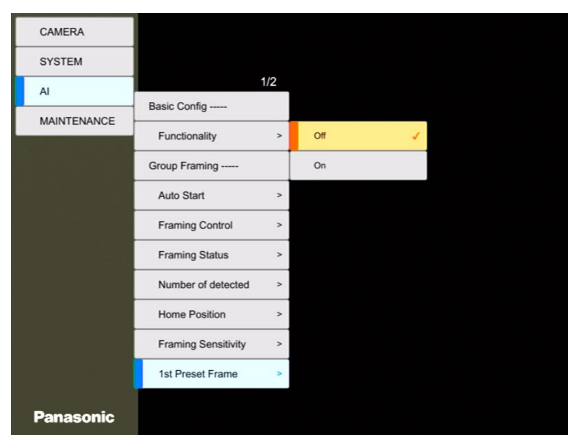


1st Preset Frame

When enabled, the camera uses the preset frame when the framing target is inside of the preset frame, and uses group framing when the framing target is outside of all preset frames.

<NOTE>

- You must set up the preset frame on the [AI] screen first.

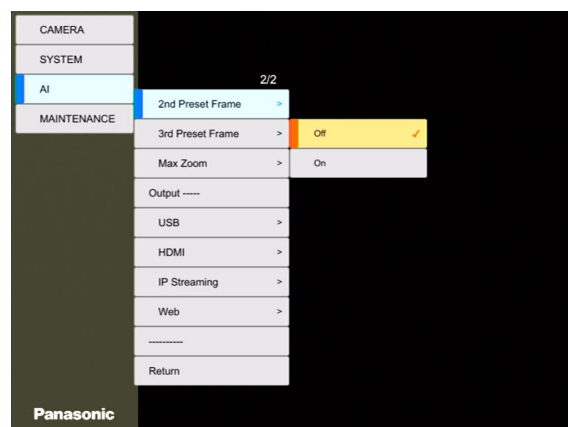


2nd Preset Frame

When enabled, the camera uses the preset frame when the framing target is inside of the preset frame, and uses group framing when the framing target is outside of all preset frames.

<NOTE>

- You must set up the preset frame on the [AI] screen first.

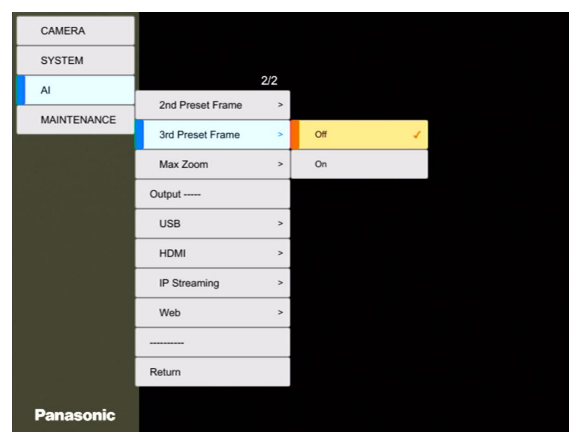


3rd Preset Frame

When enabled, the camera uses the preset frame when the framing target is inside of the preset frame, and uses group framing when the framing target is outside of all preset frames.

<NOTE>

- You must set up the preset frame on the [AI] screen first.

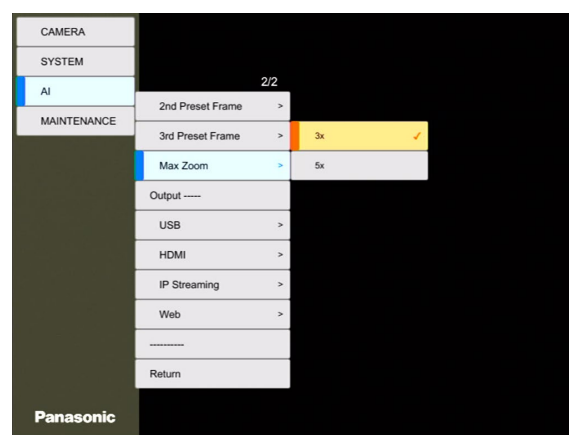


Max Zoom

Set the maximum digital zoom magnification.

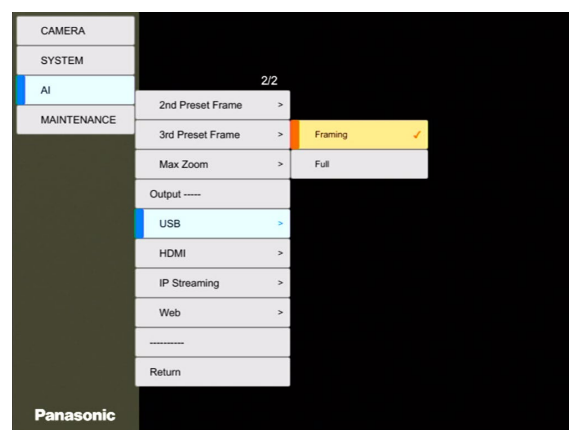
<NOTE>

- Higher digital zoom magnifications will result in coarser images.
- Settings can only be changed when [Framing Status] is [Not Framing].



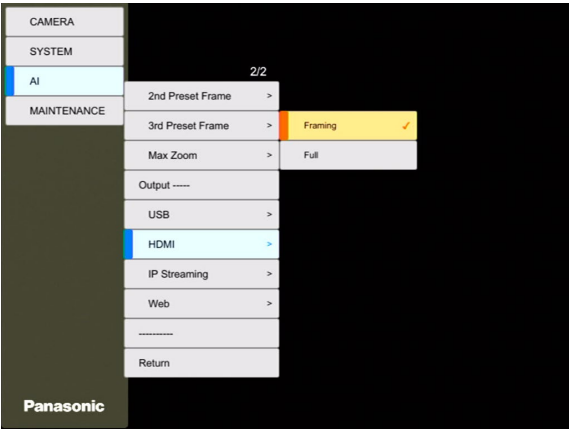
USB

Select whether the camera outputs the framed view or the full-angle view at 1x digital zoom via USB.



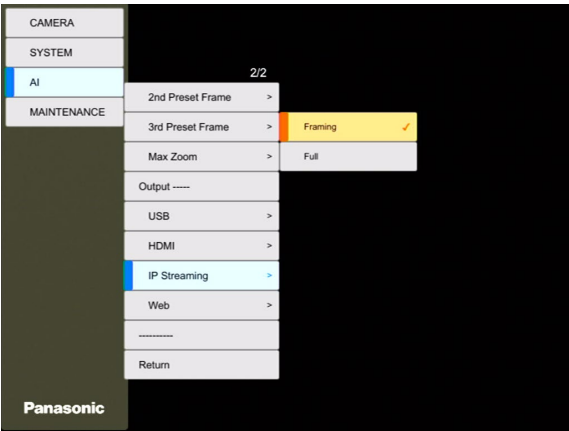
HDMI

Select whether the camera outputs the framed view or the full-angle view at 1x digital zoom via HDMI.



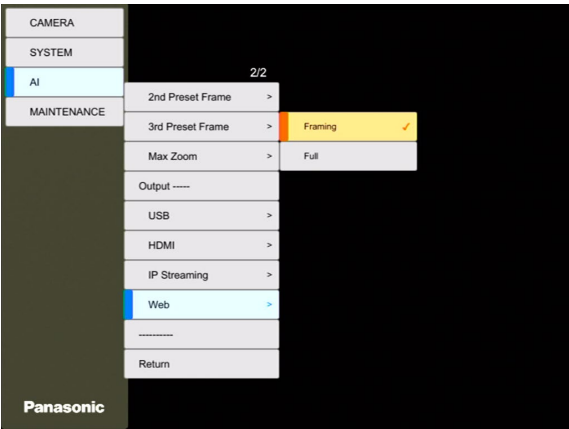
IP Streaming

Select whether the camera outputs the framed view or the full-angle view at 1x digital zoom via IP.



Web

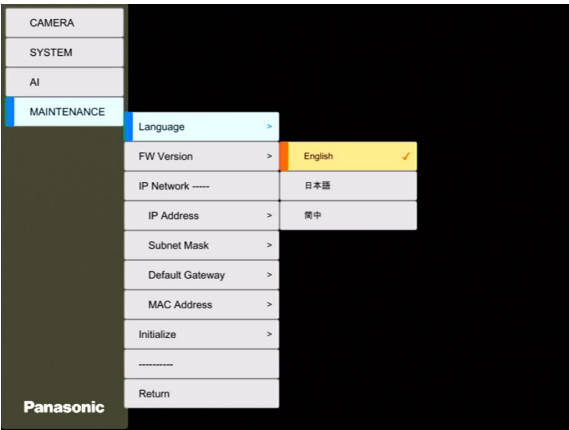
Select whether the camera outputs the framed view or the full-angle view at 1x digital zoom on the camera web screen.



Maintenance Menu

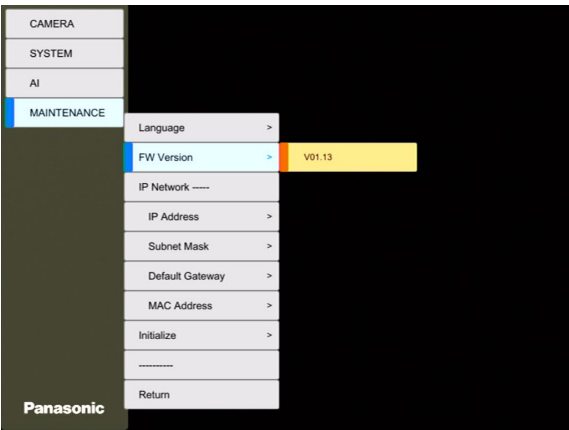
Language

The system supports three language – English, Japanese, and Simple Chinese.



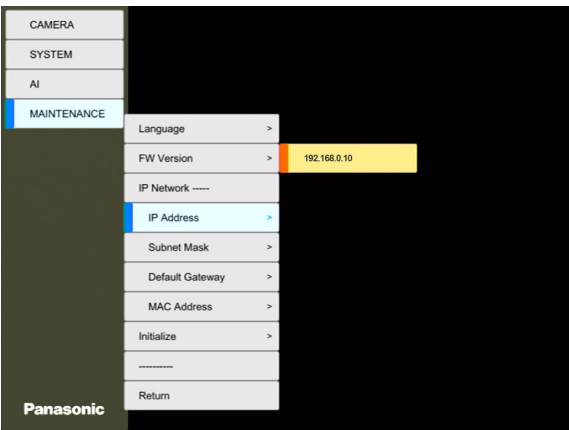
FW Version

Displays the current firmware version of the unit.



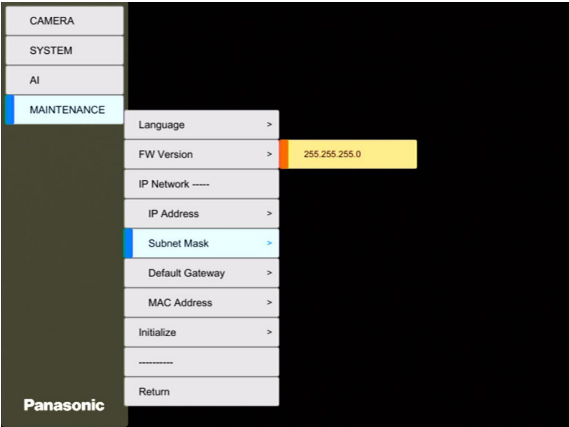
IP Address

Displays the IP address of the unit.



Subnet Mask

Displays the subnet mask of the unit.



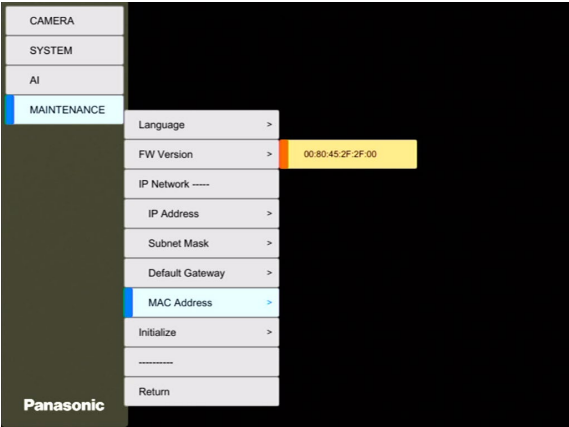
Default Gateway

Displays the default gateway which has been set for the unit.



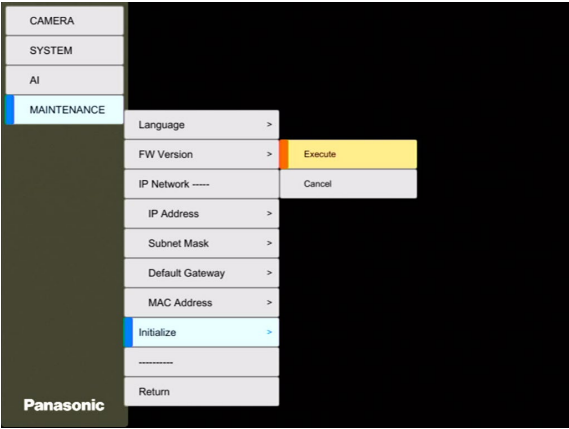
MAC Address

Displays the MAC address of the unit.



Initialize

Reset the unit to factory default settings.



Menu Table

Main menu	Sub menu	Factory default setting			Selection Items
CAMERA	Scene	Full Auto	Shutter priority	Manual	Full Auto, Shutter Priority, Manual
	Brightness				
	<i>Picture Level</i>	0	0	---	-4, -3, -2, -1, 0, +1, +2, +3, +4
	<i>AGC Max Gain</i>	24dB	24dB	---	24dB, 30dB, 36dB, 42dB
	<i>Slow Shutter</i>	Off	---	---	Off, On
	<i>Shutter Speed</i>	---	[50Hz] 1/50 [59.94Hz/60Hz] 1/60	[50Hz] 1/50 [59.94Hz/60Hz] 1/60	[50Hz] 1/1, 1/2, 1/5, 1/10, 1/20, 1/25, 1/50, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/16000 [59.94Hz/60Hz] 1/1, 1/2, 1/5, 1/10, 1/20, 1/30, 1/60, 1/120, 1/240, 1/480, 1/1000, 1/2000, 1/4000, 1/8000, 1/16000
	<i>Gain</i>	---	---	0dB	0dB, 3dB, 6dB, 9dB, 12dB, 15dB, 18dB, 21dB, 24dB, 27dB, 30dB, 33dB, 36dB, 39dB, 42dB
	Picture				
	<i>Chroma Level</i>	5			0~10
	<i>White Balance Mode</i>	ATW			ATW, AWB A, AWB B, 3200K, 5600K
	<i>Detail</i>	2			0, 1, 2, 3
	<i>Contrast</i>	2			0, 1, 2, 3, 4
	<i>DRS</i>	Off			Off, On
	<i>Back Light COMP.</i>	Off	Off	---	Off, On
	<i>DNR</i>	Low			Off, Low, High
	<i>Max Digital Zoom</i>	3x			3x, 5x
	<i>LDC</i>	Off			Off, On
	<i>Power On Position</i>	Standby			Standby, Home, Preset
	<i>P. ON Preset No.</i>	Preset 1			1~100
SYSTEM	Priority Mode	ePTZ/AI			ePTZ/AI, 4K High Frame Rate
	Frequency	59.94Hz			50Hz, 59.94Hz, 60Hz
	Format	[50Hz] 1080/25p [59.94Hz] 1080/29.97p [60Hz] 1080/30p			[50Hz] 2160/50p, 2160/25p, 1080/50p, 1080/25p, 720/50p [59.94Hz] 2160/59.94p, 2160/29.97p, 1080/59.94p, 1080/29.97p, 720/59.94p [60Hz] 2160/60p, 2160/30p, 1080/60p, 1080/30p, 720/60p
	Install Position	Desktop			Desktop, Hanging
	Mirror	Off			Off, On

	Tally	Enable	Disable, Enable
	OSD Off during R-Tally	Off	Off, On
	Framing Tally Color	Yellow	Yellow, Amber
	Wireless ID	CAM1	CAM1, CAM2, CAM3, CAM4
	Color Bars	Off	Off, On
	Mic	On	Off, On
AI	Basic Config		
	<i>Functionality</i>	Disable	Disable, Enable
	Group Framing		
	<i>Auto Start</i>	Enable	Disable, Enable
	<i>Framing Control</i>	Start	Start, Stop
	<i>Framing Status</i>	Not Framing	Not Framing, Framing, Lost, Subject Near Edge
	<i>Number of Detected</i>	0	0-20
	<i>Home Position</i>	Wide	Wide, None, Preset 1, Preset 2, Preset 3
	<i>Framing Sensitivity</i>	0	-2, -1, 0, 1, 2
	<i>1st Preset Frame</i>	Off	Off, On
	<i>2nd Preset Frame</i>	Off	Off, On
	<i>3rd Preset Frame</i>	Off	Off, On
	<i>Max Zoom</i>	3x	3x, 5x
	Output		
	<i>USB</i>	Framing	Framing, Full
	<i>HDMI</i>	Framing	Framing, Full
	<i>IP Streaming</i>	Framing	Framing, Full
	<i>Web</i>	Framing	Framing, Full
MAINTENANCE	Language	English	English, 日本語, 簡中
	FW Version	Version at shipping	---
	IP Network		
	<i>IP Address</i>	192.168.0.10	---
	<i>Subnet Mask</i>	255.255.255.0	---
	<i>Default Gateway</i>	192.168.0.1	---
	<i>MAC Address</i>	MAC Address of the unit	---
	Initialize	Execute	Execute, Cancel

Web Screen Start-up

With a personal computer connected to the unit, it is possible to view the camera's IP videos or select various settings from the web browser.

The LAN crossover cable is used when connecting a personal computer directly to the unit's LAN connector for IP control, and the LAN straight cable is used when making the connection through a switching hub.

Select an IP address for the personal computer within the private address range while ensuring that it is different from the address of the unit. Set the subnet mask to the same address as the unit.

<NOTE>

If you need to change the IP address and subnet mask, be sure to ask your dealer to make these changes for you.

Unit's IP address and subnet mask (factory settings)*1

IP address: 192.168.0.10

Subnet mask: 255.255.255.0

*1: The factory default for the private address range is between 192.168.0.1 and 192.168.0.255.

If the controller and web browser are being used at the same time, the content selected using the controller may not be reflected on the web browser display.

When using both the controller and web browser, be absolutely sure to check the settings using the controller or menu.

For details of the required personal computer environment, refer to Required Personal Computer Environment.

Connecting to Web Screen by Using a PC

The procedure is explained here using Windows screens (Microsoft Edge). When using other browsers, some screen displays will be different, but the procedure is similar.

1. **Start the web browser of the personal computer.**
2. **In the address bar of the web browser, enter the IP address set in the EasyIP Setup Tool Plus function in the Media Production Suite.**

IPv4 address entry example:

http://URL registered with IPv4 address

http://192.168.0.10/

IPv6 address entry example:

http://[URL registered with IPv6 address]

http://[2001:db8::10]/

<NOTE>

- If the HTTP port number has been changed from “80”, enter “http://<camera IP address>:<port number>” in the address bar.
Example: When the port number is set to 8080:
http://192.168.0.10:8080
- If the unit is located on the local network, configure proxy server settings on the web browser ([Setup] > [Network]) so that a proxy server is not used for the local address.

3. Display the live screen [Live].

The web screen appears. You can switch to the web setup screen [Setup] when necessary.

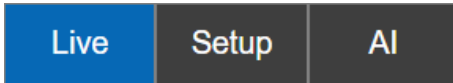


<NOTE>

- Depending on the firewall settings on your personal computer, transmitted images may not be displayed. If this occurs, change the firewall settings and change the settings to permit communication with your web browser.
- When an attempt is made to display multiple IP images on one personal computer, IP videos may not be displayed depending on the performance of the personal computer concerned.
- Images on the web screen are displayed in JPEG.
- The JPEG image frame rate may be slower depending on the network environment, performance of your personal computer, subject of the video, and access volume.

Switching between the Live screen [Live] / Web setup screen [Setup]

/ AI screen [AI]



Click the [Live], [Setup] or [AI] button on the top-left corner of the web screen to switch between screens.

For details on the live screen [Live], refer to “Live Screen [Live]”.

For details on the web setup screen [Setup], refer to “Web Setup Screen [Setup]”.

For details about the AI screen [AI], refer to “AI Screen [AI]”.

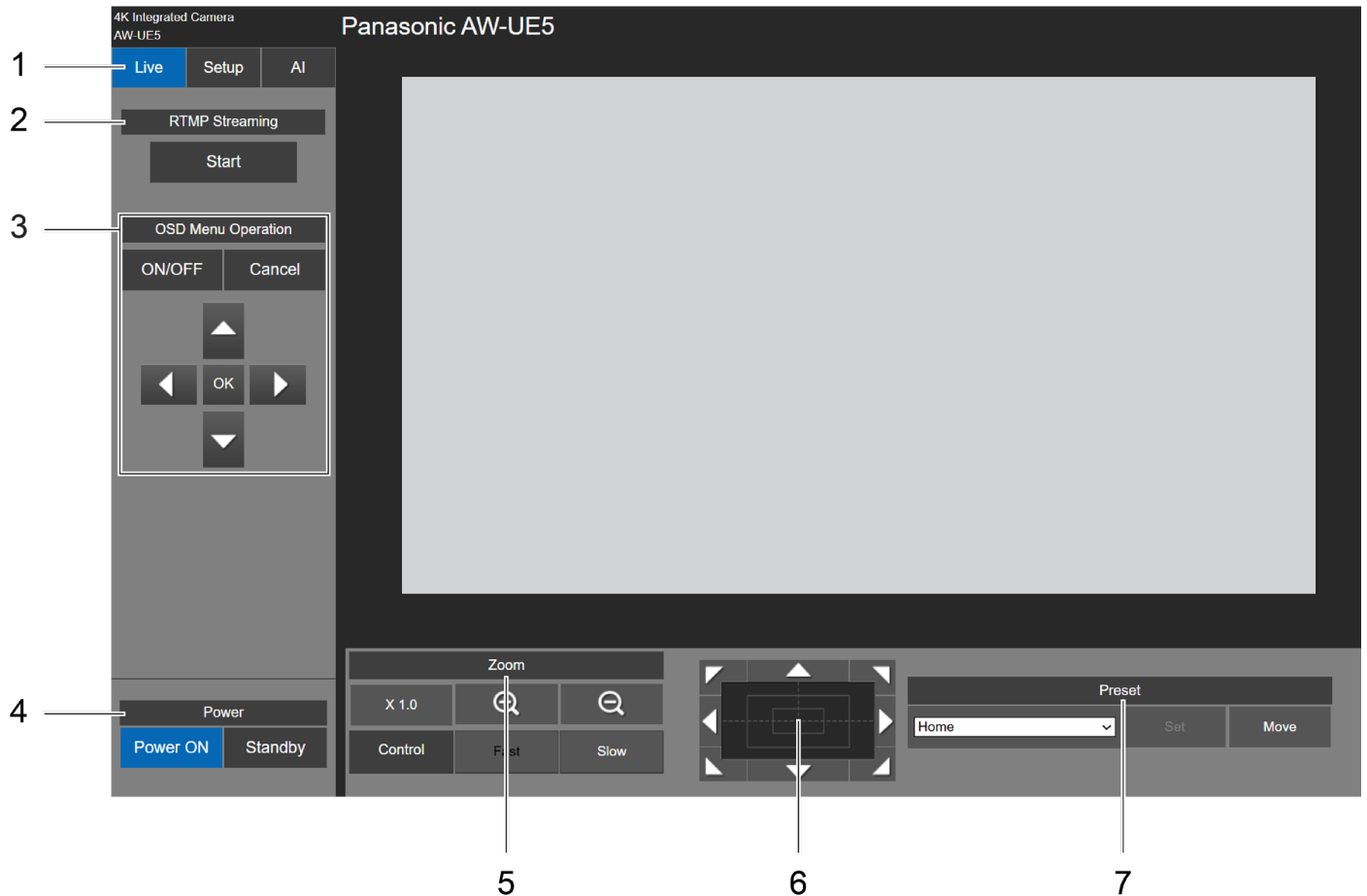
<NOTE>

- When in Standby mode, you cannot switch to the [AI] and [Setup] screens.
- When displaying the Web setup screen [Setup] or AI screen [AI], if this unit is switched to the Standby mode from another device, the screen automatically switches to the Live screen [Live] display after a few seconds.

Web Screen Operations

Live Screen [Live]

View the live camera feed and control pan, tilt, and zoom from your computer.



1. Live/Setup/AI

Click the buttons to switch between Live, Setup and AI screens.

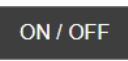
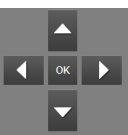
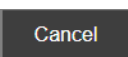
2. RTMP Streaming

Setup for uploading the camera's live view to the broadcasting platform (ex: YouTube).

Click [Start] button to start uploading the live image to pre-registered broadcasting platform. When RTMP starting, the start button will turn into stop button. To stop, click [Stop] button

To setup RTMP, refer to the "RTMP screen" section.

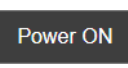
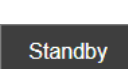
3. OSD Menu Operation

	Use this to select whether the camera's on- screen displays are to be shown.
	The items are selected using the [▲] [▼] [◀] [▶] buttons. If a selected item has a sub menu, this sub menu is displayed by pressing the [OK] button.
	It cancels the selection of the setting which is being changed. It restores the pre-change setting.

<NOTE>

- The OSD menu appears only on the HDMI output and is not displayed on the web screen's JPEG image.

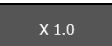
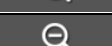
4. Power

	Turn the unit on.
	Set the unit to Standby mode. In the Standby mode, all the buttons on the live screen except for the [Power ON] button and [Standby] button are disabled.

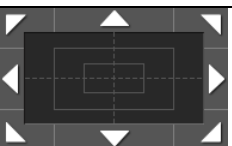
<NOTE>

- If [Power ON] or [Standby] is selected too quickly, the status selected and the display shown may not correspond. In this case, follow the steps below to restore the correct status display:
For Windows:
Press the [F5] key on the keyboard of the personal computer.
For Mac:
Press the [Command] + [R] keys on the keyboard of the personal computer.
- **When operation is transferred to the Standby mode:**
The current Pan/Tilt/Zoom positions are stored. When [Standby] is selected in the [Power On Position] menu, the information about the stored positions is used.
- **When operation is transferred to the Power ON mode:**
Pan/Tilt/Zoom are moved to the positions selected in the [Power On Position] menu.

5. Zoom

	Use this to adjust the zoom (magnification) to 1.0x
	Use this to adjust the zoom (magnification) in the "Tele" direction.
	Use this to adjust the zoom (magnification) in the "Wide" direction.
	Select the speed at which zoom operations are to be performed.

6. Pan/Tilt/Lens Control

	To adjust the image in the horizontal or vertical direction (panning or tilting), left click the pad and the buttons. It is possible to operate with the central grid pattern in the dragged state, with the speed of the pan/tilt increasing as it approaches the outside of the pad.
---	---

7. Preset

To save a preset: Use the pan, tilt and zoom controls to position the unit and click [Set] to save that position.
To go to a preset: Select [Home] or a preset number from drop-down list and click [Move].

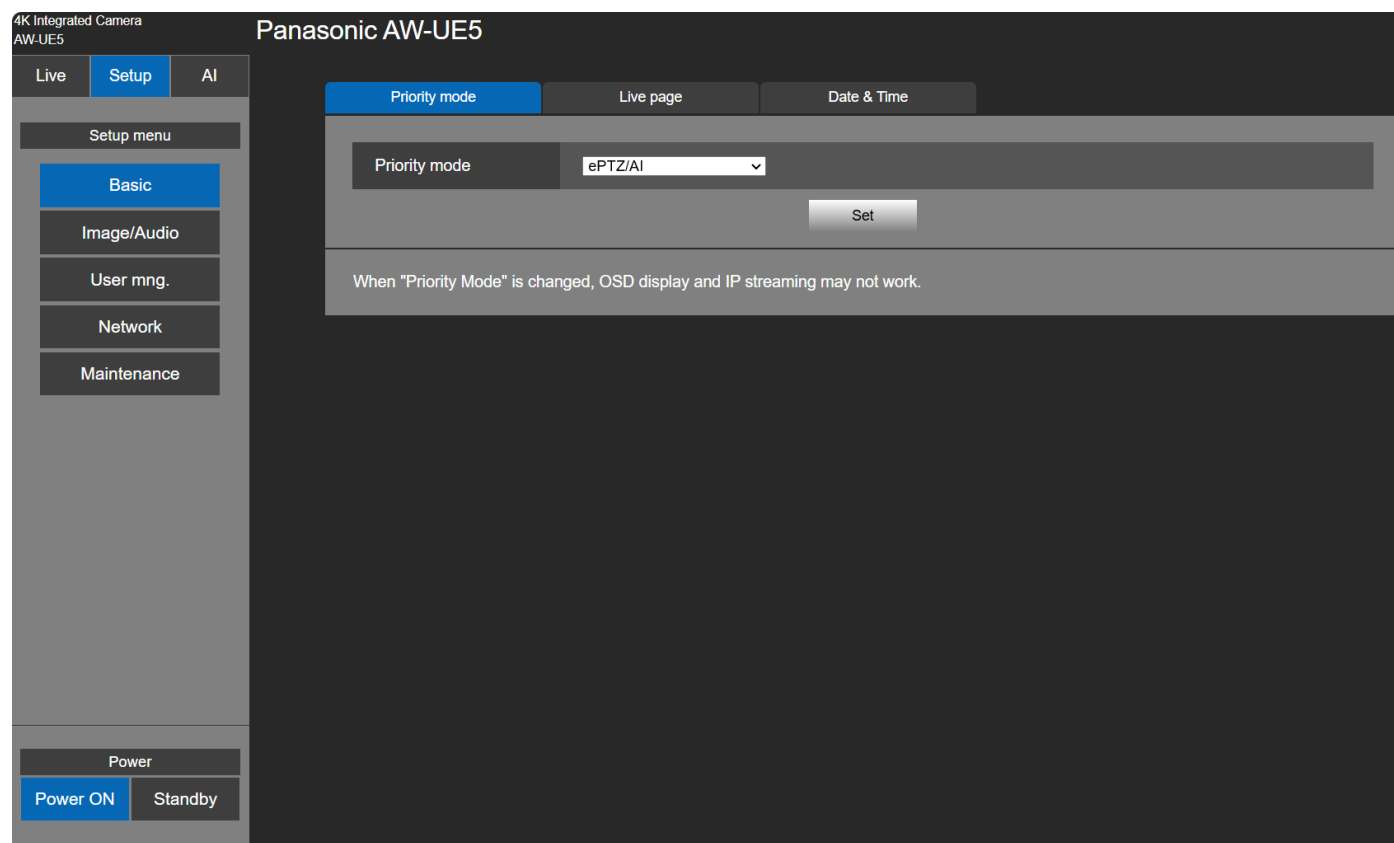
Web Screen Configurations

Web Setup Screen [Setup]

The settings for the unit are selected on this screen.

<NOTE>

- The setting menu operations can be performed only by users whose access level is “1.Administrator”.
- For the procedure used to set the access level, refer to “Access level”.
- If the value of a setting is changed using the OSD menu or a different web browser, the setting value and the displayed value may not match. In that case, update the setup menu display screen of that web browser.



Basic Screen [Basic]

■ Priority mode screen [Priority mode]

Priority mode

Live page

Date & Time

Priority mode

ePTZ/AI

▼

Set

When "Priority Mode" is changed, OSD display and IP streaming may not work.

Priority Mode

Select a mode based on the image quality and AI functions you want to use. For each mode’s detailed output format, refer to “Priority Mode.”
The setting is confirmed with the [Set] button.

ePTZ/AI	Prioritizes digital PTZ and AI functions.
4K High Frame Rate	Prioritizes 4K resolution output at a high frame rate.

Factory settings: ePTZ/AI

■ Live page screen [Live page]

Priority mode

Live page

Date & Time

Camera Title

AW-UE5

Set

Camera title

Input the name of the camera here.
When the [Set] button is clicked, the input name appears in the camera title display area.

<NOTE>

- The factory default setting is the model number of the unit.
- You can enter between 0 to 20 characters.
- The following characters can be displayed.

Numeric characters	0123456789
Alphabetical characters (upper and lower cases)	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz
Symbols	#%+=, - ^/ @:

■ Date & Time screen [Date & Time]

Make clock settings.

You can set using one of three types [PC Synchronization], [NTP], or [Manual].

Priority mode		Live page		Date & Time	
PC synchronization		<button>Execute</button>			
NTP		NTP >>			
Manual	Date / time	APR ▾	/ 10 ▾	/ 2026 ▾	01 ▾ : 59 ▾ : 39 ▾
	Time zone	(GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London ▾			
<button>Set</button>					

Auto

PC Synchronization

If you click the [Execute] button, the settings are configured by synchronizing the unit to the date and time of the connected personal computer.

<NOTE>

- The time zone of the personal computer is not reflected on the unit. Set the time zone on the unit.

NTP

If you click [NTP>>], the settings screen for the NTP server appears. Refer to “NTP.”

Manual

Date/Time

Configure the settings for the month, day, and year and for the hour, minute, and second.

<NOTE>

- The time is in the 24-hour format.

Time Zone

Selects the time zone according to the region where the camera is being used.

Factory settings: (GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London

Image Screen [Image/Audio]

■ Video over IP screen [Video over IP]

Adjust video quality settings for IP streaming (NDI, RTSP, and RTMP).

<NOTE>

- IP control can be performed but if you do not want to perform IP image transmission, set [Stream transmission] to [Off].
- Images and audio are not synchronized. Therefore, images and audio may be slightly out of sync.
- The audio may skip depending on the network environment.
- Please do not change the following menu during IP streaming:
Priority mode, Frequency, Format, Install Position, Mirror, Mic.
- When starting RTSP/RTP streaming, enter the following URL in the decoder and application.
For H.264(1)
rtsp://[this unit's IP address]/MediaInput/h264/stream_1

• NDI/RTSP/RTMP

NDI / RTSP / RTMP

Stream transmission: ☐ Off ☒ On

Codec: ☒ H.264 ☐ H.265
RTMP does not support H.265. When H.265 is selected, there is no RTMP output.

Image capture size: 1920x1080

Frame rate: 30

Max. bit rate (per client): 14336kbps
When setting is higher than 8192kbps, the bit rate of live streaming with RTMP only supports up to 8192kbps.

Set

Stream transmission

Set whether to transmit image via NDI/RTSP/RTMP.

Factory settings: On

Codec

Select the H.264 or H.265 as image codec.

Factory settings: H.264

Image capture size

Select the resolution (640x360, 1280x720, 1920x1080, or 3840x2160) for H.264/H.265 images.

Factory settings: 1920x1080

<NOTE>

- RTMP streaming is unavailable when H.265 is selected.

Frame rate

Set the frame rate for H.264/H.265 images.

50Hz	5fps, 10fps, 25fps, 50fps
59.94Hz	5fps, 15fps, 30fps, 60fps
60Hz	

Factory settings:

50Hz: 25fps

59.94Hz/60Hz: 30fps

<NOTE>

- When the priority mode is set to [ePTZ/AI], the 4K frame rate is limited to 30p.

Max. bit rate (per client)

Specify the H.264/H.265 bit rate per client (1024kbps, 1536kbps, 2048kbps, 3072kbps, 4096kbps, 6144kbps, 8192kbps, 10240kbps, 12288kbps, 14336kbps, 16384kbps, 20480kbps, 24576kbps, and 32768kbps).

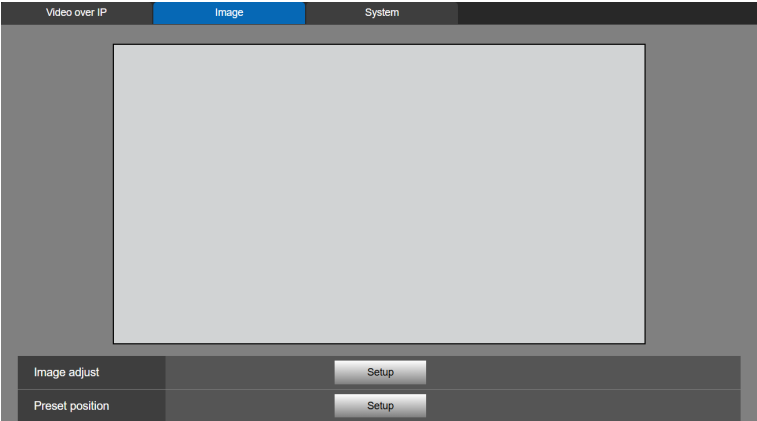
Factory settings: 14336kbps.

<NOTE>

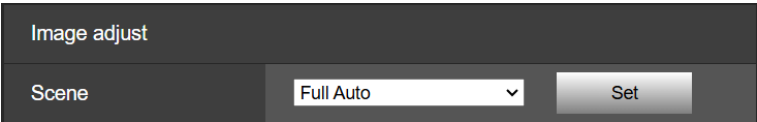
- When bit rate is set higher than 8192kbps, the bit rate during RTMPS transmission will be 8192kbps.
- NDI HX3 bit rate options: 1024kbps, 1536kbps, 2048kbps, 3072kbps, 4096kbps, 6144kbps, 8192kbps, 10240kbps, 12288kbps, 14336kbps, 16384kbps, 20480kbps, 24576kbps, 32768kbps, 49152kbps, 73728kbps, and 112640kbps.
- Do not change the [Max. bit rate] while streaming, as this may cause the camera to restart.

■ **Image adjust screen [Image adjust]**

Adjust the image quality.
Except for [Scene], all changes on this screen take effect immediately. To apply a new [Scene] setting, click [Set].



Scene

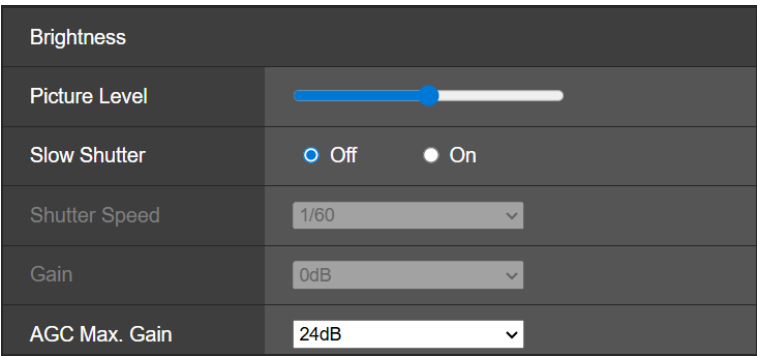


Select a shooting mode based on the shooting conditions or preference.

Full Auto	Automatically adjust camera settings for optimal image quality based on shooting conditions. You can still adjust [Picture Level], [AGC Max. Gain], and [Slow Shutter] values under [Brightness].
Shutter priority	When you set the shutter speed, the camera automatically adjusts other settings for optimal brightness. You can adjust [Picture Level], [AGC Max. Gain], and [Shutter Speed] values under [Brightness].
Manual	Manually adjust brightness. You can adjust [Shutter Speed] and [Gain] values under [Brightness].

Factory settings: Full Auto

• **Brightness**



Picture Level

Adjust the brightness level when the scene mode is set to [Full Auto] or [Shutter Priority].
Factory settings: 0

Slow Shutter

Turn slow shutter on or off.
This setting is available only when the scene mode is set to [Full Auto].
Factory settings: Off

Shutter Speed

Adjust the shutter speed. Selecting a faster shutter speed reduces motion blur in fast-moving subjects but results in a darker image. This setting is available only when the scene mode is set to a mode other than [Full Auto].
Factory settings:
50Hz: 1/50
59.94Hz/60Hz: 1/60

Gain

Adjust the gain. Increase the gain in low-light environments, and decrease it in overly bright conditions. When a scene mode other than [Manual] is selected, the camera automatically optimizes the exposure. This setting is available only when the scene mode is set to [Manual].
Higher gain levels increase image noise.
Factory settings: 0dB

AGC Max. Gain

Set the maximum gain boost when the scene mode is set to [Full Auto] or [Shutter Priority].
Factory settings: 24dB

Picture

Picture

Chroma Level

White Balance Mode

ATW

Execute

Detail

Contrast

DRS

Off

On

Back Light COMP.

Off

On

DNR

Off

Low

High

Chroma Level

Set the color intensity (chroma level) of the images.
Factory settings: 5

White Balance Mode

Set the white balance mode.
Select the mode when the coloring is not natural because of the nature of the light source or other factors.
If the white color serving as the reference can be recognized, subjects can be shot with natural coloring.

ATW	In this mode, the white balance is compensated for automatically, even if changes occur in the light source or color temperature, by a process of continuous and automatic adjustment.
AWB A AWB B	When [AWB A] or [AWB B] is selected and the automatic white balance is executed, the adjustment results obtained are stored in the memory selected. When [AWB A] or [AWB B] is then selected, the white balance stored in the selected memory can be recalled.
3200K	This white balance mode is ideal when a 3200K halogen light is used as the light source.
5600K	This white balance mode is ideal when 5600K sunlight or fluorescent lighting is used as the light source.

Factory settings: ATW

Detail

Adjust the sharpness of the image.

Factory settings: 2

Contrast

Adjust the contrast level of the image.

Factory settings: 2

DRS

Set here is the DRS function which provides just the right amount of compensation when images with significant light/dark differences are displayed.

Depending on the shooting conditions, however, the picture quality may drop with increased noise.

Factory settings: Off

Back Light COMP.

Turn backlight compensation on or off.

Under backlight conditions, the function prevents darkening as a result of light striking the backs of subjects, and makes it possible to shoot images in shade or shadow more brightly.

Factory settings: Off

DNR

Set the digital noise reduction level for outputting bright, clear images without noise, even at night and low-light conditions. When [Low] or [High] is selected, noise can be eliminated. However, image lag may increase.

Factory settings: Low

• Lens

Lens	
Max Digital Zoom	☒ 3x ☐ 5x
LDC	☒ Off ☐ On
Power On Position	Standby
P. ON Preset No.	Preset1

Max Digital Zoom

Set the maximum digital zoom magnification.

Factory settings: 3x

<NOTE>

- Higher digital zoom magnifications will result in coarser images.

LDC

Turn LDC (Lens Distortion Correction) on or off.

Factory settings: Off

<NOTE>

- When you set the LDC setting to [On], the bent line at the edge of the image turns to a straight line, but the area is stretched.

Power on Position

Select the initial positions for Pan/Tilt/Zoom when the power is turned on.

Standby	Move to the Pan/Tilt/Zoom positions they were in the last time the camera was switched to Standby mode.
Home	Pan/Tilt move to their home positions (front) and Zoom goes to the Wide end.
Preset	Preset playback is performed at the preset position specified with [P. ON Preset No.].

Factory settings: Standby

P. ON Preset No.

Preset Number [001 to 100] are available.

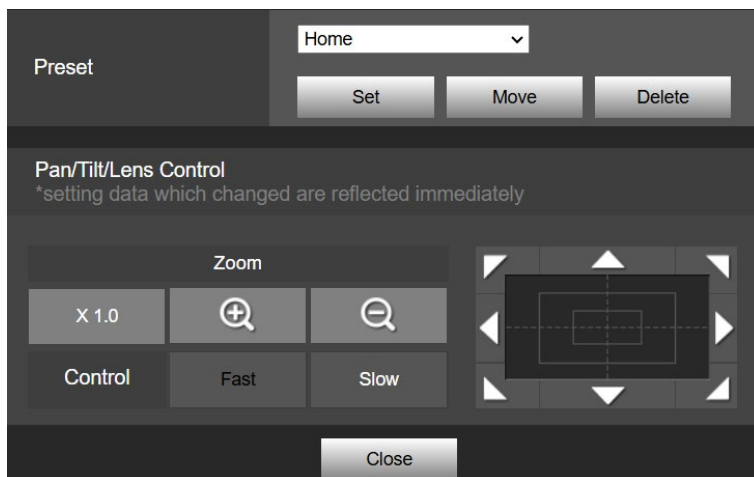
Specify a number for preset playback when the power turns ON when [Preset] is set in [Power On Position].

Factory settings: Preset1

<NOTE>

- If an unregistered preset number is set, preset playback is not performed and the operation is the same as [Standby].

■ Preset position screen [Preset position]



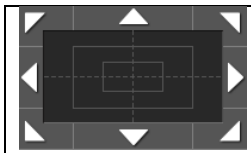
Preset

To save a preset: Use the pan, tilt and zoom controls to position the unit and click [Set] to save that position.

To go to a preset: Select [Home] or a preset number from drop-down list and click [Move].

To delete a preset: Select a preset number from drop-down list and click [Delete].

Pan/Tilt/Lens Control



To adjust the image in the horizontal or vertical direction (panning or tilting), left click the pad and the buttons.

It is possible to operate with the central grid pattern in the dragged state, with the speed of the pan/tilt increasing as it approaches the outside of the pad.

Zoom

X 1.0		Use this to adjust the zoom (magnification) to 1.0x
+		Use this to adjust the zoom (magnification) in the “Tele” direction.
-		Use this to adjust the zoom (magnification) in the “Wide” direction.
Fast	Slow	Select the speed at which zoom operations are to be performed.

■ **System screen [System]**

Video over IP

Image

System

Output

Format

1080/59.94p

Frequency

☐ 50Hz

☒ 59.94Hz

☐ 60Hz

Set

Others

Enable ePTZ

☒ USB

☒ HDMI

☒ IP stream

☒ Web

Install Position

☒ Desktop

☐ Hanging

Mirror

☒ Off

☐ On

Tally

☐ Disable

☒ Enable

OSD off during R-Tally

☒ Off

☐ On

Framing Tally Color

☒ Yellow

☐ Amber

Color Bars

☒ Off

☐ On

Mic

☐ Off

☒ On

Wireless ID

CAM1

Wireless Control

☐ Off

☒ On

Set

● **Output**

Output

Format

1080/59.94p

Frequency

☐ 50Hz

☒ 59.94Hz

☐ 60Hz

Set

Format

Change the video format. The available options for [Format] vary depending on the selected [Frequency] and [Priority Mode]. For details, refer to "Priority Mode."

Factory settings: Off

50Hz: 1080/50p

59.94Hz: 1080/59.94p

60Hz: 1080/60p

Frequency

Set the frame frequency to 50Hz, 59.94Hz, or 60Hz. The available options for [Format] vary depending on the selected [Frequency].

Factory settings: 59.94Hz

• Others

Others	
Enable ePTZ	☒ USB ☒ HDMI ☒ IP stream ☒ Web
Install Position	☒ Desktop ☐ Hanging
Mirror	☒ Off ☐ On
Tally	☐ Disable ☒ Enable
OSD off during R-Tally	☒ Off ☐ On
Framing Tally Color	☒ Yellow ☐ Amber
Color Bars	☒ Off ☐ On
Mic	☐ Off ☒ On
Wireless ID	CAM1
Wireless Control	☐ Off ☒ On

Enable ePTZ

Select to enable digital PTZ over USB, HDMI, IP stream or the camera web screen.

Factory settings: All enabled

<NOTE>

- Selecting [Full] for any [Output] ([USB], [HDMI], [IP Streaming], or [Web]) on the AI screen will clear its checkbox here automatically.

Install Position

[Desktop] or [Hanging] is selected here as the method used to install the unit.

Desktop	Stand-alone installation
Hanging	Suspended installation

Factory settings: Desktop

<NOTE>

- When [Hanging] has been selected, the image will be flipped vertically. To flip the image horizontally, set [Mirror] to [On] on the [SYSTEM] screen.

Mirror

Turn image flip on or off.

Factory settings: Off

Tally

[Disable] or [Enable] is set here for the function which turns on or turns off the tally lamp using the tally control signal.

Factory settings: Enable

OSD off during R-Tally

Off or on the function that turns off camera menu, status, and other displays when red tally signals are received via commands or contacts.

When the red tally signal releases, the camera menu display will return.

Factory settings: Off

Framing Tally Color

Sets the color in which the tally lamp lights to indicate the framing status of group framing.

Lights in the specified color (yellow/amber)	Group framing in progress. ([Framing Status] is [Framing])
Blinks in the specified color (yellow/amber)	Group framing has started, but a framing target has not been detected. ([Framing Status] is [Lost])
Off	Group framing has not started. ([Framing Status] is [Not Framing] or [Subject Near Edge])

Factory settings: Yellow

For details, refer to the AI screen on the web screen.

Color Bars

Switch between camera images and color bars.

Factory settings: Off

<NOTE>

- Only HDMI can output color bar. IP and USB cannot output color bar.
- The camera displays different color bars based on the selected [Frequency] (59.94/60Hz vs. 50Hz).

Mic

Turn the microphone on or off.

Factory settings: On

Wireless ID

Configure the unit's remote control ID. The settings for this item correspond to the CAMERA<1> to <4> buttons on the wireless remote control.

Factory settings: CAM1

Wireless Control

Turn wireless remote control on or off.

Factory settings: On

User Management Screen [User mng.]

The screenshot shows the 'User auth.' tab selected. It contains two sections. The first section has 'User auth.' with radio buttons for 'Off' (selected) and 'On', and 'Authentication' with radio buttons for 'Basic' (selected) and 'Digest'. A 'Set' button is below. The second section has 'User name' and 'Password' fields highlighted in yellow, a 'Retype password' field, and 'Access level' with radio buttons for '1.Administrator' (selected) and '2.Camera control'. A 'Set' button is below. At the bottom, 'User check' shows '1 [1]' in a dropdown and a 'Delete' button.

■ User authentication screen [User auth.]

Configure the user authentication settings for the personal computers and mobile terminals that can access the unit.
Up to 9 users can be registered.

User auth.

Turn user authentication on or off.

The setting is confirmed with the [Set] button.

Factory settings: Off

Authentication

Specify the method of user authentication to use.

The setting is confirmed with the [Set] button.

Basic	Use basic authentication.
Digest	Use digest authentication.

Factory settings: Digest

User name [1 to 32 characters]

The user name is input here.

The setting is confirmed with the [Set] button.

- The following characters can be displayed.

Numeric characters	0123456789
Alphabetical characters (upper and lower cases)	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz
Symbols	# % + = , - _ ^ / @ . ~

Password [4 to 32 characters]

Retype password

The password is input here.

The setting is confirmed with the [Set] button.

Access level

Select the user access level.

The setting is confirmed with the [Set] button.

1.Administrator	This access level allows the user to perform all the unit's operations.
2.Camera control	This access level allows only live screen [Live] operations to be performed.

Factory settings: 2.Camera control

User Check

Delete the user accounts registered in the unit.

You can delete selected users by clicking the [Delete] button at the right.

Network Setup Screen [Network]

Configure network, RTMP, NDI HX, and NTP settings on the Network setup screen.

Network

RTMP

NDI HX

NTP

IPv4 network

DHCP

Off

On

IP address

192

168

0

10

Subnet mask

255

255

255

0

Default gateway

192

168

0

1

DNS

Auto

Manual

Primary server address

8

8

8

8

Secondary server address

8

8

4

4

Set

IPv6 network

IP address(IPv6)

Default gateway

Primary server address

Secondary server address

Set

Common

HTTP port

80

(1-65535)

Easy IP Setup accommodate period

20min

Set

■ Network screen [Network]

Set up IPv4 and IPv6 network.

The setting is confirmed with the [Set] button.

• IPv4 network

IPv4 network

DHCP

Off

On

IP address

192

168

0

10

Subnet mask

255

255

255

0

Default gateway

192

168

0

1

DNS

Auto

Manual

Primary server address

8

8

8

8

Secondary server address

8

8

4

4

Set

DHCP

Select the method in which the IP address is configured.

Factory settings: Off

<NOTE>

- When [DHCP] is set to [On], AW-RP60's automatic configuration of IP address (AUTO IP) cannot be used.
- Turn this setting on if you use DHCP for IPv6 configurations.

IP Address (IPv4)

Input the unit's IP address here when the DHCP function is not going to be used. Input an address that will not duplicate an existing IP address which has been set for a personal computer or another network camera.

Factory settings: 192.168.0.10

<NOTE>

- Multiple IP addresses cannot be used even when the DHCP function is used.
For details on the DHCP server settings, consult your network administrator.

Subnet Mask

Input the unit's subnet mask here if the DHCP function is not going to be used.

Factory settings: 255.255.255.0

Default Gateway

Input the unit's default gateway if the DHCP function is not going to be used.

Factory settings: 192.168.0.1

<NOTE>

- Multiple IP addresses cannot be used for the default gateway even when the DHCP function is used.
For details on the DHCP server settings, consult your network administrator.

DNS

Whether the DNS server address is to be acquired automatically (Auto) or manually (Manual) is input here.

If [Manual] has been selected, the DNS settings must be established. If [Auto] is selected when the DHCP function is going to be used, the DNS server address is acquired automatically.

For details, consult your system administrator.

Factory settings: Manual

Primary Server Address

Secondary Server Address

Enter the IPv4/IPv6 address of the DNS server.

For details on the IPv4/IPv6 address of the DNS server, consult your system administrator.

- **IPv6 network**

IPv6 network	
IP address(IPv6)	
Default gateway	
Primary server address	
Secondary server address	
Set	

IP Address(IPv6)

The IPv6 address must be entered manually.

Be sure to enter an address unique from other devices.

<NOTE>

- When connecting to the manually specified IP address through a router, use an IPv6-compatible router, and enable the automatic configuration function for the IPv6 address. Be sure to configure an IPv6 address that includes the prefix information provided by the IPv6-compatible router. For details, refer to the operating instructions for the router.
- Link local address cannot be set.

Default Gateway

Enter the default gateway for the unit's IPv6 network.

Factory settings: Blank

Primary server address

Secondary server address

Enter the IPv4/IPv6 address of the DNS server.

For details on the IPv4/IPv6 address of the DNS server, consult your system administrator.

- **Common (to IPv6/IPv4)**

Common		
HTTP port	80	(1-65535)
Easy IP Setup accommodate period	20min	
Set		

HTTP port

Port numbers are allocated separately.

The following port numbers are used by the unit so they cannot be used.

53, 5353, 5960, 5961, 6789, 6790, 8000, 8080, 10669, 10670, 34358, 40391, 52380, 52381

Factory settings: 80

Easy IP Setup accommodate period

Set the time allowed for network setting operations from the EasyIP Setup Tool Plus function in the Media Production Suite. You can set either 20min from the time this unit is started or Unlimited.

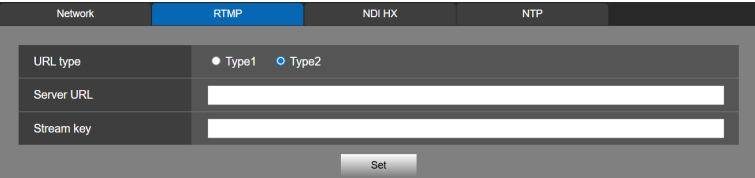
20min	Allows camera setting operations on the EasyIP Setup Tool Plus function in the Media Production Suite for just 20 minutes after start up of this unit.
Unlimited	Allows camera setting operations on the EasyIP Setup Tool Plus function in the Media Production Suite at any time.

Factory settings: 20min

<NOTE>

- Camera display on the EasyIP Setup Tool Plus function in the Media Production Suite is enabled at any time, and the camera screen can be opened.
- To access the camera via the Internet after connecting it to a router, it will be necessary to set an individual HTTP port No. for each network camera and to convert the address using the router's port forwarding function. For details, refer to the operating instructions for the router.

■ RTMP screen [RTMP]



<NOTE>

- Switch to the appropriate method of registering RTMP transmission server information suited to the setting information notified from the RTMP transmission server you are using.
- The Stream Key setting field is displayed only when [Type2] is set.
- Please do not change the following menu during RTMP streaming:
Priority mode, Frequency, Format, Install Position, Mirror, Mic.
- [Max. bit rate (per client)] is set higher than 8192kbps, the bit rate during RTMPS transmission will be 8192kbps.
- For video settings such as resolution, please also configure the [Video over IP] settings.

URL Type

Select the method for registering the information for the RTMP transmission server.

Type1	Specify to set the server URL and RTMP stream key as a set in [Server URL].
Type2	Specify to individually set the server URL and RTMP stream key in [Server URL] and [Stream Key].

Factory settings: Type 2

Server URL

Set the URL for the RTMP server to be transmitted to.

Stream Key

The stream key obtained from the RTMP server is set during streaming only when the [URL Type] is set to [Type2].

■ **NDI HX screen [NDI HX]**

Make NDI HX2 and NDI HX3 transmission settings.
The setting is confirmed with the [Set] button.

NetworkRTMP**NDI HX**NTP

Common Setup

Source Name

NDI_Device-B6A0005AV

NDI HX Version

☒HX2

☐HX3

Set

NDI Network Settings

NOTE: Changing of NDI network settings can have a major impact on system compability and performance across your network. You should carefully consider the need to change these settings.

Enable Multicast Group

☒Off

☐On

Transmit Preferred Method

RUDP

Multicast Net Prefix

239.192.0.30

Multicast Net Mask

255.255.255.0

Multicast TTL

16

(1~128)

NDI Discovery Server

☒Off

☐On

Discovery Server IP

Backup Discovery Server IP

Set

Grouping Function

NDI Group Enable

☐Enable

☒Disable

NDI Group Name

Set

<NOTE>

- This unit restarts when [Streaming mode] is changed to [NDI HX2], or when changed from [NDI HX2] to another mode.
- For video settings such as resolution, please also configure the [Video over IP] settings.

• **Common Setup**

Common Setup

Source Name

NDI_Device-B6A0005AV

NDI HX Version

☒HX2

☐HX3

Set

Source Name

Sets the device name displayed when this unit is detected by software applications and hardware compatible with NDI HX2 and NDI HX3.

Factory settings: NDI_Device-[serial number of this unit]

Maximum number of characters	1 to 32 characters
Characters that can be entered	Alphanumeric characters, symbols: - _

NDI HX Version

Select the NDI HX version you want to use.
Factory settings: NDI HX2

• NDI Network Settings

NDI Network Settings	
NOTE: Changing of NDI network settings can have a major impact on system compatibility and performance across your network. You should carefully consider the need to change these settings.	
Enable Multicast Group	☒ Off ☐ On
Transmit Preferred Method	RUDP
Multicast Net Prefix	239.192.0.30
Multicast Net Mask	255.255.255.0
Multicast TTL	16 (1~128)
NDI Discovery Server	☒ Off ☐ On
Discovery Server IP	
Backup Discovery Server IP	
Set	

Enable Multicast Group

Sets whether to perform multicast transmissions of images for software applications and hardware that are compatible with NDI.

Factory settings: Off

Transmit Preferred Method

Sets the format of unicast transmission (RUDP, TCP, UDP) to be used.

Factory settings: RUDP

Multicast Net Prefix [IPv4 : 244.0.0.0 to 239.255.255.255]

Enter the multicast IP address.

Images and audio are transmitted to the specified multicast address.

Factory settings: 239.192.0.30

<NOTE>

- Check the multicast IP addresses available for use before entering.

Multicast Net Mask (IPv4)

Enter the subnet mask.

Factory settings: 255.255.255.0

<NOTE>

- [Address (IPv4)] and [Subnet (IPv4)] clarify the multicast address ranges randomly set during multicast transmissions.
- When [Address (IPv4)] is set to [239.255.0.0] and [Subnet (IPv4)] is set to [255.255.0.0], multiple allocations are made randomly from the range between [239.255.0.0] and [239.255.255.252].

Multicast TTL

Enter the TTL/HOPLimit value [1 to 254] for multicast.

Factory settings: 16

<NOTE>

- When transmitting H.264 images via the Internet, transmitted images may not appear depending on proxy server settings, firewall settings, etc. In such cases, consult your network administrator.
- When displaying multicast images on a personal computer with multiple LAN cards installed, disable the LAN cards that are not used for reception.

NDI Discovery Server

Sets whether to use the discovery server when performing NDI transmission.

Factory settings: Off

Discovery Server IP

Sets the IPv4 address of the server when using the discovery server.

Factory settings: Blank

Backup Discovery Server IP

Sets the IPv4 address of the backup server when using the backup discovery server.
Factory settings: Blank

- Grouping Function**

Grouping Function

NDI Group Enable

☐ Enable ☒ Disable

NDI Group Name

Set

NDI Group Enable

Sets whether to use the grouping function when performing NDI transmission.
Factory settings: Disable

NDI Group Name

Sets the group name for use when the grouping function is used.

Maximum number of characters	1 to 32 characters
Characters that can be entered	Alphanumeric characters

Factory settings: Blank

■ NTP screen [NTP]

Settings relating to the NTP server address and port No. are performed.

The setting is confirmed with the [Set] button.

Synchronization with NTP

On	The time adjusted automatically through synchronization with the NTP server will be used as this unit's standard time.
Off	The time set in [Date/time] of the Basic screen [Basic] will be used as this unit's standard time.

Factory settings: Off

NTP server address setting

Select the method to acquire the NTP server address.

Auto	Acquires the NTP server address from the DHCP server.
Manual	Sets the address by inputting the NTP server address in [NTP server address].

Factory settings: Manual

<NOTE>

- To acquire the NTP server address from the DHCP server, go to network setup screen [Network] > [Network] screen > [IPv4 network] > turn on [DHCP].

NTP server address

When [Manual] is selected in the [NTP server address setting], input the IP address or host name of the NTP server.

Maximum number of characters	0 to 128 half-size characters
Characters that can be entered	Half-size alphanumeric characters, half-size symbols: : . _ -

Factory settings: Blank

<NOTE>

- To input the [NTP server address] host name, the [DNS] setting must be selected on the [Network] of the network setup screen [Network].
- This does not work when link local address is set in [NTP server address].

NTP port [1 to 65535]

Input the port No. of the NTP server.

The following port numbers are used by the unit so they cannot be used.

53, 5353, 5960, 5961, 6789, 6790, 8000, 8080, 10669, 10670, 34358, 40391, 52380, 52381

Factory settings: 123

Time adjustment interval [1h to 24h]

Selects the interval (1 to 24 hours in 1-hour increments) for acquiring the time from the NTP server.

Factory settings: 1h

Maintenance Screen [Maintenance]

On this screen, you can check the system logs, check the version of the software, initialize the unit, etc.

The screenshot shows a web interface with a top navigation bar containing five tabs: 'Product info.' (highlighted in blue), 'Language', 'Default reset', 'System log', and 'Backup'. Below the tabs is a table with the following data:

Model no.	AW-UE5
MAC address	00:80:45:2F:2F:00
Serial no.	B6A0005AV
Firmware version	V01.15
Operation time	161

Below the table, there are two sections:

- OSS license:** A section with a 'Download' button.
- Update firmware:** A section with a 'Browse...' button, a text field containing 'No file selected.', and an 'Execute' button.

■ Product info. Screen [Product info.]

The versions of the unit's software can be checked on this screen.

The [Model no.], [MAC address], [Serial no.], [Firmware version] and [Operation Time] of the unit are displayed.

Model no.

Display the unit's model number.

MAC address

Display the unit's MAC address.

Serial no.

Display the unit's serial number.

Firmware version

Display the overall system version of the unit.

Operation time

Display the hours the unit has been operating.

OSS license

Click [Download] button to download the OSS (Open Source Software) file. The OSS license file includes all OSS license for AW-UE5. The download file name is "License.zip".

Update firmware

Upgrade the firmware.

1. Download the latest software to your personal computer.

<NOTE>

- Keep the maximum combined number of characters to be used for the name of the directory in which the software will be stored and for the name of the software which has been downloaded to less than 250 characters.

2. Click the [Choose File] button, and specify the downloaded software.

3. Click the [Execute] button.

The software update check screen is displayed.

After updating the software version, be absolutely sure to delete the temporary Internet files.

<NOTE>

- Click [Execute] to confirm you want to update the firmware, then click [Yes] to open the update screen. The update takes about 10 minutes.

- Use the personal computer on the same subnet as the camera to update the software version.
- Before using the version update software, be absolutely sure to check the precautions to be observed, and follow the instructions.
- Use the files specified by Panasonic as the software used for version update.
- Do not turn off the unit's power while a software version is being updated. (Message will appear to indicate that the process is complete.)
- While a software version is being updated, do not attempt to execute any other operations until the version has been updated.
- Close the web browser once after performing a version update.
- If the power is turned off during updating, please update once more. In the case the unit may not power on, please consult your local dealer.

■ Language screen [Language]

Language

Set the unit system's language.

The language only supports [English], [Simplified Chinese], and [Japanese].

Factory settings: English

■ Default reset screen [Default reset]

The unit's setting data is initialized and the unit is restarted in here.

Reset to the default

When the [Execute] button is clicked, the unit's settings are returned to their defaults.

When the initialization operation is started, the unit is restarted so no operations can be undertaken for about 2 minutes.

<NOTE>

After restarting, the [Live] screen will appear.

The following setting items will not be returned to defaults.

- [Priority Mode]
- [Frequency]
- [Format]
- All settings under [User mng.]
- All settings under [Network - Network]
- [AWB] adjustment values will not be returned to defaults.

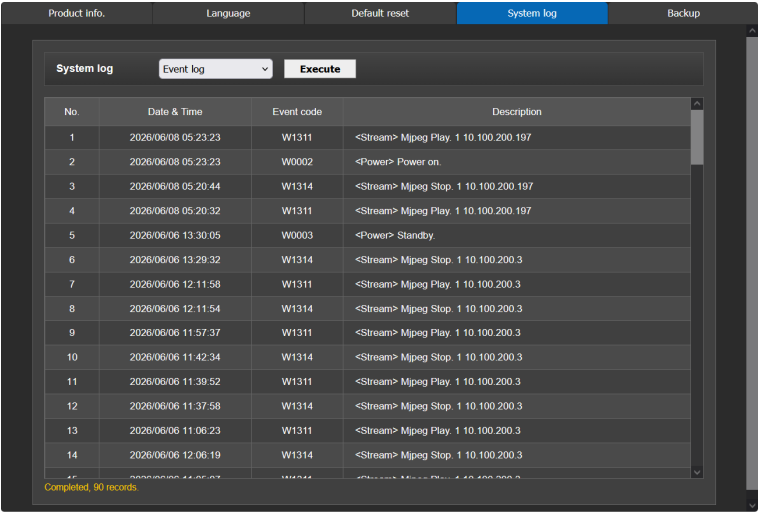
Reboot

When the [Execute] button is clicked, the unit is rebooted.

After the unit has been rebooted, no operations can be undertaken for about 2 minutes as is the case when the unit's power is turned on.

■ **System log screen [System log]**

A maximum of 100 event logs and a maximum of 100 error logs can be stored in the unit's internal memory. When this maximum number has been exceeded, the old logs are overwritten successively by the new logs. The logs are cleared when the unit's power is turned off.



System log

Switch the display between event logs and error logs.
The event log display is updated when you click the [Execute] button.

Event log	Displays the event logs.
Error log	Displays the error logs.

[Event log]

No.
Displays the log sequence numbers.
“1” indicates the latest information, and up to 100 logs can be saved.

Date & Time

Displays the dates and times when the events occurred.
The dates and times when the events occurred are indicated in 24-hour format according to the clock of the unit.

Event code

Displays the event code numbers.

Description

Displays the event descriptions.

[Error log]

No.
Displays the log sequence numbers.
“1” indicates the latest information, and up to 100 logs can be saved.

Date & Time

Displays the dates and times when the errors occurred.
The dates and times when the errors occurred are indicated in 24-hour format according to the clock of the unit.

Error code

Displays the error code numbers.

Error description

Displays the error descriptions.

■ Event log

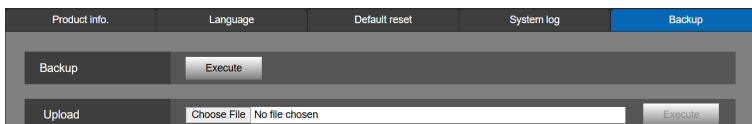
Event Code	Description in the web display	Meaning
W0001	<Power> System start.	Displayed when power is supplied to the camera and start up has begun.
W0002	<Power> Power on.	Displayed when the camera is powered on.
W0003	<Power> Standby.	Displayed when the camera goes to standby mode.
W0005	<Power> PoE (Hardware) is working.	Displayed when the hardware PoE power supply is confirmed.
W0006	<Power> PoE (Software) is working.	Displayed when the software authentication for PoE power supply is complete.
W1003	<Maintenance> Succeeded OSD Menu initialization.	Displayed when initialization of the OSD menu was successful.
W1005	<Maintenance> Succeeded firmware update.	Displayed when updating of the firmware was successful.
W1006	<Maintenance> Failed firmware update.	Displayed when updating of the firmware failed.
W1007	<Maintenance> Succeeded OSD menu and WEB menu initialization.	Displayed when initializing of the web menu was successful.
W1008	<Maintenance> Reboot.	Displayed when restarted.
W1303	<Login> Remote camera controller connected. [user name] [IP address]	IP/account information is displayed when connected with a remote controller.
W1311	<Stream> Mjpeg Play. [user name] [IP address]	User information for the user that started the mjpeg transmission is displayed.
W1314	<Stream> Mjpeg Stop. [user name] [IP address]	Mjpeg transmission stop is indicated and IP/account information is displayed.
W1317	<Stream> H.264 Play. [user name] [IP address]	User information for the user that started the H.264 transmission is displayed.
W1321	<Stream> H.264 Stop. [user name] [IP address]	User information for the user that stopped the H.264 transmission is displayed.
W1325	<Stream> H.265 Play. [user name] [IP address]	User information for the user that started the H.265 transmission is displayed.
W1326	<Stream> H.265 Stop. [user name] [IP address]	User information for the user that stopped the H.265 transmission is displayed.
W1345	<Stream> NDI Add Client. [Number of Clients]	The number of Clients when transmission of NDI HX started is displayed.
W1346	<Stream> NDI Decrease. [Number of Clients]	The number of Clients when transmission of NDI HX stopped is displayed.

■ Error log

Error Code	Description in the web display	Meaning
0x43	PoE Software auth. Timeout	Software authentication for PoE could not be completed.

■ Backup screen [Backup]

On this screen, the unit's settings can be saved to a personal computer or settings saved in a personal computer can be loaded into the unit for use.



Backup

Save the unit's settings onto the personal computer.

When the destination dialog box appears after clicking the [Execute] button, specify the destination folder.

Upload

The unit's setting files, which were saved in the personal computer by the backup function, are uploaded.

Click the [Choose File] button to display the dialog box, and specify the saved file.

Click the [Execute] button to start uploading.

The unit will restart automatically after the upload is complete.

AI Screen [AI]

Make a variety of settings related to group framing.

The unit supports the following AI functions:

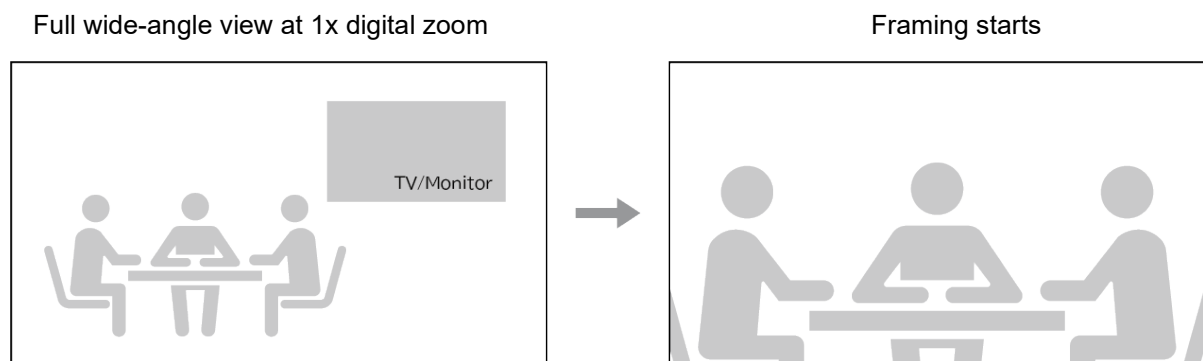
- Group Framing
- Preset Framing

<NOTE>

Only available when [Priority Mode] is set to [ePTZ/AI].

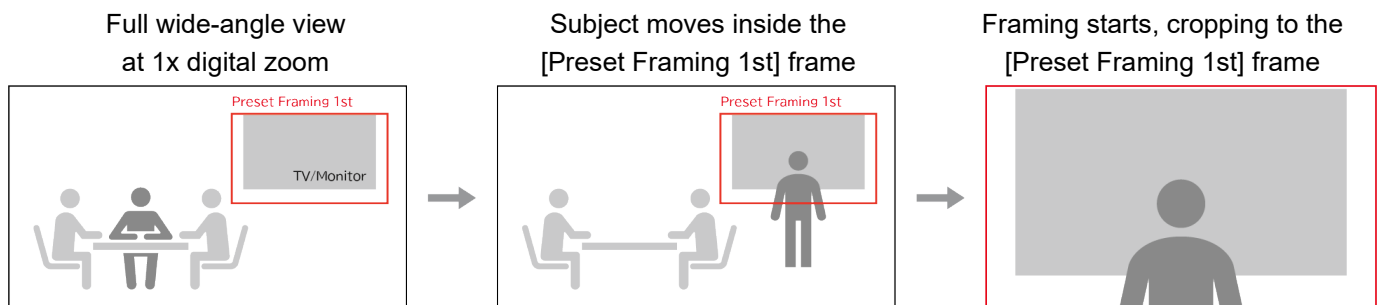
■ Group Framing

Automatically and continuously adjusts the digital PTZ to keep all detected subjects framed in the shot.



■ Preset Framing

Automatically recalls a predefined position when a subject enters a designated frame. For example, if you set a red frame (Preset Framing 1st), the camera will automatically crop to that position when a subject moves inside it.

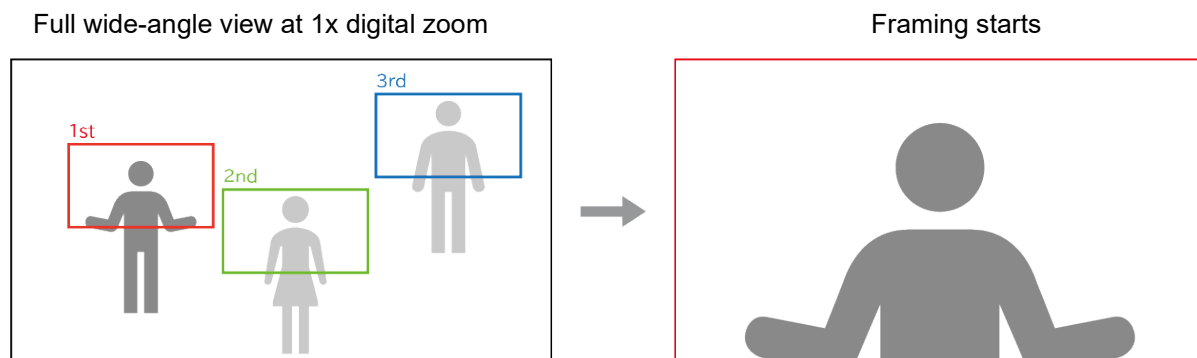


Please note that these [Preset Framing] frames are used exclusively for AI functions and are different from the standard camera [Preset] (where up to 100 can be registered).

You can set up to three [Preset Framing] frames ([1st] to [3rd]).

If subjects are detected in multiple frames at the same time, priority is given in numerical order ([1st] > [2nd] > [3rd]), meaning the lower number is recalled first.

For example, if [1st] to [3rd] frames are all set and framing begins as shown below, the [1st] frame will be recalled.



■ Relationship Between Group Framing and Preset Framing

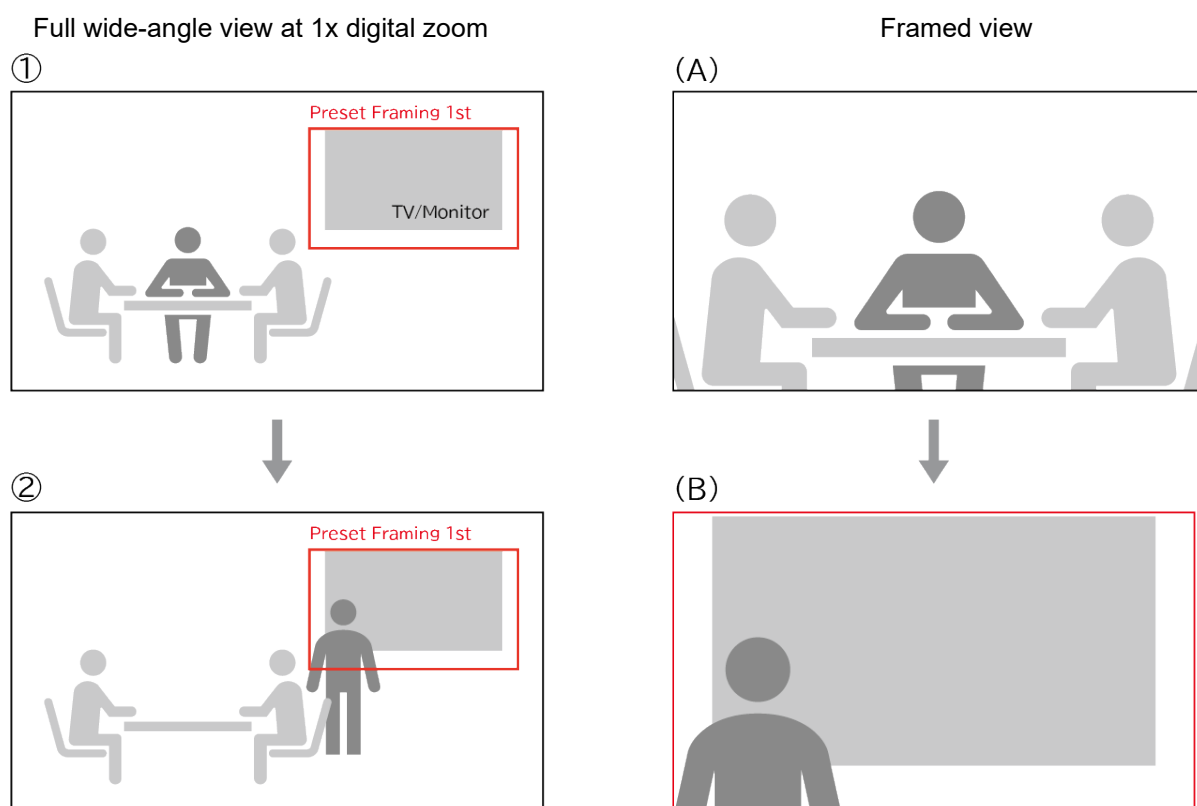
When [Preset Framing] is turned [Off], the camera operates using Group Framing only. When [Preset Framing] is turned [On], the operation depends on subject detection:

If no subject is detected inside the [Preset Framing] frame: The standard Group Framing starts.

If a subject is detected inside the [Preset Framing] frame: Preset Framing starts.

As shown in ①, if you turn on [Preset Framing] [1st] and start framing, the camera will operate in standard Group Framing mode (A).

Next, when a subject moves toward the [Preset Framing] [1st] frame and is detected inside it, the camera recalls that specific [Preset Framing] frame (B).



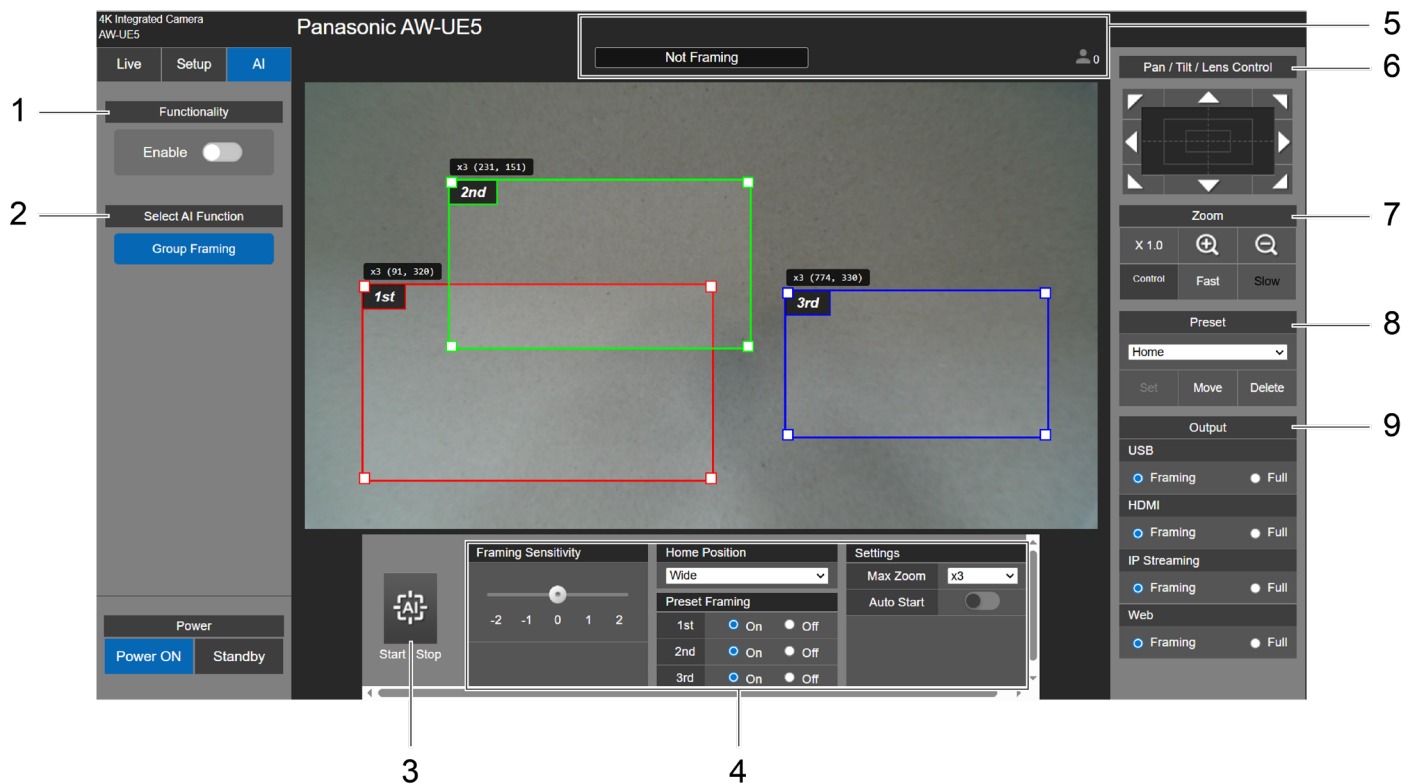
■ Video Outputs

For each video output (HDMI, USB, IP streaming, and Web), you can choose between these display options mentioned in the “Relationship Between Group Framing and Preset Framing” section:

- [Full]: Full-angle view at 1x digital zoom
- [Framing]: Framed view

■ Framing Considerations

- Framing stops if a subject is detected too close to the edge of the full-angle view, and a "Subject Near Edge" message appears. Have the subject move further inside the frame.
- You can only configure preset framing frames when [Functionality] is set to [Disable] or [Framing Control] is set to [Stop].
- Proper framing depends on ideal conditions. Incorrect camera exposure, poor lighting, or composition factors (such as subject crowding, distance from the camera, fast movement, or busy backgrounds) may affect performance.



1. Functionality

Enable or disable AI function. You can start group framing using the menu described below.

2. Select AI Function

No selection is required.

The current AI function is Group Framing, which uses the camera to frame the participants in the conference room.

3. Start/Stop

Start or stop group framing.

4. Group Framing Settings

Framing Sensitivity

Adjust framing sensitivity to subject movement. Range: -2 (more stable) to +2 (more sensitive).

Factory settings: 0

Home Position

Set the behavior when the framing target is lost for a period of time.

Wide	Reset the camera to 1x digital zoom (wide end) after the framing target is lost.
None	Camera position is not changed after the framing target is lost.
Preset1 to 3	Camera returns to a specified preset position after the framing target is lost.

Factory settings: Wide

Framing restarts if the framing target is detected during any of the above operations.

Max Zoom

Set the maximum digital zoom magnification.

Factory settings: 3x

<NOTE>

- Higher digital zoom magnifications will result in coarser images.
- Settings can only be changed when [Framing Status] is [Not Framing].

Preset Framing

Set up to three preset frames (1st to 3rd) so that the camera uses the preset frame when the framing target is inside of the preset frame, and uses group framing when the framing target is outside of all preset frames.

Factory settings: Off

To set up Preset Framing:

- (1) Set [Start/Stop] to [Stop].
- (2) Turn [On] the preset framing frames you want to use ([1st] to [3rd]).
- (3) Drag the colored frames (1st: red, 2nd: green, 3rd: blue) to position them. Drag the corner anchors to resize them. The minimum frame size depends on your [Max Zoom] value; setting it to 5x allows for a smaller frame.
- (4) Once your frames are sized and positioned, set [Start/Stop] to [Start] to start framing.

<NOTE>

- If preset frames overlap, the camera prioritizes the lower-numbered frame.
- You can save up to two sets of preset framing configurations—one set for each [Max Zoom] ratio.
- Coordinates are displayed in the upper-left corner of each preset framing frame, based on a grid where the upper-left of the preview screen is (0,0) and the lower-right is (1280, 720).
- The aspect ratio of the frames is fixed at 16:9.

Auto Start

Set whether framing starts automatically.

If both [Functionality] and [Auto Start] are set to [Enable], framing will start immediately upon startup.

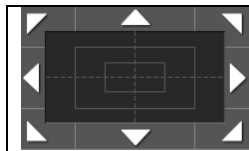
Factory settings: Enable

5. Framing Status

Displays the status of group framing.

Not Framing	Framing has not started.
Framing	Framing in progress.
Lost	Target cannot be detected. Framing will begin once the subject is detected.
Subject Near Edge	Group framing is unavailable because the subject is near the edge of the frame. Framing will begin once the subject is detected.
Preset Framing	Preset framing in progress.
	The number (0-20) next to the person icon indicates the number of people detected.

6. Pan/Tilt/Lens Control



To adjust the image in the horizontal or vertical direction (panning or tilting), left click the pad and the buttons.

It is possible to operate with the central grid pattern in the dragged state, with the speed of the pan/tilt increasing as it approaches the outside of the pad.

7. Zoom

X 1.0		Use this to adjust the zoom (magnification) to x1.
		Use this to adjust the zoom (magnification) in the “Tele” direction.
		Use this to adjust the zoom (magnification) in the “Wide” direction.
Fast	Slow	Select the speed at which zoom operations are to be performed.

8. Preset

To save a preset: Use the pan, tilt and zoom controls to position the unit and click [Set] to save that position.

To go to a preset: Select [Home] or a preset number from drop-down list and click [Move].

To delete a preset: Select a preset number from drop-down list and click [Delete].

9. Output

For each video output (HDMI, USB, IP streaming, and Web), you can choose between a framed view or a full-angle view at 1x digital zoom.

Framing	Framed view
Full	Full-angle view at 1x digital zoom

Factory settings: Framing

■ Starting and Stopping Framing

You can start and stop framing in two ways:

(1) When [Auto Start] is set to [Enable]:

[Framing starts immediately when you set [Functionality] to [Enable].

To stop framing, set [Start/Stop] to [Stop] or [Functionality] to [Disable]

(2) When [Auto Start] is set to [Disable]:

First, set [Functionality] to [Enable].

Next, set [Start/Stop] to [Start] to start framing. To stop framing, set [Start/Stop] to [Stop] or [Functionality] to [Disable].

If you want to start and stop framing using the [OPT]-[ON]/[OFF] buttons on the wireless remote control, use method (1).

<NOTE>

- Manually adjusting digital PTZ via the wireless remote control or other inputs during framing will automatically stop the framing operation.

Web Camera Functions

You can use this unit as a Web camera by connecting it to a personal computer or other device using the USB cable included with the device.

The unit is compliant with USB Video Class and USB Audio Class. The video and audio of the unit can be transmitted to a personal computer or other device by using communication software or other software.

- Audio recorded by this unit's built-in microphone can be output to a personal computer or other devices.

<NOTE>

- There is no guarantee that operation will be possible with all devices that have a USB port.
- When using an Ethernet cable, you can use IP control, IP video transmission, and PoE power simultaneously.
- Please do not change the following menu during UVC output.
Priority mode, Frequency, Format, Install Position, Mirror, Mic

Controllable functions

The following functions can be controlled when the unit is used as a Web camera.

- The names of the functions are the names used in Windows. Furthermore, values are shown as decimals.
- [] indicates the actual function names.

Brightness [Picture Level]

This is configured in the same way as [Picture Level] in the menu and web settings.

Setting range: -4 to +4

Color saturation [Chroma Level]

This is configured in the same way as [Chroma Level] in the menu and web settings.

Setting range: 0 to 10

White balance [White Balance Mode]

This is configured in the same way as [White Balance Mode] in the menu and web settings.

Setting value: Auto, 3200K, 5600K

Backlight compensation [Back Light COMP.]

This is configured in the same way as [Back Light COMP.] in the menu and web settings.

Setting value: 0(Off), 1(On)

Detail [Detail]

This is configured in the same way as [Detail] in the menu and web settings.

Setting range: 0, 1, 2, 3

Contrast [Contrast]

This is configured in the same way as [Contrast] in the menu and web settings.

Setting range: 0, 1, 2, 3, 4

Zoom [Zoom]

Change the zoom magnification ratio.

Setting range: 0 to 768

Pan [Pan]

Adjust the horizontal cropping position when zoomed in.

Setting range : -384 to +384

Tilt [Tilt]

Adjust the vertical cropping position when zoomed in.

Setting range : -216 to +216

Troubleshooting

■ Operation

Symptom	Cause and solution
No power	Is the network cable for the PoE (IEEE802.3af) compatible power supply device and the unit connected properly?
	Power may not be supplied if the total power limit is exceeded on power supply devices that allow connections to multiple PoE terminals.
	If the unit is connected to the controller, has it been connected properly? → For details, refer to the operating instructions for the controller.
	When using an AC adapter for power, please use the included USB cable and an AC adapter that supports USB Type-C.
Cannot operate (common to wireless remote control, controller)	Is the power on? → If the unit's status display lamp is off or lights up orange, it means that the unit's power is not on.
	Has the unit you want to operate been selected properly?
Cannot operate using the wireless remote control	Have the remote control's batteries run down or have the batteries been installed with their polarities reversed? → If the status display lamp does not blink even when the wireless remote control is operated near the wireless remote control signal light-sensing area, it means that the batteries have run down. Replace the batteries.
	Has the [Wireless ID] been set correctly?
	Is there a fluorescent light or plasma monitor near the unit and, if so, is the wireless remote control signal light-sensing area exposed to its light?
	Is the [Wireless Control] on the web screen menu set to [Off]? → If the power status indicator flashes orange rapidly (5Hz) when operated with the wireless remote control, the [Wireless Control] in the web screen menu is set to [Off].
The unit turns in the opposite direction to the one operated	Has the [Install Position] setting been selected correctly?
	The reversal setting may have been established at the controller if the unit is connected to the controller. → For details, refer to the operating instructions for the controller.
Cannot operate using the controller	Is the unit connected to the controller properly? → For details, refer to the operating instructions for the controller.
	It may be necessary to upgrade the version of the controller so that the controller will support the unit. → For details on upgrading, visit the following website: https://pro-av.panasonic.net/
Cannot access from a web browser	Has a LAN cable of category 5e or above been connected to the LAN connector for IP control <LAN LINK/ACT>?
	Is the <LINK> LED of the LAN connector for IP control lit? → If it is not lit, it means that something is wrong with the connection to the LAN or that the network at the connection destination is not working properly. Check the LAN cable for defective contacts, and check the wiring.
	Is the power on? → If the unit's status display lamp is off or lights up orange, it means that the unit's power is not on.

Symptom	Cause and solution
Cannot access from a web browser	Has a valid IP address been set in the unit? Has the wrong IP address been accessed? → Check the connections by following the steps below. For Windows: Using the Windows command prompt, execute > ping [IP address which has been set in the camera] A reply returned from the unit signifies that there are no problems in operation. If a reply is not received, try following operation: Reboot the unit, and within 20 minutes change the IP address using the EasyIP Setup Tool Plus software. For Mac: Using the OS X terminal, execute > ping -c 10 [IP address which has been set in the camera] A reply returned from the unit signifies that there are no problems in operation. If a reply is not received, try following operation: Reboot the unit, and within 20 minutes change the IP address using the EasyIP Setup Tool Plus software.
	Is the same IP address setting being used by another unit? → Check out the IP addresses of the unit, access devices (personal computer, etc.) and any other cameras.
	Does the subnet mask setting match the network subnet of the connection destination? → Check out the subnet mask settings of the unit and access devices, and then consult with the network administrator.
	Has the “Use a proxy server” setting been selected by the web browser? (When the unit and the personal computer are connected to the same subnet) → If a proxy server has been set using the [proxy setting] of the web browser, it is recommended that a “Don’t use proxy” address be selected as the unit’s IP address setting.
	Has the wrong default gateway been set for the unit? (When the unit and personal computer are connected to different subnets) → Check out the default gateway that has been set for the unit, and then consult with the network administrator.
When powered by a personal computer, the unit does not turn on	Reconnect the USB cable (use the cable included with this unit) to your personal computer. Make sure it is connected to a USB Type-C (Power Delivery compatible) port on the computer.

■ Video

Symptom	Cause and solution
No pictures are displayed or the pictures are disturbed	Has the unit been connected properly to the other connected devices?
	If the system is configured in such a way that the picture is also switched when the unit to be operated is selected, has the correct unit been selected?
	Has the image signal setting been selected correctly?
	While outputting video from HDMI, if the USB device is connected / disconnected or video is started, the HDMI output video may be disrupted. Do not disconnect the USB device while using HDMI output.
The picture is flipped vertically	Has the [Install Position] setting been selected correctly
Multiple color bands (color bars) are displayed	Switch to the camera picture.
The menu screen is displayed	Exit the menu.
It is difficult to view the menu screens	Depending on the HDMI monitor you are using, you may experience one or more of the symptoms described below. These symptoms are especially noticeable when any of the SD formats is used: This is normal and not indicative of any trouble. - The resolution of the characters in the camera menu displays changes as the background image changes. - Depending on the edge enhancement setting established for the monitor, white lines appear in front of the black shadows of the menus.
Something is wrong with the coloring of the pictures	Activate the [ATW] (Auto tracking white adjustment) function.
	In some situations, the proper colors may not be reproduced using the [ATW] function.
	→ In cases like this, proceed with the white balance adjustment.
The pictures are too light or too dark	Select the appropriate [Scene] for your environment.

■ IP images

Symptom	Cause and solution
Images are not displayed	For Windows: If [Check for newer versions of stored pages] is not set to [Every time I visit the webpage] in the temporary Internet file settings, IP images may not appear in the live screen [Live]. → Perform the following. ① Select [Tools] - [Internet Options] in Microsoft Edge. ② Click the [General] tab, and click the [Settings] button under [Browsing history]. ③ In the [Temporary Internet Files and History Settings] dialog box, select the [Every time I visit the webpage] option under [Check for newer versions of stored pages]. ④ Click the [OK] button.
The images do not update or display properly	Perform the following to delete the temporary Internet files. For Windows: ① Select [Tools] - [Internet Options] in Microsoft Edge. ② Click the [General] tab, and click the [Delete] button under [Browsing history]. ③ In the [Delete Browsing History] screen, select the [Temporary Internet Files] checkbox, and then click [Delete]. ④ Click the [OK] button. For Mac: ① Select [Safari] - [Empty Cache] in Safari. ② Click [Empty] in the [Are you sure you want to empty the cache?] pop-up screen. The unit's ports may be filtered by the firewall or other function of the anti-virus software. → Change the HTTP port number of the unit to a port number that will not be filtered. If the web browser screen stops, reload the web browser screen.
The RTSP image transmission stops	If the RTSP image transmission stops, perform the playback operation from the playback device again.

■ USB

Symptom	Cause and solution
Cannot be recognized as a USB device, or image are not displayed	USB drive installation takes time for the first time. If the following operations are performed, this unit may not be recognized as a USB device. 1. Change the priority mode with the USB cable connected 2. Unplug the USB cable during UVC video playback If it is no longer recognized as a USB device, restart this unit.

Specifications

Power requirements:

DC  5 V

DC  37 V to 57 V (PoE power supply)

Current consumption:

3.0 A (USB-C port power supply)

0.3 A (PoE power supply)

The symbols on this product (including the accessories) represent the following:

 DC

■ GENERAL

- **Ambient operating temperature:** 0 °C to 40 °C (32 °F to 104 °F)
- **Storage temperature:** -20 °C to 50 °C (-4 °F to 122 °F)
- **Allowable humidity ranges:** 20 % to 90 % (no condensation)
- **Dimensions (W x H x D):** 123 mm x 131 mm x 139 mm (Excluding protrusions, ceiling mount bracket)
(4-53/64 inches x 5-5/32 inches x 5-29/64 inches)
- **Mass (Weight):** Approx. 0.5 kg (1.1 lb.) (Excluding ceiling mount bracket)
- **Controller supported:**
<NOTE>
 - For the latest information on compatible operating systems, and web browsers, visit the support site at the website: <https://pro-av.panasonic.net/>

■ OUTPUT

- **HDMI:** HDMI Type-A
HDCP is not supported.
VIERA Link is not supported.

■ INPUT/OUTPUT

- **LAN:** LAN connector for IP control (RJ-45)
- **USB:** Type-C port

■ FUNCTIONS AND PERFORMANCE

[Camera unit]

- **Image sensor:** 1/2.8" type MOS
- **Lens:** F2.45, f = 1.64 mm/1.11 mm (35mm equivalent)
Horizontal field of view: 121.8° (LDC OFF), 121.0° (LDC ON)
Vertical field of view: 87.8°
Minimum focus distance: 300 mm (0.98 ft)
- **Minimum illumination:** 3 lx (50 IRE, Gain 42 dB, Shutter speed 1/60)
- **Horizontal resolution:** 1400 TV line (center area)
- **Gain selection :** Auto, 0 dB to 42 dB (3 dB steps)

- **Shutter speed:**

Full Auto	• Slow Shutter [ON] / Shutter Priority mode 1/1、1/2、1/5、1/10、1/20、1/30、1/60、1/120、1/240、1/480、1/1000、1/2000、1/4000、1/8000、1/16000 [60 Hz/59.94 Hz] 1/1、1/2、1/5、1/10、1/20、1/25、1/50、1/100、1/250、1/500、1/1000、1/2000、1/4000、1/8000、1/16000 [50 Hz] • Slow Shutter [OFF] 1/60、1/120、1/240、1/480、1/1000、1/2000、1/4000、1/8000、1/16000 [60 Hz/59.94 Hz] 1/50、1/100、1/250、1/500、1/1000、1/2000、1/4000、1/8000、1/16000 [50 Hz]
Manual	1/1、1/2、1/5、1/10、1/20、1/30、1/60、1/120、1/240、1/480、1/1000、1/2000、1/4000、1/8000、1/16000 [60 Hz/59.94 Hz] 1/1、1/2、1/5、1/10、1/20、1/25、1/50、1/100、1/250、1/500、1/1000、1/2000、1/4000、1/8000、1/16000 [50 Hz]

- **Zoom:** Max. 5x Digital Zoom
- **Pan/tilt angle:**
±40.60°/±29.27° (Digital Zoom 3x)
±48.72°/±35.12° (Digital Zoom 5x)
- **White balance adjustment:** ATW, AWB A, AWB B, 3200 K, 5600 K
- **Chroma amount variability :** 11 steps (0 to 10)
- **Color bars :** [59.94 Hz/60 Hz]: SMPTE
[50 Hz]: FULL
- **Scene:** Full Auto, Shutter Priority, Manual
- **Microphone:** Stereo microphone
- **HDMI output format:**

System frequency 59.94 Hz	System frequency 60 Hz	System frequency 50 Hz
2160/59.94p	2160/60p	2160/50p
2160/29.97p	2160/30p	2160/25p
1080/59.94p	1080/60p	1080/50p
1080/29.97p	1080/30p	1080/25p
720/59.94p	720/60p	720/50p

[USB connection]

Supported devices: Equipped with USB2.0/3.0 compatible port.

- **Video output:** USB Video Class Ver1.1
- **Video output format:** Motion JPEG, YUV (no compression).
- **Audio output:** USB Audio Class Ver1.0
- **Audio compression format:** Linear PCM, 48 kHz, 16-bit, 2 channels
- **Resolution/Frame rate**

4K High Frame Rate

Frequency	Format	UVC (3.0)*1	UVC (2.0)*1
60Hz	2160/60p	[MJPG]	[MJPG]
59.94Hz	2160/59.94p	2160/60p, 30p, 15p, 5p 1080/60p, 30p, 15p, 5p 720/60p, 30p, 15p, 5p 360/60p, 30p, 15p, 5p [YUV] 720/60p, 30p, 15p 360/60p, 30p, 15p	2160/30p, 15p, 10p, 5p 1080/60p, 30p, 15p, 5p 720/60p, 30p, 15p, 5p 360/60p, 30p, 15p, 5p [YUV] 360/30p, 15p
50Hz	2160/50p	[MJPG] 2160/50p, 25p, 10p, 5p 1080/50p, 25p, 10p, 5p 720/50p, 25p, 10p, 5p 360/50p, 25p, 10p, 5p [YUV] 720/50p, 25p, 10p 360/50p, 25p, 10p	[MJPG] 2160/25p, 12.5p, 10p, 5p 1080/50p, 25p, 10p, 5p 720/50p, 25p, 10p, 5p 360/50p, 25p, 10p, 5p [YUV] 360/25p, 10p

ePTZ/AI

Frequency	Format	UVC (3.0)*1	UVC (2.0)*1
60Hz	2160/30p	[MJPG]	[MJPG]
	1080/60p	2160/30p, 15p, 10p, 5p	2160/30p, 15p, 10p, 5p
	1080/30p	1080/60p, 30p, 15p, 5p	1080/60p, 30p, 15p, 5p
	720/60p	720/60p, 30p, 15p, 5p 360/60p, 30p, 15p, 5p	720/60p, 30p, 15p, 5p 360/60p, 30p, 15p, 5p
59.94Hz	2160/29.97p	[YUV]	[YUV]
	1080/59.94p	720/60p, 30p, 15p	360/30p, 15p
	1080/29.97p	360/60p, 30p, 15p	
	720/59.94p		
50Hz	2160/25p	[MJPG]	[MJPG]
	1080/50p	2160/25p, 12.5p 10p, 5p	2160/25p, 12.5p 10p, 5p
	1080/25p	1080/50p, 25p, 10p, 5p	1080/50p, 25p, 10p, 5p
	720/50p	720/50p, 25p, 10p, 5p	720/50p, 25p, 10p, 5p
		360/50p, 25p, 10p, 5p	360/50p, 25p, 10p, 5p
		[YUV] 720/50p, 25p, 10p 360/50p, 25p, 10p	[YUV] 360/25p, 10p

<NOTE>

- The frame rate may be lower than the setting depending on the operating conditions.
- *1: The supported file formats vary depending on the USB standard of the connected device.

[IP streaming]

Video compression format: Motion JPEG (web)

H.264(NDI HX, RTSP, RTMP, RTMPS)

H.265(NDI HX, RTSP)

- Resolution/Frame rate**

4K High Frame Rate

Frequency	Format	IP Stream (RTSP/RTMP/NDI HX)	Web (MJPEG)
60Hz	2160/60p	[H.264/H.265] 2160/60p, 30p, 15p, 5p 1080/60p, 30p, 15p, 5p 720/60p, 30p, 15p, 5p 360/60p, 30p, 15p, 5p	720/30p
59.94Hz	2160/59.94p	[H.264/H.265] 2160/59.94p, 29.97p, 14.99p, 5p 1080/59.94p, 29.97p, 14.99p, 5p 720/59.94p, 29.97p, 14.99p, 5p 360/59.94p, 29.97p, 14.99p, 5p	720/29.97p
50Hz	2160/50p	[H.264/H.265] 2160/50p, 25p, 10p, 5p 1080/50p, 25p, 10p, 5p 720/50p, 25p, 10p, 5p 360/50p, 25p, 10p, 5p	720/25p

ePTZ/AI

Frequency	Format	IP Stream (RTSP/RTMP/NDI HX)	Web (MJPEG)
60Hz	2160/30p	[H.264/H.265]	720/30p
	1080/60p	2160/30p, 15p, 5p	
	1080/30p	1080/60p, 30p, 15p, 5p	
	720/60p	720/60p, 30p, 15p, 5p 360/60p, 30p, 15p, 5p	
59.94Hz	2160/29.97p	[H.264/H.265] 2160/29.97p, 14.99p, 5p	720/29.97p
	1080/59.94p	1080/59.94p, 29.97p, 14.99p, 5p	
	1080/29.97p	720/59.94p, 29.97p, 14.99p, 5p	
	720/59.94p	360/59.94p, 29.97p, 14.99p, 5p	
50Hz	2160/25p	[H.264/H.265] 2160/25p, 10p, 5p	720/25p
	1080/50p	1080/50p, 25p, 10p, 5p	
	1080/25p	720/50p, 25p, 10p, 5p	
	720/50p	360/50p, 25p, 10p, 5p	

<NOTE>

- The frame rate may be lower than the setting depending on the operating conditions.

- Audio compression mode**

Audio compression format: AAC-LC, 48 kHz, 16 bit, 2 channels.

- Supported protocol**

IPv4	TCP/IP, UDP/IP, HTTP, RTSP, RTP, RTP/RTCP, DHCP, DNS, ICMP, ARP, RTMP, RTMPS
IPv6	TCP/IP, UDP/IP, HTTP, DNS, DHCP, ICMPv6

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