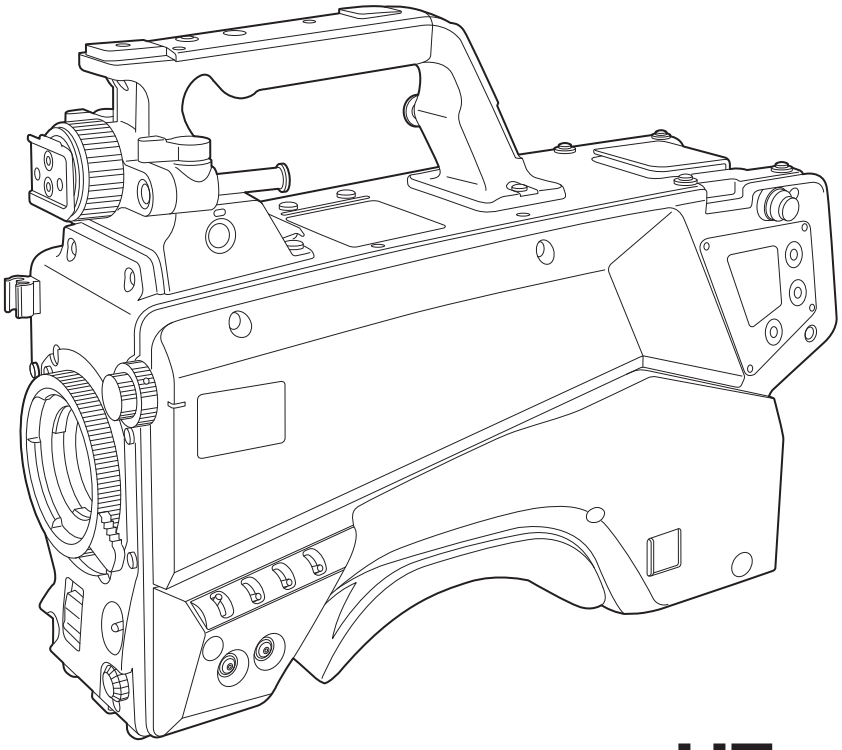
Panasonic

Operating Instructions

4K Studio Camera

Model No. AK-UCX100GS



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

Before operating this product, please read the instructions carefully and save this manual for future use.
Before using this product, be sure to read “Read this first!” (pages 2 to 7).

GSJ
W0125YM1065 -FJ

ENGLISH
DPQP1605YA

Read this first!

▭ indicates safety information.

WARNING:
This equipment must be earthed.
To ensure safe operation, make sure that the optical cable is securely connected to an earthed CCU when in use.
The fact that the equipment operates satisfactorily does not imply that the power point is earthed or that the installation is completely safe. For your safety, if you are in any doubt about the effective earthing of the power point, please consult a qualified electrician.

WARNING:
- To reduce the risk of fire or electric shock, do not expose this equipment to rain or moisture.
- To reduce the risk of fire or electric shock, keep this equipment away from all liquids. Use and store only in locations which are not exposed to the risk of dripping or splashing liquids, and do not place any liquid containers on top of the equipment.

WARNING:
Always keep accessories (camera number sheet, camera hanger and screw) out of the reach of babies and small children.

WARNING:
This equipment is compliant with Class A of CISPR 32.
In a residential environment this equipment may cause radio interference.

CAUTION:
Do not remove panel covers by unscrewing.
To reduce the risk of electric shock, do not remove the covers. No user serviceable parts inside.
Refer servicing to qualified service personnel.

CAUTION:
In order to maintain adequate ventilation, do not install or place this unit in a bookcase, built-in cabinet or any other confined space. To prevent risk of electric shock or fire hazard due to overheating, ensure that curtains and any other materials do not obstruct the ventilation.

CAUTION:
The optical cable shall remain readily operable.
To completely disconnect this equipment from the power supply, disconnect the optical cable from the equipment.

CAUTION:
To reduce the risk of fire or electric shock and annoying interference, use the recommended accessories only.

CAUTION:
Excessive sound pressure from earphones and headphones can cause hearing loss.

CAUTION:
Invisible Laser radiation is emitted from the Optical fiber connector when this product is turned on.
Don’t look into directly into the Optical fiber connector of this product.

CAUTION:
Do not jar, swing, or shake the unit by its handle while another accessory is attached.
Due to the added weight, any strong jolt to the handle may damage the unit or result in personal injury.

CAUTION:
Do not lift the unit by its handle while the tripod is attached. When the tripod is attached, its weight will also affect the unit’s handle, possibly causing the handle to break and hurting the user. To carry the unit while the tripod is attached, take hold of the tripod.

CAUTION:
Do not leave the unit in direct contact with the skin for long periods of time when in use.
Low temperature burn injuries may be suffered if the high temperature parts of this unit are in direct contact with the skin for long periods of time.
When using the equipment for long periods of time, make use of the tripod.

CAUTION:
A coin type battery is installed inside of the unit.
Do not store the unit in temperatures over 60 ºC (140 ºF).
Do not leave the unit in an automobile exposed to direct sunlight for a long period of time with doors and windows closed.

▭ indicates safety information.

CAUTION:

This product uses a semiconductor laser system and is a Class 1 Laser Product complies with Radiation Performance Standards, 21CFR SUBCHAPTER J.
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
Don't make any modifications.
Don't repair by yourself.
Refer servicing to qualified personnel.

FCC NOTICE (USA)

Supplier's Declaration of Conformity
Model Number: AK-UCX100GS
Trade Name: Panasonic
Responsible Party: Panasonic Corporation of North America
Two Riverfront Plaza, Newark, NJ 07102
Support contact: 1-800-524-1448

This device complies with part 15 of the FCC Rules.
Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Note:
This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Warning:
To assure continued FCC emission limit compliance, the user must use only shielded interface cables when connecting to external units. Also, any unauthorized changes or modifications to this equipment could void the user's authority to operate it.

NOTIFICATION (Canada)

CAN ICES-003 (A)/NMB-003(A)

IMPORTANT SAFETY INSTRUCTIONS

1) Read these instructions.
2) Keep these instructions.
3) Heed all warnings.
4) Follow all instructions.
5) Do not use this apparatus near water.
6) Clean only with dry cloth.
7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11) Only use attachments/accessories specified by the manufacturer.
12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13) Unplug this apparatus during lightning storms or when unused for long periods of time.
14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

EMC NOTICE FOR THE PURCHASER/USER OF THE APPARATUS

1. Pre-requisite conditions to achieving compliance with the above standards

<1> Peripheral equipment to be connected to the apparatus and special connecting cables

- The purchaser/user is urged to use only equipment which has been recommended by us as peripheral equipment to be connected to the apparatus.
- The purchaser/user is urged to use only the connecting cables described below.

<2> For the connecting cables, use shielded cables which suit the intended purpose of the apparatus.

- Video signal connecting cables
  Use double-shielded coaxial cables, which are designed for 75-ohm type high-frequency applications, for SDI (Serial Digital Interface).
  Coaxial cables, which are designed for 75-ohm type high-frequency applications, are recommended for analog video signals.
- Audio signal connecting cables
  If your apparatus supports AES/EBU serial digital audio signals, use cables designed for AES/EBU.
  Use shielded cables, which provide quality performance for high-frequency transmission applications, for analog audio signals.
- Other connecting cables
  Use shielded cables, which provide quality performance for high-frequency applications, such as connecting cables for IEEE1394 or USB.
- When connecting to the HDMI signal terminal, use multilayer shielded cables, which provide quality performance for high-frequency applications.
- When connecting to the DVI signal terminal, use a cable with a ferrite core.
- If your apparatus is supplied with ferrite core(s), they must be attached on cable(s) following instructions in this manual.

2. Performance level

The performance level of the apparatus is equivalent to or better than the performance level required by these standards.
However, the apparatus may be adversely affected by interference if it is being used in an EMC environment, such as an area where strong electromagnetic fields are generated (by the presence of signal transmission towers, cellular phones, etc.). In order to minimize the adverse effects of the interference on the apparatus in cases like this, it is recommended that the following steps be taken with the apparatus being affected and with its operating environment:

1. Place the apparatus at a distance from the source of the interference.
2. Change the direction of the apparatus.
3. Change the connection method used for the apparatus.
4. Connect the apparatus to another power outlet where the power is not shared by any other appliances.

< Предупреждение >

Следуйте нижеприведённым правилам, если иное не указано в других документах.

1. Устанавливайте прибор на твёрдой плоской поверхности, за исключением отсоединяемых или несъёмных частей.
2. Хранить в сухом, закрытом помещении.
3. Во время транспортировки не бросать, не подвергать излишней вибрации или ударам о другие предметы.
4. Утилизировать в соответствии с национальным и/или местным законодательством.

Правила и условия реализации не установлены изготовителем и должны соответствовать национальному и/или местному законодательству страны реализации товара.

AEEE Yönetmeliğine Uygundur.
AEEE Complies with Directive of Turkey.

ІНФОРМАЦІЯ ПРО ПІДТВЕРДЖЕННЯ ВІДПОВІДНОСТІ ПРОДУКТУ

Виробник:	Panasonic Entertainment & Communication Co., Ltd.	Панасонік Ентертейнмент енд Коммюнікейшн Ко., Лтд.
Адреса виробника:	Moriguchi, Osaka, Japan	Моріґучі Осака Японія
Країна походження:	Japan	Японія

Уповноважений Представник:	ТОВ “ПАНАСОНІК УКРАЇНА ЛТД”
Адреса Уповноваженого Представника:	вул. Васильківська, буд. 30, м. Київ, 03022, Україна

Примітки:

Термін служби виробу	7 років

Дату виготовлення можна визначити за комбінацією букв і цифр серійного номера, що розташований на маркувальній табличці виробу.

Приклад: X X XXXXXXX

Рік: остання цифра року (5 – 2015, 6 – 2016,…0 – 2020)
Місяць: A – Січень, B – Лютий… L – Грудень

Manufactured by:
Panasonic Entertainment & Communication Co., Ltd.
1-10-12, Yagumo-higashi-machi, Moriguchi City, Osaka, Japan
Importer:
Panasonic Connect Europe GmbH
Hagenauer Strasse 43, 65203 Wiesbaden, Germany
Authorized Representative in EU:
Panasonic Connect Europe GmbH
Panasonic Testing Centre
Winsbergring 15, 22525 Hamburg, Germany

Importer for UK:
Panasonic Connect UK,
a branch of Panasonic Connect Europe GmbH,
Maxis 2, Western Road, Bracknell, Berkshire, RG12 1RT

UK CA

TO REMOVE BATTERY

Main Power Battery (Ni-Cd / Ni-MH / Li-ion Battery)

- To detach the battery, please proceed in the reverse order of the installation method described in this manual.
- If a battery made by any other manufacturer is to be used, check the Operating Instructions accompanying the battery.

Back-up Battery (Lithium Battery)

- For the removal of the battery for disposal at the end of its service life, please consult your dealer.

WARNING:

THIS PRODUCT CONTAINS A COIN BATTERY

- INGESTION HAZARD: This product contains a button cell or coin battery.
- DEATH or serious injury can occur in 2 hours or less if swallowed or placed inside any part of the body.
- The battery is hazardous, KEEP new and used batteries OUT OF REACH of CHILDREN.
- Seek immediate medical attention if a battery is suspected to be swallowed or inserted inside any part of the body.

Battery recycling symbol (valid only in Taiwan)

臺灣限定的廢電池回收標識。

廢電池請回收

CE The CE mark covers battery(ies) supplied with the product and that this battery(ies) comply with the requirements of the Battery Regulation (EU) 2023/1542.

Information for Users in India

Information on hazardous constituents as specified in the E-Waste (Management) Rules in electrical and electronic equipment.
Declaration of Conformity with the requirements of the E-Waste (Management) Rules limits with respect to Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls, Polybrominated diphenyl ethers.
The content of hazardous substance with the exemption of the applications listed in the E-Waste (Management) Rules:

1. Lead (Pb) – not over 0.1% by weight.
2. Cadmium (Cd) – not over 0.01% by weight.
3. Mercury (Hg) – not over 0.1% by weight.
4. Hexavalent chromium (Cr6+) – not over 0.1% by weight.
5. Polybrominated biphenyls (PBBs) – not over 0.1% by weight.
6. Polybrominated diphenyl ethers (PBDEs) – not over 0.1% by weight.

For the purpose of recycling to facilitate effective utilization of resources, please return this product to a nearby authorized collection center, registered dismantler of recycler, or Panasonic service center when disposing of this product.
Customer care number (Toll free) : 080-6984-1333
Please see the Panasonic website for further information on collection centers, etc. or call the customer care toll-free number.
https://www.panasonic.com/in/corporate/e-waste-management.html

Do's & Don'ts		
No.	Do's	Don'ts
1	All electrical and electronic products are required to be handed over only to the Authorized recycler.	The product should not be opened by the user himself / herself, but only by authorized service personnel.
2	The product should be handed over only to authorized recycler for disposal.	The product is not meant for re-sale to any unauthorized agencies / scrap dealers / kabariwalas.
3	Keep the product in an isolated area, after it becomes non-functional / unrepairable so as to prevent its accidental breakage.	The product is not meant for mixing into household waste stream.
4	Refer to Operating Instructions for handling of end of life products.	Do not keep any replaced spare part(s) from the product in an exposed area.
5	Always dispose of products that have reached end of life at Panasonic Life Solutions India Authorized Service Centre.	Do not donate old electronic items to anybody. Do not dispose of your product in garbage bins along with municipal waste that ultimately reaches landfill.
6	Wherever possible or as instructed, separate the packaging material according to responsible waste disposal options and sorting for recycling.	Do not give e-waste to informal and unorganized sectors like Local Scrap Dealers / Rag Pickers.

- Microsoft®, Windows®, Windows® 10, Windows® 11 and Microsoft Edge are either registered trademarks or trademarks of Microsoft Corporation in the United States and other countries.
- Apple, Mac, macOS, and Safari are registered trademarks of Apple Inc., in the United States and other countries.
- Chrome™ browser is a trademark of Google LLC.
- Intel® and Intel® Core™ are trademarks or registered trademarks of Intel Corporation in the United States and other countries.
- NDI® is a video connectivity technology and is registered as a trademark by Vizrt NDI AB in the United States and other countries.
- Other names of companies and products contained in these Operating Instructions may be trademarks or registered trademarks of their respective owners.
- Transferring, copying, disassembling, decompiling, reverse engineering, and exporting in violation of export laws of any software included with this product are strictly prohibited.

How to read this document

■ Illustrations

- Illustrations of the camera, menu screens, and other items, may vary from the actual products.
- Screenshots are used according to guidelines provided by Microsoft Corporation.

■ Conventions used in this manual

- Words and phrases in [ ] brackets indicate content displayed in the viewfinder or monitor.
- Words and phrases in < > brackets indicate design text used on this camera, such as button names.

■ Reference pages

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

■ Terminology

- Windows® Internet Explorer® 11 32/64-bit is abbreviated to “Internet Explorer”.
- The Camera Control Unit is referred to as “CCU”.
- The Remote Operation Panel is referred to as “ROP”.

Contents

Chapter 1 Overview

Before using the camera, read this chapter.

Before using the camera

■ Connecting to CCU

- Connect this camera to a designated CCU that is properly grounded.

■ Use appropriate lighting when shooting to capture images with clear color

- To make the color of images clear, use appropriate lighting for shooting.
- Colors may not be reproduced correctly under fluorescent lighting. Select appropriate lighting as necessary.
- Use the ND filter in excessively bright locations.

■ Turn off the power before connecting or disconnecting the cables

- Turn off the power of the devices before connecting or disconnecting the cables.

■ Handling of the camera

- Do not drop or add strong impact or vibration to the camera. Doing so may lead to failure.

■ Do not touch optical system parts

- The optical system parts are the “life” of the camera. Do not touch the optical systems on occasions such as when the lens is removed. In the event that dust has adhered, use a blower for cameras or lens cleaning paper to gently remove the dust.

■ Do not shoot images toward sunlight or a laser beam

- Shooting toward sunlight or a laser beam for a long period of time may result in damage of the MOS.

■ When using the camera in rain or snow, or on a beach or shore

- Use a rain cover (optional), etc. to prevent water from splashing on or entering the camera.

■ Humidity and dust

- The internal parts of the camera are more easily damaged in humid and dusty locations. Avoid such locations.
- Cover the terminals that are not in use with their protective caps.

■ Temperature range for use

- Using the camera under the following conditions may have negative effects on the image quality or internal parts of the camera. Avoid such locations.
  Cold places where the temperature is −10 °C (14 °F) or below
  Hot places where the temperature is 45 °C (113 °F) or above
- Preheating is required in a low-temperature environment. Confirm ⚠ is not lit before using the camera.

■ Cleaning

- Turn off the power and clean the camera with a dry cloth. If the dust cannot be removed with a dry cloth, try soaking the cloth with kitchen detergent to gently wipe off the dust.
- Use lens cleaning paper (for use with glasses or cameras) when cleaning the lens.

■ Optical fiber connector

- The transmission and reception conditions of optical signals will deteriorate when the optical fiber connector has become dirty. Be sure to clean the connector. (page 27)

■ Cooling fan

- The camera has an internal cooling fan.
- The cooling fan is a consumable supply. Replace it after approximately 25,000 hours of use. Be sure to contact your dealer for the replacement.

■ Peripheral devices and software

- The software of the peripheral devices (CCU and ROP) that are connected to AK-UCX100GS may require upgrading.
- For details, contact your dealer.

■ Consult your dealer for internal cleaning of the camera approximately once a year.

- Continued use of the camera with build-up of dust inside may result in a fire or failure.

■ Information on software used with this product

- 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.
  This product includes MIT Licensed software.
  This product includes BSD 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.

■ 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.
  (i) Recording of image information in compliance with the AVC standard (hereafter, “AVC videos”)
  (ii) Playing of AVC videos recorded by consumers engaging in personal activities or AVC videos acquired from licensed providers
  For details, visit MPEG LA, LLC website (http://www.mpegla.com).

■ Disposal of the unit

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

■ JPEG XS patent pool licensing

This product or service includes JPEG XS compliant features that are covered by patents in the United States and in other jurisdictions owned by intoPIX SA (“intoPIX”) and/or Fraunhofer-Gesellschaft zur Foerderung der angewandten Forschung E.V. (“Fraunhofer”) and listed at www.jpegxspool.com. Additional patents may be pending in United States and elsewhere.

Notes

Required environment for computer

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 × 1080 pixels or more Color generation: True Color 24-bit or more
Supported operating systems and web browsers	**For Windows:** Microsoft® Windows® 11 Microsoft® Windows® 10 Microsoft Edge (most recent version) Google Chrome
	For Mac: macOS15 macOS14 macOS13 Safari Google Chrome

IMPORTANT

- **Failure to provide the required personal computer environment may slow down the delineation of the images on the screen, make 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 page at the following website.
  https://pro-av.panasonic.net/en/

Disclaimer

In any case, Panasonic will not liable for any of the following:

- Incidental, special, or consequential damage or harm caused directly or indirectly in regard to the camera
- Trouble or malfunctions caused by the misuse or careless use of a user
- Disassembly, repair, or modification of the camera performed by a user
- Inconvenience, damage, or harm arising from the inability to display images as a result of any reason or cause including failure or malfunction of the camera
- Malfunctions arising from a system that has been combined with a third party device or any inconvenience, damage, or harm caused as a result thereof
- Inconvenience, damage, or harm caused by such as improper installation or any reason other than a defect of the camera
- Any loss of stored information due to any reason
- Any damage or claim regarding loss or leakage of image data or setting data saved in the camera or computer

Notes regarding network

As the unit intended to be used while connected to a network, the following security risks exist.

1. Leakage or theft of information through the unit
2. Unauthorized operation of the unit 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. Panasonic does not accept any responsibility for damage of this type.

- 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 programs (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 unit in locations where the unit, cables, and other parts can be easily damaged or destroyed by persons with malicious intent.
- Avoid connections that use public lines.

NOTE

Notes on user authentication

- User authentication on the unit can 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 or host authentication.

Usage restrictions

- We recommend connecting the unit, controller, and any computers to the same network segment.
  Events based on settings inherent to the network devices, for example, may occur in connections that include different segments, so be sure to perform checks prior to operation.
- When using the ROP, set [Wait time mode] to [Mode2] when using digest authentication. (page 155)
  Smooth operation may be diminished when [Wait time mode] is set to [Mode1].

Using the camera in a system

An example of a standard system consisting of the 4K Studio Camera (AK-UCX100GS) and peripheral devices is as follows.
For details on the connected devices, refer to the Operating Instructions of each device.

Basic configuration devices

The basic system configuration includes the lens, 4K Studio Camera, viewfinder, Camera Control Unit (CCU) or the camera fiber adaptor, and Remote Operation Panel (ROP).

Part name	Part No.	Remark
0.7-inch FHD OLED viewfinder	AJ-CVF70G	This is the viewfinder for 4K Studio Camera.
3.45-inch color viewfinder	AJ-CVF25G	—
9-inch LCD viewfinder	AK-HVF100G	This is the LCD viewfinder for 4K Studio Camera.
Lens	FUJINON/CANON	—
Camera Control Unit (CCU)	AK-UCU700P/AK-UCU700PS/AK-UCU700E/ AK-UCU700ES/AK-UCU710P/AK-UCU710PS/ AK-UCU710E/AK-UCU710ES	This is the camera control unit for 4K Studio Camera. It is connected to 4K Studio Camera using an optical fiber multi cable. Do not connect anything other than AK-UCU700P/ AK-UCU700PS/AK-UCU700E/AK-UCU700ES/AK-UCU710P/AK-UCU710PS/AK-UCU710E/ AK-UCU710ES.
Remote Operation Panel (ROP)	AK-HRP1010G AK-HRP1015G	This is connected to the CCU using the ROP cable to remotely control the camera, CCU, and lens.
Camera Fiber Adaptor	AK-CFA100PS/AK-CFA100ES	This is the camera fiber adaptor for 4K Studio Camera. It is connected to 4K Studio Camera using an optical fiber multi cable.

Expanded configuration devices

The following devices can also be used in addition to the basic configuration devices.

Part name	Part No.	Remark
Microphone kit	AG-MC200G	“Connecting a microphone” (page 40)
Microphone holder	AJ-MH800G	“Connecting a microphone” (page 40)
5G mobile router (supports USB tethering)*	—	Video transmission is made possible using wireless connections.
Master setup unit	AK-MSU1000GJ	The master setup unit is not necessary if multiple cameras are not to be controlled.
Build-up Unit	AK-HBU500G	This allows to mount large lens to the 4K Studio Camera, allowing an equivalent operation as the large camera. Do not connect anything other than AK-HBU500G.
Tripod adaptor	SHAN-TM700	“Tripod mount” (page 23)

* Visit the support desk available on the following website for information on 5G mobile routers that can be connected.
https://pro-av.panasonic.net/en/

System block diagram

When connecting to a CCU

- Connect the SFP28 module to the <SFP 1> terminal as shown in figure 1. (factory setting)
- Set [ALL MENU] → [BASIC CONFIG] → [OPT MODE] to [CCU CONNECT].

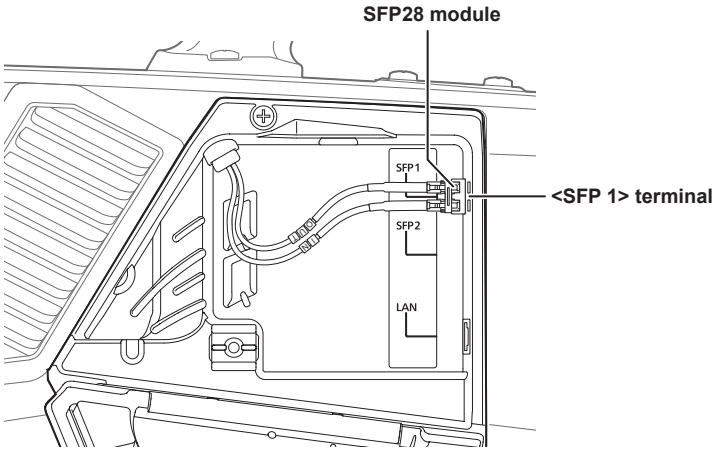
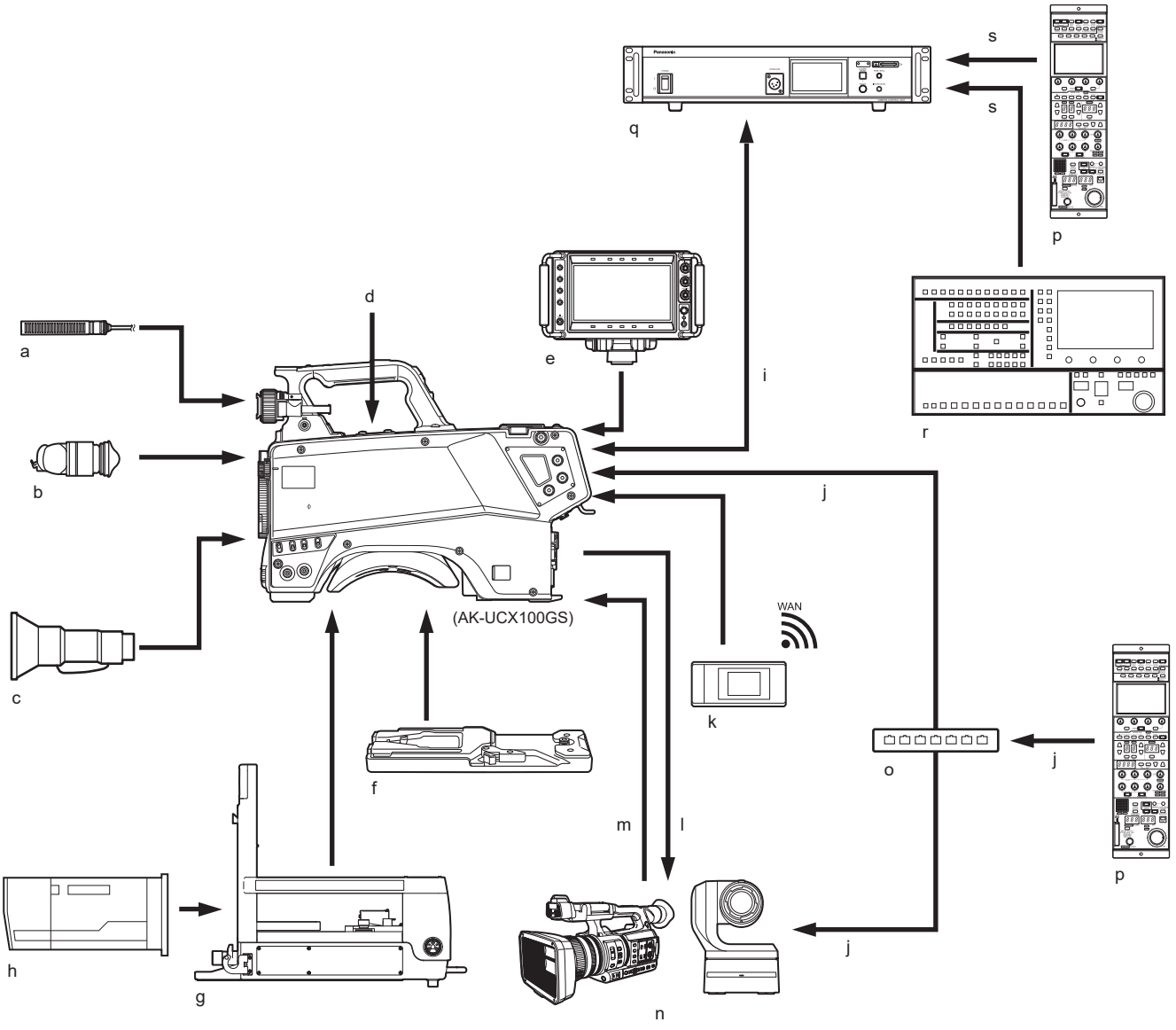


Fig. 1



a: Microphone
b: Color viewfinder
c: Lens
d: Microphone holder
e: LCD viewfinder
f: Tripod adaptor
g: Build-up Unit
h: Large lens
i: Optical fiber multi cable
j: LAN cable
k: <USB3.0 HOST> 5G mobile router
l: <REF OUT> BNC cable
m: <TRUNK IN> BNC cable
n: Camera recorder, remote camera, etc.
o: PoE++ compatible switching hub
p: Remote Operation Panel (ROP)
q: Camera Control Unit (CCU)
r: Master setup unit
s: ROP cable

When connecting to a camera fiber adaptor

- Connect the SFP28 module to the <SFP 1> terminal as shown in figure 2. (factory setting)
  You can use 2 BiDi SFP28 modules to build redundancy into your system. Refer to “Attaching the SFP modules” (page 33) for instructions on how to attach.
- Set [ALL MENU] → [BASIC CONFIG] → [OPT MODE] to anything other than [CCU CONNECT].

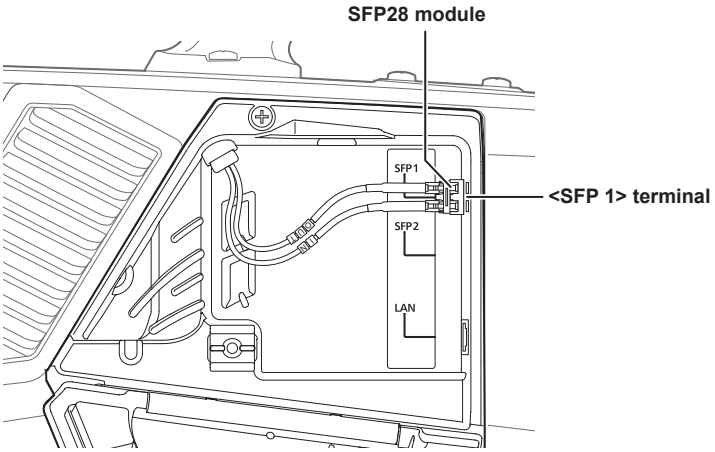
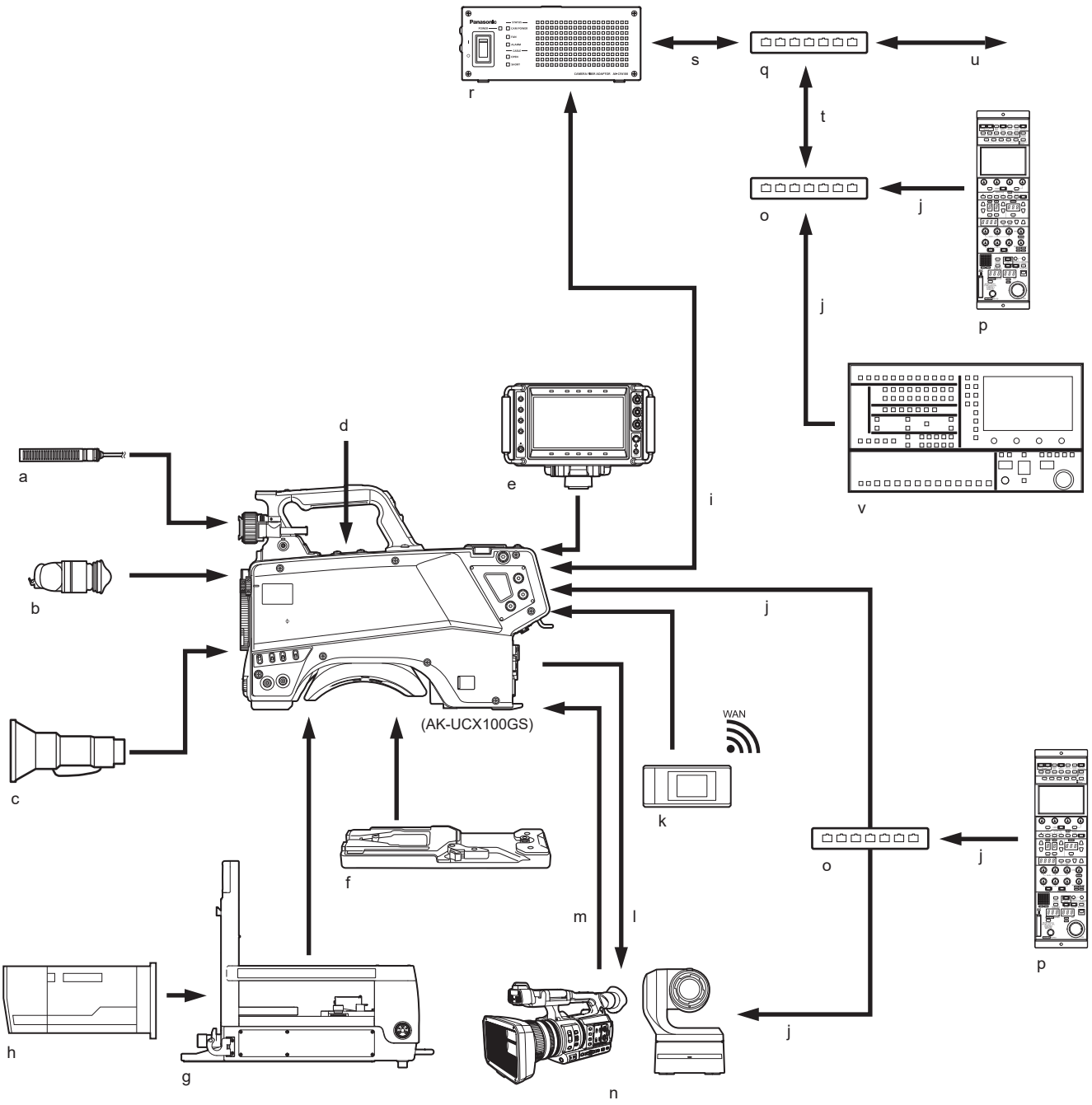


Fig. 2



a: Microphone
b: Color viewfinder
c: Lens
d: Microphone holder
e: LCD viewfinder
f: Tripod adaptor
g: Build-up Unit
h: Large lens
i: Optical fiber multi cable
j: LAN cable
k: <USB3.0 HOST> 5G mobile router
l: <REF OUT> BNC cable
m: <TRUNK IN> BNC cable
n: Camera recorder, remote camera, etc.
o: PoE++ compatible switching hub
p: Remote Operation Panel (ROP)
q: Broadband network switch
r: Camera fiber adaptor
s: Single mode fiber cable
t: NMOS LAN cable
u: ST2110
v: Master setup unit

When using the camera by itself

You can also build redundancy into your system by using an external DC power supply.
As shown in figure 3, attach 2 SFP28 modules (one of which is an optional accessory, purchased separately) to the <SFP 1> terminal and the <SFP 2> terminal and use 2 single mode fiber cables (optional).

Refer to “Attaching the SFP modules” (page 33), and connect as shown in figure 3 for instructions on how to attach.

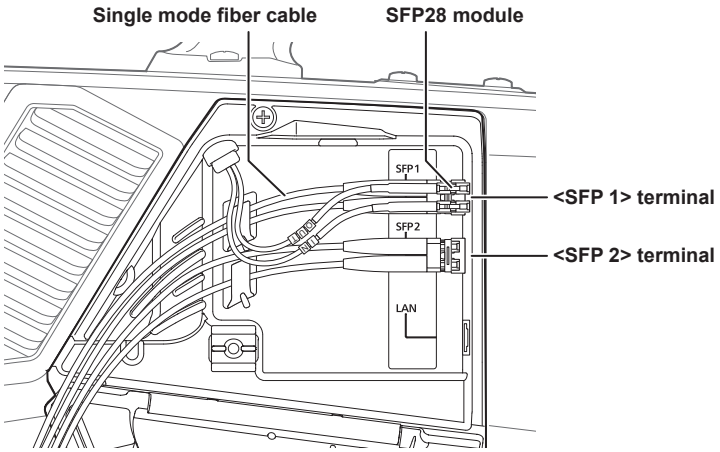
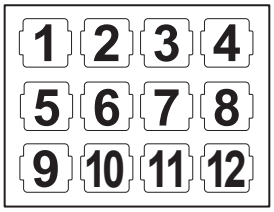


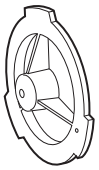
Fig. 3

Accessories

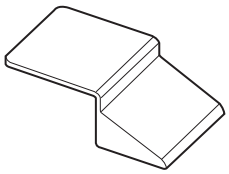
Camera number sheet (1 to 12)



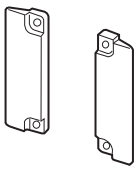
Mount cap (already attached to the product)



D-sub connector cover (already attached to the product)



Camera hanger (x 2)



Screw (M3 × 8 mm) (x 4)

NOTE

- Properly dispose of the packaging materials after unboxing the product.
- The camera hangers and screws are used to attach to the Build-up Unit (AK-HBU500G). Store them carefully.

Frame frequency setting

To change the frame frequency, follow the steps below to set it.

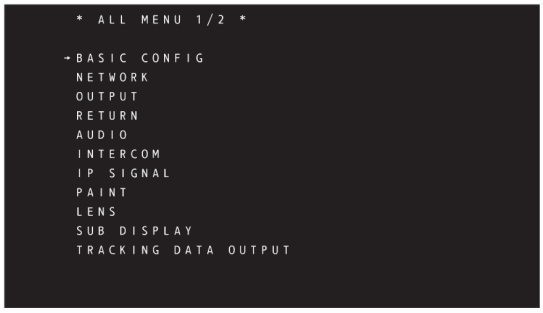


Fig. 1

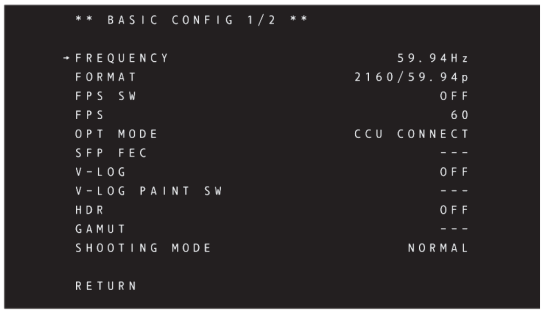


Fig. 2

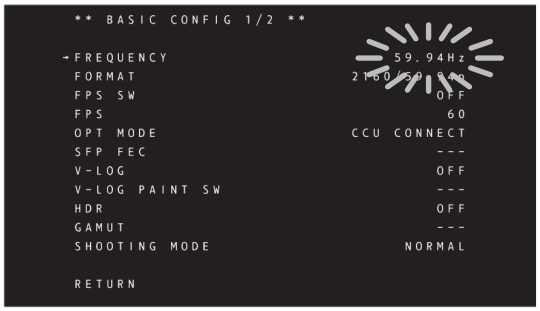


Fig. 3

1 Attach the viewfinder (page 34) or connect the monitor to the <SDI OUT 2> terminal (page 29).

2 Connect the DC power supply.

Follow the frame frequency of the CCU when the CCU is connected.

3 Set the <POWER> switch to <ON>.

4 Press <MENU>.

[ALL MENU] is displayed.
For details on operations, refer to “Menu operations” (page 45).

5 Turn the <SELECT> dial button to move the cursor (arrow) to [BASIC CONFIG]. (Fig. 1)

6 Press the <SELECT> dial button.

7 Turn the <SELECT> dial button to move the cursor (arrow) to [FREQUENCY]. (Fig. 2)

[FREQUENCY] cannot be selected right after the power is turned on, because boot of the camera is in progress.
This is not an error. Perform operation after a while.

8 Press the <SELECT> dial button.

9 Turn the <SELECT> dial button to select the format. (Fig. 3)

10 Press the <SELECT> dial button.

The frame frequency setting is confirmed.
The camera will be restarted automatically.

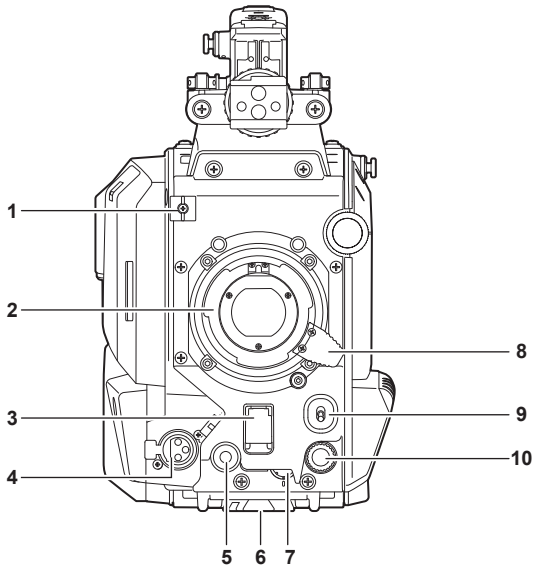
NOTE

- The clock is not set at the time of shipment. Press <MENU>, set the clock in the [DATE/TIME] menu screen, then start using the unit. (page 99) The clock can also be set in the [Date&Time] clock setting screen in the web screen. (page 118)
- Also set the clock if [DATE/TIME HAS BEEN RESET] is displayed.

Chapter 2 Description of Parts

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

Front side



1 Lens cable/microphone cable clamp
Used for securing the lens and microphone cables.

2 Lens mount (Bayonet type)
This is where the lens is mounted.

3 <SHUTTER> switch
This is the electronic shutter switch.
<OFF>: Disables the electronic shutter.
<ON>: Enables the electronic shutter.
<SEL>: Switches the shutter speed within the preset range.
This switch cannot be used when the CCU or ROP is connected to the camera.

4 <MIC> terminal (front)
Used to connect the microphone (optional).
When using, set the switch on the rear side as follows.
- <LINE/MIC/+48V> selector switch (<MIC 1>): <MIC> or <+48V> (when using a phantom microphone)
- <FRONT>/<REAR> switch (<MIC 1>): <FRONT>

5 <USER 1> button
A user-selected function can be assigned to this button. Pressing the button performs the assigned function.

6 Tripod mount
Used to attach the tripod adaptor SHAN-TM700 (optional) when mounting the camera on a tripod.

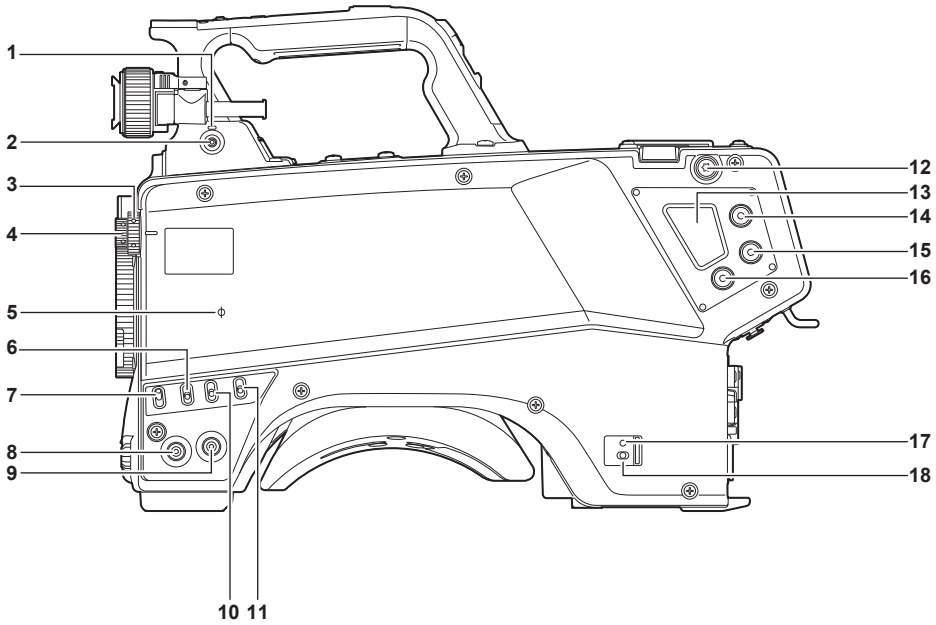
7 <INCOM LEVEL> dial (front)
Used to adjust the volume level of the intercom according to the settings of <REAR>/<INC1 FRONT>/<INC2 FRONT> on the rear side.
- **<REAR>:** Cannot adjust the volume level.
- **<INC1 FRONT>:** Adjusts the volume level of the intercom 1.
- **<INC2 FRONT>:** Adjusts the volume level of the intercom 2.

8 Lens lever
After the lens is mounted on the lens mount, this lever can be tightened to secure the lens.

9 <AUTO W/B BAL> switch
<AWB>: Automatically adjusts the white balance. When the white balance is automatically adjusted with the <WHITE BAL> switch on the side of the camera set to the <A> or <B> position, the white balance is adjusted in several seconds and the adjusted value is stored in the memory.
<ABB>: Automatically adjusts the black balance.
The operation performed when the CCU or ROP is connected to the camera can be set from [ALL MENU] → [SWITCH ASSIGN] → [W/B BAL SETTING].

10 <SELECT> dial button
Turning the <SELECT> dial button while the menu screen is displayed moves the cursor to a setting item. The menu setting can be confirmed by pressing the <SELECT> dial button.
For details on operations, refer to “Menu operations” (page 45).

Left side



1 <LOCAL> lamp
While this lamp is lit, the <ND> filter and <FX> filter can be adjusted manually.

2 <FILTER LOCAL> switch
This switch sets whether to adjust the <ND> filter and <FX> filter manually or remotely.

3 <FX> filter dial
Select the filter for the desired effect.
<A><CLEAR>: Does not use the FX filter.
<B><CLEAR(OP)>: Does not use the FX filter. Refer to the place of purchase for information about the optional HD-Low Pass Filter.
<C><CROSS>: Sets the cross filter.
<D><DF0>: Sets the diffusion filter.
<E><CAP>: Shuts out light from entering the MOS sensor.

NOTE

- Do not turn the <FX> filter dial when the <LOCAL> lamp is off.

4 <ND> filter dial
This dial selects the filter to suit the brightness of the subject.
<1><CLEAR>: Does not use the ND filter.
<2> <1/2ND>: Reduces the amount of light entering the MOS sensor to 1/2.
<3><1/4ND>: Reduces the amount of light entering the MOS sensor to 1/4.
<4><1/16ND>: Reduces the amount of light entering the MOS sensor to 1/16.
<5><1/64ND>: Reduces the amount of light entering the MOS sensor to 1/64.

NOTE

- Do not turn the <ND> filter dial when the <LOCAL> lamp is off.

5 <ϕ> mark
Indicates the focal plane of the MOS sensor.
Use this mark as a reference to accurately measure the focal distance from the subject.

6 <GAIN> switch
Switches the gain for the camera image. (<L>, <M>, <H>)
The gain can be configured with the CCU.
This switch cannot be used when the CCU or ROP is connected to the camera.

7 <DISP/MODE CHK> switch
This is a spring switch which can be used to check the shooting status etc.

- Push this switch towards <OFF> to hide all displays except for the operation status display of the viewfinder, frame display such as an area, marker, and safety zone.
- Push this switch towards <CHK> to display in the viewfinder the setting status for shooting functions, and the list of functions assigned to the <USER 1>/<USER 2>/<USER 3>/<USER 4>/<USER 5>/<USER 6> buttons, etc. Pushing the switch towards <CHK> again while information is being displayed switches the display to the next information page. The mode check information display disappears after approximately three seconds.

8 <MENU> button
Press this button to display the camera's [ALL MENU] screen.
Press the button again to return to the original image.

9 <USER 2> button
A user-selected function can be assigned to this button. Pressing the button performs the assigned function.

10 <OUTPUT> switch

Switches video output (<CAM>, <BARS>, <TEST>).
This switch cannot be used when the CCU or ROP is connected to the camera.

11 <WHITE BAL> switch

Selects the white balance memory. Data can be recorded to <A> or <B>.
<PRST>: The white balance configured in [ALL MENU] → [PAINT] → [COLOR TEMP SETTING] is set.
This switch cannot be used when the CCU or ROP is connected to the camera.

12 Shoulder strap fittings

Used to attach the shoulder strap.

13 <DC OUT 12V 2.5A> terminal

This terminal is a DC 12 V output terminal. It provides a maximum current of 2.5 A.
If the current exceeds the rating, the current will be cut off intermittently.
When the total power being taken from the <DC OUT 12V 1A>, <DC OUT 12V 2.5A>, and <USB 3.0 HOST> terminals is detected as exceeding the rated amount, the amount of power supplied to each of the terminals is limited.

NOTE

- Immediately disconnect external equipment if the power supply to external equipment is cut off intermittently. Failure to do so may lead to a malfunction.
- When connecting external equipment, first fully check the polarities and current consumption. Failure to do so may lead to a malfunction.

14 <USER 4> button

A user-selected function can be assigned to this button. Pressing the button performs the assigned function.

15 <USER 5> button

A user-selected function can be assigned to this button. Pressing the button performs the assigned function.

16 <USER 6> button

A user-selected function can be assigned to this button. Pressing the button performs the assigned function.

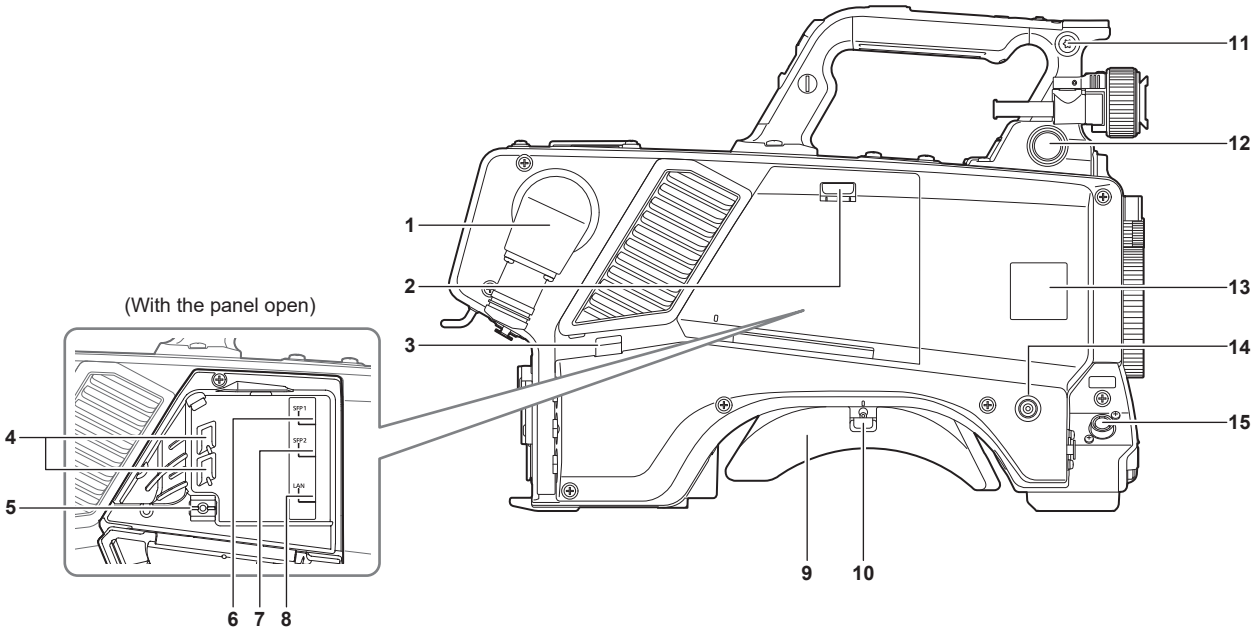
17 Power indicator lamp

Lights up in green when power is supplied to the camera.
ON (green): The camera power is on
ON (red): The camera power is off while the camera is connected to the CCU or the camera fiber adaptor which is turned on
OFF: The camera power is off with the CCU or the camera fiber adaptor not connected, or the camera is connected to the CCU or the camera fiber adaptor which is turned off

18 <POWER> switch

Selects the camera power input, or turns off the power.
<CCU>: When the camera is connected to the CCU or the camera fiber adaptor, this switch turns on the power with the power supplied from the CCU or the camera fiber adaptor.
<EXT>: When an external DC power supply is connected to the camera, this switch turns on the power with the power supplied from the external DC power supply.
Center position: Turns off the power.

Right side



1 <OPT FIBER> terminal
Used to connect with the CCU or the camera fiber adaptor using the optical fiber multi cable. When the terminal is not in use, attach the dust cap.

2 Panel lock release
Release the lock to open the panel.

3 Cable clamp
This clamp is used to gather the different cables connected to the terminals inside the panel.

4 Optical fiber cable clamps
These clamps are used to secure the optical fiber cable connected from outside the unit to the <SFP 1>/<SFP 2> terminal.

5 LAN cable clamp
This clamp is used to secure the LAN cable.

6 <SFP 1> terminal
Used to connect an SFP28/BiDi SFP28 optical fiber module.

NOTE

- An SFP28 module and optical fiber cable have already been connected to the <OPT FIBER> terminal.

7 <SFP 2> terminal
Used to connect an SFP28/BiDi SFP28 optical fiber module.

8 <LAN> terminal
Used to connect the LAN cable (100BASE-TX/1000BASE-T).

NOTE

- A category 5e or better STP (Shielded Twisted Pair) cable should be used as the cable to connect to the <LAN> terminal.

9 Shoulder pad
Reduces the burden on the shoulder when the camera is carried on your shoulder.

10 Slide lock release lever
Releases this lever when changing the shoulder pad position.

11 Shoulder strap fittings
Used to attach the shoulder strap.

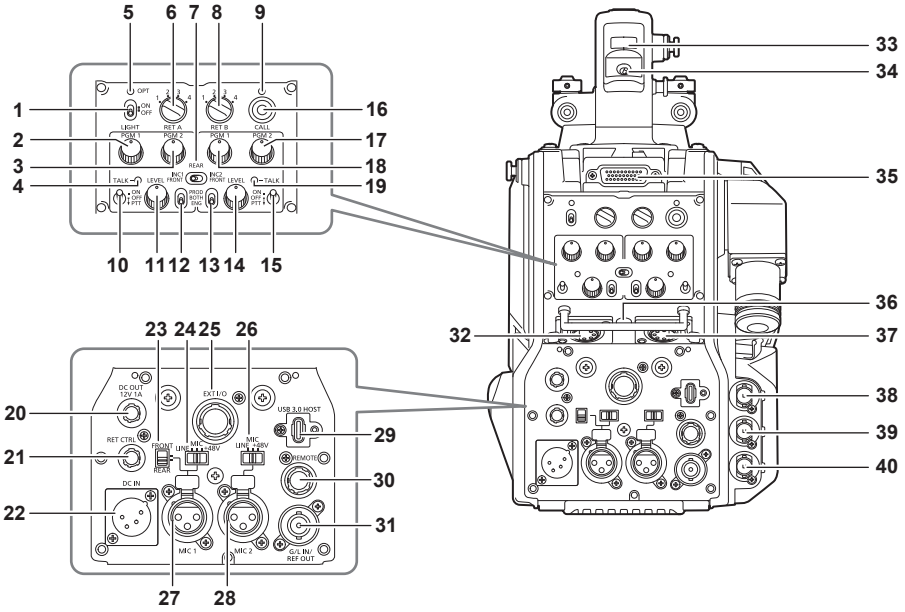
12 <VF> terminal
Used to connect the plug of the viewfinder.

13 Camera number sheet holder
Attach the supplied camera number sheet.

14 <USER 3> button
A user-selected function can be assigned to this button. Pressing the button performs the assigned function.

15 <LENS> terminal
Used to connect the lens cable.

Rear side



1 <LIGHT> switch
Used to turn the back panel lamp on/off.

2 <PGM1> dial (<INTERCOM1>)
Used to adjust the level of the audio or mixing ratio set from [ALL MENU] → [INTERCOM] → [LEVEL/PGM1/PGM2 VR SETTING] → [INTERCOM1 PGM1 VR].

3 <PGM2> dial (<INTERCOM1>)
Used to adjust the level of the audio or mixing ratio set from [ALL MENU] → [INTERCOM] → [LEVEL/PGM1/PGM2 VR SETTING] → [INTERCOM1 PGM2 VR].

4 <TALK> lamp (<INTERCOM1>)
Lights up when the <TALK> switch (<INTERCOM1>) is enabled.

5 <OPT> lamp
Indicates the camera's optical signal reception status.
Normal: Lit in green
Error: Lit in red

NOTE

- When an error has occurred, turn off the power of this camera and the CCU or the camera fiber adaptor, and then clean the optical fiber connector. If the error persists, immediately turn off the power, and contact your dealer.

6 <RET A> switch
Used to switch the type of the return A image.

7 <REAR>/<INC1 FRONT>/<INC2 FRONT> switch
Used to switch the receiving target of the intercom.

- **<REAR>:** Adjusts the volume level of the intercom using the <LEVEL> dials of <INTERCOM1> and <INTERCOM2> on the rear side.
- **<INC1 FRONT>:** Adjusts the volume level of the intercom 1 using the <INCOM LEVEL> dial (front).
- **<INC2 FRONT>:** Adjusts the volume level of the intercom 2 using the <INCOM LEVEL> dial (front).

8 <RET B> switch
Used to switch the type of the return B image.

9 <CALL> lamp
Lights up in green when the call switch is pressed from the ROP or CCU.
The lamp will flash in the following cases.

- When the <POWER> switch is set to <EXT>:
  If the camera detects that the total current consumption including external DC output exceeds the rating, the lamp will flash in red.
  If the camera detects that external DC output exceeds the rating, the lamp will flash in orange.
- When the <POWER> switch is set to <CCU>:
  If the camera detects that the voltage supplied from the CCU or the camera fiber adaptor is lower than the rating, the lamp will flash in red.
  If the camera detects that external DC output exceeds the rating, the lamp will flash in orange.

NOTE

- The voltage supplied from the CCU or the camera fiber adaptor will change depending on the total power consumption which includes the following conditions.
  Length of an optical fiber multi cable and the power consumption of the camera which includes the DC output
  Attaching AK-HBU500G

10 <TALK> switch (<INTERCOM1>)
This switch is the <ON>/<OFF>/<PTT> selector switch of the intercom microphone connected to the <INTERCOM1> terminal.
Pushes the switch towards <ON>/<PTT> to turn on the microphone.

11 <LEVEL> dial (<INTERCOM1>)
Used to adjust the volume level of the intercom 1 when the mixing function of the intercom connected to the <INTERCOM1> terminal and the PGM is enabled. The mixing function of the intercom and the PGM can be enabled/disabled from [ALL MENU] → [INTERCOM] → [INTERCOM1] → [INCOM1 RECEIVE CH1 SETTING] → [PGM1 MIX]/[PGM2 MIX].

12 <PROD>/<BOTH>/<ENG> switch (<INTERCOM1>)
Used to switch the call destination of the intercom connected to the <INTERCOM1> terminal.

13 <PROD>/<BOTH>/<ENG> switch (<INTERCOM2>)
Used to switch the call destination of the intercom connected to the <INTERCOM2> terminal.

14 <LEVEL> dial (<INTERCOM2>)
Used to adjust the volume level of the intercom 2 when the mixing function of the intercom connected to the <INTERCOM2> terminal and the PGM is enabled. The mixing function of the intercom and the PGM can be enabled/disabled from [ALL MENU] → [INTERCOM] → [INTERCOM2] → [INCOM2 RECEIVE CH1 SETTING] → [PGM1 MIX]/[PGM2 MIX].

15 <TALK> switch (<INTERCOM2>)
This switch is the <ON>/<OFF>/<PTT> selector switch of the intercom microphone connected to the <INTERCOM2> terminal.
Pushes the switch towards <ON>/<PTT> to turn on the microphone.

16 <CALL> switch
While this switch is pressed, the call lamps on the ROP and CCU are lit and the ROP buzzer sounds. (When the ROP buzzer setting is enabled)

NOTE

- If the <CALL> switch is pressed when the camera is operating with an external DC power source, the ROP call lamp does not light up.

17 <PGM2> dial (<INTERCOM2>)
Used to adjust the level of the audio or mixing ratio set from [ALL MENU] → [INTERCOM] → [LEVEL/PGM1/PGM2 VR SETTING] → [INTERCOM2 PGM2 VR].

18 <PGM1> dial (<INTERCOM2>)
Used to adjust the level of the audio or mixing ratio set from [ALL MENU] → [INTERCOM] → [LEVEL/PGM1/PGM2 VR SETTING] → [INTERCOM2 PGM1 VR].

19 <TALK> lamp (<INTERCOM2>)
This lamp is lit when the <TALK> switch (<INTERCOM2>) is enabled.

20 <DC OUT 12V 1A> terminal
This terminal is a DC 12 V output terminal. It provides a maximum current of 1.0 A.
If the current exceeds the rating, the current will be cut off.
When the total power being taken from the <DC OUT 12V 1A>, <DC OUT 12V 2.5A>, and <USB 3.0 HOST> terminals is detected as exceeding the rated amount, the amount of power supplied to each of the terminals is limited.
Additionally, R and G tally signals are output. (Open collector type)

NOTE

- Immediately disconnect external equipment if the power supply to external equipment is cut off intermittently. Failure to do so may lead to a malfunction.
- When connecting external equipment, first fully check the polarities and current consumption. Failure to do so may lead to a malfunction.

21 <RET CTRL> terminal
This is the external control terminal. This terminal controls the on/off of the external return control switches 1, 2, 3 and the intercom microphone 1, 2. The return signal can be assigned from [ALL MENU] → [RETURN] → [RETURN SELECT] → [RETURN C].

22 <DC IN> terminal
This is an input terminal for the external DC power supply. Connect an external DC power supply to this terminal. (DC 10.8 V to 17 V)

23 <FRONT>/<REAR> selector switch
Used to switch the microphone input signal of <MIC 1> to the front microphone or the rear microphone.
<FRONT>: Front microphone
<REAR>: Rear microphone

24 <LINE/MIC/+48V> selector switch (<MIC 1>)
Used to switch the audio input signal of the audio channel 1.
<LINE>: When connecting audio equipment with the line input
<MIC>: When connecting an external microphone
<+48V>: When supplying 48 V power to the microphone

25 <EXT I/O> terminal
This is the external input and output terminal.

26 <LINE/MIC/+48V> selector switch (<MIC 2>)
Used to switch the audio input signal of the audio channel 2.
<LINE>: When connecting audio equipment with the line input
<MIC>: When connecting an external microphone
<+48V>: When supplying 48 V power to the microphone

27 <MIC 1> terminal
Used to connect audio equipment or a microphone.
The power for the microphone is supplied via this terminal, enabling use of a phantom powered (48 V) microphone. Turn the power off when connecting a microphone, and then configure the settings to suit the microphone after connecting the microphone.

28 <MIC 2> terminal
Used to connect audio equipment or a microphone.
The power for the microphone is supplied via this terminal, enabling use of a phantom powered (48 V) microphone. Turn the power off when connecting a microphone, and then configure the settings to suit the microphone after connecting the microphone.

29 <USB 3.0 HOST> terminal

Used to connect a USB memory device (optional) which can be used to save and load the setting menus of the camera, update the software, etc. For details, refer to “Data” (page 43).

It is also possible to transmit video using wireless connections by connecting a 5G mobile router (supports USB tethering) (optional).

When the total power being taken from the <DC OUT 12V 1A>, <DC OUT 12V 2.5A>, and <USB 3.0 HOST> terminals is detected as exceeding the rated amount, the amount of power supplied to each of the terminals is limited.

NOTE

- Refer to the catalog of the device you are using for usage times for the 5G mobile router.
- Use a USB cable conforming to the USB3.0 specification. We also recommend using a cable that is 1.5 m (4.9 ft) or shorter.
- Operation is not guaranteed with a cable for USB2.0. This unit will need to be restarted if one is connected by mistake.
- A USB Type A – Type C adaptor may be required, depending on the product to be connected.

30 <REMOTE> terminal

Used to connect the remote control unit (optional) which can control some of the functions.

31 <G/L IN/REF OUT> terminal

Input terminal for genlock signals or output terminal for reference signals.

Set this in [ALL MENU] → [BASIC CONFIG] → [SYNC SIGNAL] → [GENLOCK] → [IN/OUT SEL].

NOTE

- When [MAIN MENU] → [SYSTEM MODE] → [FORMAT] is [2160/23.98p] or [1080/23.98p], the following signals can have genlock applied:
  - 1080/23.98p or 1080/23.98PsF HD-Y signals
  - Composite signals
- Other than [2160/23.98p] or [1080/23.98p], the following signals can have genlock applied:
  - 1080/59.94i or 1080/50i HD-Y signals
  - Composite signals

32 <INTERCOM1> terminal

Used to connect the intercom or headset plug.

33 Back tally lamp

Lights up when the tally signal is supplied.

R tally signal: Lit in red

G tally signal: Lit in green

R and G tally signals at the same time: Lit in orange

34 Back tally lamp selector switch

Used to switch the back tally lamp to on/off.

35 Rear viewfinder terminal

Used to connect the 9-inch LCD viewfinder AK-HVF100G.

This D-sub connector is used for the viewfinder interface.

NOTE

- AK-HVF70G can also be connected to this terminal.

36 <EARPHONE> terminal

Used to connect the plug of a set of earphones.

Configures the audio output from [ALL MENU] → [INTERCOM] → [EAR PHONES SETTING] → [LCH OUTPUT SELECT]/[RCH OUTPUT SELECT].

37 <INTERCOM2> terminal

Used to connect the intercom or headset plug.

38 <SDI OUT 1> terminal (BNC)

[CAM]: Outputs camera images.

[HD PROMPT]: Outputs HD prompter video images.

Configure the output images in [ALL MENU] → [OUTPUT] → [SDI OUT1] → [OUTPUT SELECT].

NOTE

- Use a cable for 12G SDI.

39 <SDI OUT 2> terminal (BNC)

[CAM]: Outputs camera images.

[VF]: Outputs viewfinder images.

[RET]: Outputs return images.

[RET1]/[RET2]/[RET3]/[RET4]: Outputs the selected images.

Configure the output images in [ALL MENU] → [OUTPUT] → [SDI OUT2] → [OUTPUT SELECT].

NOTE

- Use a cable for 12G SDI.

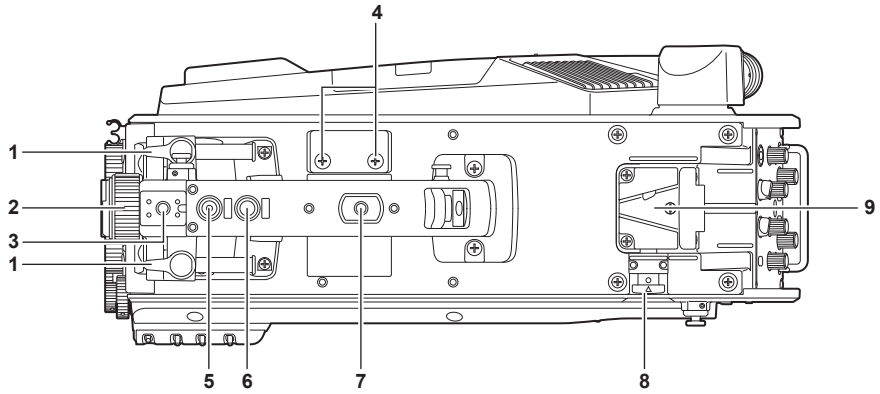
40 <TRUNK IN> terminal

This is an input terminal for trunk video signals.

NOTE

- Use a cable that is 5C-FB or above.

Upper side



1 Viewfinder front/back positioning lever
To adjust the front/back position of the viewfinder, loosen this lever and slide the viewfinder forwards or backwards to adjust the viewfinder to a position that enables easy viewing. After adjusting the viewfinder, turn the lever towards <LOCK> to lock the position.

2 Viewfinder left-right positioning ring
To adjust the left/right position of the viewfinder, loosen this lever and slide the viewfinder to the left or right to adjust the viewfinder to a position that enables easy viewing. Tighten the lever to clamp the viewfinder in place after adjusting.

3 Light shoe
Used to mount a video light, etc.

4 Microphone holder holes
Used to mount a microphone holder.

5 <PTT> switch
Used to switch the intercom microphone on/off. The function can be changed in [ALL MENU] → [SWITCH ASSIGN] → [USER SWITCH] → [GRIP PTT].

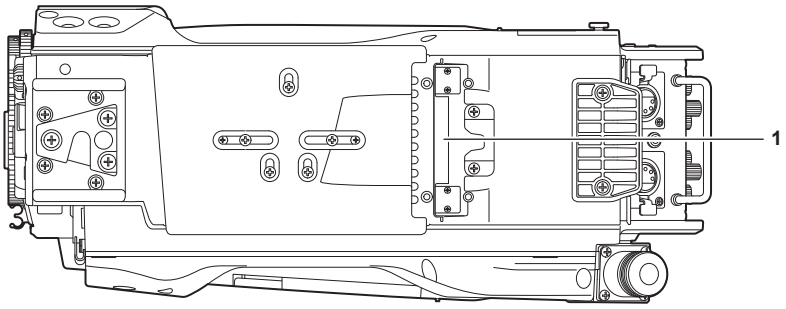
6 <RET> switch
Used to switch to the return A signal. The function can be changed in [ALL MENU] → [SWITCH ASSIGN] → [USER SWITCH] → [GRIP RET].

7 Accessory mounting hole
Used to attach accessories. This hole is used only for the purpose of attaching accessories.
- Mounting hole size
  - 1/4-20 UNC (screw length 13 mm or shorter)

8 Lock release button
Used to release the lock of the V-groove.

9 V-groove
Used to attach the rear viewfinder.

Bottom side



1 Build-up terminal
Used to connect the Build-up Unit AK-HBU500G (optional).

Chapter 3 Preparation

Follow the procedures described in this chapter to mount the accessories before using the camera.

Attaching the SFP modules

Attaching the BiDi SFP28 modules

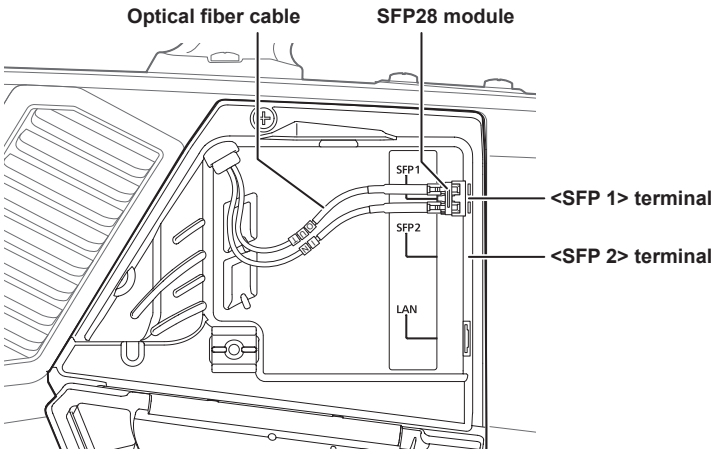


Fig. 1

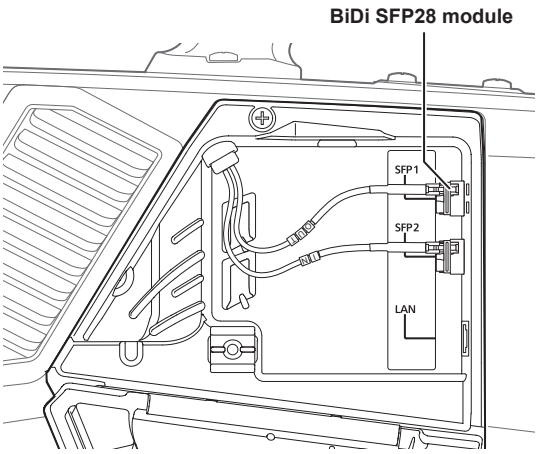


Fig. 2

You can use 2 BiDi SFP28 modules to build redundancy into your system.

1 Turn off the unit.

2 Disconnect the optical fiber cables of the SFP28 module inserted in the <SFP 1> terminal as shown in figure 1.

3 Temporarily put down the optical fiber cables.

4 Remove the SFP28 module.

5 Connect the BiDi SFP28 modules (optional) to the <SFP 1> terminal and the <SFP 2> terminal.

6 Insert the optical fiber cables into each of the BiDi SFP28 modules. (Fig. 2)

NOTE

- Take great care with the SFP28/BiDi SFP28 modules and the optical fiber cables.
- SFP+ modules are not supported on this unit.

To restore the factory settings

1 Turn off the unit.

2 Disconnect the optical fiber cables of the BiDi SFP28 modules inserted in the <SFP 1> terminal and the <SFP 2> terminal as shown in figure 2.

3 Temporarily put down the optical fiber cables.

4 Remove the BiDi SFP28 modules.

5 Insert the SFP28 module into the <SFP 1> terminal.

6 Insert the IN optical fiber cable into the IN (▷) of the SFP28 module.
Insert the OUT optical fiber cable into the OUT (◁) of the SFP28 module. (Fig. 1)

NOTE

- Take great care with the SFP28/BiDi SFP28 modules and the optical fiber cables.
- SFP+ modules are not supported on this unit.

Attaching the viewfinder

Attach the viewfinder (optional).

Attaching the viewfinder

HD viewfinder AJ-CVF70G (optional) can be used with this camera.
For details on handling the HD viewfinder, refer to the Operating Instructions of the viewfinder.

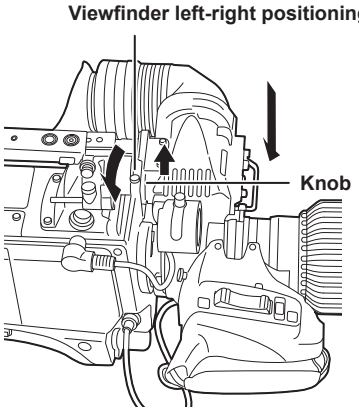


Fig. 1

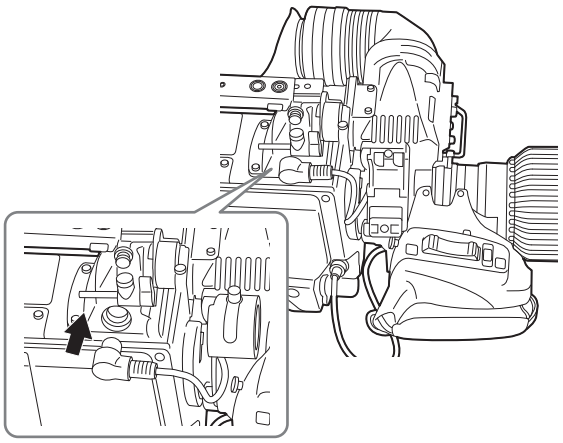


Fig. 2

1 Set the <POWER> switch to <OFF>.

2 Pull up the knob on the mounting plate and slide the plate to attach the viewfinder. (Fig. 1)

3 Securely tighten the viewfinder left-right positioning ring. (Fig. 1)

4 Connect the plug to the <VF> terminal. (Fig. 2)

NOTE

- When connecting the plug to the <VF> terminal, confirm that the plug is fully inserted in the terminal.

Removing the viewfinder

1 Set the <POWER> switch to <OFF>.

2 Remove the plug from the <VF> terminal.

3 Loosen the viewfinder clamping dial and then pull up the knob on the mounting plate.

4 Slide the viewfinder along the plate to remove it from the plate.

Attaching the rear viewfinder

LCD viewfinder AK-HVF100G (optional) can be used with this camera.

For details on handling the LCD viewfinder, refer to the Operating Instructions of the viewfinder.

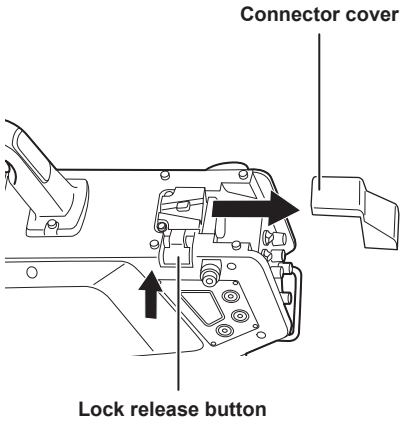


Fig. 1

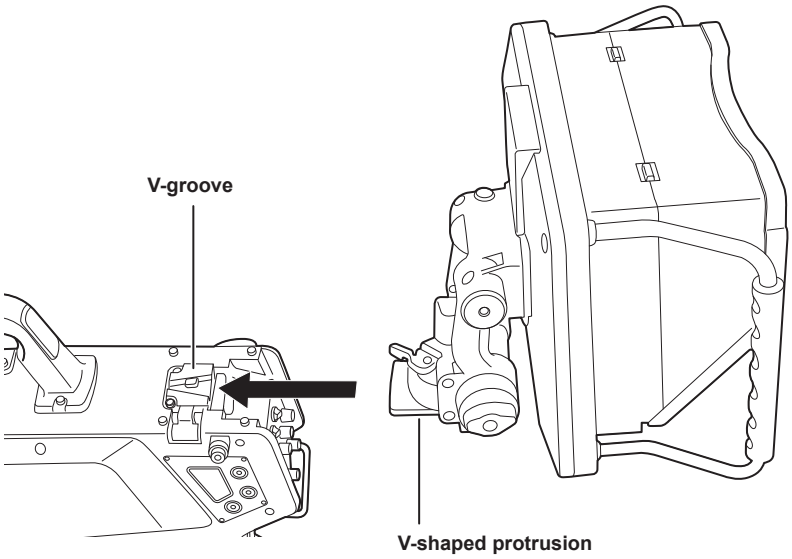


Fig. 2

1 Turn off the power of the camera and the LCD viewfinder.

2 Press the lock release button and remove the connector cover. (Fig. 1)

3 Align the V-shaped protrusion of the LCD viewfinder with the V-shaped groove on the camera and slide it in until the lock is engaged. (Fig. 2)

NOTE

- When attaching the viewfinder, refrain from holding the hood of the LCD viewfinder.

Removing the rear viewfinder

1 Turn off the power of the camera and the LCD viewfinder.

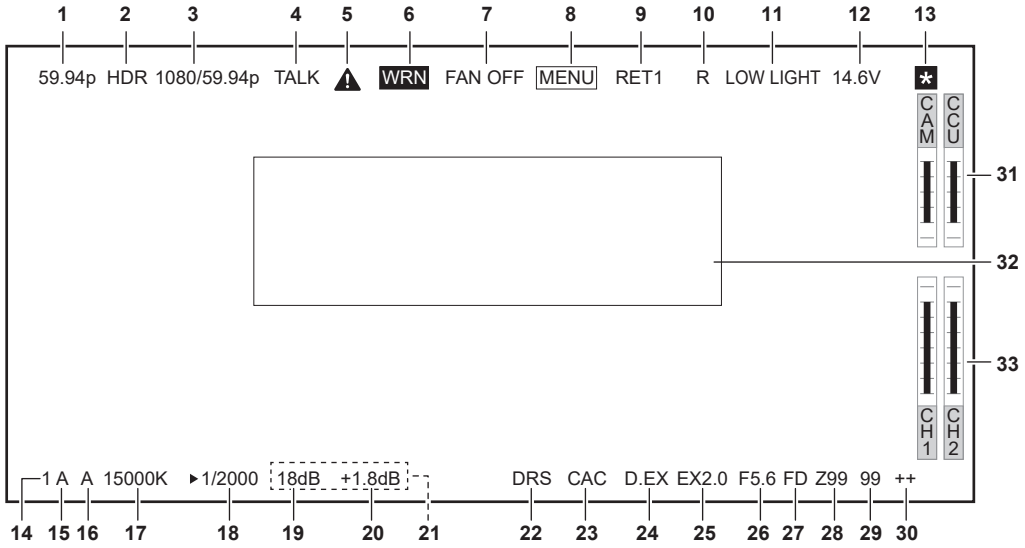
2 While pressing the lock release button, slide off the LCD viewfinder.

NOTE

- When removing the viewfinder, refrain from holding the hood of the LCD viewfinder.

On-screen displays of the viewfinder

4K Studio Camera settings and messages indicating operating statuses appear on the viewfinder screen.
All items that can be displayed are located as follows.



1 Sensor rate display
Indicates the camera image mode.
- [59.94p]
- [50p]
- [29.97p]
- [25p]
- [23.98p]
- [240p]
- [200p]
- [180p]
- [150p]
- [120p]
- [100p]

The [FPS] value is shown when [BASIC CONFIG] – [FPS SW] is [ON].
- [60p]
- [30p]
- [24p]

2 HDR/V-LOG mode display
Displayed when the format is HDR or V-LOG.
- [HDR]
- [V-LOG]

3 System mode display
Indicates the system frequency.
- [2160/59.94p]
- [2160/50p]
- [2160/29.97p]
- [2160/25p]
- [2160/23.98p]
- [1080/59.94p]
- [1080/50p]
- [1080/29.97p]
- [1080/25p]
- [1080/23.98p]

4 TALK SW display
Displayed when the <TALK> switch is <ON>/<PTT>.

5 Warning display (preheating)
Displayed when the device is being preheated at startup due to low temperature inside the device.

6 Warning display (device)
Displayed when there is an abnormality with the condition of the device.
- The fan stops abnormally.
- Internal temperature becomes high.
- DC output supply goes over. (Combined total of each output)
- There is a problem with the light reception level.

The display cannot be hidden.

7 Warning display (fan stopped)
Displayed when the fan is stopped.

8 Warning display (menu display)
Displays the camera menu in the CCU. The menu cannot be operated from the camera.

9 Return ID display
Displays the return ID of the current return output number.
The ID (character string) set in [ALL MENU] → [RETURN] → [RETURN1 ID] to [RETURN4 ID] is displayed.
The following return IDs (character strings) are set in factory settings.
- [RET.1] (When [RETURN1] is output)
- [RET.2] (When [RETURN2] is output)
- [RET.3] (When [RETURN3] is output)
- [RET.4] (When [RETURN4] is output)

10 TALLY (RGY) display
R, G, and Y TALLY are each displayed independently.
- [R]
- [G]
- [Y]

11 High-sensitivity mode display
Displayed when [ALL MENU] → [BASIC CONFIG] → [LOW LIGHT] is set.

12 Voltage display
Indicates the voltage coming in from the power supply.

13 Focus assist magnification display
The focus assist magnification display function is displayed while active.

14 ND filter display
Indicates the selected ND filter value.
- [1]
- [2]
- [3]
- [4]
- [5]

15 FX filter display
Indicates the selected FX filter value.
- [A]
- [B]
- [C]
- [D]
- [E]

16 <WHITE BAL> switch position display
Indicates the selected switch position.
- **[A]:** When the <WHITE BAL> switch is set to <A>
- **[B]:** When the <WHITE BAL> switch is set to <B>
- **[P]:** When the <WHITE BAL> switch is set to <PRST>

17 Color temperature display
Indicates the color temperature that is set on the camera.
This can be either the memory value when automatic white balance is performed or the value configured in the menu.

18 Shutter speed display
Indicates the shutter speed in accordance with each setting.
This is displayed as time (a fraction) when [ALL MENU] → [PAINT] → [SHUTTER SPEED] → [SHUTTER DISP] is set to [sec], and as aperture angle when set to [deg].
When the display is [sec]
When [ALL MENU] → [PAINT] → [SHUTTER SPEED] → [SHUTTER SW] → [ON] is set, and also [ALL MENU] → [PAINT] → [SHUTTER SPEED] → [SHUTTER MODE] → [STEP] is set
- [1/48] (in [23.98p] mode only)
- [1/50] (in [25p] mode only)
- [1/60] (in [50i]/[50p]/[29.97p]/[25p]/[23.98p] mode only)
- [1/96] (in [29.97p]/[25p]/[23.98p] mode only)
- [1/100] (not available in HS mode)
- [1/120] (in [59.94i]/[59.94p]/[29.97p]/[23.98p] mode only)
- [1/125] (not available in [240p]/[200p]/[180p]/[150p] mode)
- [1/250]

- [1/500]
- [1/1000]
- [1/1500]
- [1/2000]

When [ALL MENU] → [PAINT] → [SHUTTER SPEED] → [SHUTTER SW] → [ON] is set, and also [ALL MENU] → [PAINT] → [SHUTTER SPEED] → [SHUTTER MODE] → [SYNCHRO] is set

- [60.0Hz] to [7200Hz] (in [59.94i]/[59.94p] mode only)
- [50.0Hz] to [7200Hz] (in [50i]/[50p] mode only)
- [30.0Hz] to [7200Hz] (in [29.97p] mode only)
- [25.0Hz] to [7200Hz] (in [25p] mode only)
- [24.0Hz] to [7200Hz] (in [23.98p] mode only)
- [241.1Hz] to [7200Hz] (in [240p] mode only)
- [200.5Hz] to [7200Hz] (in [200p] mode only)
- [180.2Hz] to [7200Hz] (in [180p] mode only)
- [150.3Hz] to [7200Hz] (in [150p] mode only)
- [120.1Hz] to [7200Hz] (in [120p] mode only)
- [100.1Hz] to [7200Hz] (in [100p] mode only)

When the display is [deg]

- [3.0d] to [357.0d]

When [ALL MENU] → [PAINT] → [SHUTTER SPEED] → [SHUTTER SW] → [OFF] is set

- [SH.OFF]

19 Master gain display

When [ALL MENU] → [PAINT] → [GAIN SETTING] → [GAIN/ISO MODE] → [dB], the value set in [ALL MENU] → [PAINT] → [GAIN SETTING] → [LOW GAIN]/[MID GAIN]/[HIGH GAIN] is displayed.

- [–6dB] to [18dB]

20 Offset gain display

When [ALL MENU] → [PAINT] → [GAIN SETTING] → [GAIN/ISO MODE] → [dB], the value set in [ALL MENU] → [PAINT] → [GAIN SETTING] → [OFFSET LOW GAIN]/[OFFSET MID GAIN]/[OFFSET HIGH GAIN] is displayed.

[–2.9dB] to [+2.9dB]

21 ISO display

Displayed when [ALL MENU] → [PAINT] → [GAIN SETTING] → [GAIN/ISO MODE] → [ISO] is set.

- [ISO 400], [ISO 500], [ISO 640], [ISO 800], [ISO 1000], [ISO 1250], [ISO 1600], [ISO 2000], [ISO 2500], [ISO 3200], [ISO 4000], [ISO 5000], [ISO 6400], [ISO 8000], [ISO 10000], [ISO 12800]

NOTE

- The master gain display and the offset gain display cannot be shown together.

22 Dynamic range stretcher display

Displayed when the dynamic range stretcher function is active.

23 Chromatic aberration compensation display

Displayed when the chromatic aberration compensation function is active.

24 Digital extender display

Displayed when the digital extender is being used.

25 Lens extender display

Displayed when the lens extender is being used.

26 Iris display

Indicates the iris setting value (F value) or [OPEN]/[CLOSE]. The F value is an approximate value.

[NC] is displayed when the lens cable is not connected.

27 F drop display

Displayed when the F drop has occurred.

NOTE

- The display may not be supported depending on the lens model.
  For details, consult the lens manufacturer.

28 Zoom position display

Indicates the zoom position.

- [Z00] to [Z99]

NOTE

- The zoom position is displayed when using a lens having a zoom position output.

29 Focus position display

Indicates the focus position.

- [00] to [99]: Displayed when [ALL MENU] → [SUB DISPLAY] → [STATUS INDICATOR]→ [FOCUS DISP] → [NUMBER] is set.
- [***.*ft]: Displayed when [ALL MENU] → [SUB DISPLAY] → [STATUS INDICATOR]→ [FOCUS DISP] → [FEET] is set.
- [***.*m]: Displayed when [ALL MENU] → [SUB DISPLAY]→ [STATUS INDICATOR]→ [FOCUS DISP] → [METER] is set.

NOTE

- The focus position is displayed when using a lens having a focus position output.

30 Focus information display

Displays the focus information of the focus.

NOTE

- This is displayed only when an auto focus lens with the function to return the focus information is mounted.

31 Optical level display

Indicates the level of the optical signals the camera will receive.
When [OPT MODE] is [CCU CONNECT], the received level displayed is for the CCU or this unit.
When [OPT MODE] is other than [CCU CONNECT], the received level displayed is for the SFP 1 terminal (display is [PRI])/SFP 2 terminal (display is [SEC]).

32 Camera warning and information display area

Displays a message indicating the occurrence of an error, the camera settings, the progress made in the adjustments, or the adjustment results for about three seconds.

33 Audio input channel and level meter

Indicates the audio level of the <MIC 1> terminal (audio input 1) and <MIC 2> terminal (audio input 2).

Connecting a microphone

When mounting a microphone on the viewfinder (optional) for use

A microphone such as microphone kit AJ-MC700P (optional) can be mounted on the viewfinder.

Microphone holder

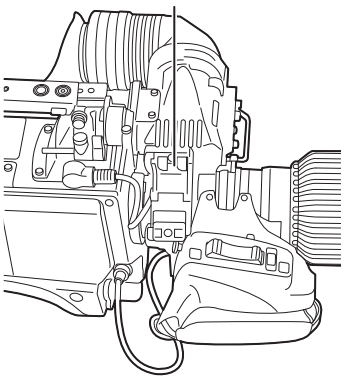


Fig. 1

Clamp screw

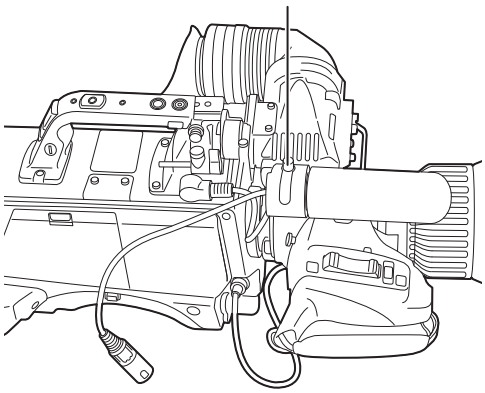
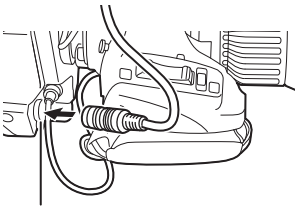


Fig. 2



<MIC 1> terminal

Fig. 3

1 **Open the microphone holder. (Fig. 1)**

2 **Mount the microphone and tighten the clamp screw. (Fig. 2)**

3 **Insert the microphone cable into the cable clamp and connect it to the <MIC 1> terminal (front). (Fig. 3)**

4 **Set the <FRONT>/<REAR> switch (<MIC 1>) to <FRONT>.**

5 **Set the <LINE/MIC/+48V> selector switch (<MIC 1>) to <MIC> or <+48V>.**

When mounting a microphone holder (optional) for use

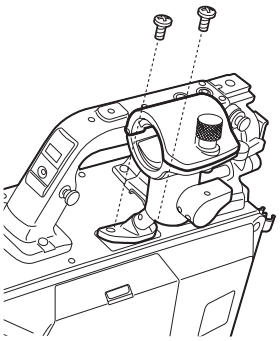


Fig. 1

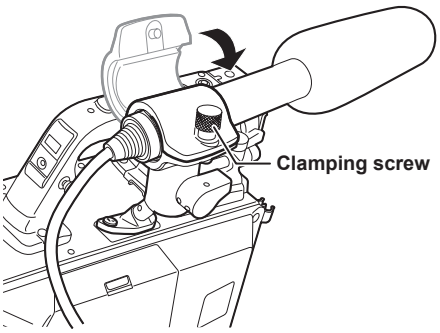


Fig. 2

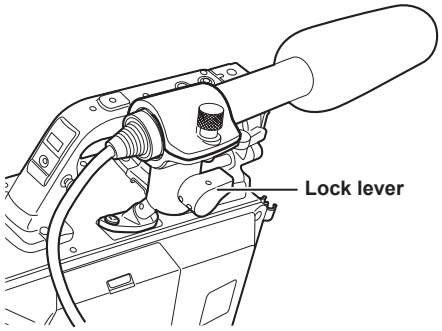


Fig. 3

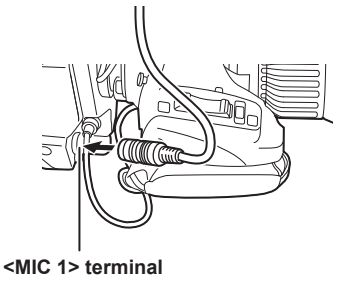


Fig. 4

1 **Remove the screws on the microphone holder mounting position and mount the microphone holder AJ-MH800G (optional). (Fig. 1)**

2 **Mount the microphone and tighten the clamping screw. (Fig. 2)**

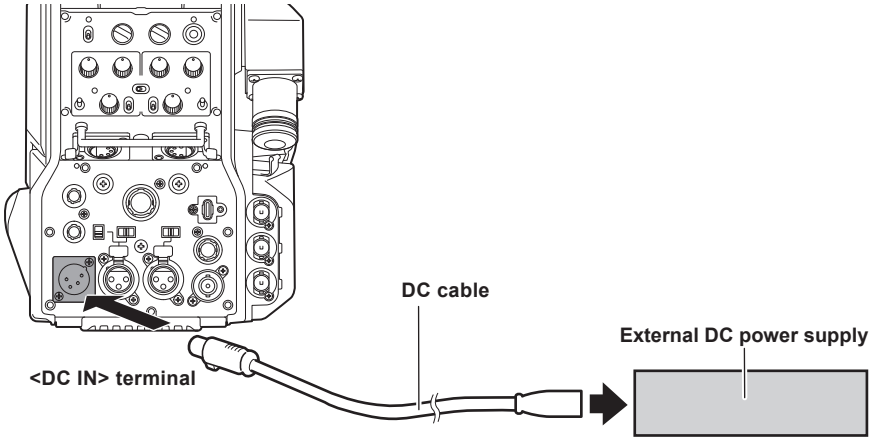
3 **Loosen the lock lever, adjust the angle of the microphone, and then tighten the lock lever. (Fig. 3)**

4 **Insert the microphone cable into the cable clamp and connect it to the <MIC 1> terminal (front). (Fig. 4)**

5 **Set the <FRONT>/<REAR> switch (<MIC 1>) to <FRONT>.**

6 **Set the <LINE/MIC/+48V> selector switch (<MIC 1>) to <MIC> or <+48V>.**

Using external DC power supply



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

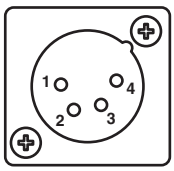
2 Turn on the <POWER> switch of the external DC power supply (if the external DC power supply has a <POWER> switch).

3 Set the <POWER> switch of the camera to <EXT>.

■ External DC power supply

Connect after making sure that the output voltage of the external DC power supply is compatible with the rated voltage of the camera.
Select an output amperage for the external DC power supply with a margin above the total amperage of the connected devices.
The total amperage of connected devices can be calculated with the following formula.
Total power consumption ÷ voltage
When the power of the camera is turned on, inrush current is generated. An insufficient power supply when turning on the power may lead to failure. It is recommended that you use an external DC power supply that can assure double the capacity of the total power consumption of the camera and connected devices (such as viewfinder) that are turned on by the interlock when the power of the camera is turned on. For the DC cable, use a dual-core shielded cable of AWG18 (nominal cross section area 0.824 mm^2) or thicker.

- Check the pin alignment of the DC output terminal of the external DC power supply and the <DC IN> terminal on the camera, and make sure to correctly connect the polarity.
  Mistakenly connecting the +12 V power supply to the GND terminal may result in a fire or failure.

	DC IN	
	1	UNREG GND
	2	Not used
	3	Not used
	4	+12 V
	XLR-4-32-F512 (ITT Cannon)	

NOTE

- When using external DC power supply, be sure to turn on the <POWER> switch of the external DC power supply, and then set the <POWER> switch of the camera to <EXT>. Performing these operations in the opposite order may lead to failure due to the output voltage of the external DC power supply rising too slowly.
- Even when the camera is connected to the CCU, operation from the CCU and ROP can be performed with the external DC power supply. The performance is affected by the extended distance between this camera and the CCU.
- When the camera is connected to the CCU or the camera fiber adaptor while the external DC power supply is used, perform the following.
  - Use the optical fiber multi cable to connect to the CCU or the camera fiber adaptor.

  When connecting to a CCU:
  - Set [ALL MENU] → [BASIC CONFIG] → [OPT MODE] to [CCU CONNECT].

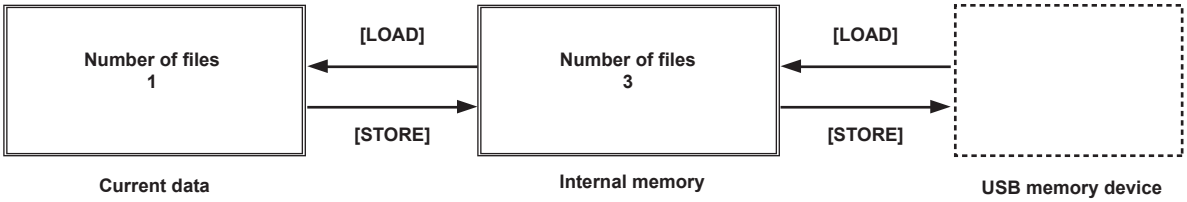
  When connecting to a camera fiber adaptor:
  - Set [ALL MENU] → [BASIC CONFIG] → [OPT MODE] to anything other than [CCU CONNECT].

Data

The following shows the data handled in the camera.

Managed system component	Name	Quantity	Description
Camera	User file	1 - 3	These files contain equipment configuration data held by the camera, set in [ALL MENU]. The data is managed by the camera. It can be saved or loaded by [ALL MENU] → [FILES] → [USER FILE].
	Lens file	1 - 32	These files contain data used by video engineers to correct characteristics specific to each lens. The data is managed by the camera. It can be saved or loaded by [ALL MENU] → [MAINTENANCE] → [LENS FILE ADJUST].
	Scene file	1 - 8	These files which contain data for creating pictures are handled mainly by video engineers. The data is managed by the camera. It can be saved or loaded by [ALL MENU] → [FILES] → [SCENE FILE].
	Operation file	1	These files which contain operation data are handled mainly by camera operators. The data is managed by the camera. It can be saved or loaded by [ALL MENU] → [FILES] → [USB MEDIA] using a USB memory device.
	Reference file	1 - 3	These files contain data excluding the operation data from the equipment configuration data. The data is managed by the camera. It can be saved or loaded by [ALL MENU] → [FILES] → [REFERENCE FILE].

User file



■ Loading

Operations data saved in a USB memory device that is inserted in the USB memory device connector on the camera can be read out to the operations area using [ALL MENU] → [FILES] → [USB MEDIA].

The operation data in the actual operating area can also be saved to the USB memory device.

NOTE

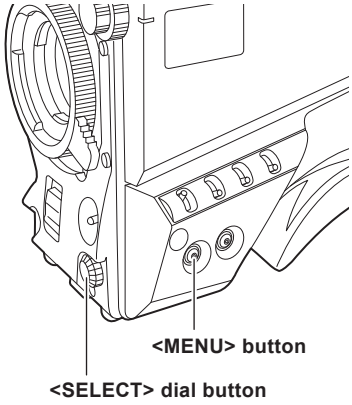
- Connect a USB memory device (Type C) directly to the <USB 3.0 HOST> terminal of this unit.
  If a USB hub or an SD card-to-USB adaptor is used, the unit may not operate properly.
- This unit supports exFAT/FAT32. Formats other than the supported formats will not be recognized.
- Notes on file names
  - File names set on this unit can be up to 15 characters.
  - When file names applied on PCs, etc., exceed 15 characters, the first 12 characters are displayed, then the remaining characters are abbreviated and "..." is displayed instead.
  - If characters not available on this unit are used, they are replaced with "_" when loaded onto this unit.

Chapter 4 Menu Operations

This chapter describes how to operate the camera menus and the structure and details of the setting menu.

Menu operations

Basic operations



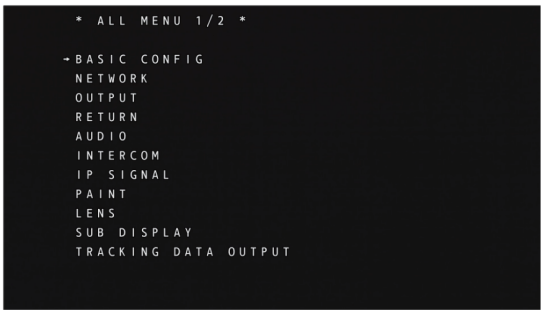


Fig. 1

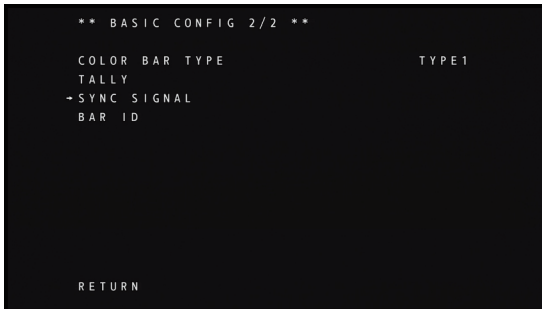


Fig. 2

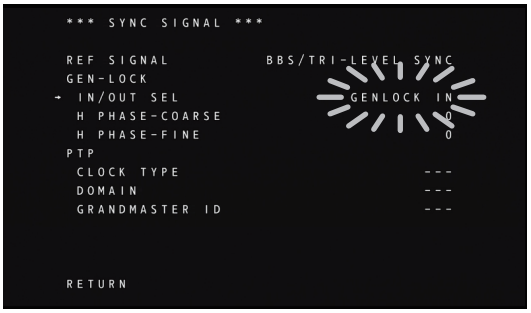


Fig. 3

1 Press the <MENU> button.

The [ALL MENU] screen of the camera is displayed on the viewfinder or monitor. (Fig. 1)

2 Turn the <SELECT> dial button to select an item.

3 Press the <SELECT> dial button.

The menu of the selected item is accessed. (Fig. 2)

4 Turn the <SELECT> dial button to select a menu item to configure.

5 Press the <SELECT> dial button.

The setting of the item indicated by the arrow flashes. (Fig. 3)

6 Turn the <SELECT> dial button and change the setting.

7 Press the <SELECT> dial button.

The setting is confirmed.
Pressing the <MENU> button to exit the menu screen also reflects the setting.

Entering characters

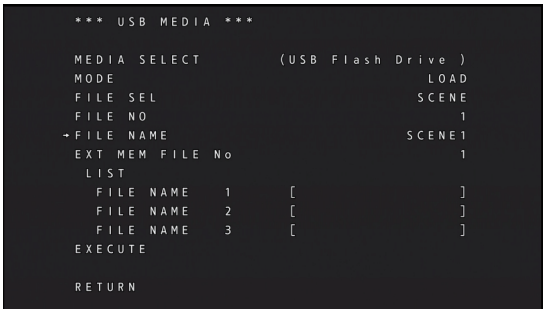


Fig. 1

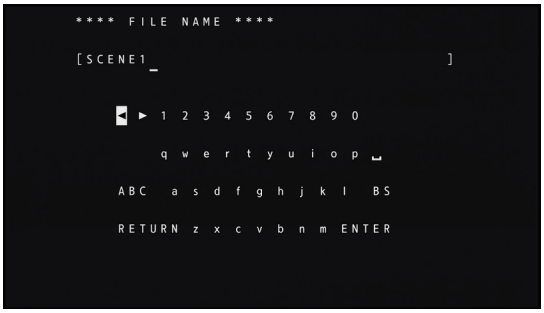


Fig. 2

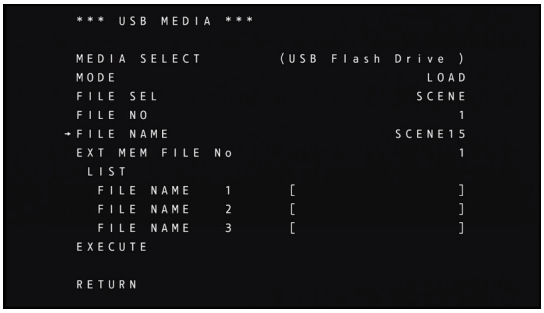


Fig. 3

1 Press the <SELECT> dial button. (Fig. 1, Fig. 2)

2 Turn the <SELECT> dial button and change the character.

3 Turn the <SELECT> dial button and press [ENTER].

The setting is confirmed. (Fig. 3)
Another item can be selected.

Menu configuration

[ALL MENU]

BASIC CONFIG	Set basic configuration items for the camera (system configuration items).
NETWORK	Set basic configuration items related to networks.
OUTPUT	Set items for the various output connectors.
RETURN	Set items related to return images.
AUDIO	Set items related to audio.
INTERCOM	Set items related to intercom.
IP SIGNAL	Set items related to IP related image/audio output.
PAINT	Set items related to camera images.
LENS	Set items related to lenses.
SUB DISPLAY	Set items for status indicators/indication displays, etc.
TRACKING DATA OUTPUT	Set items related to tracking data output.
SWITCH ASSIGN	Sets the functionality to be assigned to the switches.
FILES	Set items related to SCENE file or the USB memory device.
MAINTENANCE	Set items related to maintenance.

NOTE

- Immediately after turning on the power, the unit is starting up, so some menu items cannot be selected. This is not an error. Perform operation after a while.
- Setting values may not be updated if you turn the power off immediately after making changes to menu settings. Turn the power off after waiting 10 seconds or more after making the settings to ensure the values are updated.

Menu list

S: Can be saved and loaded as a scene file data.
U: Can be saved and loaded as a user file data.
O: Can be saved and loaded as an operation file data.
R: Can be saved and loaded as a reference file data.
N: Can be saved and loaded as a network file data.

[BASIC CONFIG]

[FREQUENCY] cannot be selected right after the power is turned on, because boot of the camera is in progress.
This is not an error. Perform operation after a while.

Item	Description of settings
[FREQUENCY]	Sets the system frequency. **[59.94Hz], [50Hz]** • Factory setting: [59.94Hz]
[FORMAT]	Sets the system format. **[2160/120fps], [2160/59.94p], [2160/29.97p], [2160/23.98p], [1080/240fps], [1080/180fps], [1080/120fps], [1080/59.94p], [1080/29.97p], [1080/23.98p], [2160/100fps], [2160/50p], [2160/25p], [1080/200fps], [1080/150fps], [1080/100fps], [1080/50p], [1080/25p]** • Factory setting: [2160/59.94p] ***NOTE*** • HS mode can be set only when [OPT MODE] is [CCU CONNECT].
[FPS SW]	Enables/disables the FPS function. **[OFF], [ON]** • Factory setting: [OFF] ***NOTE*** • This can be set only when [FORMAT] is [2160/59.94p] or [1080/59.94p].
[FPS]	Set the frame rate of the MOS sensor when [FPS SW] is [ON]. **[60], [30], [24]** • Factory setting: [60]
[OPT MODE]	Sets the OPT mode. **[CCU CONNECT], [ST2110], [ST2110 JPEG XS]** • Factory setting: [CCU CONNECT]
[SFP FEC]	Enables/disables the error correcting function of SFP mode. **[25G-FEC], [25G]** • Factory setting: [25G-FEC]
[LAN(RJ45) MODE] U R N	Sets the usage for the <LAN> terminal. **[TRUNK], [IP CONTROL]** • Factory setting: [IP CONTROL] ***NOTE*** • [TRUNK] cannot be selected when [OPT MODE] is [ST2110] or [ST2110 JPEG XS].
[V-LOG] U R	Enables/disables the V-LOG mode. **[OFF]:** Enables fine image quality adjustments from the camera as with previous studio cameras. **[ON]:** Uses a gamma curve which can achieve a wide range of tone and exposure. Color grading will be necessary after shooting. • Factory setting: [OFF] ***NOTE*** • [V-LOG] cannot be selected when [HDR] is [ON].
[V-LOG PAINT SW] U R	Selects whether to make it possible to make settings in the [PAINT] menu when [V-LOG] is [ON]. **[OFF], [ON]** • Factory setting: [OFF] ***NOTE*** Even if [V-LOG PAINT SW] is set to [ON], the following functions cannot be set. • [GAMMA], [GAMMA MODE SELECT], [MASTER GAMMA], [R GAMMA], [B GAMMA], and [INITIAL GAMMA] in [GAMMA/BLACK GAMMA] • [DRS] and [EFFECT DEPTH] in [DRS] • [PRESET MATRIX] in [LINEAR MATRIX] • [PRESET MATRIX] in [COLOR CORRECTION]
[HDR] U R	Enables/disables the HDR mode. **[OFF], [ON]** • Factory setting: [OFF] ***NOTE*** • [HDR] cannot be selected when [V-LOG] is [ON].
[GAMUT] U R	Change the color gamut when [HDR] is [ON]. **[NORMAL], [WIDE_G2]** • Factory setting: [NORMAL]
[SHOOTING MODE] U R	Sets the shooting mode. **[NORMAL], [LOW LIGHT]** • Factory setting: [NORMAL]

Item		Description of settings
[COLOR BAR TYPE] U R		Sets the type of color bar to display. **[TYPE1:SMPTE]** **[TYPE2:FULL]** **[TYPE3:ARIB(FHD)]** **[TYPE4:ARIB(UHD)]** **[TYPE5:ARIB(2020/HLG)]** • Factory setting: [TYPE1:SMPTE] ***NOTE*** • Color bars of IP transmissions (H.264/H.265/M-JPEG) do not conform with SMPTE. • With [TYPE4:ARIB(UHD)]/[TYPE5:ARIB(2020/HLG)], the 709 format is used for output when using a 709 setting.
[TALLY]	[CALL TALLY] U R	Sets whether the rear tally lamp is to be lit up when called. **[OFF]:** Turned off. **[R]:** Red tally lights up. **[T]:** Up tally lights up. **[R&T]:** Red tally and up tally light up. • Factory setting: [OFF]
	[TALLY GUARD] U R	Enables/disables automatic white balance and automatic black balance when the tally lamp is lit. **[OFF], [ON]** • Factory setting: [OFF]
	[TSL5.0]	Make settings related to Tally control via TSL Protocol 5.0.
	[INDEX NO.] U R N	Sets the INDEX NO. that is set by devices that receive TALLY. **[1] … [65534]** • Factory setting: [1]
	[PORT] U R N	Sets the PORT number. **[1] … [65535]** • Factory setting: [62000]
[SYNC SIGNAL]	[REF SIGNAL] U R	Sets the input terminal for reference signals. **[BBS/TRI-LEVEL SYNC], [PTP]** • Factory setting: [BBS/TRI-LEVEL SYNC] ***NOTE*** • When [OPT MODE] is [CCU CONNECT] or [IP SIGNAL] – [ST2110 COMMON] – [MOIP MODE] is [OFF], this is fixed to [BBS/TRI-LEVEL SYNC].
	[GEN-LOCK]	—
	[IN/ OUT SEL] U R	Sets the <G/L IN/REF OUT> terminal. **[GENLOCK IN], [REF OUT]** • Factory setting: [GENLOCK IN]
	[H PHASE-COARSE] U R	Roughly adjusts the phase of horizontal synchronization. **[–100] … [+100]** • Factory setting: [0]
	[H PHASE-FINE] U R	Finely adjusts the phase of horizontal synchronization. **[–100] … [+100]** • Factory setting: [0]
	[PTP]	—
	[CLOCK TYPE] U R	Sets the CLOCK TYPE for PTP. **[BC], [E2E TC], [P2P TC]** • Factory setting: [BC]
	[DOMAIN] U R	Sets the DOMAIN number. **[0] … [127]** • Factory setting: [127]
	[GMID]	Displays GRANDMASTER ID notified from the PTP server.
[BAR ID]	[BAR ID] U R	Enables/disables the camera ID on the color bar. **[OFF], [ON]** • Factory setting: [OFF]
	[BRIGHTNESS] U R	Sets the text color for the camera ID on the color bar. **[0%] … [100%]** • Factory setting: [100%]
	[ID1 POSITION V] U R	Sets the display start position (vertical direction) of the camera ID1 on the color bar. **[0] … [5]** • Factory setting: [0]
	[ID1 POSITION H] U R	Sets the display start position (horizontal direction) of the camera ID1 on the color bar. **[0] … [15]** • Factory setting: [0]
	[ID1] U R	Sets the camera ID1. Maximum 16 characters (Alphanumeric characters, spaces, ! # % & ' ( ) * + , - . / : ; < = > ? [ ] _ ~ $ @ |)
	[ID2 POSITION V] U R	Sets the display start position (vertical direction) of the camera ID2 on the color bar. **[0] … [5]** • Factory setting: [1]
	[ID2 POSITION H] U R	Sets the display start position (horizontal direction) of the camera ID2 on the color bar. **[0] … [15]** • Factory setting: [0]
	[ID2] U R	Sets the camera ID2. Maximum 16 characters (Alphanumeric characters, spaces, ! # % & ' ( ) * + , - . / : ; < = > ? [ ] _ ~ $ @ |)

Item		Description of settings
	[OFFSET V] U R	Specifies in pixels the origin point (above left) for the area for writing of characters in the vertical direction. **[0] … [89]** • Factory setting: [0]
	[OFFSET H] U R	Specifies in pixels the origin point (above left) for the area for writing of characters in the horizontal direction. **[0] … [79]** • Factory setting: [0]

[NETWORK]

Item	Description of settings
[LAN]	Sets the network for the <LAN> terminal.
[DHCP]	Enables/disables DHCP. **[OFF], [ON]** • Factory setting: [OFF]
[IP ADDRESS]	Sets the IP address. • Factory setting: [192.168.0.30]
[SUBNET MASK]	Sets the subnet mask. • Factory setting: [255.255.255.0]
[DEFAULT GATEWAY]	Sets the default gateway. • Factory setting: [192.168.0.1]
[MAC ADDRESS]	Displays the MAC address.
[SET EXECUTE]	Select this to save the set content.
[SFP28 PRIMARY]	Sets the network for the <SFP 1> terminal.
[DHCP]	Enables/disables DHCP. **[OFF], [ON]** • Factory setting: [OFF]
[IP ADDRESS]	Sets the IP address. • Factory setting: [192.168.1.30]
[SUBNET MASK]	Sets the subnet mask. • Factory setting: [255.255.255.0]
[DEFAULT GATEWAY]	Sets the default gateway. • Factory setting: [192.168.1.1]
[MAC ADDRESS]	Displays the MAC address.
[SET EXECUTE]	Select this to save the set content.
[SFP28 SECONDARY]	Sets the network for the <SFP 2> terminal.
[DHCP]	Enables/disables DHCP. **[OFF], [ON]** • Factory setting: [OFF]
[IP ADDRESS]	Sets the IP address. • Factory setting: [192.168.2.30]
[SUBNET MASK]	Sets the subnet mask. • Factory setting: [255.255.255.0]
[DEFAULT GATEWAY]	Sets the default gateway. • Factory setting: [192.168.2.1]
[MAC ADDRESS]	Displays the MAC address.
[SET EXECUTE]	Select this to save the set content.
[USB]	Sets the network for the <USB 3.0 HOST> terminal.
[DHCP]	Enables/disables DHCP. **[OFF], [ON]** • Factory setting: [OFF]
[IP ADDRESS]	Sets the IP address. • Factory setting: [192.168.3.30]
[SUBNET MASK]	Sets the subnet mask. • Factory setting: [255.255.255.0]
[DEFAULT GATEWAY]	Sets the default gateway. • Factory setting: [192.168.3.1]
[SET EXECUTE]	Select this to save the set content.
[COMMON SETTING]	—
[DNS] N	Sets the method for acquiring the address for the DNS server. **[MANUAL], [AUTO]** • Factory setting: [MANUAL]
[PRIMARY] N	Sets the DNS PRIMARY address. Display only (The settings cannot be changed in the OSD menu, so change them from the web screen if they are to be changed.)
[SECONDARY] N	Sets the DNS SECONDARY address. Display only (The settings cannot be changed in the OSD menu, so change them from the web screen if they are to be changed.)

Item		Description of settings
[DOMAIN] N		The value allocated by the DHCP server is displayed. Display only (The settings cannot be changed in the OSD menu, so change them from the web screen if they are to be changed.)
[HTTP PORT] N		Sets the port number when using with HTTP. **[1] … [65535]** The following port numbers cannot be set because they are used by this unit. [20], [21], [23], [25], [42], [53], [67], [68], [69], [110], [123], [161], [162], [443], [546], [547], [554], [995], [5960] … [5985], [7960] … [8060], [10669], [10670], [59000] … [61000] • Factory setting: [80]
[HTTPS PORT] N		Sets the port number when using with HTTPS. **[1] … [65535]** The following port numbers cannot be set because they are used by this unit. [20], [21], [23], [25], [42], [53], [67], [68], [69], [80], [110], [123], [161], [162], [546], [547], [554], [995], [5960] … [5985], [7960] … [8060], [10669], [10670], [59000] … [61000] • Factory setting: [443]
[WEB CONNECTION] N		Sets the method to connect to the unit. **[HTTP], [HTTPS]** • Factory setting: [HTTP]
[ROP PORT] N		Sets the port number when connecting to ROP. **[49152], [49200] … [49299]** • Factory setting: [49152]
[ROP AUTH MODE] N		Sets the algorithm used for user authentication. **[SHA2&MD5], [SHA2]** • Factory setting: [SHA2&MD5]
[SET EXECUTE]		Select this to save the set content.
[NTP]		—
	[SYNCHRONIZATION WITH NTP] U R N	Enables/disables NTP server synchronizing. **[ON], [OFF]** • Factory setting: [OFF]
	[NTP SERVER ADDRESS SETTING] U R N	Sets the method for acquiring the address for the NTP server. **[AUTO], [MANUAL]** • Factory setting: [MANUAL]
	[NTP SERVER ADDRESS] N	Sets the IP address for the NTP server when [NTP SERVER ADDRESS SETTING] is [MANUAL]. Maximum 128 characters (Alphanumeric characters, : . _ -)
	[NTP PORT] N	Sets the port number of the NTP server to be connected. **[1] … [65535]** The following port numbers cannot be set because they are used by this unit. [20], [21], [23], [25], [42], [53], [67], [68], [69], [80], [110], [161], [162], [443], [546], [547], [554], [995], [5960] … [5985], [7960] … [8060], [10669], [10670], [59000] … [61000] • Factory setting: [123]
	[TIME ADJUSTMENT INTERVAL] U R N	Sets the access interval for the NTP server. **[1h] … [24h]** • Factory setting: [1h]
	[SET EXECUTE]	Select this to save the set content.
[NMOS]		—
	[NMOS] U R N	Enables/disables the NMOS function. **[ON], [OFF]** • Factory setting: [OFF] ***NOTE*** • When [IP SIGNAL] – [MOIP MODE] is [OFF] or [BASIC CONFIG] – [OPT MODE] is [CCU CONNECT], this is fixed to [OFF].
	[STATUS] N	Displays the NMOS operation status, such as RDS connection status. **[UNREGISTERED], [REGISTERING], [REGISTERED], [P2P MODE], [---]**
	[PORT(IS-04)] N	Sets the port number on the camera for IS-04 Node API. **[1024] … [65535]** • Factory setting: [50040]
	[PORT(IS-05)] N	Sets the port number on the camera for IS-05 Connection API. **[1024] … [65535]** • Factory setting: [50050]
	[RDS IP ADDR] N	Displays the IP address automatically discovered.
	[RDS PORT] N	Displays the port number automatically discovered.
	[LABEL SETTING] U R N	Sets whether the label name is to be acquired automatically or input manually. **[AUTO], [MANUAL]** • Factory setting: [AUTO]
	[LABEL PREFIX] U R N	Sets the prefix appended which is shared with NMOS resource names on this unit. Maximum 16 characters (Alphanumeric characters, spaces, ! # % ( ) + - . / = [ ] _) • Factory setting: [UCX100_****] (asterisks are the last four digits of the MAC address)
	[SET EXECUTE]	Select this to save the set content.

Item			Description of settings
		[DISCOVERY] U R N	Sets the method for NMOS resource discovery. **[Auto], [mDNS], [uniDNS], [Manual]** • Factory setting: [Auto]
		[RDS IP ADDR MANUAL] N	Enter the IP address to be entered manually. • Factory setting: [192.168.0.130]
		[RDS PORT MANUAL] N	Sets the port number to be entered manually. **[1024] … [65535]** • Factory setting: [8010]
		[SET EXECUTE]	Select this to save the set content.

[OUTPUT]

Item		Description of settings
[SDI OUT1]	[OUTPUT SELECT] U R	Configures the video output from the <SDI OUT 1> terminal. **[CAM]:** Outputs camera images. **[HD PROMPT]:** Outputs HD prompter video images. • Factory setting: [CAM]
	[FORMAT SELECT] U R	Sets the signal format of the video output from the <SDI OUT 1> terminal. **[2160p], [1080p], [1080i]** • Factory setting: [2160p] ***NOTE*** • [2160p] can be selected only when [OUTPUT SELECT] is [CAM]. • [2160p] cannot be selected when [OUTPUT SELECT] is [HD PROMPT]. • When [OPT MODE] is [CCU CONNECT], [HD PROMPT] is fixed to [1080i].
	[HDR OUTPUT SELECT] U R	Sets the signal output from the <SDI OUT 1> terminal when [HDR] is [ON]. **[SDR(709)]**, **[HDR(709)], [HDR(2020)]** • Factory setting: [HDR(2020)] ***NOTE*** • This can only be set when [OUTPUT SELECT] is [CAM]. • [HDR(2020)] can be selected only when [BASIC CONFIG] – [GAMUT] is [WIDE_G2].
	[V-LOG OUTPUT SELECT] U R	Sets the signal output from the <SDI OUT 1> terminal when [V-LOG] is [ON]. **[V-LOG], [V-709], [BC709]** • Factory setting: [V-LOG] ***NOTE*** • This can only be set when [OUTPUT SELECT] is [CAM].
	[OUTPUT ITEM] U R	Selects details of the characters superimposed on images output from the <SDI OUT 1> terminal. **[MENU ONLY]:** Displays only on the menu. **[STATUS]:** Displays all characters that are the same as in the viewfinder display. • Factory setting: [MENU ONLY]
	[CHAR] U R	Sets whether to superimpose characters on images output from the <SDI OUT 1> terminal. **[OFF], [ON]** • Factory setting: [OFF]
[SDI OUT2]	[OUTPUT SELECT] U R	Configures the video output from the <SDI OUT 2> terminal. **[CAM]:** Outputs camera images. **[VF]:** Outputs viewfinder images. **[RET]:** Outputs return images. **[RET1], [RET2], [RET3], [RET4]:** Outputs fixed return images. • Factory setting: [VF]
	[FORMAT SELECT] U R	Sets the signal format of the video output from the <SDI OUT 2> terminal. **[2160p], [1080p], [1080i]** • Factory setting: [1080i] ***NOTE*** • [2160p] can be selected only when [OUTPUT SELECT] is [CAM] and [OPT MODE] is [CCU CONNECT]. • When [OUTPUT SELECT] is [VF], this is fixed to [1080i]. • When [OPT MODE] is [CCU CONNECT], [RET] to [RET4] are fixed to [1080i]. • When [OPT MODE] is other than [CCU CONNECT], and when [FORMAT] is [29.97p], [23.98p], or [25p], this is fixed to [1080p].
	[HDR OUTPUT SELECT] U R	Sets the signal output from the <SDI OUT 2> terminal when [HDR] is [ON]. **[SDR(709)], [HDR(709)], [HDR(2020)]** • Factory setting: [HDR(709)] ***NOTE*** • This can only be set when [OUTPUT SELECT] is [CAM] or [VF]. • [HDR(2020)] can be selected only when [BASIC CONFIG] – [GAMUT] is [WIDE_G2].
	[V-LOG OUTPUT SELECT] U R	Sets the signal output from the <SDI OUT 2> terminal when [V-LOG] is [ON]. **[V-LOG], [V-709], [BC709]** • Factory setting: [V-709] ***NOTE*** • This can only be set when [OUTPUT SELECT] is [CAM] or [VF].

Item		Description of settings
	[OUTPUT ITEM] U R	Selects details of the characters superimposed on images output from the <SDI OUT 2> terminal. **[MENU ONLY]:** Displays only on the menu. **[STATUS]:** Displays all characters that are the same as in the viewfinder display. • Factory setting: [MENU ONLY]
	[CHAR] U R	Sets whether to superimpose characters on images output from the <SDI OUT 2> terminal. **[OFF], [ON]** • Factory setting: [ON]
[BACK LIGHT] U R		Sets the brightness of the backlight. **[1] … [70]** • Factory setting: [20]

[RETURN]

Item		Description of settings
[RETURN MODE] U O		Sets the operation mode of the <RET> switch. **[NORM], [TOGGLE], [BOX]** • Factory setting: [NORM]
[RETURN SELECT]	[RETURN C] U O	Sets the function assigned to return C. **[RETURN1], [RETURN2], [RETURN3], [RETURN4]** • Factory setting: [RETURN1]
[RETURN1 ID] U O		Sets the name of return video 1. (Within 5 characters, alphanumeric characters, spaces,! # % & ' ( ) * + , - . / : ; < = > ? [ ] _ ~ $ @ |) • Factory setting: [RET.1]
[RETURN2 ID] U O		Sets the name of return video 2. (Within 5 characters, alphanumeric characters, spaces, ! # % & ' ( ) * + , - . / : ; < = > ? [ ] _ ~ $ @ |) • Factory setting: [RET.2]
[RETURN3 ID] U O		Sets the name of return video 3. (Within 5 characters, alphanumeric characters, spaces, ! # % & ' ( ) * + , - . / : ; < = > ? [ ] _ ~ $ @ |) • Factory setting: [RET.3]
[RETURN4 ID] U O		Sets the name of return video 4. (Within 5 characters, alphanumeric characters, spaces, ! # % & ' ( ) * + , - . / : ; < = > ? [ ] _ ~ $ @ |) • Factory setting: [RET.4]

[AUDIO]

Item		Description of settings
[INPUT1 SETTING]	[MIC GAIN] U O	Sets the gain when there is a microphone input to the <MIC 1> terminal. **[60dB], [40dB], [20dB]** • Factory setting: [60dB]
	[LINE LEVEL] U O	Sets the input level when there is a line input to the <MIC 1> terminal. **[0dB], [+4dB]** • Factory setting: [0dB]
	[MIC AMP] U O	Adjusts the level of the input to the <MIC 1> terminal. **[–20dB] … [+20dB]** • Factory setting: [0dB]
[INPUT2 SETTING]	[MIC GAIN] U O	Sets the gain when there is a microphone input to the <MIC 2> terminal. **[60dB], [40dB], [20dB]** • Factory setting: [60dB]
	[LINE LEVEL] U O	Sets the input level when there is a line input to the <MIC 2> terminal. **[0dB], [+4dB]** • Factory setting: [0dB]
	[MIC AMP] U O	Adjusts the level of the input to the <MIC 2> terminal. **[–20dB] … [+20dB]** • Factory setting: [0dB]
	[MIC INPUT SELECT] U O	Sets the input signal for the <MIC 2> terminal. This item can be set only when the PGM option is used. **[FRONT MIC], [OFF]** • Factory setting: [OFF]
[FRONT MIC POWER] U O		Enables/disables the phantom power (48 V) for the external microphone connected to the <MIC> terminal (front). This item can be set only when the PGM option is used. **[ON], [OFF]** • Factory setting: [OFF]
[ST2110 AUDIO FORMAT]	This cannot be set when [IP SIGNAL] – [MOIP MODE] is [OFF], or [BASIC CONFIG] – [OPT MODE] is [CCU CONNECT].	
	[MIC1 TX] U R	Sets the output format for MIC 1. **[1ms/8ch], [0.125ms/8ch], [0.125ms/64ch]** • Factory setting: [1ms/8ch]
	[MIC2 TX] U R	Sets the output format for MIC 2. **[1ms/8ch], [0.125ms/8ch], [0.125ms/64ch]** • Factory setting: [1ms/8ch]

Item		Description of settings
	[MIX TX] U R	Sets the output format for MIX. **[1ms/8ch], [0.125ms/8ch], [0.125ms/64ch]** • Factory setting: [1ms/8ch]
	[TRUNK TX] U R	Sets the output format for TRUNK. **[1ms/8ch] (fixed)**
	[PGM1 RX] U R	Sets the input format for PGM 1. **[1ms/8ch], [0.125ms/8ch], [0.125ms/64ch]** • Factory setting: [1ms/8ch]
	[PGM2 RX] U R	Sets the input format for PGM 2. **[1ms/8ch], [0.125ms/8ch], [0.125ms/64ch]** • Factory setting: [1ms/8ch]
	[PROMPTER RX] U R	Sets the input format for PROMPTER. **[1ms/8ch] (fixed)**
	[INCOM1 TX (ENG)] U R	Sets the output format for INCOM 1. **[1ms/8ch], [0.125ms/8ch], [0.125ms/64ch]** • Factory setting: [1ms/8ch]
	[INCOM2 TX (PROD)] U R	Sets the output format for INCOM 2. **[1ms/8ch], [0.125ms/8ch], [0.125ms/64ch]** • Factory setting: [1ms/8ch]
	[INCOM1 RX (ENG)] U R	Sets the input format for INCOM 1. **[1ms/8ch], [0.125ms/8ch], [0.125ms/64ch]** • Factory setting: [1ms/8ch]
	[INCOM2 RX (PROD)] U R	Sets the input format for INCOM 2. **[1ms/8ch], [0.125ms/8ch], [0.125ms/64ch]** • Factory setting: [1ms/8ch]

[INTERCOM]

Item		Description of settings
[INTERCOM1]	[INCOM1 TALK SETTING]	—
	[MIC TYPE] U O	Selects the type of the intercom 1 microphone. **[DYN]:** Dynamic type **[ECM]:** Condenser type **[CBN]:** Carbon type • Factory setting: [DYN]
	[MIC POWER] U O	Sets the on/off for the power supply to the intercom 1 microphone. **[OFF], [ON]** • Factory setting: [OFF]
	[MIC GAIN] U O	Sets the volume of the intercom 1 microphone. **[–12dB]…[12dB]** • Factory setting: [0dB]
	[SIDE TONE] U O	Sets the volume of the intercom 1 microphone side tone. **[OFF], [–36dB]…[0dB]** (3 dB step) • Factory setting: [–6dB]
	[INCOM1 TO CCU] U O	Sets whether to transmit the intercom 1 microphone audio to the CCU. **[OFF], [ON]** • Factory setting: [ON]
	[INCOM1 RECEIVE SETTING]	—
	[OUTPUT GAIN] U O	Sets the gain of the intercom 1 audio output. **[NORMAL], [BOOST]** • Factory setting: [NORMAL]
	[OUTPUT CH] U O	Sets the allocation of the intercom 1 audio output. **[CH1/CH2], [CH2/CH1]** • Factory setting: [CH1/CH2]
	[INCOM1 RECEIVE CH1 SETTING]	—
	[ENG MIX] U O	Sets whether to mix the ENG signal with the intercom 1 CH1 output by specifying with the <PROD>/<BOTH>/<ENG> switch (**12** on page 28) or by setting this item to [ON]. **[SWITCH], [ON]** • Factory setting: [SWITCH]
	[PROD MIX] U O	Sets whether to mix the PROD signal with the intercom 1 CH1 output by specifying with the <PROD>/<BOTH>/<ENG> switch (**12** on page 28) or by setting this item to [ON]. **[SWITCH], [ON]** • Factory setting: [SWITCH]
	[PGM1 MIX] U O	Sets whether to mix the PGM1 signal with the intercom 1 CH1 output. **[OFF], [ON]** • Factory setting: [ON]
	[PGM2 MIX] U O	Sets whether to mix the PGM2 signal with the intercom 1 CH1 output. **[OFF], [ON]** • Factory setting: [ON]

Item	Description of settings
[CRANE INCOM MIX] U O	Sets whether to mix the crane intercom signal with the intercom 1 CH1 output. **[OFF], [ON]** • Factory setting: [OFF]
[INCOM2 MIX]([CLEAR COM MIX]) U O	Sets whether to mix the intercom 2 signal (CLEAR COM signal for the Clear-Com option) with the intercom 1 CH1 output. **[OFF], [ON]** • Factory setting: [OFF]
[INCOM1 RECEIVE CH2 SETTING]	—
[ENG MIX] U O	Sets whether to mix the ENG signal with the intercom 1 CH2 output. **[OFF], [ON]** • Factory setting: [OFF]
[PROD MIX] U O	Sets whether to mix the PROD signal with the intercom 1 CH2 output. **[OFF], [ON]** • Factory setting: [OFF]
[PGM1 MIX] U O	Sets whether to mix the PGM1 signal with the intercom 1 CH2 output. **[OFF], [ON]** • Factory setting: [ON]
[PGM2 MIX] U O	Sets whether to mix the PGM2 signal with the intercom 1 CH2 output. **[OFF], [ON]** • Factory setting: [ON]
[CRANE INCOM MIX] U O	Sets whether to mix the crane intercom signal with the intercom 1 CH2 output. **[OFF], [ON]** • Factory setting: [OFF]
[INCOM2 MIX]([CLEAR COM MIX]) U O	Sets whether to mix the intercom 2 signal (CLEAR COM signal for the Clear-Com option) with the intercom 1 CH2 output. **[OFF], [ON]** • Factory setting: [OFF]
[TALK SW SEL] U O	Sets the other party when the <PROD>/<BOTH>/<ENG> switch on Intercom 1 is <BOTH>. **[PROD], [BOTH], [ENG]** • Factory setting: [BOTH]

NOTE

- The call destination for the intercom can be switched as shown below in 1. to 3., depending on the combinations of the <PROD>/<BOTH>/<ENG> switch and the MENU settings.
- Only CH1 can be switched for the receive destination. Set the switching for CH2 with [INCOM1 RECEIVE CH2 SETTING] in MENU.

		1. When switching the TALK destination with MENU (RECEIVE is BOTH)			2. When switching both TALK and RECEIVE with the switch		3. When switching the TALK destination with the switch (RECEIVE is BOTH)	
	Intercom receive destination (CH1 only)	BOTH			PROD	ENG	BOTH	
	Intercom microphone call destination	BOTH	PROD	ENG	PROD	ENG	PROD	ENG
Switch	<PROD>/<BOTH>/<ENG> switch	<BOTH>			<PROD>	<ENG>	<PROD>	<ENG>
MENU	<INCOM1 RECEIVE CH1 SETTING > ENG MIX	[SWITCH]/[ON]			[SWITCH]	[SWITCH]/ [ON]	[ON]	[SWITCH]/ [ON]
	<INCOM1 RECEIVE CH1 SETTING > PROD MIX	[SWITCH]/[ON]			[SWITCH]/ [ON]	[SWITCH]	[SWITCH]/ [ON]	[ON]
	TALK SW SEL	[BOTH]	[PROD]	[ENG]	Disabled		Disabled	

Example of use

1. When you want to fix the TALK destination to BOTH, PROD, or ENG when listening to both PROD and ENG
2. When you want to switch both TALK and RECEIVE with the switch
3. When you want to switch the TALK destination to PROD or ENG with the switch when listening to both PROD and ENG

[INTERCOM2] This item is not displayed when Clear-Com is connected.

[INCOM2 TALK SETTING]	—
[MIC TYPE] U O	Selects the type of the intercom 2 microphone. **[DYN]:** Dynamic type **[ECM]:** Condenser type **[CBN]:** Carbon type • Factory setting: [DYN]
[MIC POWER] U O	Sets the on/off for the power supply to the intercom 2 microphone. **[OFF], [ON]** • Factory setting: [OFF]
[MIC GAIN] U O	Sets the volume of the intercom 2 microphone. **[–12dB]…[+12dB]** • Factory setting: [0dB]
[SIDE TONE] U O	Sets the volume of the intercom 2 microphone side tone. **[OFF], [–36dB]…[0dB]** • Factory setting: [–6dB]
[INCOM2 TO CCU] U O	Sets whether to transmit the intercom 2 microphone audio to the CCU. **[OFF], [ON]** • Factory setting: [ON]

Item		Description of settings
	[INCOM2 RECEIVE SETTING]	—
	[OUTPUT GAIN] U O	Sets the gain of the intercom 2 audio output. **[NORMAL], [BOOST]** • Factory setting: [NORMAL]
	[OUTPUT CH] U O	Sets the allocation of the intercom 2 audio output. **[CH1/CH2], [CH2/CH1]** • Factory setting: [CH1/CH2]
	[INCOM2 RECEIVE CH1 SETTING]	—
	[ENG MIX] U O	Sets whether to mix the ENG signal with the intercom 2 CH1 output by specifying with the <PROD>/<BOTH>/<ENG> switch (**13** on page 28) or by setting this item to [ON]. **[SWITCH], [ON]** • Factory setting: [SWITCH]
	[PROD MIX] U O	Sets whether to mix the PROD signal with the intercom 2 CH1 output by specifying with the <PROD>/<BOTH>/<ENG> switch (**13** on page 28) or by setting this item to [ON]. **[SWITCH], [ON]** • Factory setting: [SWITCH]
	[PGM1 MIX] U O	Sets whether to mix the PGM1 signal with the intercom 2 CH1 output. **[OFF], [ON]** • Factory setting: [ON]
	[PGM2 MIX] U O	Sets whether to mix the PGM2 signal with the intercom 2 CH1 output. **[OFF], [ON]** • Factory setting: [ON]
	[CRANE INCOM MIX] U O	Sets whether to mix the crane intercom signal with the intercom 2 CH1 output. **[OFF], [ON]** • Factory setting: [OFF]
	[INCOM1 MIX] U O	Sets whether to mix the intercom 1 signal with the intercom 2 CH1 output. **[OFF], [ON]** • Factory setting: [OFF]
	[INCOM2 RECEIVE CH2 SETTING]	—
	[ENG MIX] U O	Sets whether to mix the ENG signal with the intercom 2 CH2 output. **[OFF], [ON]** • Factory setting: [OFF]
	[PROD MIX] U O	Sets whether to mix the PROD signal with the intercom 2 CH2 output. **[OFF], [ON]** • Factory setting: [OFF]
	[PGM1 MIX] U O	Sets whether to mix the PGM1 signal with the intercom 2 CH2 output. **[OFF], [ON]** • Factory setting: [ON]
	[PGM2 MIX] U O	Sets whether to mix the PGM2 signal with the intercom 2 CH2 output. **[OFF], [ON]** • Factory setting: [ON]
	[CRANE INCOM MIX] U O	Sets whether to mix the crane intercom signal with the intercom 2 CH2 output. **[OFF], [ON]** • Factory setting: [OFF]
	[INCOM1 MIX] U O	Sets whether to mix the intercom 1 signal with the intercom 2 CH2 output. **[OFF], [ON]** • Factory setting: [OFF]
	[TALK SW SEL] U O	Sets the other party when the <PROD>/<BOTH>/<ENG> switch on Intercom 2 is <BOTH>. **[PROD], [BOTH], [ENG]** • Factory setting: [BOTH]

NOTE

- The call destination for the intercom can be switched depending on the combinations of the <PROD>/<BOTH>/<ENG> switch and the MENU settings. Refer to the NOTE for [INTERCOM1] for details on how to make the settings.

[CRANE INTERCOM]	[CRANE INCOM SETTING]	—
	[INPUT LEVEL] U O	Sets the input volume of the crane intercom (connected to the <EXT I/O> terminal). **[–36dB]…[+12dB]** • Factory setting: [0dB]
	[OUTPUT LEVEL] U O	Sets the output volume of the crane intercom (connected to the <EXT I/O> terminal). **[–36dB]…[+12dB]** • Factory setting: [0dB]
	[SIDE TONE] U O	Sets the side tone volume of the crane intercom (connected to the <EXT I/O> terminal). **[OFF], [–36dB]…[0dB]** (3 dB step) • Factory setting: [–6dB]
	[ENG/PROD] U O	Sets the line input of the crane intercom audio. **[ENG], [PROD], [BOTH]** • Factory setting: [ENG]
	[CRANE TO CCU] U O	Sets whether to output the crane intercom audio to the CCU. **[OFF], [ON]** • Factory setting: [OFF]

Item		Description of settings
	[CRANE INCOM OUTPUT SETTING]	—
	[PGM1 MIX] U O	Sets whether to mix the PGM1 signal with the crane intercom output. **[OFF], [ON]** • Factory setting: [ON]
	[PGM2 MIX] U O	Sets whether to mix the PGM2 signal with the crane intercom output. **[OFF], [ON]** • Factory setting: [ON]
	[INCOM1 MIX] U O	Sets whether to mix the intercom 1 signal with the crane intercom output. **[OFF], [ON]** • Factory setting: [OFF]
	[INCOM2 MIX]([CLEAR COM MIX]) U O	Sets whether to mix the intercom 2 signal (CLEAR COM signal for Clear-Com option) with the crane intercom output. **[OFF], [ON]** • Factory setting: [OFF]
[CLEAR COM]	This item is not displayed when intercom 2 is connected.	
	[CLEAR COM SETTING]	—
	[INPUT LEVEL] U O	Sets the input volume of Clear-Com. **[–36dB]…[+12dB]** • Factory setting: [0dB]
	[CANCEL LEVEL] U O	Sets the input/output cancel signal level of Clear-Com. **[–20.0dB]…[+20.0dB]** (0.5 dB step) • Factory setting: [0.0dB]
	[SIDE TONE] U O	Sets the side tone volume of Clear-Com. **[OFF], [–36dB]…[0dB]** (3 dB step) • Factory setting: [–6dB]
	[CLEAR COM TO CCU] U O	Sets whether to output the Clear-Com audio to the CCU. **[OFF], [ON]** • Factory setting: [ON]
	[CLEAR COM OUTPUT SETTING]	—
	[PGM1 MIX] U O	Sets whether to mix the PGM1 signal with Clear-Com output. **[OFF], [ON]** • Factory setting: [ON]
	[PGM2 MIX] U O	Sets whether to mix the PGM2 signal with Clear-Com output. **[OFF], [ON]** • Factory setting: [ON]
	[INCOM1 MIX] U O	Sets whether to mix the INCOM1 signal with Clear-Com output. **[OFF], [ON]** • Factory setting: [OFF]
	[CRANE INCOM MIX] U O	Sets whether to mix the CRANE INCOM signal with Clear-Com output. **[OFF], [ON]** • Factory setting: [OFF]
[EARPHONES SETTING]	[LCH OUTPUT] U O	Sets the audio signal output to the L channel of the earphones. **[INCOM1(CH1)], [INCOM2(CH1)] (for Clear-Com option: [CLEAR COM]), [INCOM1/2 MIX(CH1)] (for Clear-Com option: [INCOM1(CH1)/CLEAR COM MIX]), [PGM1], [PGM2], [PGM1/PGM2 MIX], [MIC1], [OFF]** • Factory setting: [INCOM1(CH1)]
	[RCH OUTPUT] U O	Sets the audio signal output to the R channel of the earphones. **[INCOM1(CH2)], [INCOM2(CH2)] (for Clear-Com option: [CLEAR COM]), [INCOM1/2 MIX(CH2)] (for Clear-Com option: [INCOM1(CH2)/CLEAR COM MIX]), [PGM1], [PGM2], [PGM1/PGM2 MIX], [MIC2], [OFF]** • Factory setting: [INCOM1(CH2)]
	[LCH MONITOR LEVEL] U O	Sets the monitor output level for the L channel of the earphones. **[–40dB]…[+12dB]** • Factory setting: [0dB]
	[RCH MONITOR LEVEL] U O	Sets the monitor output level for the R channel of the earphones. **[–40dB]…[+12dB]** • Factory setting: [0dB]
[PGM OUTPUT]	These items can be set only when the PGM option is used.	
	[PGM OUTPUT SELECT] U O	Sets the audio output from the <PGM OUT> terminal. **[PGM1], [PGM2], [PGM1/PGM2], [ENG], [PROD], [ENG/PROD], [CRANE]** • Factory setting: [PGM1]
	[PGM OUTPUT LEVEL] U O	Sets the output level from the <PGM OUT> terminal. **[–36dB]…[+12dB]** • Factory setting: [0dB]

Item		Description of settings
[LEVEL/PGM1/ PGM2 VR SETTING]	[INTERCOM1 PGM1 VR] U O	Sets the audio signal to be controlled by the <PGM1> dial of <INTERCOM1>. **[ENG], [PROD], [ENG/PROD], [PGM1], [PGM2], [PGM1/PGM2], [CRANE], [INCOM2] (for Clear-Com option: [CLEAR COM])** • Factory setting: [PGM1]
	[INTERCOM1 PGM2 VR] U O	Sets the audio signal to be controlled by the <PGM2> dial of <INTERCOM1>. **[ENG], [PROD], [ENG/PROD], [PGM1], [PGM2], [PGM1/PGM2], [CRANE], [INCOM2] (for Clear-Com option: [CLEAR COM])** • Factory setting: [PGM2]
	[INTERCOM2 PGM1 VR] U O	Sets the audio signal to be controlled by the <PGM1> dial of <INTERCOM2>. **[ENG], [PROD], [ENG/PROD], [PGM1], [PGM2], [PGM1/PGM2], [CRANE], [INCOM1]** • Factory setting: [PGM1]
	[INTERCOM2 PGM2 VR] U O	Sets the audio signal to be controlled by the <PGM2> dial of <INTERCOM2>. **[ENG], [PROD], [ENG/PROD], [PGM1], [PGM2], [PGM1/PGM2], [CRANE], [INCOM1]** • Factory setting: [PGM2]
	[VR MIN MODE] U O	Sets the level when the volume level is minimum. **[MUTE]:** Muted **[MIN GAIN]:** Minimum level • Factory setting: [MUTE]
	[B/U INTERCOM LEVEL] U O	Sets the audio signal to be controlled by the intercom level of the Build-up Unit. **[OFF], [INCOM1], [INCOM2] (for Clear-Com option: [CLEAR COM]), [INCOM1/INCOM2] (for Clear-Com option: [INCOM1/CLEAR COM])** • Factory setting: [OFF]
[OPT INTERCOM INPUT SETTING]	[OPT ENG INPUT LEVEL] U O	Sets the input level of the ENG audio signal sent from the CCU to the camera. **[–36dB]…[+12dB]** • Factory setting: [0dB]
	[OPT PROD INPUT LEVEL] U O	Sets the input level of the PROD audio signal sent from the CCU to the camera. **[–36dB]…[+12dB]** • Factory setting: [0dB]
	[OPT PGM1 INPUT LEVEL] U O	Sets the input level of the PGM1 audio signal sent from the CCU to the camera. **[–36dB]…[+12dB]** • Factory setting: [0dB]
	[OPT PGM2 INPUT LEVEL] U O	Sets the input level of the PGM2 audio signal sent from the CCU to the camera. **[–36dB]…[+12dB]** • Factory setting: [0dB]

[IP SIGNAL]

Item		Description of settings
[START/STOP]		Starts/stops transmission of streaming. **[START], [STOP]** • Factory setting: [STOP]
[STREAMING COMMON]	[STREAMING MODE] U R N	Sets the streaming mode. **[H.264], [H.264(UHD)], [H.265], [H.265(UHD)], [JPEG(UHD)], [RTMP], [RTMP(UHD)], [SRT(H.264)], [SRT(H.264 UHD)], [SRT(H.265)], [SRT(H.265 UHD)], [NDI High Bandwidth], [MPEG2-TX over UDP]** • Factory setting: [H.264] ***NOTE*** • UHD streaming mode can be selected only when [BASIC CONFIG] – [FORMAT] is UHD. • This cannot be set when [FORMAT] is HS mode. • When [BASIC CONFIG] – [OPT MODE] is [ST2110 JPEG XS], [NDI High Bandwidth] cannot be selected. • Depending on the [STREAMING MODE] setting, the items from [JPEG(1)] to [MPEG2-TS OVER UDP] may not be displayed.
	[SET EXECUTE]	Select this to save the set content.
	[TIMECODE OVERLAY] U R N	Sets whether timecode information is overlayed on IP transmission data. **[ENABLE], [DISABLE]** • Factory setting: [DISABLE]
	[HDR/V-LOG MODE] U R N	Sets the HDR/V-LOG mode. **[V-LOG], [V709], [BC709], [SDR/709], [HDR/709], [HDR/2020]** • Factory setting: [SDR/709] when HDR is ON, [V709] when V-LOG is ON
	[OUTPUT ITEM] U R N	Selects details of the characters superimposed on output images. **[MENU ONLY]:** Displays only on the menu. **[STATUS]:** Displays all characters that are the same as in the viewfinder display. • Factory setting: [MENU ONLY]
	[CHAR] U R N	Sets whether to superimpose characters on output images. **[OFF], [ON]** • Factory setting: [ON]

Item		Description of settings
[JPEG(1)]		Makes settings for JPEG(1) images.
	[JPEG TRANSMISSION] U R N	Enables/disables transmission of JPEG(1) images. **[ON], [OFF]** • Factory setting: [ON]
	[IMAGE CAPTURE SIZE] U R N	Sets the image resolution for the display of JPEG(1) images. **[3840 x 2160], [1920 x 1080], [1280 x 720], [640 x 360], [320 x 180]** • Factory setting: [1280 x 720] ***NOTE*** • [3840 x 2160] can be selected only when [STREAMINNG MODE] is [JPEG(UHD)].
	[REFRESH INTERVAL] U R N	Sets the refresh rate for JPEG(1) images. [59.94Hz] **[1fps], [5fps], [15fps], [30fps]** Only [1fps] and [5fps] can be selected when [STREAMING MODE] is [JPEG (UHD)]. [50Hz] **[1fps], [5fps], [12.5fps], [25fps]** Only [1fps] and [5fps] can be selected when [STREAMING MODE] is [JPEG (UHD)]. [23.98Hz] **[1fps], [4fps], [12fps], [24fps]** Only [1fps] and [4fps] can be selected when [STREAMING MODE] is [JPEG (UHD)]. • Factory setting: [30fps]
	[IMAGE QUAULITY] U R N	Sets the image quality for JPEG(1) images. **[FINE], [NORMAL]** • Factory setting: [FINE]
	[SET EXECUTE]	Select this to save the set content.
[JPEG(2)]		Makes settings for JPEG(2) images. This cannot be set when [STREAMING MODE] is [JPEG(UHD)] or [NDI HIGH BANDWIDTH].
	[JPEG TRANSMISSION] U R N	Enables/disables transmission of JPEG(2) images. **[ON], [OFF]** • Factory setting: [ON]
	[IMAGE CAPTURE SIZE] U R N	Sets the image resolution for the display of JPEG(2) images. **[640 x 360], [320 x 180]** • Factory setting: [640 x 360]
	[REFRESH INTERVAL] U R N	Sets the refresh rate for JPEG(2) images. [59.94Hz] **[1fps], [5fps], [15fps], [30fps]** [50Hz] **[1fps], [5fps], [12.5fps], [25fps]** [23.98Hz] **[1fps], [4fps], [12fps], [24fps]** • Factory setting: [30fps]
	[IMAGE QUAULITY] U R N	Sets the image quality for JPEG(2) images. **[FINE], [NORMAL]** • Factory setting: [FINE]
	[SET EXECUTE]	Select this to save the set content.
[JPEG(3)]		Makes settings for JPEG(3) images. This cannot be set when [STREAMING MODE] is [JPEG(UHD)] or [NDI HIGH BANDWIDTH].
	[JPEG TRANSMISSION] U R N	Enables/disables transmission of JPEG(3) images. **[ON], [OFF]** • Factory setting: [ON]
	[IMAGE CAPTURE SIZE] U R N	Sets the image resolution for the display of JPEG(3) images. **[640 x 360], [320 x 180]** • Factory setting: [320 x 180]
	[REFRESH INTERVAL] U R N	Sets the refresh rate for JPEG(3) images. [59.94Hz] **[1fps], [5fps], [15fps], [30fps]** [50Hz] **[1fps], [5fps], [12.5fps], [25fps]** [23.98Hz] **[1fps], [4fps], [12fps], [24fps]** • Factory setting: [30fps]
	[IMAGE QUAULITY] U R N	Sets the image quality for JPEG(3) images. **[FINE], [NORMAL]** • Factory setting: [FINE]
	[SET EXECUTE]	Select this to save the set content.
[H.264(1)]		Makes settings for H.264(1) images.
	[H.264 TRANSMISSION] U R N	Enables/disables transmission of H.264(1) images. **[ON], [OFF]** • Factory setting: [ON]
	[BIT DEPTH] U R N	Sets the bit count for H.264(1) images. **[10bit], [8bit]** • Factory setting: [10bit]

Item		Description of settings
	[PROFILE TYPE] U R N	Sets the profile for when H.264(1) images are transmitted. **[HIGH], [MAIN], [BASELINE]** • Factory setting: [HIGH] ***NOTE*** • Only [HIGH] can be selected when [BIT DEPTH] is [10bit] or [IMAGE CAPTURE SIZE] is [3840 x 2160].
	[IMAGE CAPTURE SIZE] U R N	Sets the resolution for H.264(1) images. **[3840 x 2160], [1920 x 1080], [1280 x 720]** • Factory setting: [1920 x 1080] ***NOTE*** • [3840 x 2160] can be selected only when [STREAMINNG MODE] is [H.264(UHD)].
	[CBR/VBR] U R N	Sets the transmission mode for H.264(1) images. **[CBR], [VBR]** • Factory setting: [VBR]
	[FRAME RATE] U R N	Sets the frame rate for H.264(1) images. [59.94Hz] **[30fps], [60fps]** [50Hz] **[25fps], [50fps]** [23.98Hz] **[24fps]** • Factory setting: [30fps]
	[MAX BIT RATE] U R N	Sets the H.264(1) bit rate per client. When [BIT DEPTH] is set to [10bit]: **[112640(110Mbps)], [76800(75Mbps)], [36864(36Mbps)], [30720(30Mbps)], [21504(21Mbps)], [18432(18Mbps)], [15360(15Mbps)], [12288(12Mbps)], [6144(6Mbps)]** When [BIT DEPTH] is set to [8bit]: **[76800(75Mbps)], [51200(50Mbps)], [25600(25Mbps)], [24576(24Mbps)], [20480(20Mbps)], [14336(14Mbps)], [12800(12.5Mbps)], [10240(10Mbps)], [8192(8Mbps)], [4096(4Mbps)], [2048(2Mbps)]** • Factory setting: [14336(14Mbps)]
	[SET EXECUTE]	Select this to save the set content.
	[TRANSMISSION TYPE] N	Sets the transmission format for H.264(1) images. **[UNICAST (AUTO)], [UNICAST (MANUAL)], [MULTICAST]** • Factory setting: [UNICAST (AUTO)]
	[UNICAST PORT(IMAGE)] N	Enter the unicast port number (used when sending images from the unit). **[1024] … [50000]** • Factory setting: [32004]
	[UNICAST PORT(AUDIO)] N	Enter the unicast port number (used when transmitting audio from this unit). **[1024] … [50000]** • Factory setting: [33004]
	[MULTICAST ADDRESS] N	Enter the multicast IP address. Images and audio will be sent to the specified IP address. **[224.0.0.0] … [239.255.255.255]** • Factory setting: [239.192.0.20]
	[MULTICAST PORT] N	Enter the multicast port number (used when sending images from the unit). **[1024] … [50000]** • Factory setting: [37004]
	[MULTICAST TTL/HOP LIMIT] N	Enter the TTL/HOPLimit value for multicast. **[1] … [254]** • Factory setting: [16]
	[SET EXECUTE]	Select this to save the set content.
[H.264(2)]		Makes settings for H.264(2) images.
	[H.264 TRANSMISSION] U R N	Enables/disables transmission of H.264(2) images. **[ON], [OFF]** • Factory setting: [ON]
	[PROFILE TYPE] U R N	Set the profile for when H.264(2) images are transmitted. **[HIGH], [MAIN], [BASELINE]** • Factory setting: [HIGH]
	[IMAGE CAPTURE SIZE] U R N	Sets the resolution for H.264(2) images. **[1920 x 1080], [1280 x 720], [640 x 360]** • Factory setting: [1280 x 720]
	[CBR/VBR] U R N	Sets the transmission mode for H.264(2) images. **[CBR], [VBR]** • Factory setting: [VBR]
	[FRAME RATE] U R N	Sets the frame rate for H.264(2) images. [59.94Hz] **[30fps], [60fps]** [50Hz] **[25fps], [50fps]** [23.98Hz] **[24fps]** • Factory setting: [30fps]
	[MAX BIT RATE] U R N	Sets the H.264(2) bit rate per client. **[24576(24Mbps)], [20480(20Mbps)], [14336(14Mbps)], [10240(10Mbps)], [8192(8Mbps)], [4096(4Mbps)], [2048(2Mbps)]** • Factory setting: [8192(8Mbps)]

Item		Description of settings
	[SET EXECUTE]	Select this to save the set content.
	[TRANSMISSION TYPE] N	Sets the transmission format for H.264(2) images. **[UNICAST (AUTO)], [UNICAST (MANUAL)], [MULTICAST]** • Factory setting: [UNICAST (AUTO)]
	[UNICAST PORT(IMAGE)] N	Enter the unicast port number (used when sending images from the unit). **[1024] … [50000]** • Factory setting: [32014]
	[UNICAST PORT(AUDIO)] N	Enter the unicast port number (used when transmitting audio from this unit). **[1024] … [50000]** • Factory setting: [33014]
	[MULTICAST ADDRESS] N	Enter the multicast IP address. Images and audio will be sent to the specified IP address. **[224.0.0.0] … [239.255.255.255]** • Factory setting: [239.192.0.21]
	[MULTICAST PORT] N	Enter the multicast port number (used when sending images from the unit). **[1024] … [50000]** • Factory setting: [37004]
	[MULTICAST TTL/HOP LIMIT] N	Enter the TTL/HOPLimit value for multicast. **[1] … [254]** • Factory setting: [16]
	[SET EXECUTE]	Select this to save the set content.
[H.264(3)]		Makes settings for H.264(3) images.
	[H.264 TRANSMISSION] U R N	Enables/disables transmission of H.264(3) images. **[ON], [OFF]** • Factory setting: [ON]
	[PROFILE TYPE] U R N	Set the profile for when H.264(3) images are transmitted. **[HIGH], [MAIN], [BASELINE]** • Factory setting: [HIGH]
	[IMAGE CAPTURE SIZE] U R N	Sets the resolution for H.264(3) images. **[1280 x 720], [640 x 360]** Factory setting: [640 x 360]
	[CBR/VBR] U R N	Sets the transmission mode for H.264(3) images. **[CBR], [VBR]** • Factory setting: [VBR]
	[FRAME RATE] U R N	Sets the frame rate for H.264(3) images. [59.94Hz] **[30fps], [60fps]** [50Hz] **[25fps], [50fps]** [23.98Hz] **[24fps]** • Factory setting: [30fps]
	[MAX BIT RATE] U R N	Sets the H.264(3) bit rate per client. **[14336(14Mbps)], [10240(10Mbps)], [8192(8Mbps)], [4096(4Mbps)], [2048(2Mbps)]** • Factory setting: [4096(4Mbps)]
	[SET EXECUTE]	Select this to save the set content.
	[TRANSMISSION TYPE] N	Sets the transmission format for H.264(3) images. **[UNICAST (AUTO)], [UNICAST (MANUAL)], [MULTICAST]** • Factory setting: [UNICAST (AUTO)]
	[UNICAST PORT(IMAGE)] N	Enter the unicast port number (used when sending images from the unit). **[1024] … [50000]** • Factory setting: [32024]
	[UNICAST PORT(AUDIO)] N	Enter the unicast port number (used when transmitting audio from this unit). **[1024] … [50000]** • Factory setting: [33024]
	[MULTICAST ADDRESS] N	Enter the multicast IP address. Images and audio will be sent to the specified IP address. **[224.0.0.0] … [239.255.255.255]** • Factory setting: [239.192.0.22]
	[MULTICAST PORT] N	Enter the multicast port number (used when sending images from the unit). **[1024] … [50000]** • Factory setting: [37004]
	[MULTICAST TTL/HOP LIMIT] N	Enter the TTL/HOPLimit value for multicast. **[1] … [254]** • Factory setting: [16]
	[SET EXECUTE]	Select this to save the set content.
[H.265(1)]		Makes settings for H.265(1) images.
	[H.265 TRANSMISSION] U R N	Enables/disables transmission of H.265(1) images. **[ON], [OFF]** • Factory setting: [ON]
	[BIT DEPTH] U R N	Sets the bit count for H.265(1) images. **[10bit], [8bit]** • Factory setting: [10bit]

Item		Description of settings
	[IMAGE CAPTURE SIZE] U R N	Sets the resolution for H.265(1) images. **[3840 x 2160], [1920 x 1080], [1280 x 720]** • Factory setting: [1920 x 1080] ***NOTE*** • [3840 x 2160] can be selected only when [STREAMINNG MODE] is [H.265(UHD)].
	[CBR/VBR] U R N	Sets the transmission mode for H.265(1) images. **[CBR], [VBR]** • Factory setting: [VBR]
	[FRAME RATE] U R N	Sets the frame rate for H.265(1) images. [59.94Hz] **[30fps], [60fps]** [50Hz] **[25fps], [50fps]** [23.98Hz] **[24fps]** • Factory setting: [30fps]
	[MAX BIT RATE] U R N	Sets the H.265(1) bit rate per client. **[76800(75Mbps)], [51200(50Mbps)], [25600(25Mbps)], [24576(24Mbps)], [20480(20Mbps)], [14336(14Mbps)], [12800(12.5Mbps)], [10240(10Mbps)], [8192(8Mbps)], [4096(4Mbps)], [2048(2Mbps)]** • Factory setting: [14336(14Mbps)]
	[SET EXECUTE]	Select this to save the set content.
	[TRANSMISSION TYPE] N	Sets the transmission format for H.265(1) images. **[UNICAST (AUTO)], [UNICAST (MANUAL)], [MULTICAST]** • Factory setting: [UNICAST (AUTO)]
	[UNICAST PORT(IMAGE)] N	Enter the unicast port number (used when sending images from the unit). **[1024] … [50000]** • Factory setting: [32004]
	[UNICAST PORT(AUDIO)] N	Enter the unicast port number (used when transmitting audio from this unit). **[1024] … [50000]** • Factory setting: [33004]
	[MULTICAST ADDRESS] N	Enter the multicast IP address. Images and audio will be sent to the specified IP address. **[224.0.0.0] … [239.255.255.255]** • Factory setting: [239.192.0.20]
	[MULTICAST PORT] N	Enter the multicast port number (used when sending images from the unit). **[1024] … [50000]** • Factory setting: [37004]
	[MULTICAST TTL/HOP LIMIT] N	Enter the TTL/HOPLimit value for multicast. **[1] … [254]** • Factory setting: [16]
	[SET EXECUTE]	Select this to save the set content.
[H.265(2)]		Makes settings for H.265(2) images.
	[H.265 TRANSMISSION] U R N	Enables/disables transmission of H.265(2) images. **[ON], [OFF]** • Factory setting: [ON]
	[IMAGE CAPTURE SIZE] U R N	Sets the resolution for H.265(2) images. **[1920 x 1080], [1280 x 720], [640 x 360]** • Factory setting: [1280 x 720]
	[CBR/VBR] U R N	Sets the transmission mode for H.265(2) images. **[CBR], [VBR]** • Factory setting: [VBR]
	[FRAME RATE] U R N	Sets the frame rate for H.265(2) images. [59.94Hz] **[30fps], [60fps]** [50Hz] **[25fps], [50fps]** [23.98Hz] **[24fps]** • Factory setting: [30fps]
	[MAX BIT RATE] U R N	Sets the H.265(2) bit rate per client. **[24576(24Mbps)], [20480(20Mbps)], [14336(14Mbps)], [10240(10Mbps)], [8192(8Mbps)], [4096(4Mbps)], [2048(2Mbps)]** • Factory setting: [8192(8Mbps)]
	[SET EXECUTE]	Select this to save the set content.
	[TRANSMISSION TYPE] N	Sets the transmission format for H.265(2) images. **[UNICAST (AUTO)], [UNICAST (MANUAL)], [MULTICAST]** • Factory setting: [UNICAST (AUTO)]
	[UNICAST PORT(IMAGE)] N	Enter the unicast port number (used when sending images from the unit). **[1024] … [50000]** • Factory setting: [32014]
	[UNICAST PORT(AUDIO)] N	Enter the unicast port number (used when transmitting audio from this unit). **[1024] … [50000]** • Factory setting: [33014]

Item		Description of settings
	[MULTICAST ADDRESS] N	Enter the multicast IP address. Images and audio will be sent to the specified IP address. **[224.0.0.0] … [239.255.255.255]** • Factory setting: [239.192.0.21]
	[MULTICAST PORT] N	Enter the multicast port number (used when sending images from the unit). **[1024] … [50000]** • Factory setting: [37004]
	[MULTICAST TTL/HOP LIMIT] N	Enter the TTL/HOPLimit value for multicast. **[1] … [254]** • Factory setting: [16]
	[SET EXECUTE]	Select this to save the set content.
[RTMP]		Makes settings for RTMP/RTMPS transmissions.
	[RTMP TRANSMISSION] U R N	Enables/disables RTMP transmissions. **[ON], [OFF]** • Factory setting: [ON]
	[BIT DEPTH] U R N	Refer to [H.264(1)] for setting contents.
	[PROFILE TYPE] U R N	
	[IMAGE CAPTURE SIZE] U R N	
	[CBR/VBR] U R N	
	[FRAME RATE] U R N	
	[MAX BIT RATE] U R N	
	[URL TYPE] N	Sets the method for registering the information for the RTMP transmission server. **[TYPE1], [TYPE2]** • Factory setting: [TYPE1]
	[SERVER URL] N	Sets the URL for the RTMP server to be transmitted to.
	[STREAMING KEY] N	Sets the stream key obtained from the RTMP server during streaming only when [URL TYPE] is set to [Type2].
	[SET EXECUTE]	Select this to save the set content.
[SRT]		Makes settings for SRT transmissions.
	[SRT TRANSMISSION] U R N	Enables/disables SRT transmissions. **[ON], [OFF]** • Factory setting: [ON]
	[BIT DEPTH] U R N	Refer to [H.264(1)] or [H.265(1)] for setting contents.
	[PROFILE TYPE] U R N	
	[IMAGE CAPTURE SIZE] U R N	
	[CBR/VBR] U R N	
	[FRAME RATE] U R N	
	[MAX BIT RATE] U R N	
	[SET EXECUTE]	Select this to save the set content.
	[MODE] U R N	Selects the method to connect to the SRT compatible decoder or service. **[CLIENT(CALLER)], [LISTENER]** • Factory setting: [LISTENER]
	[DESTINATION URL] N	When [CLIENT(CALLER)] is set in [MODE], enter the IP address. Images and audio will be sent to the specified IP address. • Factory setting: [192.168.0.3]
	[DESTINATION PORT] N	When [CLIENT(CALLER)] is set in [MODE], enter the port number (used when transmitting images from this unit). Connection is to the specified port number. **[1] … [65535]** • Factory setting: [7002]
	[STREAM ID] N	When [CLIENT(CALLER)] is set in [MODE], enter the STREAM ID. The information entered is notified to the connection destination when SRT transmission is started. • Factory setting: [#!::m=publish,r=PanasonicStream]
	[CLIENT(CALLER)] N	When [LISTENER] is set in [MODE], enter the port number (used when this unit is waiting for a connection). • Factory setting: [2020]
	[TTL/HOP LIMIT] N	Enter the TTL/HOPLimit value for multicast. **[1] … [254]** • Factory setting: [16]

Item		Description of settings
	[LATENCY] N	Sets the time (ms) between when images and audio are sent and when they are played on the receiving device. **[0] … [65535]** • Factory setting: [120]
	[ENCRYPTION] N	Sets whether to encrypt the transmitted IP image. **[OFF], [AES-128], [AES-256]** • Factory setting: [OFF]
	[PASSPHRASE] N	Sets the phrase used for decoding the encrypted IP images.
	[SET EXECUTE]	Select this to save the set content.
[NDI HIGH BANDWIDTH]		Makes settings for NDI transmissions.
	[FORMAT SELECT] U R N	Sets the format for NDI transmissions.
	[SOURCE NAME] N	Sets the device name displayed when this unit is detected by software applications and hardware compatible with NDI. Maximum 32 characters (Alphanumeric characters, : - _) • Factory setting: [NDI_Device-[Serial No]]
	[PROTOCOL] N	Sets the format of unicast transmission to be used. **[TCP], [UDP], [RUDP]** • Factory setting: [RUDP]
	[MULTICAST TRANSMIT] N	Sets whether to perform multicast transmission of images for the software applications and hardware compatible with NDI. **[ON], [OFF]** • Factory setting: [OFF]
	[ADDRESS] N	Enter the multicast IP address. Images and audio will be sent to the specified IP address. **[224.0.0.0] … [239.255.255.255]** Factory setting: [239.192.0.30]
	[SUBNET] N	Enter the subnet mask. • Factory setting: [255.255.255.255]
	[TTL/HOP LIMIT] N	Enter the TTL/HOPLimit value for multicast. **[1] … [254]** • Factory setting: [16]
	[SET EXECUTE]	Select this to save the set content.
	[GROUP] N	Sets whether to use the grouping function when performing NDI transmission. **[ENABLE], [DISABLE]** • Factory setting: [DISABLE]
	[NAME] N	Sets the group name for use when grouping function is used. Maximum 63 characters (Alphanumeric characters, : - _)
	[USE DISCOVERY SERVER] N	Sets whether to use the discovery server when performing NDI transmission. **[ENABLE], [DISABLE]** • Factory setting: [DISABLE]
	[SERVER ADDRESS] N	Sets the IPv4 address of the server when using the discovery server.
	[SET EXECUTE]	Select this to save the set content.
[MPEG2-TS OVER UDP]		Makes settings for MPEG2-TS OVER UDP transmissions.
	[TS TRANSMISSION] U R N	Enables/disables MPEG2-TS OVER UDP transmissions. **[ON], [OFF]** • Factory setting: [ON]
	[BIT DEPTH] U R N	Refer to [H.264(1)] for setting contents.
	[PROFILE TYPE] U R N	
	[IMAGE CAPTURE SIZE] U R N	
	[CBR/VBR] U R N	
	[FRAME RATE] U R N	
	[MAX BIT RATE] U R N	
	[SET EXECUTE]	Select this to save the set content.
	[TRANSMISSION TYPE] N	Sets the format for MPEG2-TS OVER UDP transmissions. **[UNICAST], [MULTICAST]** • Factory setting: [UNICAST]
	[UNICAST ADDRESS] N	Sets the UNICAST address used for MPEG2-TS OVER UDP transmission. Specify this IP address on the receiving application or service. • Factory setting: [192.168.0.3]
	[UNICAST PORT] N	Sets the UNICAST port number used for MPEG2-TS OVER UDP transmission. Specify this port number on the receiving application or service. **[1024] … [50000]** • Factory setting: [7002]

Item		Description of settings
	[MULTICAST ADDRESS] N	Sets the MULTICAST address used for MPEG2-TS OVER UDP transmission. Specify this IP address on the receiving application or service. • Factory setting: [239.192.0.20]
	[MULTICAST PORT] N	Sets the MULTICAST port number used for MPEG2-TS OVER UDP transmission. Specify this port number on the receiving application or service. **[1024] … [50000]** • Factory setting: [32004]
	[MULTICAST TTL/HOP LIMIT] N	Enter the TTL/HOPLimit value for multicast. **[1] … [254]** • Factory setting: [16]
	[PUSH UDP] N	When [PUSH UDP] has been set to [ENABLE], MPEG2-TS OVER UDP transmission starts automatically when the camera is started. **[ENABLE], [DISABLE]** • Factory setting: [ENABLE]
	[SET EXECUTE]	Select this to save the set content.
[ST2110 COMMON]	This cannot be set when [BASIC CONFIG] – [OPT MODE] is [CCU CONNECT].	
	[MOIP MODE] U R N	Enables/disables MOIP (SMPTE ST2110 video/audio input/output). **[OFF], [ON]** • Factory setting: [OFF]
	[ST2110 PORT] U R N	Enter the port number for SMPTE ST2110 (used when transmitting SMPTE ST2110 from this unit). 10670 cannot be set as a port number. • Factory setting: [49330]
	[MAIN VIDEO TX]	—
	[FORMAT] U R N	Sets the image format of the MAIN video signal of SMPTE ST2110 (uncompressed).
	[MAIN JPEG XS VIDEO TX]	—
	[FORMAT] U R N	Sets the image format of the MAIN video signal of SMPTE ST2110 JPEG-XS (compressed).
	[PAYLOAD TYPE] U R N	Set the payload type of SMPTE ST2110 JPEG XS (compressed). **[96] … [127]** • Factory setting: [101]
	[SUB VIDEO TX]	—
	[FORMAT] U R N	Sets the image format of the SUB video signal of SMPTE ST2110 (uncompressed). The images output by [SUB VIDEO TX] are the same as [CAM] in [SDI OUT2]. (Excluding the FORMAT setting)
	[TRUNK VIDEO TX]	—
	[FORMAT]	Sets the image format of the TRUNK video signal of SMPTE ST2110 (uncompressed).
	[RET VIDEO RX]	—
	[FORMAT] U R N	Sets the image format of the RETURN video signal of SMPTE ST2110 (uncompressed).
	[PROMPTER VIDEO RX]	—
	[FORMAT] U R N	Sets the image format of the PROMPTER video signal of SMPTE ST2110 (uncompressed).
[ST2110 PRIMARY TX]		Makes SMPTE ST2110 (uncompressed) PRIMARY transmission settings.
	[MAIN VIDEO TX]	—
	[DEST ADDR] N	Enter the IP address of the transmission destination for [MAIN VIDEO]. First octet: 0 to 239 Second octet: 0 to 255 Third octet: 0 to 255 Fourth octet: 0 to 255 You cannot set 0.0.0.0, 224.0.0.0 to 224.0.1.255, or a 127 IP address for the first octet. • Factory setting: [230.1.0.1]
	[DEST PORT] N	Enter the [MAIN VIDEO] transmission destination port number. **[1024] … [65535]** 10670 cannot be set as a port number. • Factory setting: [49101]
	[MAIN JPEG XS VIDEO TX]	—
	[DEST ADDR] N	Enter the IP address of the transmission destination for [MAIN JPEG XS VIDEO]. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [230.1.0.2]
	[DEST PORT] N	Enter the [MAIN JPEG XS VIDEO] transmission destination port number. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [49102]
	[SUB VIDEO TX]	—
	[DEST ADDR] N	Enter the IP address of the transmission destination for [SUB VIDEO]. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [230.1.0.3]
	[DEST PORT] N	Enter the [SUB VIDEO] transmission destination port number. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [49103]
	[TRUNK VIDEO TX]	—

Item		Description of settings
	[DEST ADDR] N	Enter the IP address of the transmission destination for [TRUNK VIDEO]. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [230.1.0.4]
	[DEST PORT] N	Enter the [TRUNK VIDEO] transmission destination port number. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [49104]
	[SET EXECUTE]	Select this to save the set content.
	[MIC1 AUDIO TX]	—
	[DEST ADDR] N	Enter the IP address of the transmission destination for [MIC1 AUDIO]. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [230.1.20.2]
	[DEST PORT] N	Enter the [MIC1 AUDIO] transmission destination port number. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [49122]
	[MIC2 AUDIO TX]	—
	[DEST ADDR] N	Enter the IP address of the transmission destination for [MIC2 AUDIO]. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [230.1.20.3]
	[DEST PORT] N	Enter the [MIC2 AUDIO] transmission destination port number. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [49123]
	[MIX AUDIO TX]	—
	[DEST ADDR] N	Enter the IP address of the transmission destination for [MIX AUDIO]. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [230.1.20.6]
	[DEST PORT] N	Enter the [MIX AUDIO] transmission destination port number. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [49126]
	[SET EXECUTE]	Select this to save the set content.
	[TRUNK AUDIO TX]	—
	[DEST ADDR] N	Enter the IP address of the transmission destination for [TRUNK AUDIO]. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [230.1.20.1]
	[DEST PORT] N	Enter the [TRUNK AUDIO] transmission destination port number. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [49121]
	[INCOM1 AUDIO TX (ENG)]	—
	[DEST ADDR] N	Enter the IP address of the transmission destination for [INCOM1 AUDIO]. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [230.1.20.4]
	[DEST PORT] N	Enter the [INCOM1 AUDIO] transmission destination port number. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [49124]
	[INCOM2 AUDIO TX (PROD)]	—
	[DEST ADDR] N	Enter the IP address of the transmission destination for [INCOM2 AUDIO]. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [230.1.20.5]
	[DEST PORT] N	Enter the [INCOM2 AUDIO] transmission destination port number. Refer to [MAIN VIDEO TX] for setting contents. • Factory setting: [49125]
	[SET EXECUTE]	Select this to save the set content.
[ST2110 PRIMARY RX]		Makes SMPTE ST2110 (uncompressed) PRIMARY reception settings.
	[RET1 VIDEO RX]	—
	[DEST ADDR] N	Enter the multicast address of the stream to be received as [RET1 VIDEO]. First octet: 0 to 239 Second octet: 0 to 255 Third octet: 0 to 255 Fourth octet: 0 to 255 You cannot set 0.0.0.0, 224.0.0.0 to 224.0.1.255, or a 127 IP address for the first octet. • Factory setting: [230.1.30.1]
	[DEST PORT] N	Enter the port number of the stream to be received as [RET1 VIDEO]. **[1024] … [65535]** 10670 cannot be set as a port number. • Factory setting: [49131]
	[SRC ADDR] N	Enter the IP address of the device that is the transmission source of the stream to be received as [RET1 VIDEO]. First octet: 0 to 223 Second octet: 0 to 255 Third octet: 0 to 255 Fourth octet: 0 to 255 You cannot set 0.0.0.0 or a 127 IP address for the first octet. • Factory setting: [0.0.0.0]

Item	Description of settings
[RET2 VIDEO RX]	—
[DEST ADDR] N	Enter the multicast address of the stream to be received as [RET2 VIDEO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [230.1.30.2]
[DEST PORT] N	Enter the port number of the stream to be received as [RET2 VIDEO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [49132]
[SRC ADDR] N	Enter the IP address of the device that is the transmission source of the stream to be received as [RET2 VIDEO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [0.0.0.0]
[SET EXECUTE]	Select this to save the set content.
[RET3 VIDEO RX]	—
[DEST ADDR] N	Enter the multicast address of the stream to be received as [RET3 VIDEO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [230.1.30.3]
[DEST PORT] N	Enter the port number of the stream to be received as [RET3 VIDEO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [49133]
[SRC ADDR] N	Enter the IP address of the device that is the transmission source of the stream to be received as [RET3 VIDEO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [0.0.0.0]
[RET4 VIDEO RX]	—
[DEST ADDR] N	Enter the multicast address of the stream to be received as [RET4 VIDEO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [230.1.30.4]
[DEST PORT] N	Enter the port number of the stream to be received as [RET4 VIDEO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [49134]
[SRC ADDR] N	Enter the IP address of the device that is the transmission source of the stream to be received as [RET4 VIDEO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [0.0.0.0]
[SET EXECUTE]	Select this to save the set content.
[PROMPTER VIDEO RX]	—
[DEST ADDR] N	Enter the multicast address of the stream to be received as [PROMPTER VIDEO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [230.1.40.1]
[DEST PORT] N	Enter the port number of the stream to be received as [PROMPTER VIDEO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [49141]
[SRC ADDR] N	Enter the IP address of the device that is the transmission source of the stream to be received as [PROMPTER VIDEO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [0.0.0.0]
[PGM1 AUDIO RX]	—
[DEST ADDR] N	Enter the multicast address of the stream to be received as [PGM1 AUDIO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [230.1.90.2]
[DEST PORT] N	Enter the port number of the stream to be received as [PGM1 AUDIO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [49192]
[SRC ADDR] N	Enter the IP address of the device that is the transmission source of the stream to be received as [PGM1 AUDIO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [0.0.0.0]
[SET EXECUTE]	Select this to save the set content.
[PGM2 AUDIO RX]	—
[DEST ADDR] N	Enter the multicast address of the stream to be received as [PGM2 AUDIO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [230.1.90.3]
[DEST PORT] N	Enter the port number of the stream to be received as [PGM2 AUDIO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [49193]
[SRC ADDR] N	Enter the IP address of the device that is the transmission source of the stream to be received as [PGM2 AUDIO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [0.0.0.0]
[PROMPTER AUDIO RX]	—
[DEST ADDR] N	Enter the multicast address of the stream to be received as [PROMPTER AUDIO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [230.1.90.1]

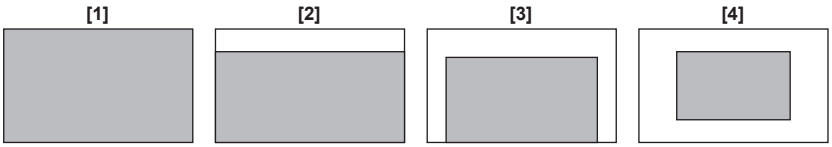
Item		Description of settings
	[DEST PORT] [N]	Enter the port number of the stream to be received as [PROMPTER AUDIO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [49191]
	[SRC ADDR] [N]	Enter the IP address of the device that is the transmission source of the stream to be received as [PROMPTER AUDIO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [0.0.0.0]
	[SET EXECUTE]	Select this to save the set content.
	[INCOM1 AUDIO RX (ENG)]	—
	[DEST ADDR] [N]	Enter the multicast address of the stream to be received as [INCOM1 AUDIO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [230.1.90.4]
	[DEST PORT] [N]	Enter the port number of the stream to be received as [INCOM1 AUDIO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [49194]
	[SRC ADDR] [N]	Enter the IP address of the device that is the transmission source of the stream to be received as [INCOM1 AUDIO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [0.0.0.0]
	[INCOM2 AUDIO RX (PROD)]	—
	[DEST ADDR] [N]	Enter the multicast address of the stream to be received as [INCOM2 AUDIO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [230.1.90.5]
	[DEST PORT] [N]	Enter the port number of the stream to be received as [INCOM2 AUDIO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [49195]
	[SRC ADDR] [N]	Enter the IP address of the device that is the transmission source of the stream to be received as [INCOM2 AUDIO]. Refer to [RET1 VIDEO RX] for setting contents. • Factory setting: [0.0.0.0]
	[SET EXECUTE]	Select this to save the set content.
[ST2110 SECONDARY TX]		Makes SMPTE ST2110 (uncompressed) SECONDARY transmission settings.
	[MAIN VIDEO TX]	Refer to [ST2110 PRIMARY TX] for setting contents. • The factory setting for [DEST ADDR] and [DEST PORT] is different to [ST2110 PRIMARY TX]. Instead of [230.1.xx.x], read [230.2.xx.x], and instead of [491xx] read [492xx].
	[DEST ADDR] [N]	
	[DEST PORT] [N]	
	[MAIN JPEG XS VIDEO TX]	
	[DEST ADDR] [N]	
	[DEST PORT] [N]	
	[SUB VIDEO TX]	
	[DEST ADDR] [N]	
	[DEST PORT] [N]	
	[TRUNK VIDEO TX]	
	[DEST ADDR] [N]	
	[DEST PORT] [N]	
	[SET EXECUTE]	
	[MIC1 AUDIO TX]	
	[DEST ADDR] [N]	
	[DEST PORT] [N]	
	[MIC2 AUDIO TX]	
	[DEST ADDR] [N]	
	[DEST PORT] [N]	
	[MIX AUDIO TX]	
	[DEST ADDR] [N]	
	[DEST PORT] [N]	
	[SET EXECUTE]	
	[TRUNK AUDIO TX]	

Item		Description of settings
	[DEST ADDR] N	
	[DEST PORT] N	
	[INCOM1 AUDIO TX (ENG)]	
	[DEST ADDR] N	
	[DEST PORT] N	
	[INCOM2 AUDIO TX (PROD)]	
	[DEST ADDR] N	
	[DEST PORT] N	
	[SET EXECUTE]	
[ST2110 SECONDARY RX]		Makes SMPTE ST2110 (uncompressed) SECONDARY reception settings.
	[RET1 VIDEO RX]	Refer to [ST2110 PRIMARY RX] for setting contents. • The factory setting for [DEST ADDR] and [DEST PORT] is different to [ST2110 PRIMARY RX]. Instead of [230.1.xx.x], read [230.2.xx.x], and instead of [491xx] read [492xx].
	[DEST ADDR] N	
	[DEST PORT] N	
	[SRC ADDR] N	
	[RET2 VIDEO RX]	
	[DEST ADDR] N	
	[DEST PORT] N	
	[SRC ADDR] N	
	[SET EXECUTE]	
	[RET3 VIDEO RX]	
	[DEST ADDR] N	
	[DEST PORT] N	
	[SRC ADDR] N	
	[RET4 VIDEO RX]	
	[DEST ADDR] N	
	[DEST PORT] N	
	[SRC ADDR] N	
	[SET EXECUTE]	
	[PROMPTER VIDEO RX]	
	[DEST ADDR] N	
	[DEST PORT] N	
	[SRC ADDR] N	
	[PGM1 AUDIO RX]	
	[DEST ADDR] N	
	[DEST PORT] N	
	[SRC ADDR] N	
	[SET EXECUTE]	
	[PGM2 AUDIO RX]	
	[DEST ADDR] N	
	[DEST PORT] N	
	[SRC ADDR] N	
	[PROMPTER AUDIO RX]	

Item		Description of settings
	[DEST ADDR] N	
	[DEST PORT] N	
	[SRC ADDR] N	
	[SET EXECUTE]	
	[INCOM1 AUDIO RX (ENG)]	
	[DEST ADDR] N	
	[DEST PORT] N	
	[SRC ADDR] N	
	[INCOM2 AUDIO RX (PROD)]	
	[DEST ADDR] N	
	[DEST PORT] N	
	[SRC ADDR] N	
	[SET EXECUTE]	

[PAINT]

Item		Description of settings
[AUTO]	[AUTO IRIS] USO	Enables/disables the auto iris mode. **[OFF], [ON]** • Factory setting: [ON] (when the camera is used standalone), [OFF] (others)
[GAIN SETTING]	[GAIN/ISO MODE] USOR	Sets the units for gain value. **[dB], [ISO]** • Factory setting: [dB]
	[LOW GAIN] USOR	Sets the amount of gain increase when <L> is selected for the <GAIN> switch. [dB mode] **[-6dB] … [18dB]** [ISO mode] **[ISO 400], [ISO 500], [ISO 640], [ISO 800], [ISO 1000], [ISO 1250], [ISO 1600], [ISO 2000], [ISO 2500], [ISO 3200], [ISO 4000], [ISO 5000], [ISO 6400], [ISO 8000], [ISO 10000], [ISO 12800]** • Factory setting: [dB mode] 0dB [ISO mode] ISO 800
	[OFFSET LOW GAIN] USOR	Sets the offset from [LOW GAIN]. **[–2.9dB]…[+2.9dB]** (0.1 dB step) • Factory setting: [0.0dB]
	[MID GAIN] USOR	Sets the amount of gain increase when <M> is selected for the <GAIN> switch. [dB mode] **[-6dB] … [18dB]** [ISO mode] **[ISO 400], [ISO 500], [ISO 640], [ISO 800], [ISO 1000], [ISO 1250], [ISO 1600], [ISO 2000], [ISO 2500], [ISO 3200], [ISO 4000], [ISO 5000], [ISO 6400], [ISO 8000], [ISO 10000], [ISO 12800]** • Factory setting: [dB mode] 9dB [ISO mode] ISO 1600
	[OFFSET MID GAIN] USOR	Sets the offset from [MID GAIN]. **[–2.9dB]…[+2.9dB]** (0.1 dB step) • Factory setting: [0.0dB]
	[HIGH GAIN] USOR	Sets the amount of gain increase when <H> is selected for the <GAIN> switch. [dB mode] **[-6dB] … [18dB]** [ISO mode] **[ISO 400], [ISO 500], [ISO 640], [ISO 800], [ISO 1000], [ISO 1250], [ISO 1600], [ISO 2000], [ISO 2500], [ISO 3200], [ISO 4000], [ISO 5000], [ISO 6400], [ISO 8000], [ISO 10000], [ISO 12800]** • Factory setting: [dB mode] 18dB [ISO mode] ISO 2500
	[OFFSET HIGH GAIN] USOR	Sets the offset from [HIGH GAIN]. **[–2.9dB]…[+2.9dB]** (0.1 dB step) • Factory setting: [0.0dB]

Item		Description of settings
[IRIS]	[AUTO IRIS] U S O	Enables/disables the auto iris mode. **[OFF], [ON]** • Factory setting: [ON] (when the camera is used standalone), [OFF] (others)
	[WINDOW SELECT] U S O	Sets the photometric range. **[1] … [5]** The image of window will be as follows.  • Factory setting: [1] ***NOTE*** • A window area can be specified when [5] is selected. The area can be specified using a web browser.
	[IRIS LEVEL] U O	Adjusts the target value (brightness) of the auto iris. **[0] … [100]** • Factory setting: [50]
	[PEAK RATIO] U S O	Sets the ratio of the peak value and average value of auto iris photometry. **[0] … [100]** • Factory setting: [30]
	[IRIS RANGE] U O	Sets the fine adjustment range of the auto iris level using the iris adjustment joystick. **[NORMAL], [(3/4)], [(2/4)], [(1/4)]** • Factory setting: [NORMAL]
	[IRIS SPEED] U S O	Sets the auto iris speed. **[1] … [25]** • Factory setting: [15]
	[IRIS GAIN] U O	Switches whether to adjust auto iris photometry speed adjustment with the iris gain volume of the lens or from the menu. Normally, set this to [LENS] and make adjustments with the iris volume of the lens. **[LENS], [CAM]** • Factory setting: [LENS]
[W/B BAL SETTING]	[SHOCKLESS WB SW] U S O	Enables/disables the shockless white balance when the color temperature is changed. **[OFF], [ON]** • Factory setting: [OFF]
	[SHOCKLESS WB SPEED] U S O	Sets the speed of the shockless white balance. **[1] … [5]** • Factory setting: [4]
[SHUTTER SPEED]	[SHUTTER SW] U S R	Enables/disables the shutter function. **[OFF]:** Disables the shutter. **[ON]:** Enables the shutter speed with [SHUTTER SPEED]/[SYNCHRO SCAN]. • Factory setting: [OFF]
	[SHUTTER DISP] U S R	Sets the display of the shutter. **[sec], [deg]** • Factory setting: [sec]
	[SHUTTER MODE] U S R	Selects the operation mode of the shutter. **[STEP]:** Sets the shutter speed to that configured for [SHUTTER SPEED]. **[SYNCHRO]:** Sets the shutter speed to that configured for [SYNCHRO SCAN]. • Factory setting: [STEP]
	[SHUTTER SPEED] U S R	Sets the shutter speed when [SHUTTER MODE] is [STEP]. This is displayed as time (a fraction) when [SHUTTER DISP] is set to [sec], and as aperture angle when set to [deg]. When the display is [sec] [59.94i]/[59.94p] mode: **[1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** [50i]/[50p] mode: **[1/60], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** [29.97p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** [25p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** [23.98p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** [120p]/[100p] mode: **[1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** [180p]/[150p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** [240p]/[200p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** When the display is [deg] **[HALF SHUTTER], [11.5d], [22.5d], [45.0d], [90.0d], [120.0d], [144.0d], [172.8d], [180.0d], [270.0d], [357.0d]** • Factory setting: [1/100]

Item		Description of settings
	[SYNCHRO SCAN] U S R	Sets the shutter speed when [SHUTTER MODE] is [SYNCHRO]. This is displayed as time (a fraction) when [SHUTTER DISP] is set to [sec], and as aperture angle when set to [deg]. When the display is [sec] [59.94i]/[59.94p] mode: **[60.0Hz] … [7200Hz]** • Factory setting: [60.0Hz] [50i]/[50p] mode: **[50.0Hz] … [7200Hz]** [29.97p] mode: **[30.0Hz] … [7200Hz]** [25p] mode: **[25.0Hz] … [7200Hz]** [23.98p] mode: **[24.0Hz] … [7200Hz]** [120p] mode: **[120.1Hz] … [7200Hz]** [180p] mode: **[180.2Hz] … [7200Hz]** [240p] mode: **[241.1Hz] … [7200Hz]** [100p] mode: **[100.1Hz] … [7200Hz]** [150p] mode: **[150.3Hz] … [7200Hz]** [200p] mode: **[200.5Hz] … [7200Hz]** When the display is [deg] **[3.0 deg] … [357.0 deg]**
[SHUTTER SELECT]	[SHUTTER OFF BY ROP] U R	Selects whether to enable the shutter mode from ROP. **[ENABLE], [DISABLE]** • Factory setting: [DISABLE]
	[POSITION1] U S R	Sets the shutter speed of [POSITION1]. When the display is [sec] [59.94i]/[59.94p] mode: **[1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/100] [50i]/[50p] mode: **[1/60], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/60] [29.97p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/60] [25p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/50] [23.98p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/48] [120p]/[100p] mode: **[1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/125] [180p]/[150p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/250] [240p]/[200p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/250] When the display is [deg] **[HALF SHUTTER], [11.5d], [22.5d], [45.0d], [90.0d], [120.0d], [144.0d], [172.8d], [180.0d], [270.0d], [357.0d]** • Factory setting: [HALF SHUTTER]

Item		Description of settings
	[POSITION2] U S R	Sets the shutter speed of [POSITION2]. When the display is [sec] [59.94i]/[59.94p] mode: **[1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/120] [50i]/[50p] mode: **[1/60], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/100] [29.97p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/120] [25p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/100] [23.98p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/120] [120p]/[100p] mode: **[1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/250] [180p]/[150p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/500] [240p]/[200p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/500] When the display is [deg] **[HALF SHUTTER], [11.5d], [22.5d], [45.0d], [90.0d], [120.0d], [144.0d], [172.8d], [180.0d], [270.0d], [357.0d]** • Factory setting: [22.5d]
	[POSITION3] U S R	Sets the shutter speed of [POSITION3]. When the display is [sec] [59.94i]/[59.94p] mode: **[1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/125] [50i]/[50p] mode: **[1/60], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/125] [29.97p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/125] [25p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/125] [23.98p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/125] [120p]/[100p] mode: **[1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/500] [180p]/[150p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1000] [240p]/[200p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1000] When the display is [deg] **[HALF SHUTTER], [11.5d], [22.5d], [45.0d], [90.0d], [120.0d], [144.0d], [172.8d], [180.0d], [270.0d], [357.0d]** • Factory setting: [45.0d]

Item		Description of settings
	[POSITION4] U S R	Sets the shutter speed of [POSITION4]. When the display is [sec] [59.94i]/[59.94p] mode: **[1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/250] [50i]/[50p] mode: **[1/60], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/250] [29.97p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/250] [25p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/250] [23.98p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/250] [120p]/[100p] mode: **[1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1000] [180p]/[150p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1500] [240p]/[200p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1500] When the display is [deg] **[HALF SHUTTER], [11.5d], [22.5d], [45.0d], [90.0d], [120.0d], [144.0d], [172.8d], [180.0d], [270.0d], [357.0d]** • Factory setting: [90.0d]
	[POSITION5] U S R	Sets the shutter speed of [POSITION5]. When the display is [sec] [59.94i]/[59.94p] mode: **[1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/500] [50i]/[50p] mode: **[1/60], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/500] [29.97p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/500] [25p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/500] [23.98p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/500] [120p]/[100p] mode: **[1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1500] [180p]/[150p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] [240p]/[200p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] When the display is [deg] **[HALF SHUTTER], [11.5d], [22.5d], [45.0d], [90.0d], [120.0d], [144.0d], [172.8d], [180.0d], [270.0d], [357.0d]** • Factory setting: [120.0d]

Item		Description of settings
	[POSITION6] U S R	Sets the shutter speed of [POSITION6]. When the display is [sec] [59.94i]/[59.94p] mode: **[1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1000] [50i]/[50p] mode: **[1/60], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1000] [29.97p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1000] [25p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1000] [23.98p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1000] [120p]/[100p] mode: **[1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] [180p]/[150p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] [240p]/[200p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] When the display is [deg] **[HALF SHUTTER], [11.5d], [22.5d], [45.0d], [90.0d], [120.0d], [144.0d], [172.8d], [180.0d], [270.0d], [357.0d]** • Factory setting: [144.0d]
	[POSITION7] U S R	Sets the shutter speed of [POSITION7]. When the display is [sec] [59.94i]/[59.94p] mode: **[1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1500] [50i]/[50p] mode: **[1/60], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1500] [29.97p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1500] [25p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1500] [23.98p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/1500] [120p]/[100p] mode: **[1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] [180p]/[150p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] [240p]/[200p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] When the display is [deg] **[HALF SHUTTER], [11.5d], [22.5d], [45.0d], [90.0d], [120.0d], [144.0d], [172.8d], [180.0d], [270.0d], [357.0d]** • Factory setting: [172.8d]

Item		Description of settings
	[POSITION8] U S R	Sets the shutter speed of [POSITION8]. When the display is [sec] [59.94i]/[59.94p] mode: **[1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] [50i]/[50p] mode: **[1/60], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] [29.97p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] [25p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] [23.98p] mode: **[1/48], [1/50], [1/60], [1/96], [1/100], [1/120], [1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] [120p]/[100p] mode: **[1/125], [1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] [180p]/[150p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] [240p]/[200p] mode: **[1/250], [1/500], [1/1000], [1/1500], [1/2000]** • Factory setting: [1/2000] When the display is [deg] **[HALF SHUTTER], [11.5d], [22.5d], [45.0d], [90.0d], [120.0d], [144.0d], [172.8d], [180.0d], [270.0d], [357.0d]** • Factory setting: [270.0d]
[SHUTTER POSITION]	[POSITION1] U S R	Enables/disables the [POSITION1] settings of the shutter position. **[OFF], [ON]** • Factory setting: [ON]
	[POSITION2] U S R	Enables/disables the [POSITION2] settings of the shutter position. **[OFF], [ON]** • Factory setting: [ON]
	[POSITION3] U S R	Enables/disables the [POSITION3] settings of the shutter position. **[OFF], [ON]** • Factory setting: [ON]
	[POSITION4] U S R	Enables/disables the [POSITION4] settings of the shutter position. **[OFF], [ON]** • Factory setting: [ON]
	[POSITION5] U S R	Enables/disables the [POSITION5] settings of the shutter position. **[OFF], [ON]** • Factory setting: [ON]
	[POSITION6] U S R	Enables/disables the [POSITION6] settings of the shutter position. **[OFF], [ON]** • Factory setting: [ON]
	[POSITION7] U S R	Enables/disables the [POSITION7] settings of the shutter position. **[OFF], [ON]** • Factory setting: [ON]
	[POSITION8] U S R	Enables/disables the [POSITION8] settings of the shutter position. **[OFF], [ON]** • Factory setting: [ON]
	[SHUTTER SELECT BY ROP] U S R	Selects whether the shutter operation from ROP follows the [POSITION1] to [POSITION8] settings. **[FULL], [SELECT]** • Factory setting: [SELECT]
[PEDESTAL]	[MASTER PEDESTAL] U S R	Adjusts the black level of the master pedestal. **[−200] … [+200]** • Factory setting: [0]
	[R PEDESTAL] U S R	Sets the correction level of red to the master pedestal. **[−800]…[+800]** • Factory setting: [0]
	[G PEDESTAL] U S R	Sets the correction level of green to the master pedestal. **[−800]…[+800]** • Factory setting: [0]
	[B PEDESTAL] U S R	Sets the correction level of blue to the master pedestal. **[−800]…[+800]** • Factory setting: [0]
	[PEDESTAL OFFSET] U S R	Sets whether to maintain the Rch, Gch, and Bch pedestal levels after adjusting the automatic black balance. **[ON]:** Maintains the values set in [R PEDESTAL], [G PEDESTAL], and [B PEDESTAL]. **[OFF]:** Sets [R PEDESTAL], [G PEDESTAL], and [B PEDESTAL] to [0]. • Factory setting: [OFF]

Item		Description of settings
[CHROMA]	[CHROMA LEVEL SWITCH] U S R	Enables/disables the gain adjustment of chroma. **[OFF], [ON]** • Factory setting: [OFF]
	[CHROMA LEVEL] U S R	Sets the gain adjustment of chroma. **[–100%]…[+80%]** • Factory setting: [0%]
[COLOR TEMP SETTING]	[COLOR TEMP PRESET]	—
	[COLOR TEMP PRE SWITCH] U S R	Enables/disables the color temperature adjustment. **[OFF], [ON]** • Factory setting: [OFF]
	[COLOR TEMP] U S R	Sets the color temperature when [COLOR TEMP PRE SWITCH] is [ON]. **[2000K]…[15000K]** • Factory setting: [3200K]
	[R GAIN] U S R	Sets the correction level of red to the color temperature. **[–400]…[+400]** • Factory setting: [0]
	[B GAIN] U S R	Sets the correction level of blue to the color temperature. **[–400]…[+400]** • Factory setting: [0]
	[G AXIS] U S R	Sets the correction level of green to the color temperature. **[–400]…[+400]** • Factory setting: [0]
	[COLOR TEMP ACH/ BCH]	When the camera is connected to the system, only [COLOR TEMP ACH] can be set.
	[COLOR TEMP ACH] U S R	Sets the color temperature when the <WHITE BAL> switch is <A>. **[2000K] … [15000K]** • Factory setting: [3200K]
	[R GAIN ACH] U S R	Sets the correction level of red to the color temperature. **[–400]…[+400]** • Factory setting: [0]
	[B GAIN ACH] U S R	Sets the correction level of blue to the color temperature. **[–400]…[+400]** • Factory setting: [0]
	[G AXIS ACH] U S R	Sets the correction level of green to the color temperature. **[–400]…[+400]** • Factory setting: [0]
	[COLOR TEMP BCH] U S R	Sets the color temperature when the <WHITE BAL> switch is <B>. **[2000K] … [15000K]** • Factory setting: [3200K]
	[R GAIN BCH] U S R	Sets the correction level of red to the color temperature. **[–400]…[+400]** • Factory setting: [0]
	[B GAIN BCH] U S R	Sets the correction level of blue to the color temperature. **[–400]…[+400]** • Factory setting: [0]
	[G AXIS BCH] U S R	Sets the correction level of green to the color temperature. **[–400]…[+400]** • Factory setting: [0]
	[COLOR TEMP USER SW]	—
	[COLOR TEMP SW] U S R	Enables/disables the [COLOR TEMP USER SW] item. **[OFF], [ON]** • Factory setting: [OFF]
	[COLOR TEMP] U S R	Sets the color temperature when any of the <USER 1>/<USER 2>/<USER 3>/<USER 4>/ <USER 5>/<USER 6> buttons are set to [C.TEMP] and the setting is enabled. **[2000K]…[15000K]** • Factory setting: [3200K]
	[R GAIN] U S R	Sets the correction level of red to the color temperature. **[–400]…[+400]** • Factory setting: [0]
	[B GAIN] U S R	Sets the correction level of blue to the color temperature. **[–400]…[+400]** • Factory setting: [0]
	[G AXIS] U S R	Sets the correction level of green to the color temperature. **[–400]…[+400]** • Factory setting: [0]

Item			Description of settings
[RGB GAIN CONTROL SETTING]			
	[G GAIN REL CONTROL SW] U S R		Enables/disables the relative value control of Gch gain. **[OFF], [ON]** • Factory setting: [OFF]
	[RGB GAIN PRESET]		—
		[R GAIN] U S R	Sets the preset value of Rch gain. **[–1000]…[+1000]** • Factory setting: [0]
		[G GAIN] U S R	Sets the preset value of Gch gain. **[–1000]…[+1000]** • Factory setting: [0]
		[B GAIN] U S R	Sets the preset value of Bch gain. **[–1000]…[+1000]** • Factory setting: [0]
	[RGB GAIN ACH/BCH]		When the camera is connected to the CCU, only [R GAIN ACH]/[G GAIN ACH]/[B GAIN ACH]/[GAIN OFFSET ACH] can be set.
		[R GAIN ACH] U S R	Sets the correction level of red to the gain. **[–1000]…[+1000]** • Factory setting: [0]
		[G GAIN ACH] U S R	Sets the correction level of green to the gain. **[–1000]…[+1000]** • Factory setting: [0]
		[B GAIN ACH] U S R	Sets the correction level of blue to the gain. **[–1000]…[+1000]** • Factory setting: [0]
		[GAIN OFFSET ACH] U S R	Sets whether to maintain the Rch, Gch, and Bch gain levels when adjusting the automatic white balance. **[ON]:** Maintains the values set in [R GAIN ACH], [G GAIN ACH], and [B GAIN ACH]. **[OFF]:** Sets [R GAIN ACH], [G GAIN ACH], and [B GAIN ACH] to [0]. • Factory setting: [OFF]
		[R GAIN BCH] U S R	Sets the correction level of red to the gain. **[–1000]…[+1000]** • Factory setting: [0]
		[G GAIN BCH] U S R	Sets the correction level of green to the gain. **[–1000]…[+1000]** • Factory setting: [0]
		[B GAIN BCH] U S R	Sets the correction level of blue to the gain. **[–1000]…[+1000]** • Factory setting: [0]
		[GAIN OFFSET BCH] U S R	Sets whether to maintain the Rch, Gch, and Bch gain levels when adjusting the automatic white balance. **[ON]:** Maintains the values set in [R GAIN BCH], [G GAIN BCH], and [B GAIN BCH]. **[OFF]:** Sets [R GAIN BCH], [G GAIN BCH], and [B GAIN BCH] to [0]. • Factory setting: [OFF]
[FLARE]		[FLARE] U S R	Enables/disables flare correction. **[OFF], [ON]** • Factory setting: [ON]
		[MASTER FLARE] U S R	Adjusts the master flare. **[–200]…[+200]** • Factory setting: [0]
		[R FLARE] U S R	Adjusts the Rch flare. **[–200]…[+200]** • Factory setting: [0]
		[G FLARE] U S R	Adjusts the Gch flare. **[–200]…[+200]** • Factory setting: [0]
		[B FLARE] U S R	Adjusts the Bch flare. **[–200]…[+200]** • Factory setting: [0]
[GAMMA/BLACK GAMMA]		[GAMMA] U S R	Enables/disables gamma correction. This cannot be set in HDR mode. **[OFF], [ON]** • Factory setting: [ON]
		[GAMMA MODE SELECT] U S R	Selects the type of gamma. **[HD]:** Video gamma characteristics conforming to Panasonic broadcasting devices. **[NORMAL]:** Gamma characteristics that emphasize face tones. **[CINEMA1]:** High contrast gamma characteristic. **[CINEMA2]:** Sedate gamma characteristic. • Factory setting: [HD]
		[MASTER GAMMA] U S R	Adjusts the gamma characteristic. **[0.15]…[0.75]** (0.01 step) • Factory setting: [0.45]
		[OFFSET GAMMA] U S R	Finely adjusts the gamma characteristic. **[–10]…[+10]** • Factory setting: [0]

Item		Description of settings
	[R GAMMA] USR	Adjusts the gamma characteristic of red to the master gamma. **[–75]…[+75]** • Factory setting: [0]
	[B GAMMA] USR	Adjusts the gamma characteristic of blue to the master gamma. **[–75]…[+75]** • Factory setting: [0]
	[BLACK GAMMA] USR	Enables/disables black gamma. This cannot be set when [V-LOG] is [ON], or [HDR] is [ON]. **[OFF], [ON]** • Factory setting: [OFF]
	[MASTER BLACK GAMMA] USR	Adjusts the gamma characteristic adjacent to black. **[–48]…[+48]** • Factory setting: [0]
	[R BLACK GAMMA] USR	Adjusts the gamma characteristic of red adjacent to black to the master gamma. **[–20]…[+20]** • Factory setting: [0]
	[B BLACK GAMMA] USR	Adjusts the gamma characteristic of blue adjacent to black to the master gamma. **[–20]…[+20]** • Factory setting: [0]
	[BLACK GAMMA RANGE] USR	Sets the maximum level of compression/expansion for the gamma curve for dark areas. **[1]:** About 20% **[2]:** About 30% **[3]:** About 40% • Factory setting: [3]
	[INITIAL GAMMA] USR	Sets the gamma initial slope. When [GAMMA MODE SELECT] is [HD]: **[4.0]/[4.5]/[5.0]** This cannot be set when [GAMMA MODE SELECT] is [NORMAL], [CINEMA1], or [CINEMA2]. • Factory setting: [4.5]
[KNEE]	[KNEE] USR	Enables/disables the knee function. This cannot be set in HDR mode. When [DRS] is enabled, the [KNEE] setting is disabled. **[OFF], [ON]** • Factory setting: [ON]
	[KNEE MASTER POINT] USR	Sets the knee point position. **[80.00%]…[110.00%]** (0.25% step) • Factory setting: [95.00%]
	[KNEE R POINT] USR	Adjusts the knee point of red to [KNEE MASTER POINT]. **[–25.00%]…[25.00%]** (0.25% step) • Factory setting: [0.00%]
	[KNEE B POINT] USR	Adjusts the knee point of blue to [KNEE MASTER POINT]. **[–25.00%]…[25.00%]** (0.25% step) • Factory setting: [0.00%]
	[KNEE MASTER SLOPE] USR	Sets the knee slope. **[0]…[199]** • Factory setting: [130]
	[KNEE R SLOPE] USR	Adjusts the knee slope of red to [KNEE MASTER SLOPE]. **[–99]…[+99]** • Factory setting: [0]
	[KNEE B SLOPE] USR	Adjusts the knee slope of blue to [KNEE MASTER SLOPE]. **[–99]…[+99]** • Factory setting: [0]
[WHITE CLIP]	[WHITE CLIP] USR	Enables/disables the white clip function. This cannot be set in HDR mode. **[OFF], [ON]** • Factory setting: [ON]
	[MASTER WHITE CLIP LEVEL] USR	Sets the white clip level. **[80%]…[109%]** • Factory setting: [109%]
	[R WHITE CLIP LEVEL] USR	Adjusts red to [MASTER WHITE CLIP LEVEL]. **[–15%]…[+15%]** • Factory setting: [0%]
	[B WHITE CLIP LEVEL] USR	Adjusts blue to [MASTER WHITE CLIP LEVEL]. **[–15%]…[+15%]** • Factory setting: [0%]
	[HI-COLOR] USR	Sets whether to improve the color reproduction in high-luminance areas. When [DRS] is enabled, the [HI-COLOR] setting is disabled. **[OFF], [ON]** • Factory setting: [OFF]
	[HI-COLOR LEVEL] USR	Sets the level of the mode that expands the color dynamic range. **[1]…[32]** • Factory setting: [32]

Item			Description of settings
[DRS]	This cannot be set when [BASIC CONFIG] – [FORMAT] is set to an HS mode other than 100fps/120fps.		
	[DRS] U S R		Enables/disables the dynamic range stretcher function. Set this to [ON] to automatically adjust the contrast. This cannot be set when [V-LOG] is [ON]. **[OFF], [ON]** • Factory setting: [OFF]
		[EFFECT DEPTH] U S R	Sets the compression level of the high-luminance areas of the dynamic range stretcher function. Set a larger value to increase the compression level of the high-luminance areas. **[1]…[5]** • Factory setting: [5]
[DETAIL SETTING]	[DETAIL] U S R		Enables/disables all detail functions. **[OFF], [ON]** • Factory setting: [ON]
		[MASTER DETAIL] U S R	Sets the master detail. **[–31]…[+31]** • Factory setting: [0]
		[PEAK FREQUENCY] U S R	Sets the peak frequency of the horizontal detail. **[1] … [8]** • Factory setting: [6]
		[CRISP] U S R	Sets the detail signal noise removal level. **[0] … [63]** • Factory setting: [0]
		[DETAIL GAIN(+)] U S R	Sets the detail level in the + (upward) direction. **[–31] … [+31]** • Factory setting: [0]
		[DETAIL GAIN(–)] U S R	Sets the detail level in the – (downward) direction. **[–31] … [+31]** • Factory setting: [0]
		[DETAIL CLIP(+)] U S R	Adjust the detail clip to reduce glare produced by an excess of details. **[0] … [63]** • Factory setting: [0]
		[DETAIL CLIP(–)] U S R	Adjusts the length of the undershoot of the detail edge component. **[0] … [63]** • Factory setting: [0]
		[KNEE APERTURE LEVEL] U S R	Adjusts the knee aperture level. **[0] … [39]** • Factory setting: [0]
		[DETAIL KNEE] U S R	Adjusts the detail components of knee. **[0] … [15]** • Factory setting: [0]
		[LEVEL DEPENDENT SW] U S R	Enables/disables the function to remove details of dark areas. **[OFF], [ON]** • Factory setting: [OFF]
		[LEVEL DEPENDENT] U S R	Sets the level to remove details of dark areas. **[0] … [15]** • Factory setting: [8]
		[DARK DETAIL SW] U S R	Enables/disables the function to emphasize details of dark areas. **[OFF], [ON]** • Factory setting: [OFF]
		[DARK DETAIL] U S R	Sets the level to emphasize details of dark areas. **[0] … [7]** • Factory setting: [3]
[DOWNCON SETTING]	This cannot be set in HD mode.		
[CHROMA]	[CHROMA LEVEL SW] U S R		Enables/disables the gain adjustment of chroma. **[OFF], [ON]** • Factory setting: [OFF]
		[CHROMA LEVEL] U S R	Sets the gain adjustment of chroma. **[–100%]…[+80%]** • Factory setting: [0%]
[DETAIL SETTING]	[DETAIL] U S R		Enables/disables all detail functions. **[OFF], [ON]** • Factory setting: [ON]
		[MASTER DETAIL] U S R	Sets the master detail. **[–31]…[+31]** • Factory setting: [0]
		[H DETAIL LEVEL] U S R	Sets the correction level of the horizontal detail. **[0]…[63]** • Factory setting: [15]
		[V DETAIL LEVEL] U S R	Sets the correction level of the vertical detail. **[0]…[63]** • Factory setting: [15]

Item			Description of settings
		[PEAK FREQUENCY] U S R	Sets the peak frequency of the horizontal detail. **[12.4MHz], [12.5MHz], [12.7MHz], [12.9MHz], [13.0MHz], [13.3MHz], [13.6MHz], [13.9MHz], [14.2MHz], [14.6MHz], [15.0MHz], [15.5MHz], [16.1MHz], [16.7MHz], [17.3MHz], [18.3MHz], [18.6MHz], [18.8MHz], [19.0MHz], [19.2MHz], [19.5MHz], [19.9MHz], [20.3MHz], [20.9MHz], [21.5MHz], [22.4MHz], [23.6MHz], [25.4MHz], [28.6MHz], [37.1MHz]** • Factory setting: [15.0MHz]
		[V DETAIL FREQUENCY] U S R	Sets the vertical detail frequency. **[0]…[31]** • Factory setting: [10]
		[CRISP] U S R	Sets the detail signal noise removal level. **[0]…[63]** • Factory setting: [10]
		[DETAIL CLIP(+)] U S R	Adjust the detail clip to reduce glare produced by an excess of details. **[0]…[63]** • Factory setting: [0]
		[DETAIL CLIP(–)] U S R	Adjusts the length of the undershoot of the detail edge component. **[0]…[63]** • Factory setting: [0]
		[KNEE APERTURE LEVEL] U S R	Adjusts the knee aperture level. **[0] … [39]** • Factory setting: [0]
		[DETAIL KNEE] U S R	Adjusts the detail components of knee. **[0] … [15]** • Factory setting: [0]
		[LEVEL DEPENDENT SW] U S R	Enables/disables the function to remove details of dark areas. **[OFF], [ON]** • Factory setting: [OFF]
		[LEVEL DEPENDENT] U S R	Sets the level to remove details of dark areas. **[0] … [15]** • Factory setting: [8]
		[DARK DETAIL SWITCH] U S R	Enables/disables the function to emphasize details of dark areas. **[OFF], [ON]** • Factory setting: [OFF]
		[DARK DETAIL] U S R	Sets the level to emphasize details of dark areas. **[0] … [7]** • Factory setting: [2]
	[SKIN TONE DETAIL SETTING]	[SKIN TONE DETAIL] U S R	Enables/disables the skin tone detail function. **[OFF], [ON]** • Factory setting: [OFF]
		[MEMORY SELECT] U S R	Selects the skin tone table of the subject to apply the skin tone table to. **[A], [B], [C]** • Factory setting: [A]
		[ZEBRA] U S R	Enables/disables the zebra display. **[OFF], [ON]** • Factory setting: [OFF]
		[ZEBRA EFFECT MEMORY] U S R	Selects the table of the zebra display. **[A], [B], [C], [A+B], [A+C], [B+C], [A+B+C]** • Factory setting: [A+B+C]
		[SKIN TONE EFFECT MEMORY] U S R	Selects the skin tone table used to apply the skin tone detail. **[A], [B], [C], [A+B], [A+C], [B+C], [A+B+C]** • Factory setting: [A+B+C]
		[SKIN TONE CRISP] U S R	Adjusts the skin tone detail. **[0]…[8]** • Factory setting: [8]
		[I CENTER] U S R	Sets the center position on the I axis (the area where the skin tone effect is applied). **[0]…[255]** • Factory setting: [65]
		[I WIDTH] U S R	Sets the width of the area where the skin tone effect is applied on the I axis with [I CENTER] being the center. **[0]…[255]** • Factory setting: [63]
		[Q WIDTH] U S R	Sets the width of the area where the skin tone effect is applied on the Q axis with [I CENTER] being the center. **[0]…[255]** • Factory setting: [32]
		[Q PHASE] U S R	Sets the phase of the area where the skin tone effect is applied with the Q axis being the reference. **[0]…[359]** • Factory setting: [90]
[SKIN TONE DETAIL SETTING]		[SKIN TONE DETAIL] U S R	Enables/disables the skin tone detail function. This cannot be set if [ALL MENU] → [PAINT] → [DETAIL SETTING] → [DETAIL] → [OFF] is set. **[OFF], [ON]** • Factory setting: [OFF]
		[SKIN GET] U S R	Selects whether to automatically obtain the color saturation and hue information from the cursor position. **[NO], [YES]**

Item		Description of settings
	[MEMORY SELECT] U S R	Selects the skin tone table of the subject to apply the skin tone table to. **[A], [B], [C]** • Factory setting: [A]
	[CURSOR] U S R	Shows/hides the box cursor in the center of the screen. **[OFF], [ON]** • Factory setting: [OFF]
	[H POSITION] U S R	Adjusts the horizontal position of the cursor. **[0%]…[100%]** (0.25% step) • Factory setting: [50%]
	[V POSITION] U S R	Adjusts the vertical position of the cursor. **[0%]…[100%]** (0.25% step) • Factory setting: [50%]
	[ZEBRA] U S R	Enables/disables the zebra display. **[OFF], [ON]** • Factory setting: [OFF]
	[ZEBRA EFFECT MEMORY] U S R	Selects the table of the zebra display. **[A], [B], [C], [A+B], [A+C], [B+C], [A+B+C]** • Factory setting: [A+B+C]
	[SKIN TONE EFFECT MEMORY] U S R	Selects the skin tone table used to apply the skin tone detail. **[A], [B], [C], [A+B], [A+C], [B+C], [A+B+C]** • Factory setting: [A+B+C]
	[SKIN TONE CRISP] U S R	Adjusts the skin tone detail. **[–63]…[+63]** • Factory setting: [+63]
	[I CENTER] U S R	Sets the center position on the I axis (the area where the skin tone effect is applied). **[0]…[255]** • Factory setting: [65]
	[I WIDTH] U S R	Sets the width of the area where the skin tone effect is applied on the I axis with [I CENTER] being the center. **[0]…[255]** • Factory setting: [63]
	[Q WIDTH] U S R	Sets the width of the area where the skin tone effect is applied on the Q axis with [I CENTER] being the center. **[0]…[255]** • Factory setting: [32]
	[Q PHASE] U S R	Sets the phase of the area where the skin tone effect is applied with the Q axis being the reference. **[0]…[359]** • Factory setting: [90]
[LINEAR MATRIX]	[PRESET MATRIX] U S R	Sets the preset matrix. **[HD]:** Matrix setting conforming to Panasonic broadcasting devices. Set [GAMMA] to [HD] for use. **[NORMAL]:** Matrix setting that puts emphasis on outdoor settings. Set [GAMMA] to [NORMAL] for use. **[STD1]:** Matrix setting conforming to Panasonic studio camera AK-UC4000G (NORM-NORMAL). Set [GAMMA] to [HD] for use. **[STD2]:** Matrix setting conforming to Panasonic studio camera AK-UC4000G (NORM-0E.11). Set [GAMMA] to [HD] for use. **[CINEMA1]:** High contrast matrix setting. Set [GAMMA] to [CINEMA1] for use. **[CINEMA2]:** Sedate matrix setting. Set [GAMMA] to [CINEMA2] for use. **[USER]:** Matrix setting conforming to Panasonic remote camera AW-UE150. Set [GAMMA] to [HD] for use. • Factory setting: [STD1]
	[MATRIX] U S R	Enables/disables the matrix function (linear matrix, 12-axis color correction). **[OFF], [ON]** • Factory setting: [OFF]
	[LINEAR MATRIX] U S R	Enables/disables the linear matrix function. **[OFF], [ON]** • Factory setting: [OFF]
	[LINEAR TABLE] U S R	Selects the table for linear matrix. **[A], [B]** • Factory setting: [A]
	[COLOR CORRECT] U S R	Enables/disables the 12-axis color correction function. **[OFF], [ON]** • Factory setting: [OFF]
	[COLOR CORRECT TABLE] U S R	Selects the table for color correction. **[A], [B]** • Factory setting: [A]
	[MATRIX (R-G)_N] U S R	Adjusts the linear matrix between red and green. This item is not available when [MATRIX] is set to [OFF]. **[–31]…[+31]** • Factory setting: [0]

Item		Description of settings
	[MATRIX (R-G)_P] U S R	Adjusts the linear matrix between red and green. This item is not available when [MATRIX] is set to [OFF]. **[–31]…[+31]** • Factory setting: [0]
	[MATRIX (R-B)_N] U S R	Adjusts the linear matrix between red and blue. This item is not available when [MATRIX] is set to [OFF]. **[–31]…[+31]** • Factory setting: [0]
	[MATRIX (R-B)_P] U S R	Adjusts the linear matrix between red and blue. This item is not available when [MATRIX] is set to [OFF]. **[–31]…[+31]** • Factory setting: [0]
	[MATRIX (G-R)_N] U S R	Adjusts the linear matrix between green and red. This item is not available when [MATRIX] is set to [OFF]. **[–31]…[+31]** • Factory setting: [0]
	[MATRIX (G-R)_P] U S R	Adjusts the linear matrix between green and red. This item is not available when [MATRIX] is set to [OFF]. **[–31]…[+31]** • Factory setting: [0]
	[MATRIX (G-B)_N] U S R	Adjusts the linear matrix between green and blue. This item is not available when [MATRIX] is set to [OFF]. **[–31]…[+31]** • Factory setting: [0]
	[MATRIX (G-B)_P] U S R	Adjusts the linear matrix between green and blue. This item is not available when [MATRIX] is set to [OFF]. **[–31]…[+31]** • Factory setting: [0]
	[MATRIX (B-R)_N] U S R	Adjusts the linear matrix between blue and red. This item is not available when [MATRIX] is set to [OFF]. **[–31]…[+31]** • Factory setting: [0]
	[MATRIX (B-R)_P] U S R	Adjusts the linear matrix between blue and red. This item is not available when [MATRIX] is set to [OFF]. **[–31]…[+31]** • Factory setting: [0]
	[MATRIX (B-G)_N] U S R	Adjusts the linear matrix between blue and green. This item is not available when [MATRIX] is set to [OFF]. **[–31]…[+31]** • Factory setting: [0]
	[MATRIX (B-G)_P] U S R	Adjusts the linear matrix between blue and green. This item is not available when [MATRIX] is set to [OFF]. **[–31]…[+31]** • Factory setting: [0]
[COLOR CORRECTION]	[PRESET MATRIX] U S R	Sets the preset matrix. **[HD]:** Matrix setting conforming to Panasonic broadcasting devices. Set [GAMMA] to [HD] for use. **[NORMAL]:** Matrix setting that puts emphasis on outdoor settings. Set [GAMMA] to [NORMAL] for use. **[STD1]:** Matrix setting conforming to Panasonic studio camera AK-UC4000G (NORM-NORMAL). Set [GAMMA] to [HD] for use. **[STD2]:** Matrix setting conforming to Panasonic studio camera AK-UC4000G (NORM-0E.11). Set [GAMMA] to [HD] for use. **[CINEMA1]:** High contrast matrix setting. Set [GAMMA] to [CINEMA1] for use. **[CINEMA2]:** Sedate matrix setting. Set [GAMMA] to [CINEMA2] for use. **[USER]:** Matrix setting conforming to Panasonic remote camera AW-UE150. Set [GAMMA] to [HD] for use. • Factory setting: [STD1]
	[MATRIX] U S R	Enables/disables the matrix function (linear matrix, 12-axis color correction). **[OFF], [ON]** • Factory setting: [OFF]
	[LINEAR MATRIX] U S R	Enables/disables the linear matrix function. **[OFF], [ON]** • Factory setting: [OFF]
	[LINEAR TABLE] U S R	Selects the table for linear matrix. **[A], [B]** • Factory setting: [A]
	[COLOR CORRECT] U S R	Enables/disables the 12-axis color correction function. **[OFF], [ON]** • Factory setting: [OFF]
	[COLOR CORRECT TABLE] U S R	Selects the table for color correction. **[A], [B]** • Factory setting: [A]

Item		Description of settings
	[G SAT] U S R	Adjusts green color saturation. **[–127]…[+126]** • Factory setting: [0]
	[G PHASE] U S R	Adjusts green hue. **[–127]…[+126]** • Factory setting: [0]
	[G_CY SAT] U S R	Adjusts the color saturation between green and cyan. **[–127]…[+126]** • Factory setting: [0]
	[G_CY PHASE] U S R	Adjusts the hue between green and cyan. **[–127]…[+126]** • Factory setting: [0]
	[CY SAT] U S R	Adjusts cyan color saturation. **[–127]…[+126]** • Factory setting: [0]
	[CY PHASE] U S R	Adjusts cyan hue. **[–127]…[+126]** • Factory setting: [0]
	[CY_B SAT] U S R	Adjusts the color saturation between cyan and blue. **[–127]…[+126]** • Factory setting: [0]
	[CY_B PHASE] U S R	Adjusts the hue between cyan and blue. **[–127]…[+126]** • Factory setting: [0]
	[B SAT] U S R	Adjusts blue color saturation. **[–127]…[+126]** • Factory setting: [0]
	[B PHASE] U S R	Adjusts blue hue. **[–127]…[+126]** • Factory setting: [0]
	[B_MG SAT] U S R	Adjusts the color saturation between blue and magenta. **[–127]…[+126]** • Factory setting: [0]
	[B_MG PHASE] U S R	Adjusts the hue between blue and magenta. **[–127]…[+126]** • Factory setting: [0]
	[MG_SAT] U S R	Adjusts magenta color saturation. **[–127]…[+126]** • Factory setting: [0]
	[MG_PHASE] U S R	Adjusts magenta hue. **[–127]…[+126]** • Factory setting: [0]
	[MG_R SAT] U S R	Adjusts the color saturation between magenta and red. **[–127]…[+126]** • Factory setting: [0]
	[MG_R PHASE] U S R	Adjusts the hue between magenta and red. **[–127]…[+126]** • Factory setting: [0]
	[R SAT] U S R	Adjusts red color saturation. **[–127]…[+126]** • Factory setting: [0]
	[R PHASE] U S R	Adjusts red hue. **[–127]…[+126]** • Factory setting: [0]
	[R_YE SAT] U S R	Adjusts the color saturation between red and yellow. **[–127]…[+126]** • Factory setting: [0]
	[R_YE PHASE] U S R	Adjusts the hue between red and yellow. **[–127]…[+126]** • Factory setting: [0]
	[YE SAT] U S R	Adjusts yellow color saturation. **[–127]…[+126]** • Factory setting: [0]
	[YE PHASE] U S R	Adjusts yellow hue. **[–127]…[+126]** • Factory setting: [0]
	[YE_G SAT] U S R	Adjusts the color saturation between yellow and green. **[–127]…[+126]** • Factory setting: [0]
	[YE_G PHASE] U S R	Adjusts the hue between yellow and green. **[–127]…[+126]** • Factory setting: [0]

Item			Description of settings
[DNR]		[DNR] U S R	Enables/disables the noise reduction function. **[OFF], [ON]** • Factory setting: [ON]
		[DNR LEVEL] U S R	Sets the level of noise reduction. **[1]…[5]** • Factory setting: [3]
[ROP CONTROL]		[CONTROL ROTATION MODE] U S R	Sets the control rotation mode of ROP. **[MODE1], [MODE2]** • Factory setting: [MODE2]
[V-LOG PAINT]		This can be set when [BASIC CONFIG] – [V-LOG] is [ON] and [V-LOG PAINT SW] is [OFF].	
	[COLOR TEMP SETTING]	[COLOR TEMP PRESET]	—
		[COLOR TEMP PRE SWITCH] U S R	Enables/disables the color temperature adjustment. **[OFF], [ON]** • Factory setting: [OFF]
		[COLOR TEMP] U S R	Sets the color temperature when [COLOR TEMP PRE SWITCH] is set to [ON]. **[2000K] … [15000K]** • Factory setting: [3200K]
		[R GAIN] U S R	Sets the correction level of red to the color temperature. **[–400]…[+400]** • Factory setting: [0]
		[B GAIN] U S R	Sets the correction level of blue to the color temperature. **[–400]…[+400]** • Factory setting: [0]
		[G AXIS] U S R	Sets the correction level of green to the color temperature. **[–400]…[+400]** • Factory setting: [0]
		[COLOR TEMP ACH/ BCH]	—
		[COLOR TEMP ACH] U S R	Sets the color temperature when [COLOR TEMP PRE SWITCH] is set to [ON]. **[2000K] … [15000K]** • Factory setting: [3200K]
		[R GAIN ACH] U S R	Sets the correction level of red to the color temperature. **[–400]…[+400]** • Factory setting: [0]
		[B GAIN ACH] U S R	Sets the correction level of blue to the color temperature. **[–400]…[+400]** • Factory setting: [0]
		[G AXIS ACH] U S R	Sets the correction level of green to the color temperature. **[–400]…[+400]** • Factory setting: [0]
		[COLOR TEMP BCH] U S R	Sets the color temperature when [COLOR TEMP PRE SWITCH] is set to [ON]. **[2000K] … [15000K]** • Factory setting: [3200K]
		[R GAIN BCH] U S R	Sets the correction level of red to the color temperature. **[–400]…[+400]** • Factory setting: [0]
		[B GAIN BCH] U S R	Sets the correction level of blue to the color temperature. **[–400]…[+400]** • Factory setting: [0]
		[G AXIS BCH] U S R	Sets the correction level of green to the color temperature. **[–400]…[+400]** • Factory setting: [0]
		[COLOR TEMP USER SW]	—
		[COLOR TEMP SW] U S R	Enables/disables the [COLOR TEMP USER SW] item. **[OFF], [ON]** • Factory setting: [OFF]
		[COLOR TEMP] U S R	Sets the color temperature when any of the <USER 1>/<USER 2>/<USER 3>/<USER 4>/ <USER 5>/<USER 6> buttons are set to [C.TEMP] and the setting is enabled. **[2000K] … [15000K]** • Factory setting: [3200K]
		[R GAIN] U S R	Sets the correction level of red to the color temperature. **[–400]…[+400]** • Factory setting: [0]
		[B GAIN] U S R	Sets the correction level of blue to the color temperature. **[–400]…[+400]** • Factory setting: [0]
		[G AXIS] U S R	Sets the correction level of green to the color temperature. **[–400]…[+400]** • Factory setting: [0]

Item			Description of settings
[DNR]		[DNR] U S R	Enables/disables the noise reduction function. **[OFF], [ON]** • Factory setting: [ON]
		[DNR LEVEL] U S R	Sets the level of noise reduction. **[1]…[5]** • Factory setting: [3]
[HDR PAINT]		This can be set when [BASIC CONFIG] – [HDR] is [ON].	
[HLG MODE] U S R			Sets the mode of HLG. **[FIX]:** Fixed mode **[VAR]:** Variable mode • Factory setting: [FIX]
[SDR CONVERT MODE] U S R			Selects the mode to convert to SDR. **[FIX]:** Fixed mode (Gain fixed to −10 dB) **[VAR]:** Variable mode • Factory setting: [FIX]
[GAMMA/BLACK GAMMA]		This cannot be set when [HLG MODE] is [FIX].	
		[BLACK GAMMA] U S R	Enables/disables black gamma. **[OFF], [ON]** • Factory setting: [OFF]
		[MASTER BLACK GAMMA] U S R	Adjusts the gamma characteristic adjacent to black. **[−32]…[+32]** • Factory setting: [0]
		[R BLACK GAMMA] U S R	Adjusts the gamma characteristic of red adjacent to black to the master gamma. **[−32]…[+32]** • Factory setting: [0]
		[B BLACK GAMMA] U S R	Adjusts the gamma characteristic of blue adjacent to black to the master gamma. **[−32]…[+32]** • Factory setting: [0]
[KNEE]		This cannot be set when [HLG MODE] is [FIX].	
		[KNEE] U S R	Enables/disables knee. **[OFF], [ON]** • Factory setting: [ON]
		[KNEE POINT] U S R	Sets the knee point position. **[60.00]…[100.00]** (0.25 step) • Factory setting: [100.00]
		[KNEE SLOPE] U S R	Sets the knee slope. **[0]…[199]** • Factory setting: [0]
[SDR CONVERT]		This cannot be set when [SDR CONVERT MODE] is [FIX].	
		[GAIN] U S R	Sets the gain of SDR. **[−12dB], [−11dB], [−10dB], [−9dB], [−8dB], [−7dB], [−6dB], [−5dB], [0dB]** • Factory setting: [−6dB]
		[POINT] U S R	Sets the video level to start compression for SDR video. **[0]…[100]** • Factory setting: [100]
		[SLOPE] U S R	Sets the slope to compress video signals. **[0]…[127]** • Factory setting: [0]
		[BLACK OFFSET] U S R	Adjusts the black level offset for the SDR video. **[-100]…[+100]** • Factory setting: [0]
[HD SDR PAINT(CCU)]			
[COLOR ADJUSTMENT]		[COLOR ADJUSTMENT SW] U S R	Enables/disables the COLOR ADJUSTMENT function. **[OFF], [ON]** • Factory setting: [OFF]
		[R SAT] U S R	Adjusts the color saturation of red. **[−127]…[+127]** • Factory setting: [0]
		[R PHASE] U S R	Adjusts the hue of red. **[−127]…[+127]** • Factory setting: [0]
		[R_R_MG SAT] U S R	Adjusts the color saturation of the color between red and the color between red and magenta. **[−127]…[+127]** • Factory setting: [0]
		[R_R_MG PHASE] U S R	Adjusts the hue of the color between red and the color between red and magenta. **[−127]…[+127]** • Factory setting: [0]
		[R_MG SAT] U S R	Adjusts the color saturation of the color between red and magenta. **[−127]…[+127]** • Factory setting: [0]
		[R_MG PHASE] U S R	Adjusts the hue of the color between red and magenta. **[−127]…[+127]** • Factory setting: [0]

Item	Description of settings
[R_MG_MG SAT] U S R	Adjusts the color saturation of the color between the color between red and magenta and magenta. **[–127]…[+127]** • Factory setting: [0]
[R_MG_MG PHASE] U S R	Adjusts the hue of the color between the color between red and magenta and magenta. **[–127]…[+127]** • Factory setting: [0]
[MG SAT] U S R	Adjusts the color saturation of magenta. **[–127]…[+127]** • Factory setting: [0]
[MG PHASE] U S R	Adjusts the hue of magenta. **[–127]…[+127]** • Factory setting: [0]
[MG_MG_B SAT] U S R	Adjusts the color saturation of the color between magenta and the color between magenta and blue. **[–127]…[+127]** • Factory setting: [0]
[MG_MG_B PHASE] U S R	Adjusts the hue of the color between magenta and the color between magenta and blue. **[–127]…[+127]** • Factory setting: [0]
[MG_B SAT] U S R	Adjusts the color saturation of the color between magenta and blue. **[–127]…[+127]** • Factory setting: [0]
[MG_B PHASE] U S R	Adjusts the hue of the color between magenta and blue. **[–127]…[+127]** • Factory setting: [0]
[MG_B_B SAT] U S R	Adjusts the color saturation of the color between the color between magenta and blue and blue. **[–127]…[+127]** • Factory setting: [0]
[MG_B_B PHASE] U S R	Adjusts the hue of the color between the color between magenta and blue and blue. **[–127]…[+127]** • Factory setting: [0]
[B SAT] U S R	Adjusts the color saturation of blue. **[–127]…[+127]** • Factory setting: [0]
[B PHASE] U S R	Adjusts the hue of blue. **[–127]…[+127]** • Factory setting: [0]
[B_B_CY SAT] U S R	Adjusts the color saturation of the color between blue and the color between blue and cyan. **[–127]…[+127]** • Factory setting: [0]
[B_B_CY PHASE] U S R	Adjusts the hue of the color between blue and the color between blue and cyan. **[–127]…[+127]** • Factory setting: [0]
[B_CY SAT] U S R	Adjusts the color saturation of the color between blue and cyan. **[–127]…[+127]** • Factory setting: [0]
[B_CY PHASE] U S R	Adjusts the hue of the color between blue and cyan. **[–127]…[+127]** • Factory setting: [0]
[B_CY_CY SAT] U S R	Adjusts the color saturation of the color between the color between blue and cyan and cyan. **[–127]…[+127]** • Factory setting: [0]
[B_CY_CY PHASE] U S R	Adjusts the hue of the color between the color between blue and cyan and cyan. **[–127]…[+127]** • Factory setting: [0]
[CY SAT] U S R	Adjusts the color saturation of cyan. **[–127]…[+127]** • Factory setting: [0]
[CY PHASE] U S R	Adjusts the hue of cyan. **[–127]…[+127]** • Factory setting: [0]
[CY_CY_G SAT] U S R	Adjusts the color saturation of the color between cyan and the color between cyan and green. **[–127]…[+127]** • Factory setting: [0]
[CY_CY_G PHASE] U S R	Adjusts the hue of the color between cyan and the color between cyan and green. **[–127]…[+127]** • Factory setting: [0]
[CY_G SAT] U S R	Adjusts the color saturation of the color between cyan and green. **[–127]…[+127]** • Factory setting: [0]
[CY_G PHASE] U S R	Adjusts the hue of the color between cyan and green. **[–127]…[+127]** • Factory setting: [0]

Item			Description of settings
		[CY_G_G SAT] U S R	Adjusts the color saturation of the color between the color between cyan and green and green. **[–127]…[+127]** • Factory setting: [0]
		[CY_G_G PHASE] U S R	Adjusts the hue of the color between the color between cyan and green and green. **[–127]…[+127]** • Factory setting: [0]
		[G SAT] U S R	Adjusts the color saturation of green. **[–127]…[+127]** • Factory setting: [0]
		[G PHASE] U S R	Adjusts the hue of green. **[–127]…[+127]** • Factory setting: [0]
		[G_G_YL SAT] U S R	Adjusts the color saturation of the color between green and the color between green and yellow. **[–127]…[+127]** • Factory setting: [0]
		[G_G_YL PHASE] U S R	Adjusts the hue of the color between green and the color between green and yellow. **[–127]…[+127]** • Factory setting: [0]
		[G_YL SAT] U S R	Adjusts the color saturation of the color between green and yellow. **[–127]…[+127]** • Factory setting: [0]
		[G_YL PHASE] U S R	Adjusts the hue of the color between green and yellow. **[–127]…[+127]** • Factory setting: [0]
		[G_YL_YL SAT] U S R	Adjusts the color saturation of the color between the color between turquoise and yellow and yellow. **[–127]…[+127]** • Factory setting: [0]
		[G_YL_YL PHASE] U S R	Adjusts the hue of the color between the color between turquoise and yellow and yellow. **[–127]…[+127]** • Factory setting: [0]
		[YL SAT] U S R	Adjusts the color saturation of yellow. **[–127]…[+127]** • Factory setting: [0]
		[YL PHASE] U S R	Adjusts the hue of yellow. **[–127]…[+127]** • Factory setting: [0]
		[YL_YL_R SAT] U S R	Adjusts the color saturation of the color between yellow and the color between yellow and red. **[–127]…[+127]** • Factory setting: [0]
		[YL_YL_R PHASE] U S R	Adjusts the hue of the color between yellow and the color between yellow and red. **[–127]…[+127]** • Factory setting: [0]
		[YL_R SAT] U S R	Adjusts the color saturation of the color between yellow and red. **[–127]…[+127]** • Factory setting: [0]
		[YL_R PHASE] U S R	Adjusts the hue of the color between yellow and red. **[–127]…[+127]** • Factory setting: [0]
		[YL_R_R SAT] U S R	Adjusts the color saturation of the color between the color between yellow and red and red. **[–127]…[+127]** • Factory setting: [0]
		[YL_R_R PHASE] U S R	Adjusts the hue of the color between the color between yellow and red and red. **[–127]…[+127]** • Factory setting: [0]
	[NON-LINEAR MATRIX]	[NON-LINEAR MATRIX SW] U S R	Enables/disables the NON-LINEAR MATRIX function. **[OFF], [ON]** • Factory setting: [OFF]
		[(R-G)_N] U S R	Adjusts the red and green matrix. **[–31]…[+31]** • Factory setting: [0]
		[(R-G)_P] U S R	Adjusts the red and green matrix. **[–31]…[+31]** • Factory setting: [0]
		[(R-B)_N] U S R	Adjusts the red and blue matrix. **[–31]…[+31]** • Factory setting: [0]
		[(R-B)_P] U S R	Adjusts the red and blue matrix. **[–31]…[+31]** • Factory setting: [0]
		[(G-R)_N] U S R	Adjusts the green and red matrix. **[–31]…[+31]** • Factory setting: [0]

Item			Description of settings
		[(G-R)_P] U S R	Adjusts the green and red matrix. **[–31]…[+31]** • Factory setting: [0]
		[(G-B)_N] U S R	Adjusts the green and blue matrix. **[–31]…[+31]** • Factory setting: [0]
		[(G-B)_P] U S R	Adjusts the green and blue matrix. **[–31]…[+31]** • Factory setting: [0]
		[(B-R)_N] U S R	Adjusts the blue and red matrix. **[–31]…[+31]** • Factory setting: [0]
		[(B-R)_P] U S R	Adjusts the blue and red matrix. **[–31]…[+31]** • Factory setting: [0]
		[(B-G)_N] U S R	Adjusts the blue and green matrix. **[–31]…[+31]** • Factory setting: [0]
		[(B-G)_P] U S R	Adjusts the blue and green matrix. **[–31]…[+31]** • Factory setting: [0]
[PAINT SWITCH]		[FLARE] U S R	Enables/disables flare. **[OFF], [ON]** • Factory setting: [ON]
		[GAMMA] U S R	Enables/disables gamma. **[OFF], [ON]** • Factory setting: [ON]
		[BLACK GAMMA] U S R	Enables/disables black gamma. **[OFF], [ON]** • Factory setting: [OFF]
		[KNEE] U S R	Enables/disables knee. **[OFF], [ON]** • Factory setting: [ON]
		[WHITE CLIP] U S R	Enables/disables white clips. **[OFF], [ON]** • Factory setting: [ON]
		[DRS] U S R	Enables/disables dynamic range stretcher. **[OFF], [ON]** • Factory setting: [OFF]
		[DETAIL] U S R	Enables/disables the detail. **[OFF], [ON]** • Factory setting: [ON]
		[SKIN TONE DETAIL] U S R	Enables/disables the skin tone detail. **[OFF], [ON]** • Factory setting: [OFF]
		[MATRIX] U S R	Enables/disables matrix (linear matrix/12-axis color correction). **[OFF], [ON]** • Factory setting: [OFF]
		[LINEAR MATRIX] U S R	Enables/disables linear matrix. **[OFF], [ON]** • Factory setting: [OFF]
		[COLOR CORRECT] U S R	Enables/disables 12-axis color correction. **[OFF], [ON]** • Factory setting: [OFF]

[LENS]

Item	Description of settings
[DIGITAL EXTENDER] U O	Sets the ratio for the digital extender. **[OFF], [x1.4], [x2.0]** • Factory setting: [OFF]
[IRIS]	—
[LENS EXT COMP SW] U O	Sets the ALC compensation when the lens extender is enabled. **[OFF], [ON]** • Factory setting: [OFF]
[EXTENDER1] U O R	Sets the magnification of lens extender 1. **[NONE], [0.1]…[9.9]** • Factory setting: [2.0]
[LENS EXT COMP LEVEL] U O	Sets the iris compensation level when lens extender 1 is enabled. **[–100]…[+100]** • Factory setting: [0]

Item	Description of settings
[EXTENDER2] U O R	Sets the magnification of lens extender 2. **[NONE], [0.1]…[9.9]** • Factory setting: [NONE]
[LENS EXT COMP LEVEL] U O	Sets the iris compensation level when lens extender 2 is enabled. **[−100]…[+100]** • Factory setting: [0]
[EXTENDER3] U O R	Sets the magnification of lens extender 3. **[NONE], [0.1]…[9.9]** • Factory setting: [NONE]
[LENS EXT COMP LEVEL] U O	Sets the iris compensation level when lens extender 3 is enabled. **[−100]…[+100]** • Factory setting: [0]
[EXTENDER4] U O R	Sets the magnification of lens extender 4. **[NONE], [0.1]…[9.9]** • Factory setting: [NONE]
[LENS EXT COMP LEVEL] U O	Sets the iris compensation level when lens extender 4 is enabled. **[−100]…[+100]** • Factory setting: [0]

[SUB DISPLAY]

Item		Description of settings
[FOCUS ASSIST]	[FOCUS ASSIST SW] U O	Enables/disables the focus assist. **[OFF], [ON]** • Factory setting: [OFF]
	[FOCUS ASSIST MODE] U O	Sets whether to cancel the focus assist by the switch or by the duration of time. **[SW], [INSTANT]** • Factory setting: [SW]
	[CANCEL TIME] U O	Sets the duration of time before cancelling the focus assist when [INSTANT] is selected. **[1sec], [3sec], [5sec], [10sec], [20sec]** • Factory setting: [5sec]
	[IN RED SW] U O	Enables/disables the IN RED. **[OFF], [ON]** • Factory setting: [OFF]
	[IN RED COLOR] U O	Sets the color for IN RED. **[RED], [GREEN], [BLUE], [WHITE]** • Factory setting: [RED]
	[SQUARE SW] U O	Enables/disables the SQUARE. **[OFF], [ON]** • Factory setting: [OFF]
	[SQUARE COLOR] U O	Sets the color for the SQUARE. **[RED], [GREEN]** • Factory setting: [GREEN]
	[BAR SW] U O	Enables/disables the BAR. **[OFF], [ON]** • Factory setting: [OFF]
	[BAR MODE] U O	Sets the appearance of the focus bar. **[NORMAL], [THICK]** • Factory setting: [NORMAL]
	[BAR COLOR] U O	Sets the color of the bar when [BAR MODE] is set to [THICK]. **[WHITE], [RED], [BLUE], [GREEN]** • Factory setting: [WHITE]
	[BAR POSITION] U O	Sets the display position of the bar when [BAR MODE] is set to [THICK]. **[UPPER], [UNDER], [RIGHT], [LEFT]** • Factory setting: [UNDER]
	[MAG SW] U O	Enables/disables the magnification display function. **[OFF], [ON]** • Factory setting: [OFF]
[EXPOSURE ASSIST]	[ZEBRA] U O	Enables/disables the luminance zebra. **[OFF], [ON]** • Factory setting: [OFF]
	[ZEBRA1 LEVEL] U O	Sets the level of the luminance zebra 1. **[0%]…[109%]** • Factory setting: [80%]
	[ZEBRA2 LEVEL] U O	Sets the level of the luminance zebra 2. **[0%]…[109%]** • Factory setting: [100%]
	[ZEBRA PATTERN] U O	Sets the pattern of the luminance zebra. **[1], [1+2], [SPOT]** • Factory setting: [1]

Item		Description of settings
[MARKER]	[MARKER LEVEL] UO	Sets the brightness of the markers and on-screen display. **[50%] …[100%]** • Factory setting: [100%]
	[CENTER MARK] UO	Shows/hides the center marker. **[OFF], [ON]** • Factory setting: [OFF]
	[CENTER MARK SELECT] UO	Sets the size of the center marker. **[1]…[8]** • Factory setting: [1]
	[LINE WIDTH] UO	Sets the thickness of the center marker frame. **[1]…[3]** • Factory setting: [2]
	[SAFETY MARK1 SWITCH] UO	Shows/hides the safety marker 1. **[OFF], [ON]** • Factory setting: [OFF]
	[SAFETY MARK1] UO	Sets the aspect ratio of safety marker 1. **[16:9], [15:9], [14:9], [13:9], [4:3]** • Factory setting: [16:9]
	[SAFETY AREA1] UO	Sets the size of safety area 1. **[80%]…[100%]** • Factory setting: [80%]
	[SAFETY MARK2 SWITCH] UO	Shows/hides the safety marker 2. **[OFF], [ON]** • Factory setting: [OFF]
	[SAFETY MARK2] UO	Sets the aspect ratio of safety marker 2. **[16:9], [15:9], [14:9], [13:9], [4:3]** • Factory setting: [16:9]
	[SAFETY AREA2] UO	Sets the size of safety marker 2. **[80%]…[100%]** • Factory setting: [80%]
	[FRAME LEVEL SWITCH] UO	Shows/hides the level display outside the frame marker. **[OFF], [ON]** • Factory setting: [OFF]
	[FRAME LEVEL] UO	Sets the level to be displayed outside the frame marker. **[0]…[31]** • Factory setting: [31]
	[FRAME MARK SWITCH] UO	Shows/hides the frame marker. **[OFF], [ON]** • Factory setting: [OFF]
	[FRAME SIG] UO	Sets the aspect ratio of the frame marker. **[4:3], [13:9], [14:9], [15:9], [16:9], [CINEMA], [VISTA]** • Factory setting: [4:3]
	[EFFECTIVE AREA MARK] UO	Shows/hides the effective area marker. **[OFF], [ON]** • Factory setting: [OFF]
	[PF LENS AREA MARK] UO	Shows/hides the auto focus area marker of the PF lens. **[OFF], [AUTO]** • Factory setting: [OFF]
	[USER BOX] UO	Shows/hides the user box. **[OFF], [ON]** • Factory setting: [OFF]
	[MEMORY SELECT] UO	Configures the memory of the user box. **[1], [2], [3]** • Factory setting: [1]
	[H POSITION] UO	Adjusts the horizontal position of the user box. **[–50]…[50]** • Factory setting: [0]
	[H OFFSET] UO	Finely adjusts the horizontal offset of the user box. **[–10]…[10]** • Factory setting: [0]
	[V POSITION] UO	Adjusts the vertical position of the user box. **[–50]…[50]** • Factory setting: [0]
	[V OFFSET] UO	Finely adjusts the vertical offset of the user box. **[–10]…[10]** • Factory setting: [0]
	[WIDTH] UO	Adjusts the width of the user box. **[0]…[100]** • Factory setting: [50]
	[HEIGHT] UO	Adjusts the height of the user box. **[0]…[100]** • Factory setting: [50]

Item		Description of settings
	[BOX/CROSS] UO	Sets the shape of the user box. **[BOX], [CROSS]** • Factory setting: [BOX]
	[EFFECT MEMORY1] UO	Configures the valid memory of the user box. **[OFF], [ON]** • Factory setting: [OFF]
	[EFFECT MEMORY2] UO	Configures the valid memory of the user box. **[OFF], [ON]** • Factory setting: [OFF]
	[EFFECT MEMORY3] UO	Configures the valid memory of the user box. **[OFF], [ON]** • Factory setting: [OFF]
[VIEW FINDER DETAIL]	[VIEW FINDER DETAIL] UO	Adjusts the details of the viewfinder. **[0]…[23]** • Factory setting: [7]
	[ZOOM LINK] UO	Enables/disables the details of the zoom-interlocked viewfinder. **[OFF], [ON]** • Factory setting: [OFF]
	[ZOOM LINK LEVEL] UO	Adjusts the detail level of the zoom-interlocked viewfinder. **[1]…[5]** • Factory setting: [3]
	[RETURN SIGNAL]	—
	[DTL PEAK FREQUENCY] UO	Adjusts the peak frequency of the return signal. **[LOW], [MID], [HIGH]** • Factory setting: [LOW]
	[DTL OFFSET GAIN] UO	Adjusts the detail offset gain of the return signal. **[0]…[5]** • Factory setting: [0]
	[CRISP] UO	Adjusts the detail crisp level of the return signal. **[0]…[63]** • Factory setting: [0]
[VIEW FINDER DARK GAIN]	[DARK GAIN LEVEL] UO	Sets the level by which VF dark areas are emphasized. **[1] … [3]** • Factory setting: [2]
[STATUS INDICATOR]		For items whose setting is [ON], the LED in the viewfinder (⚠) lights up when the operating status of the camera becomes irregular.
	[F NUMBER] UO	Shows/hides the iris display (F value). **[OFF], [ON]** • Factory setting: [OFF] This is displayed when you use a lens that outputs position information.
	[ZOOM] UO	Shows/hides the zoom position display. **[OFF], [ON]** • Factory setting: [OFF] This is displayed when you use a lens that outputs position information.
	[FOCUS] UO	Shows/hides the focus position display. **[OFF], [ON]** • Factory setting: [OFF] This is displayed when you use a lens that outputs position information.
	[FOCUS CONDITION] UO	Shows/hides the focus information display. **[OFF], [ON]** • Factory setting: [OFF]
	[EXTENDER] UO	Shows/hides the extender display. **[OFF], [ON]** • Factory setting: [OFF]
	[FILTER] UO	Shows/hides the filter position display. **[OFF], [ON]** • Factory setting: [OFF]
	[MASTER GAIN] UO	Shows/hides the master gain display. **[OFF], [ON]** • Factory setting: [OFF]
	[OFFSET GAIN] UO	Shows/hides the offset gain display. **[OFF], [ON]** • Factory setting: [OFF]
	[SHUTTER] UO	Shows/hides the electronic shutter display. **[OFF], [ON]** • Factory setting: [OFF]
	[AUDIO LEVEL] UO	Shows/hides the audio level (level meter) display. **[OFF], [ON]** • Factory setting: [OFF]
	[DIGITAL EXTENDER] UO	Shows/hides the digital extender display. **[OFF], [ON]** • Factory setting: [OFF]

Item		Description of settings
	[WHITE CHANNEL] U O	Shows/hides the white balance memory display. **[OFF], [ON]** • Factory setting: [OFF]
	[DRS] U O	Shows/hides the dynamic range stretcher display. **[OFF], [ON]** • Factory setting: [OFF]
	[CAC] U O	Shows/hides the chromatic aberration compensation (CAC) display. **[OFF], [ON]** • Factory setting: [OFF]
	[OPT LEVEL] U O	Shows/hides the display of the level of the optical signal received by the camera. **[OFF], [ON]** • Factory setting: [OFF]
	[RETURN SELECT] U O	Shows/hides the return ID display. **[OFF], [ON]** • Factory setting: [OFF]
	[STATUS] U O	Shows/hides the display appearing when functions are selected. **[OFF], [ON]** • Factory setting: [OFF]
	[STATUS(AUTO)] U O	Shows/hides the display appearing when AWB/ABB are activated or deactivated. **[OFF], [ON]** • Factory setting: [OFF]
	[VOLTAGE] U O	Shows/hides the power supply display. **[OFF], [ON]** • Factory setting: [OFF]
	[FORMAT] U O	Shows/hides the system frequency/resolution display. **[OFF], [ON]** • Factory setting: [OFF]
	[SENSOR RATE] U O	Shows/hides the sensor imaging rate display. **[OFF], [ON]** • Factory setting: [OFF]
	[FAN OFF] U O	Shows/hides the status display when the fan is off. **[OFF], [ON]** • Factory setting: [OFF]
	[COLOR TEMP] U O	Shows/hides the color temperature display. **[OFF], [ON]** • Factory setting: [OFF]
	[SHOOTING MODE] U O	Shows/hides the sensitivity mode display. **[OFF], [ON]** • Factory setting: [OFF]
	[MAG] U O	Shows/hides the status display when the focus assist magnification display function is enabled. **[OFF], [ON]** • Factory setting: [ON]
	[MENU DISP WARNING] U O	Shows/hides the menu warning display. **[OFF], [ON]** • Factory setting: [ON]
	[F DROP ADJUST] U O	Shows/hides the F drop display. **[OFF], [ON]** • Factory setting: [OFF]
	[HDR] U O	Shows/hides the HDR display. **[OFF], [ON]** • Factory setting: [OFF]
	[V-LOG] U O	Shows/hides the V-LOG display. **[OFF], [ON]** • Factory setting: [OFF]
	[TALLY CHAR] U O	Shows/hides the TALLY character display. **[OFF], [ON]** • Factory setting: [OFF]
	[TALK SW] U O	Shows/hides the character display when TALK SW is ON. **[OFF], [ON]** • Factory setting: [OFF]
	[FOCUS DISP] U O	Switches the focus value unit display. **[FEET], [METER], [NUMBER]** • Factory setting: [NUMBER]
[MODE CHECK IND]	[AUDIO] U O	Shows/hides the [AUDIO] screen during the mode check. **[OFF], [ON]** • Factory setting: [ON]
	[USER SW STATUS] U O	Shows/hides the [USER SW STATUS] screen during the mode check. **[OFF], [ON]** • Factory setting: [ON]
	[!LED] U O	Shows/hides the [!LED] screen during the mode check. **[OFF], [ON]** • Factory setting: [ON]

Item		Description of settings
	[SDI OUT] U O	Shows/hides the [SDI OUT] screen during the mode check. **[OFF], [ON]** • Factory setting: [ON]
	[CAC] U O	Shows/hides the [CAC] screen during the mode check. **[OFF], [ON]** • Factory setting: [ON]
[!LED]		For items whose setting is [ON], the LED in the viewfinder (⚠) lights up when the operating status of the camera becomes irregular.
	[!LED MODE] U O	Enables/disables the yellow tally function for the front VF's !LED lamp. **[NORMAL], [YELLOW TALLY]** • Factory setting: [NORMAL]
	[GAMMA OFF] U O	Shows/hides the status display when gamma is disabled. **[OFF], [ON]** • Factory setting: [OFF]
	[SHUTTER] U O	Shows/hides the status display when the electronic shutter is enabled. **[OFF], [ON]** • Factory setting: [OFF]
	[EXTENDER] U O	Shows/hides the status display when the lens extender is enabled. **[OFF], [ON]** • Factory setting: [OFF]
	[FAN OFF] U O	Shows/hides the status display when the fan is off. **[OFF], [ON]** • Factory setting: [OFF]
	[MASTER GAIN] U O	Shows/hides the status display when the gain is other than 0 dB. **[OFF], [ON]** • Factory setting: [OFF]
	[BLACK GAMMA] U O	Shows/hides the status display when the black gamma is enabled. **[OFF], [ON]** • Factory setting: [OFF]
[RETURN MIX]	[RETURN MIX SW] U O	Enables/disables the composite function for the CAM video and the return video. **[OFF], [ON]** • Factory setting: [OFF]
	[MIX RATIO] U O	Sets the composite ratio for the CAM video and the return video's composite function. **[1]…[99]** • Factory setting: [50]

[TRACKING DATA OUTPUT]

Make settings related to the output of tracking data used in virtual studio systems, etc.

Item	Description of settings
[IP] U R	Enables/disables the function which outputs with UDP the tracking data such as Zoom data via IP output and synchronizes it with the GENLOCK signal. **[OFF], [ON]** • Factory setting: [OFF]
[CAMERA ID] U R	Sets the Camera ID for tracking data. **[0x00] … [0xFF]** • Factory setting: [0xFF] This can be set between [0] and [255] in the web screen.

[SWITCH ASSIGN]

Item		Description of settings
[USER SWITCH]	[GRIP RET] U O	Selects the grip <RET> switch function. **[A], [B], [C], [PTT]** • Factory setting: [A]
	[GRIP PTT] U O	Selects the grip <PTT> switch function. **[PTT], [A], [B], [C]** • Factory setting: [PTT]
	[LENS VTR] U O	Selects the <VTR> switch function of the handy lens. **[A], [B], [C], [PTT], [DISP], [MARK OFF], [LENS EXT], [D.EXT] , [C.TEMP], [CENTER], [ASSIST], [FA_INRED], [FA_SQ], [FA_BAR], [FA_MAG], [RETURN MIX], [FOCUS GUIDE], [VF DARK GAIN], [INH]** • Factory setting: [B]
	[LENS RET1] U O	Selects the <RET1> switch function of the standard lens. **[A], [B], [C], [PTT], [DISP], [MARK OFF], [LENS EXT], [D.EXT] , [C.TEMP], [CENTER], [ASSIST], [FA_INRED], [FA_SQ], [FA_BAR], [FA_MAG], [RETURN MIX], [FOCUS GUIDE], [VF DARK GAIN]** • Factory setting: [A]
	[LENS RET2] U O	Selects the <RET2> switch function of the standard lens. **[A], [B], [C], [PTT], [DISP], [MARK OFF], [LENS EXT], [D.EXT] , [C.TEMP], [CENTER], [ASSIST], [FA_INRED], [FA_SQ], [FA_BAR], [FA_MAG], [RETURN MIX], [FOCUS GUIDE], [VF DARK GAIN]** • Factory setting: [B]

Item		Description of settings
	[LENS RET3] U O	Selects the <RET3> switch function of the standard lens. **[A], [B], [C], [PTT], [DISP], [MARK OFF], [LENS EXT], [D.EXT] , [C.TEMP], [CENTER], [ASSIST], [FA_INRED], [FA_SQ], [FA_BAR], [FA_MAG], [RETURN MIX], [FOCUS GUIDE], [VF DARK GAIN]** • Factory setting: [C]
	[EXTERNAL RET1] U O	Selects the function of external return control switch 1. **[A], [B], [C], [D.EXT]** • Factory setting: [A]
	[EXTERNAL RET2] U O	Selects the function of external return control switch 2. **[A], [B], [C], [D.EXT]** • Factory setting: [B]
	[EXTERNAL RET3] U O	Selects the function of external return control switch 3. **[A], [B], [C], [D.EXT]** • Factory setting: [B]
	[USER SWITCH1] U O	Selects the function of the <USER 1> switch. **[RETURN A], [RETURN B], [RETURN C], [PTT], [DISP], [MARK OFF], [D.EXT], [C.TEMP], [ASSIST], [CALL], [FA_INRED], [FA_SQ], [FA_BAR], [FA_MAG], [RETURN MIX], [FOCUS GUIDE], [VF DARK GAIN]** • Factory setting: [RETURN A]
	[USER SWITCH2] U O	Selects the function of the <USER 2> switch. **[RETURN A], [RETURN B], [RETURN C], [PTT], [DISP], [MARK OFF], [D.EXT], [C.TEMP], [ASSIST], [CALL], [FA_INRED], [FA_SQ], [FA_BAR], [FA_MAG], [RETURN MIX], [FOCUS GUIDE], [VF DARK GAIN]** • Factory setting: [PTT]
	[USER SWITCH3] U O	Selects the function of the <USER 3> switch. **[RETURN A], [RETURN B], [RETURN C], [PTT], [DISP], [MARK OFF], [D.EXT], [C.TEMP], [ASSIST], [CALL], [FA_INRED], [FA_SQ], [FA_BAR], [FA_MAG], [RETURN MIX], [FOCUS GUIDE], [VF DARK GAIN]** • Factory setting: [PTT]
	[USER SWITCH4] U O	Selects the function of the <USER 4> switch. **[RETURN A], [RETURN B], [RETURN C], [PTT], [DISP], [MARK OFF], [D.EXT], [C.TEMP], [ASSIST], [CALL], [FA_INRED], [FA_SQ], [FA_BAR], [FA_MAG], [RETURN MIX], [FOCUS GUIDE], [VF DARK GAIN]** • Factory setting: [PTT]
	[USER SWITCH5] U O	Selects the function of the <USER 5> switch. **[RETURN A], [RETURN B], [RETURN C], [PTT], [DISP], [MARK OFF], [D.EXT], [C.TEMP], [ASSIST], [CALL], [FA_INRED], [FA_SQ], [FA_BAR], [FA_MAG], [RETURN MIX], [FOCUS GUIDE], [VF DARK GAIN]** • Factory setting: [PTT]
	[USER SWITCH6] U O	Selects the function of the <USER 6> switch. **[RETURN A], [RETURN B], [RETURN C], [PTT], [DISP], [MARK OFF], [D.EXT], [C.TEMP], [ASSIST], [CALL], [FA_INRED], [FA_SQ], [FA_BAR], [FA_MAG], [RETURN MIX], [FOCUS GUIDE], [VF DARK GAIN]** • Factory setting: [PTT]
	[USER B/U SWITCH1] U O	Selects the function of the user switch 1 on the Build-up Unit. **[RETURN A], [RETURN B], [RETURN C], [PTT], [DISP], [MARK OFF], [LENS EXT], [D.EXT], [C.TEMP], [CENTER], [ASSIST], [FA_INRED], [FA_SQ], [FA_BAR], [FA_MAG], [RETURN MIX], [FOCUS GUIDE], [VF DARK GAIN]** • Factory setting: [LENS EXT]
	[USER B/U SWITCH2] U O	Selects the function of the user switch 2 on the Build-up Unit. **[RETURN A], [RETURN B], [RETURN C], [PTT], [DISP], [MARK OFF], [LENS EXT], [D.EXT], [C.TEMP], [CENTER], [ASSIST], [FA_INRED], [FA_SQ], [FA_BAR], [FA_MAG], [RETURN MIX], [FOCUS GUIDE], [VF DARK GAIN]** • Factory setting: [CENTER]
	[USER B/U SWITCH3] U O	Selects the function of the user switch 3 on the Build-up Unit. **[RETURN A], [RETURN B], [RETURN C], [PTT], [DISP], [MARK OFF], [LENS EXT], [D.EXT], [C.TEMP], [CENTER], [ASSIST], [FA_INRED], [FA_SQ], [FA_BAR], [FA_MAG], [RETURN MIX], [FOCUS GUIDE], [VF DARK GAIN]** • Factory setting: [PTT]
[W/B BAL SETTING]	[W/B BAL SW] U O	Sets the conditions for activating the white balance switch. **[NORMAL]:** Enables the switch only when the camera is operated individually. **[ALWAYS]:** Always enables the switch. • Factory setting: [NORMAL]
	[ABB SW MODE] U O	Sets the switch of the black balance. **[NORMAL], [PTT]** • Factory setting: [NORMAL]

[FILES]

Item			Description of settings
[SCENE FILE]		[MODE]	Selects the operation mode. **[LOAD], [STORE]** • Factory setting: [LOAD]
		[FILE NO.]	Selects a file number. When [MODE] is [LOAD]: **[OFF], [1]…[8]** When [MODE] is [STORE]: **[1]…[8]** • Factory setting: [OFF]
		[FILE NAME] U S R	Enters a file name. (15 characters or less) • Factory setting: [SCENE1]
		[LIST]	The file names set for the SCENE files are shown in a list. Up to 3 can be shown in the list at a time, and then the list can be scrolled.
		[EXECUTE]	Selects whether to execute with the configured settings. **[NO], [YES]**
[USER FILE]		[MODE]	Selects the operation mode. **[LOAD], [STORE]** • Factory setting: [LOAD]
		[FILE NO.]	Selects a file. **[1], [2], [3]** • Factory setting: [1]
		[FILE NAME] U R	Enters a file name. (15 characters or less) • Factory setting: [USER1]
		[LIST]	The file names set for the SCENE files are shown in a list. Up to 3 can be shown in the list at a time, and then the list can be scrolled.
		[EXECUTE]	Selects whether to execute with the configured settings. **[NO], [YES]**
[REFFERENCE FILE]			
	[MODE]		Selects the operation mode. **[LOAD], [STORE]** • Factory setting: [LOAD]
	[FILE NO.]		Selects a file. **[1], [2], [3]** • Factory setting: [1]
	[FILE NAME] U R		Enters a file name. (15 characters or less) • Factory setting: [REFERENCE]
	[LIST]		The file names set for the REFERENCE files are shown in a list. Up to 3 can be shown in the list at a time, and then the list can be scrolled.
	[EXECUTE]		Selects whether to execute with the configured settings. **[NO], [YES]**
[USB MEDIA]			
	[MEDIA SELECT]		Displays the media information selected in [MEDIA NO].
		[MEDIA NO]	Displays the media number of the currently selected connection. You can switch the connection destination by switching the item. **[1], [2], [3], [4], [5] …** • Factory setting: [1]
		[VOL LABEL]	Displays the volume label of the media selected in [MEDIA NO].
		[PRODUCT]	Displays the product information for the media selected in [MEDIA NO].
		[No.1]	Displays information for media No.1.
		[No.2]	Displays information for media No.2.
		[No.3]	Displays information for media No.3.
		[No.4]	Displays information for media No.4.
		[No.5]	Displays information for media No.5.
		[RELOAD]	Selects whether to reload. **[NO], [YES]**
	[MODE]		Selects the operation mode. **[FORMAT], [LOAD], [STORE]** • Factory setting: [LOAD]
	[FILE SEL]		Selects a file. **[ALL], [ALL SCENE], [ALL USER], [ALL LENS], [SCENE], [USER], [LENS], [OPERATION], [NETWORK]** • Factory setting: [SCENE]
	[INTERNAL FILE NO]		Select the file number stored on the unit. **[CURRENT], [1]…[8]** (Scene file) **[1]…[3]** (User file) **[1]…[32]** (Lens file) **[CURRENT]** (Operation file) **[CURRENT]** (Network file) • Factory setting: [1]

Item			Description of settings
	[FILE NAME] U R		When [MODE] is [LOAD]: Displays the names of the files stored on the unit. When [MODE] is [STORE]: Enter the name of the file to be saved to the unit or a USB memory device. (15 characters or less)
	[USB MEM FILE NO]		Selects the file number stored on the USB memory device. **[1] … [32]**
	[LIST]		The file names on the USB memory device are shown in a list. The list can show up to 3 names at a time and scrolls to show names in order by date from the most recent one.
	[EXECUTE]		Selects whether to execute with the configured settings. **[NO], [YES]**
[ACCOUNT SETTING]			
	[ROP]		—
	[LOAD]		Loads user account information from the external memory.
		[EXECUTE]	Selects whether to execute with the configured settings. **[NO], [YES]**
		[NO.(1)]	Displays the account name on the external memory.
		[NO.(2)]	Displays the account name on the external memory.
		[NO.(3)]	Displays the account name on the external memory.
	[DELETE]		Deletes the account information recorded in this camera.
		[EXECUTE]	Selects whether to execute with the configured settings. **[YES], [NO], [PRESS USER SW4]**
		[DELETE NO.(1)]	Sets the list number to be deleted. **[NONE], [1] … [12]** • Factory setting: [NONE]
		[USER NAME]	Displays the USER NAME of the selected list number.
		[DELETE NO.(2)]	Sets the list number to be deleted. **[NONE], [1] … [12]** • Factory setting: [NONE]
		[USER NAME]	Displays the USER NAME of the selected list number.
		[DELETE NO.(3)]	Sets the list number to be deleted. **[NONE], [1] … [12]** • Factory setting: [NONE]
		[USER NAME]	Displays the USER NAME of the selected list number.
	[LIST]		Press the <SELECT> dial button to display a list of accounts recorded in the device.
	[HTTP]		—
	[DELETE]		Deletes the account information recorded in this camera.
		[EXECUTE]	Selects whether to execute with the configured settings. **[YES], [NO], [PRESS USER SW4]**

NOTE

• If files names listed in [FILE NAME] contains characters that cannot be used on this unit, they will be replaced with "_" when displayed.

[MAINTENANCE]

Item			Description of settings
[CAC ADJUST]		[CAC CONTROL] U R	Enables/disables the chromatic aberration compensation. **[OFF], [ON]** • Factory setting: [ON]
[LENS FILE ADJUST]			
		[LENS FILE SW]	Switches the enable/disable of the lens file. **[OFF], [ON]** • Factory setting: [OFF]
		[LENS FILE MODE]	Selects the operation mode. **[LOAD], [STORE], [CANCEL]** • Factory setting: [LOAD]
		[FILE NO.]	Selects a file. When [LENS FILE MODE] is [LOAD]: **[1]…[32]** When [LENS FILE MODE] is [STORE]: **[1]…[32]** • Factory setting: [1]
		[FILE NAME]	Enters a file name. (15 characters or less) • Factory setting: [LENS FILE 1]
		[EXECUTE]	Selects whether to execute. **[NO], [YES]**
		[FLARE R] U R	Adjusts Rch flare of the data selected in [FILE NO.]. **[–100]…[+100]** • Factory setting: [0]

Item		Description of settings
	[FLARE G] U R	Adjusts Gch flare of the data selected in [FILE NO.]. **[–100]…[+100]** • Factory setting: [0]
	[FLARE B] U R	Adjusts Bch flare of the data selected in [FILE NO.]. **[–100]…[+100]** • Factory setting: [0]
	[GAIN R] U R	Adjusts Rch gain of the data selected in [FILE NO.]. **[–100]…[+100]** • Factory setting: [0]
	[GAIN B] U R	Adjusts Bch gain of the data selected in [FILE NO.]. **[–100]…[+100]** • Factory setting: [0]
	[W H SAW R] U R	Adjusts Rch white shading for the data selected in [FILE NO.] horizontally using a saw-toothed waveform. **[–100]…[+100]** • Factory setting: [0]
	[W H SAW G] U R	Adjusts Gch white shading for the data selected in [FILE NO.] horizontally using a saw-toothed waveform. **[–100]…[+100]** • Factory setting: [0]
	[W H SAW B] U R	Adjusts Bch white shading for the data selected in [FILE NO.] horizontally using a saw-toothed waveform. **[–100]…[+100]** • Factory setting: [0]
	[W H PARA R] U R	Adjusts Rch white shading for the data selected in [FILE NO.] horizontally using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
	[W H PARA G] U R	Adjusts Gch white shading for the data selected in [FILE NO.] horizontally using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
	[W H PARA B] U R	Adjusts Bch white shading for the data selected in [FILE NO.] horizontally using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
	[W V SAW R] U R	Adjusts Rch white shading for the data selected in [FILE NO.] vertically using a saw-toothed waveform. **[–100]…[+100]** • Factory setting: [0]
	[W V SAW G] U R	Adjusts Gch white shading for the data selected in [FILE NO.] vertically using a saw-toothed waveform. **[–100]…[+100]** • Factory setting: [0]
	[W V SAW B] U R	Adjusts Bch white shading for the data selected in [FILE NO.] vertically using a saw-toothed waveform. **[–100]…[+100]** • Factory setting: [0]
	[W V PARA R] U R	Adjusts Rch white shading for the data selected in [FILE NO.] vertically using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
	[W V PARA G] U R	Adjusts Gch white shading for the data selected in [FILE NO.] vertically using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
	[W V PARA B] U R	Adjusts Bch white shading for the data selected in [FILE NO.] vertically using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
	[EXTENDER1] U O R	Sets the magnification of lens extender 1. **[NONE], [0.1]…[9.9]** • Factory setting: [2.0]
	[EXTENDER2] U O R	Sets the magnification of lens extender 2. **[NONE], [0.1]…[9.9]** • Factory setting: [NONE]
	[EXTENDER3] U O R	Sets the magnification of lens extender 3. **[NONE], [0.1]…[9.9]** • Factory setting: [NONE]
	[EXTENDER4] U O R	Sets the magnification of lens extender 4. **[NONE], [0.1]…[9.9]** • Factory setting: [NONE]
[F DROP ADJUST]	[F DROP RANGE] U R	Sets the determination reference value for the F drop of the lens. **[1] … [40]** • Factory setting: [10]
[FAN SETTING]	[FAN] U R	Sets the operation mode of the air cooling fan. **[NORMAL], [POWERFUL]** • Factory setting: [NORMAL]
[B/U LIGHT ADJUST]	[BOX SW(PUSH SW)] U R	Sets the luminance of the box switch of the Build-up Unit. **[1]…[10]** • Factory setting: [5]
	[LED(POWER)] U R	Sets the luminance of the lamp (<POWER>) of the Build-up Unit. **[1]…[10]** • Factory setting: [5]

Item		Description of settings
	[LED(ND/CC)] U R	Sets the luminance of the lamp (<ND>/<CC>) of the Build-up Unit. **[1]…[10]** • Factory setting: [5]
	[CAM NO.(REAR)] U R	Sets the luminance of the rear side camera number of the Build-up Unit. **[1]…[10]** • Factory setting: [5]
	[CAM NO.(FRONT)] U R	Sets the luminance of the front side camera number of the Build-up Unit. **[1]…[10]** • Factory setting: [5]
[DATE/TIME]	[PRESENT]	Displays the present date and time.
	[DATE YY]	Sets the year. **[00]…[99]** • Factory setting: [24]
	[DATE MM]	Sets the month. **[01]…[12]** • Factory setting: [01]
	[DATE DD]	Sets the day. **[01]…[31]** • Factory setting: [01]
	[TIME HH]	Sets the hour. **[00]…[23]** • Factory setting: [00]
	[TIME MM]	Sets the minute. **[00]…[59]** • Factory setting: [00]
	[TIME SS]	Sets the second. **[00] … [59]** • Factory setting: [00]
	[SET EXECUTE]	Selects whether to save the configured details. **[NO], [YES]**
	[RESET]	Selects whether to reset the settings. **[NO], [YES]**

NOTE

• The clock is not set at the time of shipment. Set the clock with these items before use.

[INITIALIZE]	[MENU INITIALIZE]	Restores the value of [ALL MENU] to their factory settings. **[NO], [YES]**
	[ALL DATA INITIALIZE]	Restores the values of [ALL MENU], scene file and user file to their factory settings. **[NO], [YES]**
	[READ FACTORY ALL DATA]	Restores the values of [ALL MENU], scene file, user file, and the factory adjusted values to their factory settings. **[NO], [YES]**
[UPDATE] [UPDATE] cannot be selected right after the power is turned on, because boot of the camera is in progress. This is not an error. Perform operation after a while.		Updates the software. • Execute the update of the software with the update image file stored in the USB memory device. • The back tally lamp flash during the update of software is executing. ***NOTE*** • Connect a USB memory device (Type C) directly to the <USB 3.0 HOST> terminal of this unit. If a USB hub or an SD card-to-USB adaptor is used, the unit may not operate properly. • This unit supports exFAT/FAT32. Formats other than the supported formats will not be recognized. **[NO], [YES]**
[VERSION]	[SYSTEM VERSION]	Displays the version for overall system of the unit.
[HOUR METER]	[OPERATION]	Displays the cumulative hours of operation of the unit.
	[FAN]	Displays the cumulative hours of operation of the cooling fan.
[ERROR STATUS]	[FAN]	Displays the error status of the cooling fan.
	[TEMPERATURE]	Displays the temperature related error statuses. **[HIGH TEMPERATURE]:** Indicates a high temperature state. **[SENSOR ERROR]:** Displays a temperature sensor abnormality.
[WHITE SHADING]	[CORRECT] U R	Enables/disables the white shading (saw-toothed waveform or parabolic waveform) correction. **[OFF], [ON]** • Factory setting: [ON]
	[W H SAW R] U R	Adjusts the white shading gain for Rch horizontally using a saw-toothed waveform. **[−100]…[+100]** • Factory setting: [0]
	[W H SAW G] U R	Adjusts the white shading gain for Gch horizontally using a saw-toothed waveform. **[−100]…[+100]** • Factory setting: [0]
	[W H SAW B] U R	Adjusts the white shading gain for Bch horizontally using a saw-toothed waveform. **[−100]…[+100]** • Factory setting: [0]
	[W H PARA R] U R	Adjusts the white shading gain for Rch horizontally using a parabolic waveform. **[−100]…[+100]** • Factory setting: [0]

Item		Description of settings
	[W H PARA G] U R	Adjusts the white shading gain for Gch horizontally using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
	[W H PARA B] U R	Adjusts the white shading gain for Bch horizontally using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
	[W V SAW R] U R	Adjusts the white shading gain for Rch vertically using a saw-toothed waveform. **[–100]…[+100]** • Factory setting: [0]
	[W V SAW G] U R	Adjusts the white shading gain for Gch vertically using a saw-toothed waveform. **[–100]…[+100]** • Factory setting: [0]
	[W V SAW B] U R	Adjusts the white shading gain for Bch vertically using a saw-toothed waveform. **[–100]…[+100]** • Factory setting: [0]
	[W V PARA R] U R	Adjusts the white shading gain for Rch vertically using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
	[W V PARA G] U R	Adjusts the white shading gain for Gch vertically using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
	[W V PARA B] U R	Adjusts the white shading gain for Bch vertically using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
[BLACK SHADING]	[CORRECT] U R	Enables/disables black shading (saw-toothed waveform or parabolic waveform) correction. **[OFF], [ON]** • Factory setting: [ON]
	[B H SAW R] U R	Adjusts the black shading gain for Rch horizontally using a saw-toothed waveform. **[–100]…[+100]** • Factory setting: [0]
	[B H SAW G] U R	Adjusts the black shading gain for Gch horizontally using a saw-toothed waveform. **[–100]…[+100]** • Factory setting: [0]
	[B H SAW B] U R	Adjusts the black shading gain for Bch horizontally using a saw-toothed waveform. **[–100]…[+100]** • Factory setting: [0]
	[B H PARA R] U R	Adjusts the black shading gain for Rch horizontally using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
	[B H PARA G] U R	Adjusts the black shading gain for Gch horizontally using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
	[B H PARA B] U R	Adjusts the black shading gain for Bch horizontally using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
	[B V SAW R] U R	Adjusts the black shading gain for Rch vertically using a saw-toothed waveform. **[–100]…[+100]** • Factory setting: [0]
	[B V SAW G] U R	Adjusts the black shading gain for Gch vertically using a saw-toothed waveform. **[–100]…[+100]** • Factory setting: [0]
	[B V SAW B] U R	Adjusts the black shading gain for Bch vertically using a saw-toothed waveform. **[–100]…[+100]** • Factory setting: [0]
	[B V PARA R] U R	Adjusts the black shading gain for Rch vertically using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
	[B V PARA G] U R	Adjusts the black shading gain for Gch vertically using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
	[B V PARA B] U R	Adjusts the black shading gain for Bch vertically using a parabolic waveform. **[–100]…[+100]** • Factory setting: [0]
[T-BAR CONNECT] U R		Sets whether to connect the T-BAR unit. **[OFF], [ON]** • Factory setting: [OFF]
[B/U LENS] U R		Sets the lens type of the Build-up Unit. **[PORTABLE], [BOX]** • Factory setting: [BOX]
[LENS I/F] U R		Sets the lens interface. **[ANALOG], [SERIAL]** • Factory setting: [SERIAL]

Chapter 5 Web Screen

This chapter describes how to configure the settings from a computer.

Setting the user account

In order to connect this unit and the ROP, you will need to register the account that has been registered on the ROP on this unit.
Use the following procedure to register the account on this unit.

Software

To install the software, download User Account Setup Software (Account Gen) from the following website. (Windows)
https://pro-av.panasonic.net/en/

■ **User Account Setup Software (Account Gen)**

User account setting of this unit can be set using User Account Setup Software.

Use the User Account Setup Software to set the user accounts in this unit

User account setting of this unit can be set using User Account Setup Software.

NOTE

- The User Account Setup Software saves user account information to a USB memory device, so you will need to insert a USB memory device in preparation.
- We recommend a password for the user account that is 8 characters or more, and that includes at least 3 types of character including upper case, lower case, numerals, and special characters.
- User accounts can also be set from the web screen of this unit. (page 157)

Procedure for setting with the User Account Setup Software

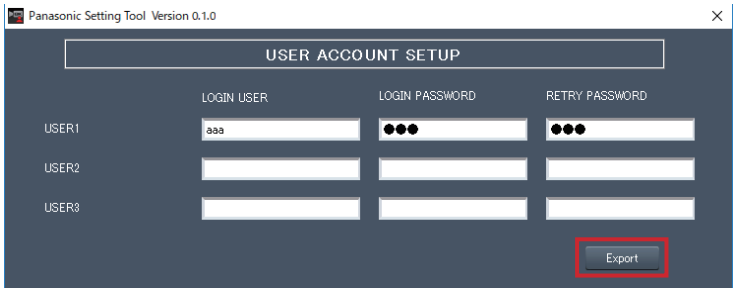


Fig. 1

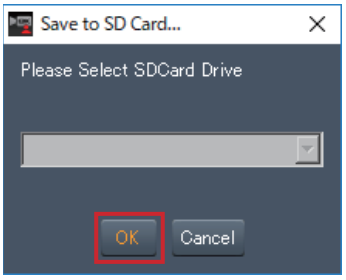


Fig. 2

1 Start User Account Setup Software.

2 Enter the account name in the LOGIN USER field and the password in the LOGIN PASSWORD and RETRY PASSWORD fields.
You can register user accounts for a maximum of 3 people. (Fig.1)

3 Click the [Export] button. (Fig.1)

4 Select the USB memory device to save to and click [OK]. (Fig.2)

Setting procedure on this unit

1 Insert the USB memory device containing the user account information into this unit.

2 Select [ACCOUNT SETTING] in the [ALL MENU] → [FILES] menu.

3 Select [LOAD].

4 Select [EXECUTE].

5 Select [YES].

Setting the network

Software

To install the software, download EasyIP Setup Tool Plus from the following website. (Windows)
https://pro-av.panasonic.net/en/

■ EasyIP Setup Tool Plus

This software is used for configuring the network settings of the camera. (page 103)

Configuring the camera using EasyIP Setup Tool Plus

Network setting of this unit can be set using EasyIP Setup Tool Plus.
To configure multiple cameras, settings must be configured for each.
Set the setting of this unit and the computer individually with [ALL MENU] → [NETWORK] when it cannot be set with EasyIP Setup Tool Plus.

NOTE

- After the network has been configured, if an IP address conflicts with another device in the same network, the camera does not operate properly. Be sure to avoid IP address conflicts.
- Do not configure the network of a single camera simultaneously from multiple computers running EasyIP Setup Tool Plus.
- EasyIP Setup Tool Plus cannot be used from a separate subnet via a router.
- Changes to the settings of this unit using the EasyIP Setup Tool Plus are performed with authentication from an account in the web screen, therefore changes are not possible if the initial account for the web screen is not yet set. (page 105)

Setting procedure

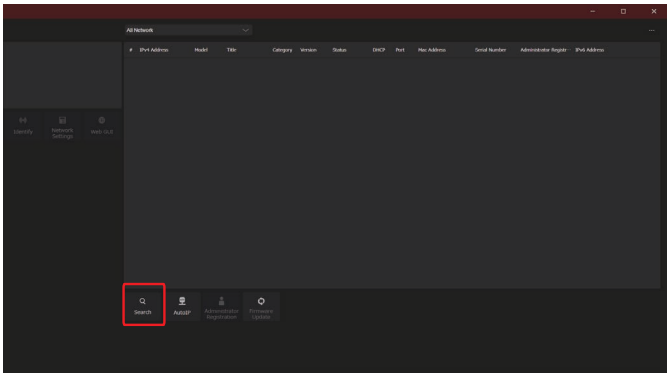


Fig. 1

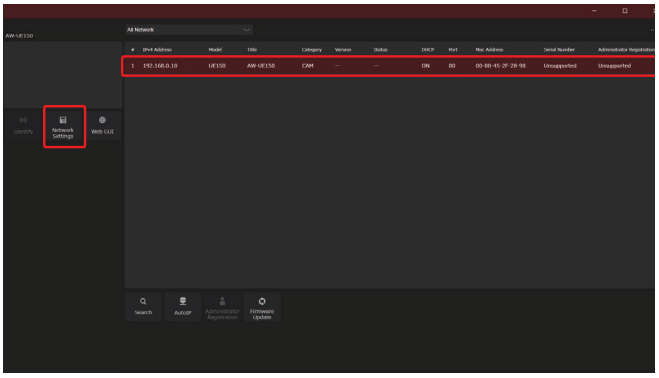


Fig. 2

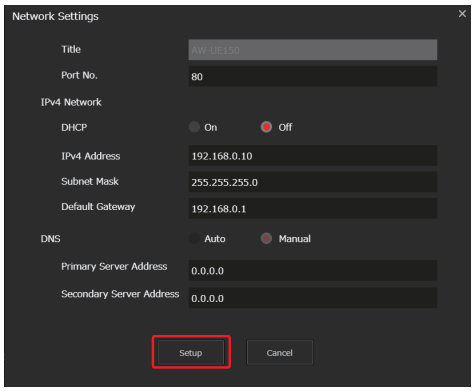


Fig. 3

Fig. 4

1 Start the EasyIP Setup Tool Plus.

2 Click the [Search] button. (Fig. 1)

- You can set the Network to be used for the search in the selection menu at the top of the screen.

3 Select the camera to configure and click the [Network Settings] button. (Fig. 2)

- The web screen for the selected camera is displayed when you click the [Web GUI] button.

4 Input the network items, and click the [Setup] button. (Fig. 3)

- Port No. settings are not supported, so do not set.

5 Enter the user name and password registered in the web screen, then click the [OK] button. (Fig. 4)

- Enter the user name and password that was set for the initial account or was set in the User management screen [Access mng.] in the web screen. (page 105, page 155)
- After the [OK] button is clicked, it takes about 2 minutes for the settings in the unit to be completed. If this unit is turned off or the LAN cable is disconnected before the settings are completed, the settings will be invalidated. In this case, repeat the steps to set the settings.

NOTE

- If a firewall (including software) is used, set access permission to all UDP ports.

Displaying the web screen

You can connect the camera to a computer to view IP images of the camera on a web browser or to configure various settings.

To connect the camera's IP control LAN terminal and a computer directly, use a crossover LAN cable.

To connect via a switching hub, etc., use a straight-through LAN cable.

Notes on the web screen

IP address and subnet mask

Set the IP address of your computer to a different one from that of the camera within the private address range, and set the subnet mask address to the same as that of the camera.

IP address and subnet mask of the camera (factory settings)

<LAN>

- IP address: 192.168.0.30
- Subnet mask: 255.255.255.0
- Private address range: 192.168.0.0 to 192.168.0.255

<SFP 1>

- IP address: 192.168.1.30
- Subnet mask: 255.255.255.0
- Private address range: 192.168.1.0 to 192.168.1.255

<SFP 2>

- IP address: 192.168.2.30
- Subnet mask: 255.255.255.0
- Private address range: 192.168.2.0 to 192.168.2.255

<USB 3.0 HOST>

- IP address: 192.168.3.30
- Subnet mask: 255.255.255.0
- Private address range: 192.168.3.0 to 192.168.3.255

Computer environment required to display the web screen

For details on the computer environment required to display the web screen, refer to "Required environment for computer" (page 13).

Some of the functions on the web setting screen are only available on computers operating on Windows. Such functions are not available for computers operating on macOS (Mac).

Functions that are only available for Windows are indicated with (Windows).

Web screen display on computer

The screen shots in this manual are based on those of Windows (Microsoft Edge). The procedures for Mac (Safari) are the same. The screen displays differ in part.

1 Start the web browser on your computer.

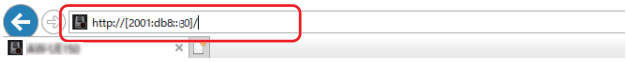
Depending on the OS on your computer, use the following web browser.

- Windows: Microsoft Edge (most recent version)
  Google Chrome
- macOS: Safari

2 Enter the IP address set on EasyIP Setup Tool Plus in the address field of the web browser.

IPv4 address entry example:
http://[URL registered with IPv4 address]
http://192.168.0.30/

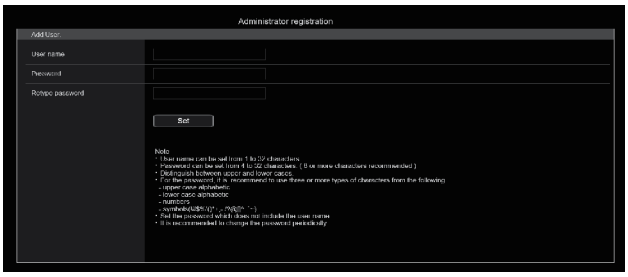
IPv6 address entry example:
http://[URL registered with IPv6 address]
http://[2001:db8::30]/



- If the HTTP port number has been changed and differs from "80", enter "http://camera's IP address:port number" in the address field.
  Example: http://192.168.0.30:8080 (when the port number is set to 8080)
- If the camera is on a local network, configure the proxy server from the web browser ([Tools] - [Internet Options] on the menu bar), so that the proxy server is not used for the local addresses.
- For details on when [HTTPS] - [Connection] (page 164) is set to [HTTPS] in the [Advanced] of the network setup screen [Network], see "Accessing the Camera by HTTPS" (page 173).

3 Set the initial account.

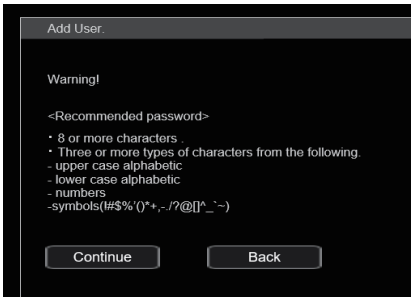
In the initial state, the initial account setting screen is displayed when the web screen is displayed.
Set a user name and password.



NOTE

- 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.

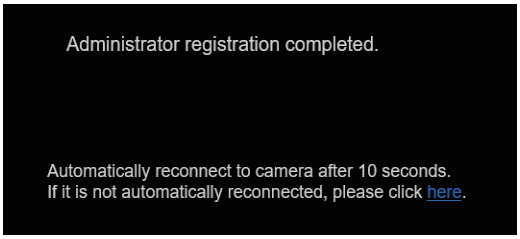
- A warning is displayed if the set password goes against the recommended setting policy. When changing the password, click the [Back] button and set the password again.
  When continuing with the setting with full understanding of the security risks, click [Continue] to complete the setting.



4 Completing registration of the initial account

After completing registration of the initial account, the following registration completed screen is displayed.
The live screen [Live] is automatically displayed after about 10 seconds elapse after the completed screen is displayed.
If the live screen [Live] is not displayed after 10 seconds elapse, manually move to the live screen [Live] by clicking the “please click here” link.

This completes the process of registering the initial account.

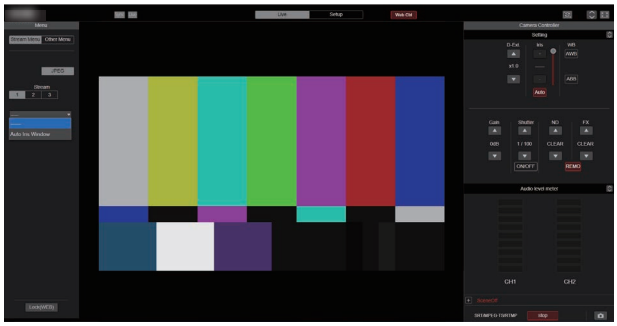


NOTE

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

5 Display the live screen [Live].

The web screen is displayed.
The initial screen is the live screen [Live]. Switch this to the web setup screen [Setup] as necessary. (page 107)



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 communications with your web browser.
- If you attempt to display multiple IP videos on a single computer, the IP images may not be displayed depending on the specifications of the computer. (Windows)
- The maximum number of users that can simultaneously access the camera is 14, including users receiving IP images.
  However, access may be restricted to less than 14 users depending on the network bandwidth used by the camera.
  When the number of users accessing the camera has exceeded the maximum of 14 users, a message indicating excessive access appears.
  When [Transmission type] of [H.264] and [H.265] is set to [Multicast port], the second and later users that receive the H.264 and H.265 images are not counted in the number of users accessing the camera.
- The refresh rate for JPEG images may decrease depending on the network environment, computer specification, subject, and the number of users accessing the camera.
- While IP video transmission (H.264/H.265/M-JPEG streaming) is being performed, there may be some delays in timing of the rendering of the OSD menu. Smooth rendering of the OSD menu becomes possible when you set [IP SIGNAL] – [STREAMING COMMON] – [CHAR] to [OFF].

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

When the live screen [Live] 

is displayed, click the [Setup] button 

at the top of the live screen [Live].

For details on the web setup screen [Setup], see “Web setup screen [Setup]” (page 112).

When the web setup screen [Setup] 

is displayed, click the [Live] button 

at the top of the web setup screen [Setup].

For details on the live screen [Live], see “Live screen [Live]” (page 108).

Logging into the Web screen

When user authentication is enabled

When displaying the live screen [Live]

You need to enter account information for a user with Camera control or Administrator privileges.

When displaying the web setup screen [Setup]

You need to enter account information for a user with Administrator privileges.

When user authentication is disabled

When displaying the live screen [Live]

It is not necessary to enter account information.

When displaying the web setup screen [Setup]

You need to enter account information for a user with Administrator privileges.

NOTE

- The account input screen is displayed in a pop up screen from your web browser.
- Correctly enter the user name and password that has already been registered.
- It is recommended that the password be changed at regular intervals.

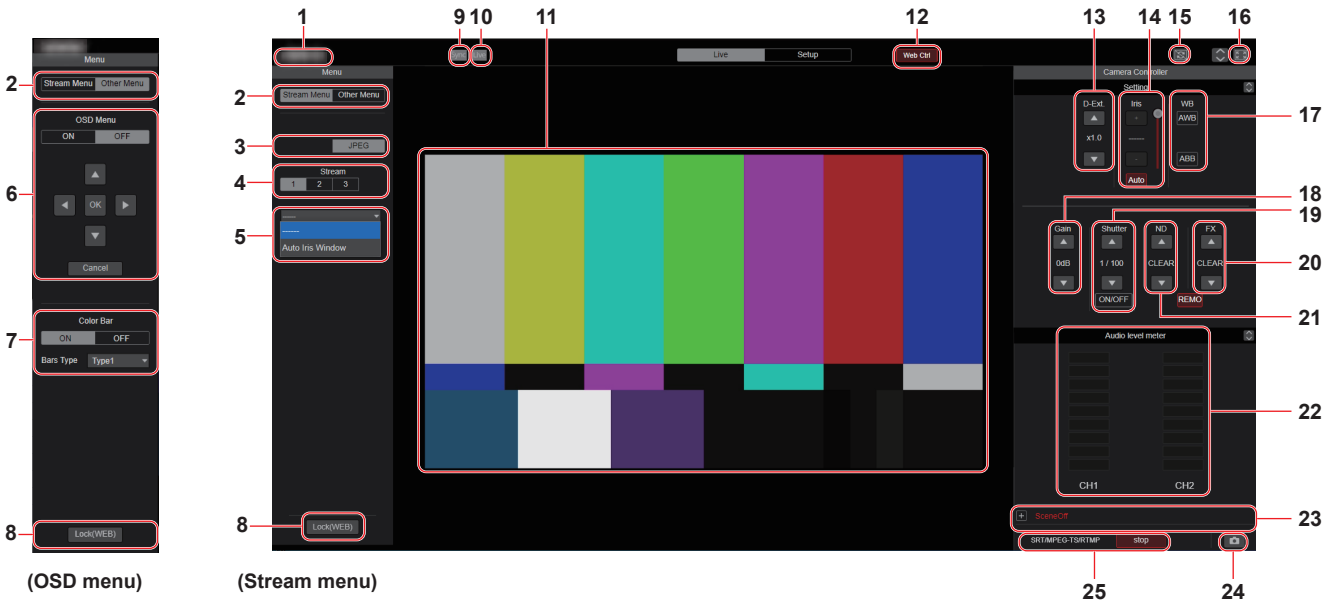
Web screen operations

Live screen [Live]

You can display images from the camera on a personal computer and perform camera operations, such as iris and shutter control.

Operation screen display buttons
Displays screen with larger operation buttons.

Expansion panel display button
(page 111)



(OSD menu) (Stream menu)

1. Camera title display area

The name for the unit configured in [Camera title] in [Live page] in the System screen [System] (page 118) appears.

2. Menu switching [Stream Menu]/[Other Menu]

Switch between menu displays.
Clicking [Other Menu] when the Stream menu is displayed displays the Other menu.
Clicking [Stream Menu] when the Other menu is displayed displays the Stream menu.

3. Compression button [Compression]

JPEG [JPEG]	JPEG images are displayed.

4. Stream buttons [Stream]

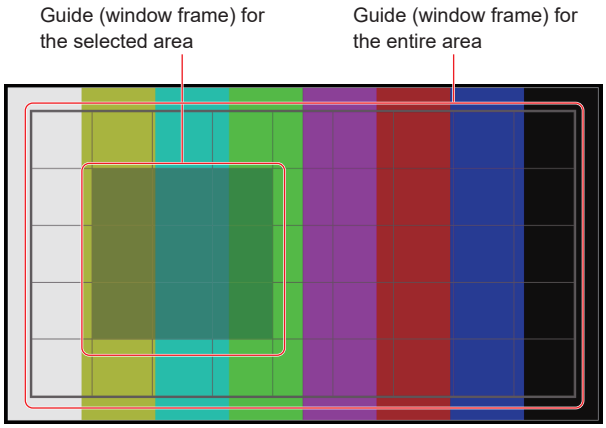
1 [1]	When selected, the button turns gray, and the images in the main area appear according to the settings configured for [JPEG(1)]. (page 122)
2 [2]	When selected, the button turns gray, and the images in the main area appear according to the settings configured for [JPEG(2)]. (page 122)
3 [3]	When selected, the button turns gray, and the images in the main area appear according to the settings configured for [JPEG(3)]. (page 122)

NOTE

- The resolution selected with [JPEG(1)], [JPEG(2)], and [JPEG(3)] (page 122) under [JPEG] in the [Video over IP] will be used.
- If the resolution is set to [1920x1080] or [1280x720], the image may be compressed depending on the size of the web browser window.
- In the following cases, the selection status of the [Image Capture Size] buttons will return to the setting configured in the [Video over IP] - [Initial display setting] - [Stream] (page 121).
  - When returning from another screen
  - When the screen is updated

5. Auto Iris Window

This is only enabled when [PAINT] – [IRIS] – [WINDOW SELECT] is set to [5].



6. OSD Menu Operation [OSD Menu]

ON OFF [ON] [OFF]	Use this to select whether the camera's on-screen displays are to be shown.
Cancel [Cancel]	It cancels the selection of the setting which is being changed. It restores the pre-change setting.
OK [▲] [▼] [◀] [▶] [OK]	Use these to perform the menu operations. 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. When the cursor is moved to any item on the bottom-level setting screen and the [OK] button is pressed, the setting of the selected item starts flashing. A setting for a regular menu item is reflected immediately if it is changed while it is still flashing. However, there are a number of menu items whose setting is reflected only after the [OK] button has been pressed, causing the setting to stop flashing and the new setting to be entered.

NOTE

- During IP video transmission (H.264/H.265/M-JPEG), there may be some delays in OSD menu operations. Smooth OSD menu operations become possible when you set [IP SIGNAL] – [STREAMING COMMON] – [CHAR] to [OFF].

7. Color bar button [Color Bar]

ON OFF [ON] [OFF]	Switch the color bar signal displayed or hide.
Bars Type SMPTE [SMPTE] [FULL] [ARIB FHD] [ARIB UHD] [ARIB 2020/HLG]	Switch the displayed color bar between TYPE1:SMPTE, TYPE2:FULL, TYPE3:ARIB(FHD), TYPE4:ARIB(UHD), and TYPE5:ARIB(2020/HLG). This is only enabled when [Color Bar] is set to [ON].

8. Operation lock button [Lock]

Lock(WEB) [Lock(WEB)]	This prevents erroneous operation by locking operations such as iris, gain, and shutter in the live screen [Live]. The button turns red while locked, and the lock is released when the button is clicked again.
Lock(CAM) [Lock(CAM)]	This is displayed when the unit is locked with the camera lock function on the ROP, and you can unlock the camera by clicking this.

NOTE

- When locked using a [Lock(WEB)] function, the status is maintained by the web browser, so the lock is released by redisplaying the web browser.
- The lock status using the [Lock(CAM)] function is maintained by the camera itself, so you need to either release the camera lock function using the ROP or release [Lock(CAM)] from the web browser while the camera is locked.
- It is not possible to enable the [Lock(CAM)] function from the web browser.

9. SYNC status indicator [Sync]

Sync	This unit uses a REF SIGNAL to synchronize with external synchronizing sources.
Sync	This unit is not synchronized with an external synchronizing source.

NOTE

- Depending on the time setting of this unit, it may take a few minutes until this unit synchronizes from when there is input from the external synchronizing source.

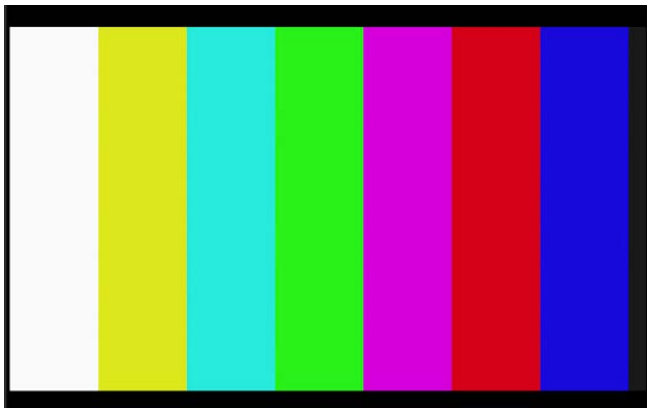
10. Streaming status indicator [Live]

Live	This unit is currently streaming over IP to an external device (software).
Live	This unit is not currently streaming over IP to an external device (software).

NOTE

- The transmission statuses of M-JPEG and ST2110 are not included.

11.Main area (IP video display area)



The IP video of the connected camera will be displayed.
When the tally lamp of the camera is on, a red and a green lines are displayed at the top of the videos. When receiving a red tally signal a red line is displayed. When receiving the green tally signal a green line is displayed. When receiving the yellow tally signal a yellow line is displayed.
When the tally lamp is off, the display area will return to normal.

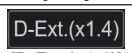
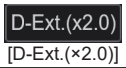
NOTE

- When the shooting scenes vary significantly, restrictions imposed by the graphics processing (GDI) of the operating system installed may give rise to a phenomenon called “screen tearing” (where parts of the picture are not displayed in synchronization) although this will depend on the personal computer used.
- The speed at which the JPEG images are refreshed may be reduced depending on the network environment, performance of the personal computer used, subjects and number of access users.
- A total of 14 users, including users receiving IP video, can access the unit simultaneously.
  However, when the IP video transmission bandwidth reaches its upper limit, access may be restricted to less than 14 users.
- When [IP(UDP)] of [Tracking Data Output] is set to [On], video transmission via IP may be delayed or the video may suffer frame loss. (page 153)
  We recommend setting [IP(UDP)] of [Tracking Data Output] to [Off] to avoid the delay or frame loss due to the video transmission via IP.
- During IP video transmission (H.264/H.265/M-JPEG), there may be some delays in OSD menu operations. Smooth OSD menu operations become possible when you set [IP SIGNAL] – [STREAMING COMMON] – [CHAR] to [OFF].

12.Web Ctrl

	Unlocks the operation lock.
	In the live screen [Live]: All operations other than with the [Live] button and [Setup] button are locked. In the web setting screen [Setup]: Operations such as [Paint] and [Lens] are locked.

13.Digital extender [D-Ext]

 [×1.0]	Use this to adjust the zoom (magnification) to x1.0.
 [D-Ext.(×1.4)]	Use this to enable or disable digital extender x1.4.
 [D-Ext.(×2.0)]	Use this to enable or disable digital extender x2.0.

14.Brightness [Iris]

 [+] [–]	[+]: Operates in stages in the direction of iris opening. It does not work during automatic adjustments. [–]: Operates in stages in the direction of iris closing. It does not work during automatic adjustments. The F value is displayed in the center.
 [Auto]	Use this to switch the iris adjustment between auto and manual. When Auto is selected, the picture brightness is adjusted automatically.

15.Button for switching real time updating

	Frame dropping in images may be observed depending on the operating performance of the personal computer running the web browser. You can improve this problem by pressing this button to disable the real time updating function. Data items subject to real time updating are as follows. - Iris - WB - Gain - Shutter - ND - FX

NOTE

- The middle-click function is disabled if the button is enabled.
- The Audio Level Meter function is disabled if the button is enabled.

16.Full-screen display button

	Display the image in full-screen mode. To return to the live screen [Live], press the [Esc] key on the personal computer while the image is displayed in full-screen mode. The aspect ratio of the displayed image will be adjusted according to the monitor size.

17.White balance [WB]

AWB [AWB]	Automatic white balance (AWB) is executed and the white balance is reset.
ABB [ABB]	Automatic black balance (ABB) is executed and the black balance is reset.

18.Gain [Gain]

▲	Increase the gain of the images.
▼	Decrease the gain of the images.

NOTE

- The current setting is displayed in the middle of the button.

19.Shutter [Shutter]

▲	Switch the shutter mode in the order [Off], [Step], [Synchro], [Auto].
▼	Switch the shutter mode in the order [Auto], [Synchro], [Step], [Off].

NOTE

- The current setting is displayed in the middle of the button.

20.FX filter [FX]

▲	Switch the FX filter in the order [CLEAR], [CLEAR(OP)], [CROSS], [DF0], [CAP].
▼	Switch the FX filter in the order [CAP], [DF0], [CROSS], [CLEAR(OP)], [CLEAR].

NOTE

- The current setting is displayed in the middle of the button.

21.ND filter [ND]

▲	Switch the transmittance of the ND filter in the order [CLEAR], [1/2 ND], [1/4 ND], [1/16 ND], [1/64 ND].
▼	Switch the transmittance of the ND filter in the order [1/64 ND], [1/16 ND], [1/4 ND], [1/2 ND], [CLEAR].

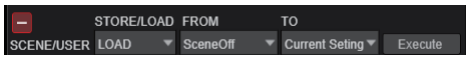
NOTE

- The current setting is displayed in the middle of the button.

22.Audio Level Meter

Displays the audio level of CH1 and CH2.

23.Scene/User [Scene/User]

 [Scene1] to [Scene8], [User1] to [User3]
Select [Scene1] to [Scene8] or [User1] to [User3] to switch the shooting mode.

+	**Expansion panel display button for Scene/User** Display the pull-down menu for switching scene/user files. The button changes to [–] while the menu is being displayed, and the menu is hidden again when you press the button again.

NOTE

- Immediately after displaying the live screen [Live], the pull-down menu for switching scene/user files is not displayed. It is displayed when the [Expansion panel display button for Scene/User] is pressed.

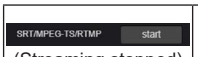
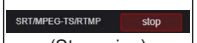
24.Snapshot button

📷	Capture a snapshot (single still image), and display it in a separate window.

NOTE

- Depending on the network environment, for example, if snapshot capture takes longer than a certain amount of time, the image may not appear.
- If [JPEG transmission(1)] - [JPEG transmission(3)] (page 122) are all set to [Off], the image captured with the snapshot button will be black.

25.SRT/MPEG2-TS/RTMP

 (Streaming stopped)  (Streaming)	Starts streaming to the transmission destination that was pre-registered. The button turns red during transmission, and transmission stops when the button is clicked again.

NOTE

- This button can be used only when [Streaming mode] is [RTMP], [SRT(H.264)], [SRT(H.264 UHD)], [SRT(H.265)], [SRT(H.265 UHD)], or [MPEG2-TS over UDP].
- When [Streaming mode] is [SRT(H.264)], [SRT(H.264 UHD)], [SRT(H.265)], or [SRT(H.265 UHD)], transmission can be started by clicking this button only when the Client(Caller) mode is set.

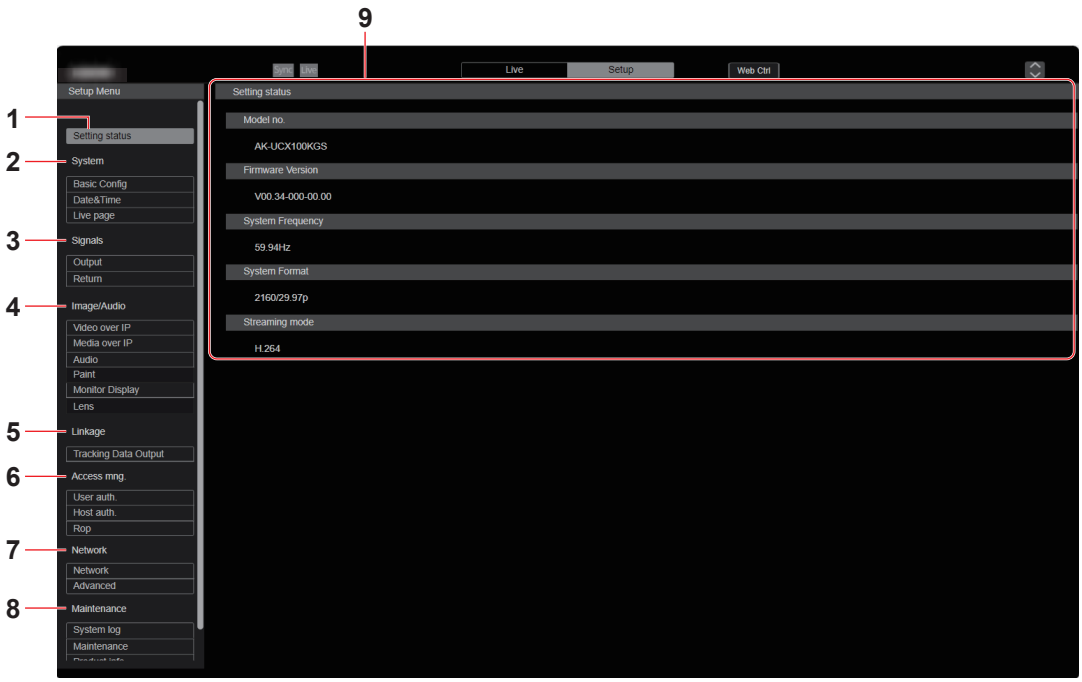
Web screen configurations

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 page 155.
- 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.



1. Setting status [Setting status]

The setting status screen [Setting status] is displayed when the button is clicked. (page 114)

2. System settings [System]

Basic setting button [Basic Config]

The basic setting screen [Basic Config] is displayed when the button is clicked. (page 114)

Date&Time button [Date&Time]

The Date & time screen [Date&Time] is displayed when the button is clicked. (page 118)

Live page button [Live page]

The live page screen [Live page] is displayed when the button is clicked. (page 118)

3. Signal settings [Signals]

Output button [Output]

The output setting screen [Output] is displayed when the button is clicked. (page 119)

Return button [Return]

The return setting screen [Return] is displayed when the button is clicked. (page 120)

4. Image screen [Image/Audio]

IP video settings button [Video over IP]

The IP video settings screen [Video over IP] is displayed when the button is clicked. (page 120)

MoIP settings button [Media over IP]

The MoIP settings screen [Media over IP] is displayed when the button is clicked. (page 130)

Audio button [Audio]

The audio setting screen [Audio] is displayed when the button is clicked. (page 136)

Paint settings button [Paint]

The paint settings screen [Paint] is displayed when the button is clicked. (page 138)

Monitor display settings button [Monitor Display]

The monitor display settings screen [Monitor Display] is displayed when the button is clicked. (page 152)

Lens button [Lens]

The Lens setting screen [Lens] is displayed when the button is clicked. (page 153)

5. Collaboration capability [Linkage]

Tracking data output setting button [Tracking Data Output]

The tracking data output setting screen [Tracking Data Output] is displayed when the button is clicked. (page 153)

6. User management settings [Access mng.]

User authentication button [User auth.]

The user authentication screen [User auth.] is displayed when the button is clicked. (page 155)

Host authentication button [Host auth.]

The host authentication screen [Host auth.] is displayed when the button is clicked. (page 156)

ROP authentication button [Rop]

The ROP authentication screen [Rop] is displayed when the button is clicked. (page 157)

7. Network settings [Network]

Network setup button [Network]

The network setup screen [Network] is displayed when the button is clicked. (page 158)

Advanced network setting button [Advanced]

The advanced network setting screen [Advanced] is displayed when the button is clicked. (page 163)

8. Maintenance [Maintenance]

System log button [System log]

The system log screen [System log] is displayed when the button is clicked. (page 176)

Maintenance button [Maintenance]

The maintenance screen [Maintenance] is displayed when the button is clicked. (page 177)

Product information button [Product Info.]

The product information screen [Product info.] is displayed when the button is clicked. (page 177)

Back up button [Backup]

The back up screen [Backup] is displayed when the button is clicked. (page 178)

9. Main area

The menu screen is displayed.

Setting status screen [Setting status]

Model no.
The model number of the unit is displayed.

Firmware Version
The firmware version of the unit is displayed.
Refer to the product information screen [Product info.] for detailed version information.

System Frequency
The frame frequency of the unit is displayed.

System Format
The video format of the unit is displayed.

Streaming mode
The streaming mode of the unit is displayed.

System screen [System]

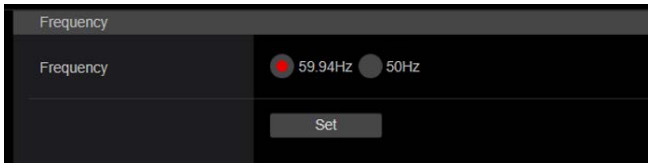
Basic setting screen [Basic Config]

■ Setting status

Frequency
The frame frequency setting is displayed.

Format
The video format setting is displayed.

■ Frequency



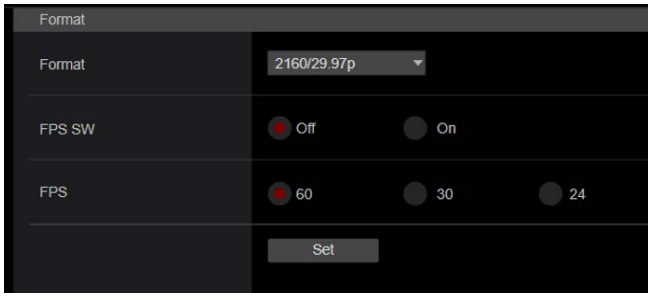
Frequency [59.94Hz, 50Hz]
This item is selected to switch the frame frequency.
The setting is confirmed with the [Set] button.
Factory settings: 59.94Hz

NOTE

- When the frame frequency is switched, the unit automatically restarts.

■ Format

The setting is confirmed with the [Set] button.



Format
For [59.94Hz]
2160/59.94p, 2160/29.97p, 2160/23.98p, 2160/120fps, 1080/59.94p, 1080/29.97p, 1080/23.98p, 1080/240fps, 1080/180fps, 1080/120fps
For [50Hz]
2160/50p, 2160/25p, 2160/100fps, 1080/50p, 1080/25p, 1080/200fps, 1080/150fps , 1080/100fps

The video format is changed on this screen.

NOTE

- Streaming stops when changing the system format.
- In order to select [H.264(UHD)], [H.265(UHD)], [JPEG(UHD)], [RTMP(UHD)], [SRT(H.264 UHD)], and [SRT(H.265 UHD)] in [Streaming mode] for [Video over IP], you need to select the 4K format here.

FPS SW [Off, On]

Enables/disables the FPS function.

Factory settings: Off

NOTE

- This can be set only when [Basic Config] – [Format] is [2160/59.94p] or [1080/59.94p].

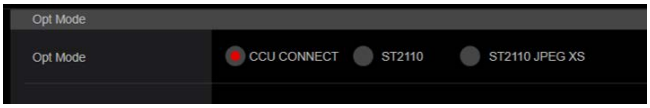
FPS [60, 30, 24]

Set the frame rate of the MOS sensor when [FPS SW] is [ON].

Factory settings: 60

■ Opt Mode

Set the operating mode for the Opt connector.



Opt Mode [CCU CONNECT, ST2110, ST2110 JPEG XS]

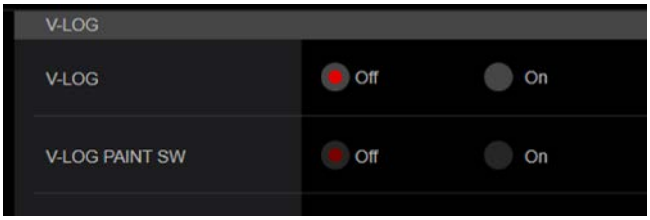
Sets the OPT mode.

Factory settings: CCU CONNECT

NOTE

- This unit automatically restarts when [Opt Mode] is changed.
- The following functions cannot be used when [ST2110 JPEG XS] is selected:
  - NDI High Bandwidth (page 129)

■ V-LOG



V-LOG [Off, On]

Set the V-LOG mode.

Off	This setting allows detailed picture quality adjustments on the camera.
On	Set a gamma curve that provides broad tones and a wide range of latitude (exposure range). Grading will be necessary after shooting.

Factory settings: Off

NOTE

- This cannot be set when the [Basic Config] – [HDR] is [On].
- Functions to adjust picture quality are limited when [Basic Config] – [V-LOG] is [On].

V-LOG PAINT SW [Off, On]

Selects whether to make it possible to make settings in the [PAINT] menu when [Basic Config] – [V-LOG] is [On].

Factory settings: Off

NOTE

- This cannot be set when the [Basic Config] – [V-LOG] is [Off].

■ HDR

HDR [On, Off]

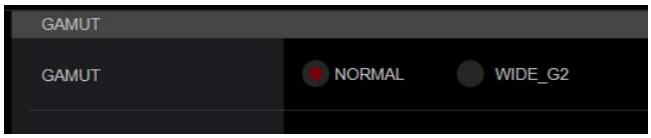
Enables/disables the HDR mode.

Factory settings: Off

NOTE

- This cannot be set when the [Basic Config] – [V-LOG] is [On].

■ GAMUT



GAMUT [NORMAL, WIDE_G2]

Sets the color gamut.

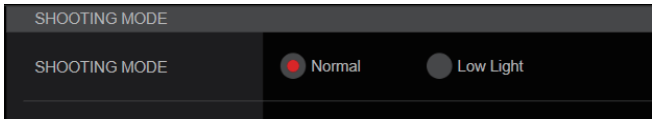
NORMAL	BT.709 equivalent color gamut.
WIDE_G2	BT.2020 equivalent color gamut.

Factory settings: WIDE_G2

NOTE

- This cannot be set when the [Basic Config] – [HDR] is [Off].

■ SHOOTING MODE



SHOOTING MODE [Normal, Low Light]

Select the shooting mode according to the shooting environment.

Normal	Select this when shooting in an environment with normal brightness.
Low Light	Select this for high sensitivity shooting. (Suited to shooting in dark environments.)

Factory settings: Normal

■ BAR

Bar [Off, On]

Off	Outputs camera images.
On	Outputs the color bar.

Factory settings: Off

Color Bar Type [TYPE1:SMPTE, TYPE2:FULL, TYPE3:ARIB(FHD), TYPE4:ARIB(UHD), TYPE5:ARIB(2020/HLG)]
Select the type of color bar to display.
Factory settings: TYPE1:SMPTE

NOTE

- When [Bar] is [On], irrespective of the HDR/GAMUT/V-LOG setting values, color bars output are all [HDR] are [Off]/[V-LOG] are [Off] color bars.
- Color bars of IP transmissions (H.264/H.265/M-JPEG) do not conform with SMPTE.
- With [TYPE4:ARIB(UHD)]/[TYPE5:ARIB(2020/HLG)], the 709 format is used for output when using a 709 setting.
- TYPE3:ARIB(FHD)/TYPE4:ARIB(UHD)/TYPE5:ARIB(2020/HLG) are not output with IP transmission modes (H.264/H.265/M-JPEG).

■ TALLY

Tally Guard [Off, On]

The following functions are suppressed during input of only the R tally signal:
- Auto white balance and auto black balance operation
- OSD menu display
- OSD status indicators

Factory settings: Off

■ SYNC SIGNAL

Make settings to synchronize video/audio output signals.

REF SIGNAL

BBS/TRI-LEVEL SYNC	Synchronization is according to the analog reference signal from the G/L connector.
PTP	Synchronization is according to the PTP from the SFP 1/SFP 2 connector.

Factory settings: BBS/TRI-LEVEL SYNC

NOTE

- When [Basic Config] – [Opt Mode] is [CCU CONNECT], [PTP] cannot be selected.
- When [IP Signal] – [ST2110] – [MoIP Mode] is [Off], [PTP] cannot be selected.

GENLOCK

This item is selected to perform the phase adjustments.

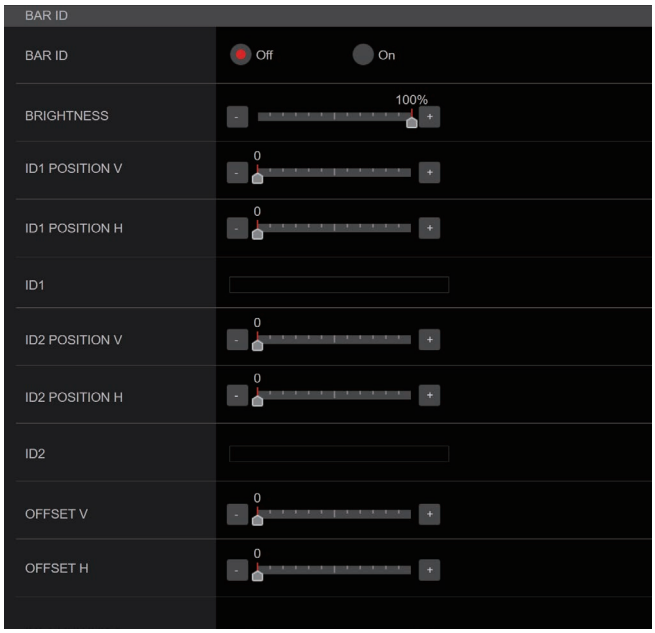
H PHASE-COARSE [–100 to 100]
This is used to adjust the horizontal phase during genlock.
Factory settings: 0

H PHASE-FINE [–100 to 100]
Make fine adjustments to horizontal phase in genlock.
Factory settings: 0

NOTE

- This cannot be set when the [Basic Config] – [Sync Signal] – [Ref Signal] is [PTP].

■ BAR ID



BAR ID [Off, On]

Select Off/On for the ID display on the color bar.
Factory settings: Off

BRIGHTNESS [0 to 100%]

Set the text color for the camera ID on the color bar.
Factory settings: 100%

ID1 POSITION V [0 to 5]

Specify the font units for the start position for display of the camera ID1 (vertically: line number) on the color bar.
Factory settings: 0

ID1 POSITION H [0 to 15]

Specify the font units for the start position for display of the camera ID1 (horizontally: column number) on the color bar.
Factory settings: 0

ID1

Set the character string for the [BAR ID].
Maximum 16 characters
(Alphanumeric characters, spaces, ! # % & ' ( ) * + , - . / : ; < = > ? [ ] _ ~ $ @ |)

ID2 POSITION V [0 to 5]

Specify the font units for the start position for display of the camera ID2 (vertically: line number) on the color bar.
Factory settings: 1

ID2 POSITION H [0 to 15]

Specify the font units for the start position for display of the camera ID2 (horizontally: column number) on the color bar.
Factory settings: 0

ID2

Set the character string for the [BAR ID].
Maximum 16 characters
(Alphanumeric characters, spaces, ! # % & ' ( ) * + , - . / : ; < = > ? [ ] _ ~ $ @ |)

OFFSET V [0 to 89]

Make fine adjustments to the display position of the [BAR ID] (offset position of the pixels in the font: vertically).
Factory settings: 0

OFFSET H [0 to 79]

Make fine adjustments to the display position of the [BAR ID] (offset position of the pixels in the font: horizontally).
Factory settings: 0

NOTE

- BAR ID is displayed only through the SDI, SMPTE ST2110, and NDI High Bandwidth outputs. It is not displayed with IP transmission (H.264/H.265/M-JPEG).

Date & time screen [Date&Time]

Make clock settings.
You can set using one of three types [PC Synchronization], [NTP], or [Manual].
The setting is confirmed with the [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.

NTP

If you click [NTP>>], the settings screen for the NTP server appears. (page 163)

Manual

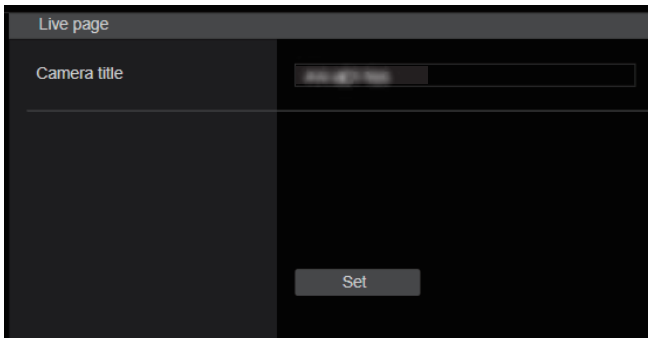
Date/Time

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.
- The clock is not set at the time of shipment. Set the clock with these items before use.

Live page screen [Live page]



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.

- 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	! #$%´()*+,-./:;<=>?@[]^_`{|}~\

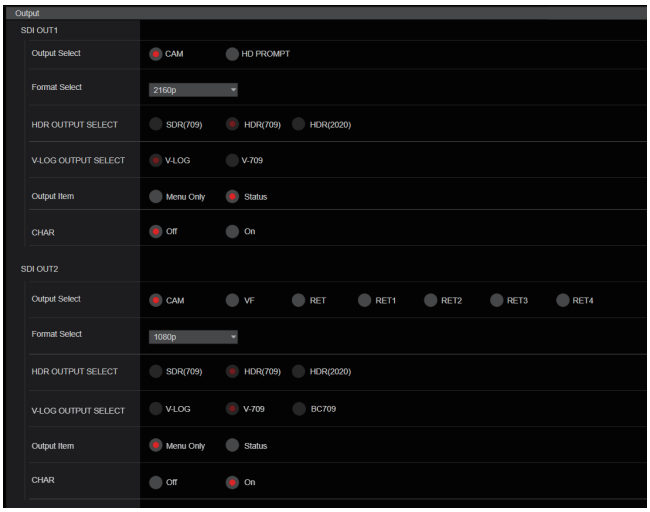
NOTE

- Camera names displayed on clients with NDI High Bandwidth are also supported.

Signal settings screen [Signals]

Output settings screen [Output]

■ Output



SDI OUT1

Make the settings for output from the <SDI OUT 1> connector.

Output Select [CAM, HD PROMPT]

CAM	Outputs camera images.
HD PROMPT	Outputs HD prompter video images.

Factory settings: CAM

Format Select [2160p, 1080p, 1080i]
Set the output format.
Factory settings: 2160p

NOTE

- [2160p] can be selected only when [Output Select] is [CAM].

HDR OUTPUT SELECT [SDR(709), HDR(709), HDR(2020)]
Select the signal output when [HDR] is [On].

SDR(709)	Selects the SDR output signal.
HDR(709)	Selects the HDR output signal (BT.709 equivalent color gamut).
HDR(2020)	Selects the HDR output signal (BT.2020 equivalent color gamut).

Factory settings: HDR(2020)

NOTE

- This cannot be set when the [Basic Config] – [HDR] is [Off].
- [HDR(2020)] can be selected only when [Basic Config] – [GAMUT] is [WIDE_G2].

V-LOG OUTPUT SELECT [V-LOG, V-709, BC709]
Select the signal output when [V-LOG] is [On].

V-LOG	Output with a gamma curve that has a wide range of tones and latitude (exposure range).
V-709	Converted for output to images suited to previewing.
BC709	Converted for output to images suited to broadcasting.

Factory settings: V-LOG

NOTE

- This cannot be set when the [Basic Config] – [V-LOG] is [Off].

Output Item [Menu Only, Status]
Select the type of OSD to be superimposed on output video.

Menu Only	Displays the OSD menu only.
Status	Displays the OSD menu and OSD status.

Factory settings: Menu Only

CHAR [Off, On]
Set whether to superimpose the OSD.
Factory settings: On

SDI OUT2

Make the settings for output from the <SDI OUT 2> connector.

Output Select [CAM, VF, RET, RET1, RET2, RET3, RET4]

CAM	Outputs camera images.
VF	Outputs viewfinder images.
RET	Outputs return images.
RET1 RET2 RET3 RET4	Outputs a fixed return video.

Factory settings: VF

Format Select [2160p, 1080p, 1080i]
Set the output format.
Factory settings: 1080i

NOTE

- [2160p] can be selected only when [OPT MODE] is [CCU CONNECT] and [Output Select] is [CAM].

HDR OUTPUT SELECT [SDR(709), HDR(709), HDR(2020)]
Select the signal output when [HDR] is [On].

SDR(709)	Selects the SDR output signal.
HDR(709)	Selects the HDR output signal (BT.709 equivalent color gamut).
HDR(2020)	Selects the HDR output signal (BT.2020 equivalent color gamut).

Factory settings: HDR(2020)

NOTE

- This cannot be set when the [Basic Config] – [HDR] is [Off].
- [HDR(2020)] can be selected only when [Basic Config] – [GAMUT] is [WIDE_G2].

V-LOG OUTPUT SELECT [V-LOG, V-709, BC709]
Select the signal output when [V-LOG] is [On].

V-LOG	Output with a gamma curve that has a wide range of tones and latitude (exposure range).
V-709	Converted for output to images suited to previewing.
BC709	Converted for output to images suited to broadcasting.

Factory settings: V-LOG

NOTE

- This cannot be set when the [Basic Config] – [V-LOG] is [Off].

Output Item [Menu Only, Status]
Select the type of OSD to be superimposed on output video.

Menu Only	Displays the OSD menu only.
Status	Displays the OSD menu and OSD status.

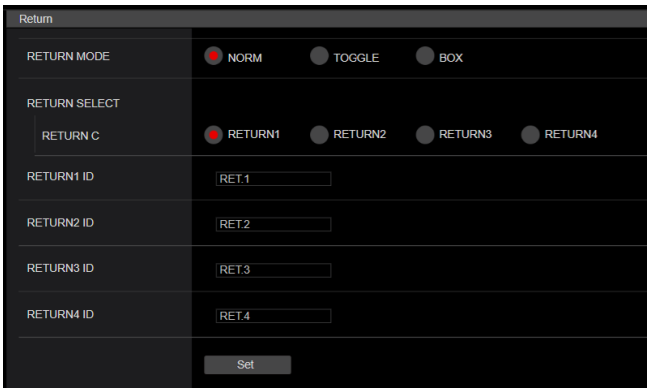
Factory settings: Menu Only

CHAR [Off, On]
Set whether to superimpose the OSD.
Factory settings: On

Return settings screen [Return]

■ Return

The setting is confirmed with the [Set] button.



RETURN MODE [NORM, TOGGLE, BOX]

Sets the operation mode of the <RET> switch.

Factory settings: NORM

RETURN SELECT

RETURN C [RETURN1, RETURN2, RETURN3, RETURN4]

Sets the function assigned to return C.

Factory settings: RETURN1

RETURN1 ID
RETURN2 ID
RETURN3 ID
RETURN4 ID

You can give a name to the return images.

It can be 5 characters.

Alphanumeric characters, spaces, ! # % & ' ( ) * + , - . / : ; < = > ? [ ] _ ~ $ @ |

Factory settings:

RETURN1 ID: RET.1
RETURN2 ID: RET.2
RETURN3 ID: RET.3
RETURN4 ID: RET.4

Image screen [Image/Audio]

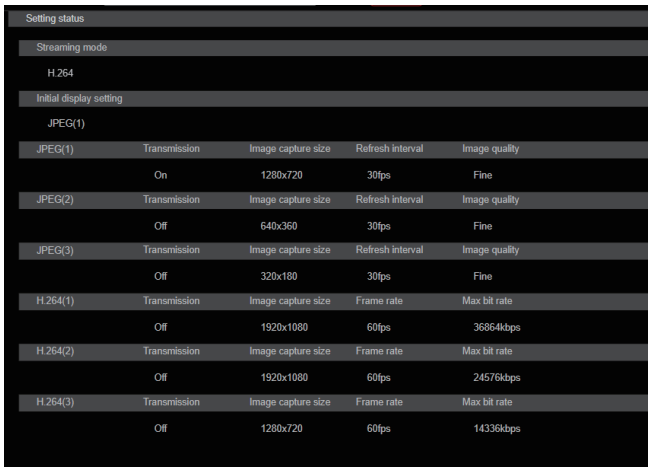
IP video settings screen [Video over IP]

The JPEG image and H.264 image settings as well as the settings related to image quality are selected on this screen.

NOTE

- IP control can be performed but if you do not want to perform IP image transmission, set [JPEG transmission], [H.264 transmission], [H.265 transmission], [RTMP transmission], [SRT transmission] and [Ts transmission] to [Off].
- During IP video transmission, disconnecting the network cable connected to this unit or changing the network settings may cause the transmission to stop.

■ Setting status



Streaming mode

The streaming mode setting is displayed.

Initial display setting

The setting for the image displayed when the live screen [Live] is open.

JPEG

The JPEG transmission settings are displayed.

H.264

The H.264 transmission settings are displayed.

These are not displayed when [Streaming mode] is [H.265], [H.265(UHD)], [SRT(H.265)] or [SRT(H.265 UHD)].

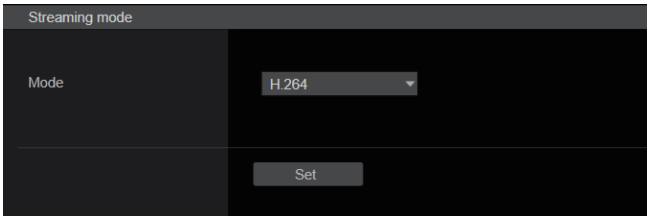
H.265

The H.265 transmission settings are displayed.

These are displayed when [Streaming mode] is [H.265], [H.265(UHD)], [SRT(H.265)] or [SRT(H.265 UHD)].

■ Streaming mode

It is possible to perform IP transmission operations suited to the application by switching the [Streaming mode] on this unit.
The setting is confirmed with the [Set] button.



Mode [H.264(UHD), H.264, H.265(UHD), H.265, JPEG(UHD), RTMP, RTMP(UHD), SRT(H.264), SRT(H.264 UHD), SRT(H.265), SRT(H.265 UHD), MPEG2-TS over UDP, NDI High Bandwidth]

H.264(UHD)	IP videos can be transmitted over multiple channels. 4K images are transmitted via IP in the H.264 format. • 4K images in H.264 format cannot be displayed in the live screen [Live] of the unit. Use external devices and software compatible with 4K images to display 4K images.
H.264	IP videos can be transmitted over multiple channels. Full HD images are transmitted via IP in the H.264 format.
H.265(UHD)	IP videos can be transmitted over multiple channels. 4K images are transmitted via IP in the H.265 format. • 4K images in H.265 format cannot be displayed in the live screen [Live] of the unit. Use external devices and software compatible with 4K images to display 4K images.
H.265	IP videos can be transmitted over multiple channels. Full HD images are transmitted via IP in the H.265 format.
JPEG(UHD)	IP videos can be transmitted over multiple channels. 4K images are transmitted via IP in the JPEG format.
RTMP	Full HD images are transmitted via IP in the H.264 format to the RTMP/RTMPS server.
RTMP(UHD)	4K images are transmitted via IP in the H.264 format to the RTMP/RTMPS server.
SRT(H.264)	Full HD images are transmitted via IP in the H.264 format to the SRT compatible decoder or service.
SRT(H.264 UHD)	4K images are transmitted via IP in the H.264 format to the SRT compatible decoder or service.
SRT(H.265)	Full HD images are transmitted via IP in the H.265 format to the SRT compatible decoder or service.
SRT(H.265 UHD)	4K images are transmitted via IP in the H.265 format to the SRT compatible decoder or service.
MPEG2-TS over UDP	IP videos can be transmitted over multiple channels. Full HD images are transmitted via IP in the H.264 format.
NDI High Bandwidth	Videos are sent to software applications and hardware compatible with NDI High Bandwidth over a network.

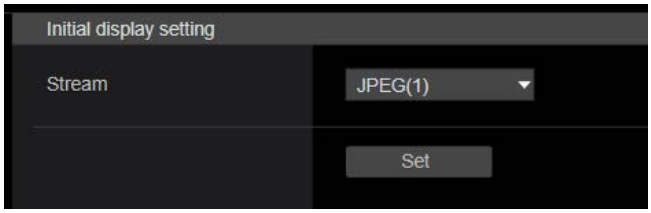
Factory settings: H.264

NOTE

- When [IP(UDP)] of [Tracking Data Output] is set to [On], video transmission via IP may be delayed or the video may suffer frame loss. (page 153)
  We recommend setting [IP(UDP)] of [Tracking Data Output] to [Off] to avoid the delay or frame loss due to the video transmission via IP.
- NDI High Bandwidth cannot be selected when [Opt Mode] is [ST2110 JPEG XS].

■ Initial display setting

Set initial display settings for the Live screen [Live].
The setting is confirmed with the [Set] button.



Stream [JPEG(1), JPEG(2), JPEG(3)]

Select the type of images to display in the Live screen [Live].

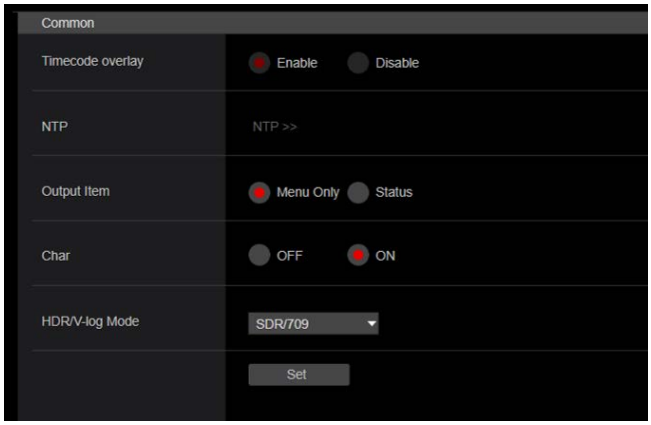
JPEG(1)	Display still images (JPEG(1)).
JPEG(2)	Display still images (JPEG(2)).
JPEG(3)	Display still images (JPEG(3)).

Factory settings: JPEG(1)

NOTE

- This setting may switch automatically according to the [Streaming mode].

■ Common



Timecode overlay [Enable, Disable]

Set whether timecode information is overlayed on IP transmission data.

Factory settings: Disable

NOTE

- This function can be set only when NTP is enabled.
- This function overlays the time information synchronized with NTP.

NTP

If you click [NTP>>], the settings screen for the NTP server appears. (page 163)

Output Item [Menu Only, Status]

Selects details of the characters superimposed on output images.

Menu Only	Displays only on the menu.
Status	Displays all characters that are the same as in the viewfinder display.

Factory settings: Menu Only

Char [OFF, ON]

Sets whether to superimpose characters on output images.

Factory settings: ON

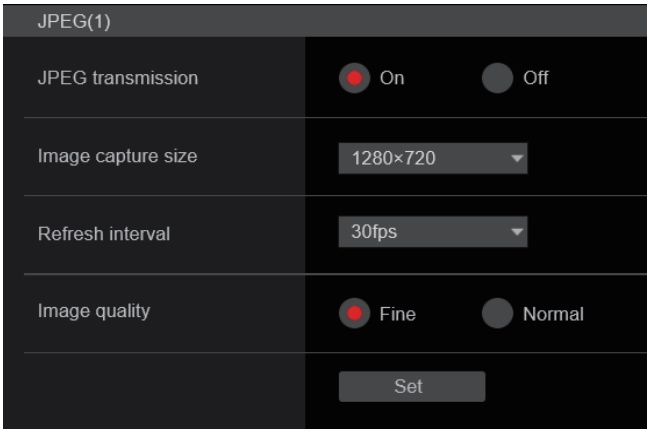
HDR/V-log Mode [V-LOG, V709, SDR/709, HDR/709, HDR/2020]

Sets the HDR/V-LOG mode.

Factory settings:
[SDR/709] when HDR is ON, [V709] when V-LOG is ON

■ JPEG

Set JPEG image settings.
The setting is confirmed with the [Set] button.
There are a total of 3 channels available for JPEG image setting.



NOTE

- [JPEG(2)] and [JPEG(3)] cannot be set when the [Streaming mode] is [JPEG(UHD)] or [NDI High Bandwidth].

JPEG transmission [On, Off]

Set whether to transmit JPEG images.
Factory settings: On

Image capture size [3840×2160, 1920×1080, 1280×720, 640×360, 320×180]

When displaying JPEG images, select the resolution for image display from the following.

JPEG(1)	3840×2160, 1920×1080, 1280×720, 640×360, 320×180
JPEG(2)	640×360, 320×180
JPEG(3)	640×360, 320×180

Factory settings:
JPEG(1): 1280×720
JPEG(2): 640×360
JPEG(3): 320×180

NOTE

- [3840 x 2160] can be selected when the [Streaming mode] is [JPEG(UHD)].

Refresh interval [1fps, 4fps, 5fps, 12fps, 12.5fps, 15fps, 24fps, 25fps, 30fps]

Select the frame rate for JPEG images.

59.94Hz	1fps/5fps/15fps/30fps
50Hz	1fps/5fps/12.5fps/25fps
23.98Hz	1fps/4fps/12fps/24fps

Factory settings:
For 59.94Hz:
JPEG(1): 30fps
JPEG(2): 5fps
JPEG(3): 30fps
For 50Hz:
JPEG(1): 25fps
JPEG(2): 5fps
JPEG(3): 25fps
For 23.98Hz:
JPEG(1): 24fps
JPEG(2): 4fps
JPEG(3): 24fps

NOTE

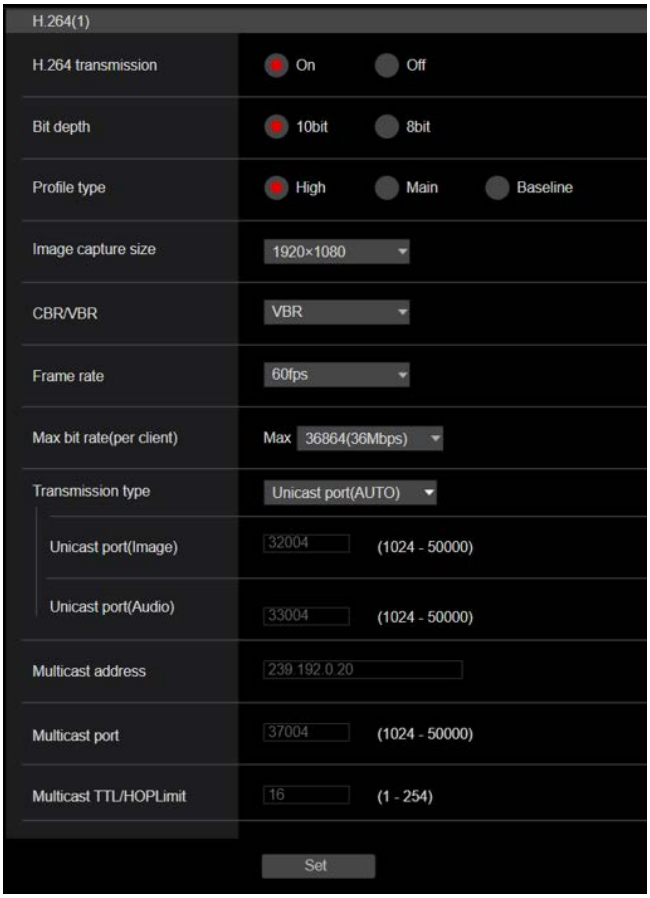
- The frame rate may be slower depending on the network environment, resolution, image quality, access volume, etc.
- If images are not transmitted at the specified frame rate, lowering the resolution or image quality may result in transmissions closer to the specified value.

Image quality [Fine, Normal]

Specify the JPEG image quality for each resolution.
Factory settings: Fine

■ H.264

Set H.264 image settings.
The setting is confirmed with the [Set] button.



NOTE

- Only [H.264(1)] can be set when the [Streaming mode] is [H.264(UHD)].
- H.264 cannot be set when the [Streaming mode] is [H.265(UHD)], [H.265], [SRT(H.265)], [SRT(H.265 UHD)] or [NDI High Bandwidth].
- When starting RTSP/RTP transmissions, set the following URLs for the decoders and applications.
  - For H.264(1):
    rtsp://[unit's IP address]/MediaInput/h264/stream_1
  - For H.264(2):
    rtsp://[unit's IP address]/MediaInput/h264/stream_2
  - For H.264(3):
    rtsp://[unit's IP address]/MediaInput/h264/stream_3

  [/MediaInput/h264/stream_*] can be changed in [RTSP] of [Advanced]. (page 165)

H.264 transmission [On, Off]

Whether to transmit the H.264 images is set here.
Factory settings: On

Bit depth [10bit, 8bit]

Sets the bit count for H.264 images.
Factory settings: 10bit

Profile type [High, Main, Baseline]

Set the profile for when H.264 images are transmitted.
Factory settings: High

NOTE

- Only [High] can be selected when [Bit depth] is [10bit] or [Image capture size] is [3840 x 2160].

Image capture size [3840×2160, 1920×1080, 1280×720, 640×360]

Select the resolution for H.264 images.
Selectable options will vary depending on the selected resolution setting.

H.264(1)	3840×2160, 1920×1080, 1280×720
H.264(2)	1920×1080, 1280×720, 640×360
H.264(3)	1280×720, 640×360

Factory settings:
H.264(1): 1920×1080
H.264(2): 1280×720
H.264(3): 640×360

NOTE

- [3840×2160] can be selected when the [Streaming mode] is [H.264(UHD)].

CBR/VBR [CBR, VBR]

Set the transmission mode for H.264 images.

CBR	Transmit with the bit rate set for H.264 images.
VBR	Transmit with the bit rate set for H.264 images and also vary the bit rate according to the images to be recorded.

Factory settings: VBR

Frame rate [24fps, 25fps, 30fps, 50fps, 60fps]

Set the frame rate for H.264 images.

59.94Hz	30fps/60fps
50Hz	25fps/50fps
23.98Hz	24fps

Factory settings:
For 59.94Hz: 30fps
For 50Hz: 25fps
For 23.98Hz: 24fps

NOTE

- [60fps(50fps)] cannot be selected when the video format is [29.97p(25p)].

Max bit rate(per client)
[2048kbps, 4096kbps, 8192kbps, 10240kbps, 12800kbps, 14336kbps, 20480kbps, 24576kbps, 25600kbps, 51200kbps, 76800kbps]

Specify the H.264 bit rate per client.

Factory settings:
H.264(1): 14336kbps
H.264(2): 8192kbps
H.264(3): 4096kbps

NOTE

- The setting range depends on the resolution.

Transmission type [Unicast port(AUTO), Unicast port(MANUAL), Multicast]

Select the transmission format for H.264 images.

Unicast port(AUTO)	Up to 14 users can access a single camera at the same time. [Unicast port(Image)] and [Unicast port(Audio)] will be configured automatically when images and audio are sent from the camera. We recommend selecting the [Unicast port(AUTO)] setting when the port number transmitting the H.264 images does not need to be fixed (e.g., during use within a network).
Unicast port(MANUAL)	Up to 14 users can access a single camera at the same time. [Unicast port(Image)] and [Unicast port(Audio)] must be configured manually when images and audio are sent from the camera. When transmitting H.264 images via the Internet, configure a fixed transmission port for the broadband router (hereafter referred to as “router”) (page 158). For details, refer to the operating instructions for the router.
Multicast	An unlimited number of users can access a single camera at the same time. When transmitting H.264 images via multicast, enter the [Multicast address], [Multicast port], and [Multicast TTL/HOPLimit].

Factory settings: Unicast port(AUTO)

NOTE

- For details on the maximum number for simultaneous access, see “***NOTE***” (page 106).

Unicast port(Image) [1024 to 50000]

Enter the unicast port number (used when sending images from the unit).
Only even numbers can be specified.
The port number cannot be set to 10670.

Factory settings:
H.264(1): 32004
H.264(2): 32014
H.264(3): 32024

Unicast port(Audio) [1024 to 50000]

Only even numbers can be specified.
The port number cannot be set to 10670.

Factory settings:
H.264(1): 33004
H.264(2): 33014
H.264(3): 33024

NOTE

- If [Unicast port(MANUAL)] is selected as the [Transmission type], the unicast port number needs to be set.

Multicast address
[IPv4: 224.0.0.0 to 239.255.255.255
IPv6: Multicast address starting with FF]

Enter the multicast IP address.
Images and audio will be sent to the specified IP address.

Factory settings:
H.264(1): 239.192.0.20
H.264(2): 239.192.0.21
H.264(3): 239.192.0.22

NOTE

- Verify usable multicast IP addresses before entering this setting.
- This setting does not work with the multicast address for link local scope.

Multicast port [1024 to 50000]

Enter the multicast port number (used when sending images from the unit).
Only even numbers can be specified.
The port number cannot be set to 10670.

Factory settings: 37004

NOTE

- When sending audio from the unit, a port number with “1000” added to the multicast port number will be used.

Multicast TTL/HOPLimit [1 to 254]

Enter the TTL/HOPLimit value for multicast.

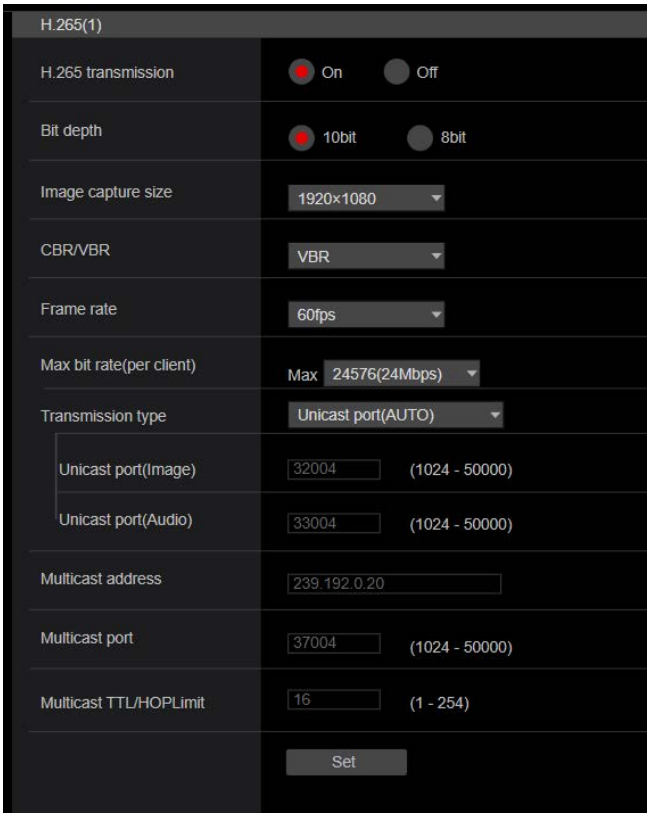
Factory settings: 16

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.

■ H.265

Set H.265 image settings.
The setting is confirmed with the [Set] button.



NOTE

- Use external devices and software compatible with H.265 images to display H.265 images.
- When starting RTSP/RTP transmissions, set the following URLs for the decoders and applications.
  - For H.265(1):
    rtsp://[unit's IP address]/MediaInput/h265/stream_1
  - For H.265(2)
    rtsp://[unit's IP address]/MediaInput/h265/stream_2

  [/MediaInput/h265/stream_*] can be changed in [RTSP] of [Advanced]. (page 165)

H.265 transmission [On, Off]

Whether to transmit the H.265 images is set here.
Factory settings: On

Bit depth [10bit, 8bit]

Sets the bit count for H.265 images.
Factory settings: 10bit

Image capture size [3840×2160, 1920×1080, 1270×720, 640×360]

Select the resolution for H.265 images.
Selectable options will vary depending on the selected resolution setting.

H.265(1)	3840×2160, 1920×1080, 1270×720
H.265(2)	1920×1080, 1270×720, 640×360

Factory settings:
H.265(1): 1920×1080
H.265(2): 1280×720

NOTE

- [3840×2160] can be selected when the [Streaming mode] is [H.265(UHD)].

CBR/VBR [CBR, VBR]

Set the transmission mode for H.265 images.

CBR	Transmit with the bit rate set for H.265 images.
VBR	Transmit with the bit rate set for H.265 images and also vary the bit rate according to the images to be recorded.

Factory settings: VBR

Frame rate [24fps, 25fps, 30fps, 50fps, 60fps]

Set the frame rate for H.265 images.

59.94Hz	30fps, 60fps
50Hz	25fps, 50fps
23.98Hz	24fps

Factory settings:
For 59.94Hz: 30fps
For 50Hz: 25fps
For 23.98Hz: 24fps

NOTE

- [60fps(50fps)] cannot be selected when the video format is [29.97p(25p)].

Max bit rate(per client) [2048kbps, 4096kbps, 8192kbps, 10240kbps, 12800kbps, 14336kbps, 20480kbps, 24576kbps, 25600kbps, 51200kbps, 76800kbps]

Specify the H.265 bit rate per client.
Factory settings:
H.265(1): 14336kbps
H.265(2): 8192kbps

Transmission type

The same as [H.264] [Transmission type] (page 124).

Unicast port(Image)	The same as [H.264] [Unicast port(Image)] (page 124).
Unicast port(Audio)	The same as [H.264] [Unicast port(Audio)] (page 124).

Multicast address

The same as [H.264] [Multicast address] (page 124).

Multicast port

The same as [H.264] [Multicast port] (page 124).

Multicast TTL/HOPLimit

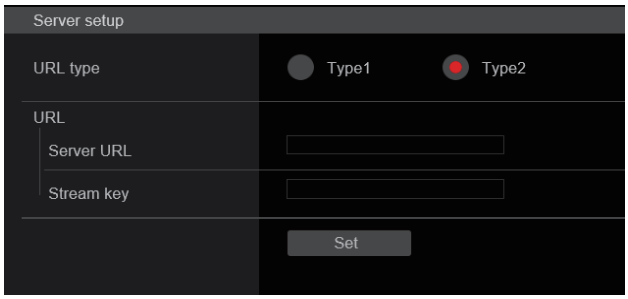
The same as [H.264] [Multicast TTL/HOPLimit] (page 124).

■ RTMP

Make RTMP/RTMPS transmission settings.

Server setup

The setting is confirmed with the [Set] button.



NOTE

- Switch to the appropriate method of registering RTMP/RTMPS transmission server information suited to the setting information notified from the RTMP/RTMPS transmission server you are using.
- The Stream Key setting field is displayed only when [Type2] is set.
- When performing RTMP transmissions, set the Server URL and Stream key acquired from the external application, and then click the [start] button for [SRT/MPEG2-TS/RTMP] in the live screen [Live].
- When performing RTMP transmissions, enable connection with the network in the [Network] screen.

URL type [Type1, Type2]

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

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

URL

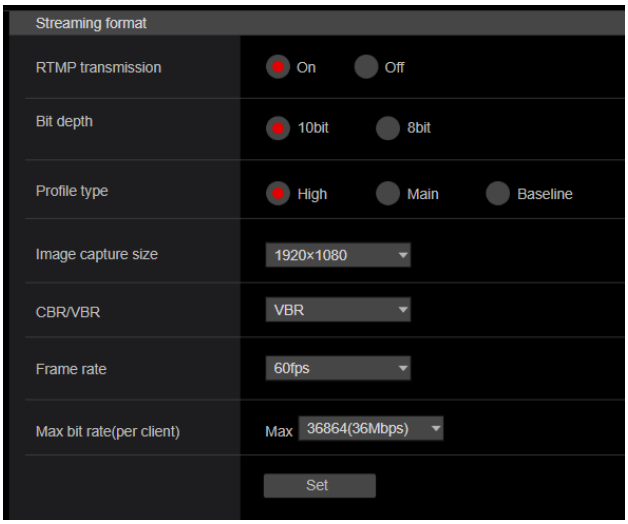
Server URL	Set the URL for the RTMP/RTMPS server to be transmitted to.
Stream key	The stream key obtained from the RTMP/RTMPS server is set during streaming only when the service is set to [Type2].

Streaming format

Make settings for H.264 images for use in RTMP/RTMPS transmission.

The setting is confirmed with the [Set] button.

Refer to the explanation for [H.264] (page 123) for information about [Profile type], [Image capture size], [CBR/VBR], [Frame rate], and [Max bit rate(per client)].



NOTE

- [Streaming format] settings cannot be changed during RTMP/RTMPS transmissions.
- Set the [Streaming format] to the settings recommended for the transmission destination server. Visit the publisher's website or contact them about the recommended values.
- When [IP(UDP)] of [Tracking Data Output] is set to [On], video transmission via IP may be delayed or the video may suffer frame loss. (page 153)
  We recommend [IP(UDP)] of [Tracking Data Output] is set to [Off] during RTMP/RTMPS transmission.

■ SRT

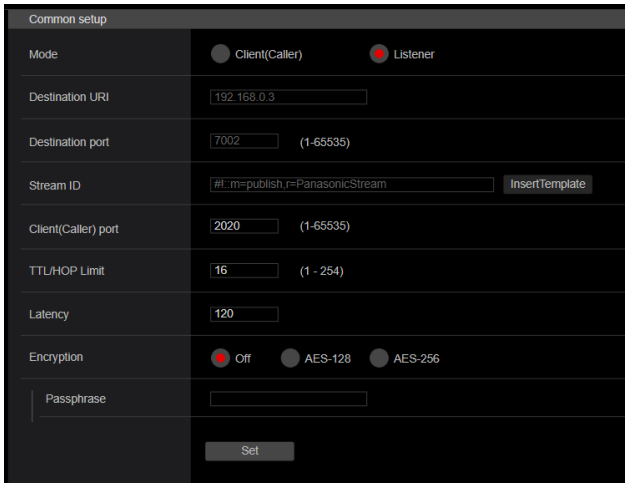
Make SRT transmission settings.

NOTE

- When starting SRT transmissions in the [Listener] mode, set the decoder and application to [Client(Caller)] mode and set the following URL:
  srt://[unit's IP address]:[value set in Client(Caller) port]
- When performing SRT transmissions in the [Client(Caller)] mode, set the IP address and port number of the decoder and application to [Destination URI] and [Destination port], and then click the [start] button for [SRT/MPEG2-TS/RTMP] in the live screen [Live].

Common setup

The setting is confirmed with the [Set] button.



Mode [Client(Caller), Listener]

Selects the method to connect to the SRT compatible decoder or service.

Client(Caller)	Specify the transmission destination IP address and port number when starting transmission from this unit.
Listener	Specify the listener port when awaiting the external request to start transmission.

Factory settings: Listener

Destination URI

When [Client(Caller)] is set in [Mode], enter the IP address.
Images and audio will be sent to the specified IP address.
Factory settings: 192.168.0.3

NOTE

- Only IPv4 can be set as the IP address.

Destination port [1 to 65535]

When [Client(Caller)] is set in [Mode], enter the port number (used when transmitting images from this unit).
Connection is to the specified port number.
Factory settings: 7002

Stream ID

When [Client(Caller)] is set in [Mode], enter the Stream ID.
The information entered is notified to the connection destination when SRT transmission is started.
If the [InsertTemplate] button is clicked, the following template is inserted in the input fields.
#!::m=publish,r=PanasonicStream

- The following characters can be displayed.

Numeric characters	0123456789
Alphabetical characters (upper and lower cases)	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz
Symbols	!"#$%'()=-~^|\`@[]{}*:+;<>,.?/_

Factory settings: #!::m=publish,r=PanasonicStream

Client(Caller) port [1 to 65535]

When [Listener] is set in [Mode], enter the port number (used when this unit is waiting for a connection).
The following port numbers are used by the unit so they cannot be used.
20, 21, 23, 25, 42, 53, 67, 68, 69, 80, 110, 123, 161, 162, 443, 546, 547, 554, 995, 5960 to 5985, 7960 to 8060, 10669, 10670, 11900, 59000 to 61000
Factory settings: 2020

TTL/HOP Limit

The same as [H.264] [Multicast TTL/HOPLimit] (page 124).
Factory settings: 254

Latency

Sets the time between when images and audio are sent and when they are played on the receiving device in a range between 0 and 65535 (ms).
Factory settings: 120

NOTE

- In some cases, the set time is not guaranteed depending on the network band.

Encryption [Off, AES-128, AES-256]

Sets whether to encrypt the transmitted IP image. (10 to 24 characters)

Off	Transmits unencrypted IP images.
AES-128	Encrypts IP images in AES-128 before transmitting.
AES-256	Encrypts IP images in AES-256 before transmitting.

Factory settings: Off

- The following characters can be displayed.

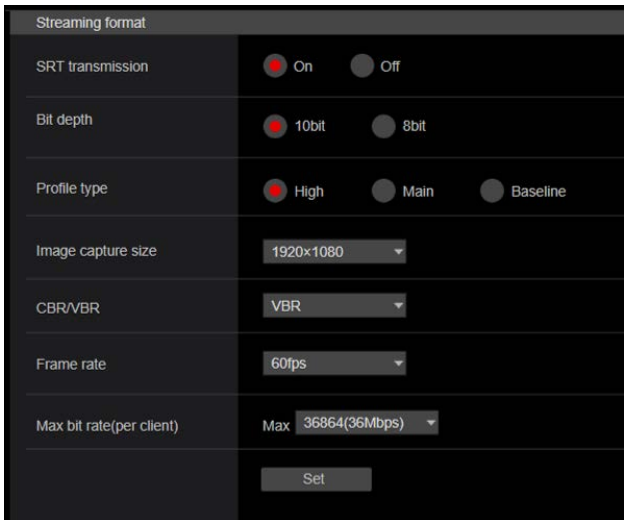
Numeric characters	0123456789
Alphabetical characters (upper and lower cases)	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz
Symbols	!"#$%'()=-~^|\`@[]{}*:+;<>,.?/_

Passphrase

Sets the phrase used for decoding the encrypted IP images.

Streaming format

Makes settings for H.264 or H.265 images for use in SRT transmission.
The setting is confirmed with the [Set] button.
Refer to the explanation for [H.264] (page 123) or [H.265] (page 125) for information about [Profile type], [Image capture size], [CBR/VBR], [Frame rate] and [Max bit rate(per client)].



NOTE

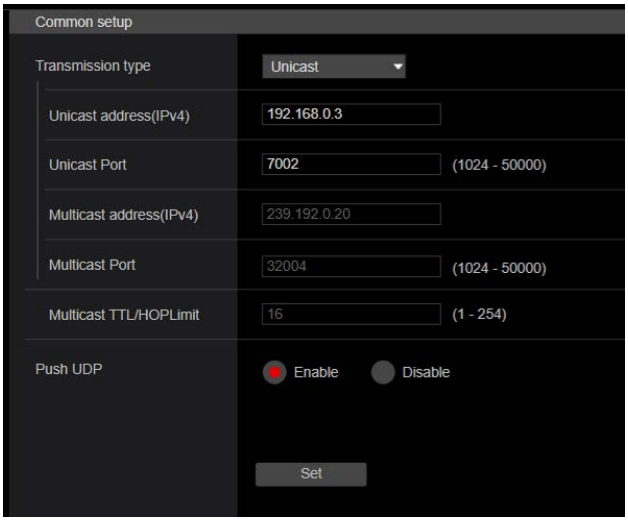
- [Streaming format] settings cannot be changed during SRT transmissions.
- When [IP(UDP)] of [Tracking Data Output] is set to [On], video transmission via IP may be delayed or the video may suffer frame loss. (page 153)
  We recommend [IP(UDP)] of [Tracking Data Output] is set to [Off] during SRT transmission.
- When the frame frequency is 23.98Hz, you cannot set to the SRT(H.264), SRT(H.264 UHD), SRT(H.265), or SRT(H.265 UHD) mode.

■ MPEG2-TS over UDP

Make settings for MPEG2-TS over UDP transmission.

NOTE

- In order to receive the images being transmitted by the camera, enter the following URL in the application or service.
  - For Unicast
    udp://@[unicast ipaddress]:[unicast port]
  - For Multicast
    udp://@[multicast ipaddress]:[multicast port]



Transmission type [Unicast, Multicast]
Sets the transmission type for MPEG2-TS over UDP transmission as either [Unicast] or [Multicast].
Factory settings: Unicast

Unicast address(IPv4)
Sets the Unicast address used for MPEG2-TS over UDP transmission.
Specify this IP address on the receiving application or service.
Factory settings: 192.168.0.3

Unicast Port [1024 to 50000]
Sets the Unicast port number used for MPEG2-TS over UDP transmission.
Specify this port number on the receiving application or service.
Factory settings: 7002

Multicast address(IPv4)
Sets the Multicast address used for MPEG2-TS over UDP transmission.
Specify this IP address on the receiving application or service.
Factory settings: 239.192.0.20

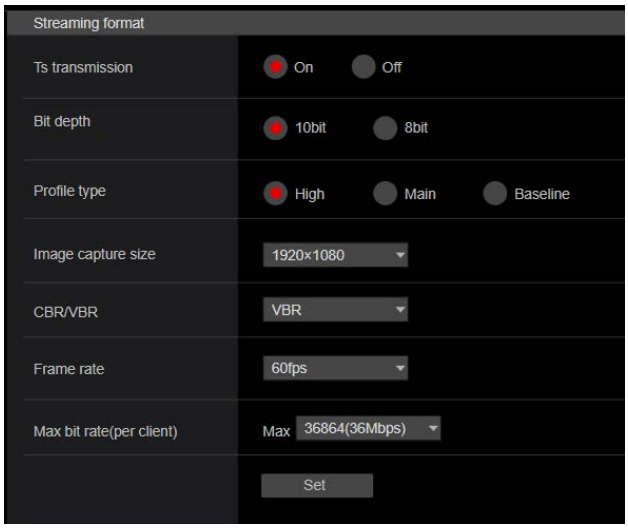
Multicast Port [1024 to 50000]
Sets the Multicast port number used for MPEG2-TS over UDP transmission.
Specify this port number on the receiving application or service.
Factory settings: 32004

Multicast TTL/HOPLimit
The same as [H.264] [Multicast TTL/HOPLimit] (page 124).

Push UDP [Enable, Disable]
When [Push UDP] has been set to [Enable], MPEG2-TS over UDP transmission starts automatically when the camera is started.
Factory settings: Enable

Streaming format

Make settings for H.264 images used for MPEG2-TS over UDP transmission.
The setting is confirmed with the [Set] button.
Refer to the explanation of [H.264] (page 123) for information about [Profile type], [Image capture size], [CBR/VBR], [Frame rate], and [Max bit rate(per client)].



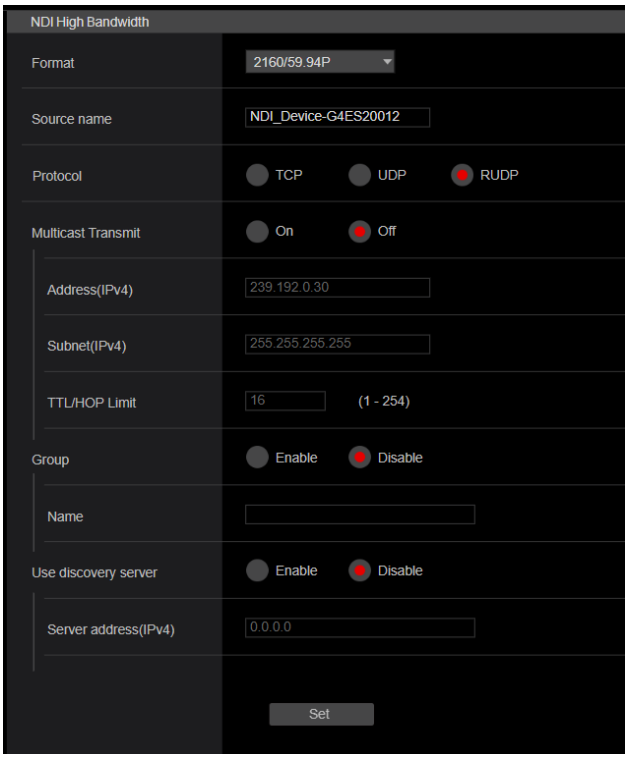
NOTE

- [Streaming format] settings cannot be changed during MPEG2-TS over UDP transmissions.
- When [IP(UDP)] of [Tracking Data Output] is set to [On], video transmission via IP may be delayed or the video may suffer frame loss. (page 153)
  We recommend [IP(UDP)] of [Tracking Data Output] is set to [Off] during MPEG2-TS over UDP transmission.

■ NDI High Bandwidth

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

NDI High Bandwidth



Format

Displays the resolution of NDI images.

Source name

Set the image source name displayed when this unit is detected by software applications and hardware compatible with NDI.
Factory settings: NDI Device [serial number of this unit]

Protocol [TCP, UDP, RUDP]

Sets the format of unicast transmission to be used.
Factory settings: RUDP

Multicast Transmit [On, Off]

Sets whether to perform multicast transmission of images for the software applications and hardware compatible with NDI.
Factory settings: Off

Address(IPv4)
[IPv4 : 224.0.0.0 to 239.255.255.255]

Enter the multicast IP address.
Images and audio will be sent to the specified IP address.
Factory settings: 239.192.0.30

NOTE

- Verify usable multicast IP addresses before entering this setting.

Subnet(IPv4)
Enter the subnet mask.
Factory settings: 255.255.255.255

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 addresses are allocated randomly in the range between [239.255.0.0] and [239.255.255.252].

TTL/HOP Limit
The same as [H.264] [Multicast TTL/HOPLimit] (page 124).

Group [Enable, Disable]
Sets whether to use the grouping function when performing NDI transmission.

Factory settings: Disable

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

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

Server address(IPv4)
Sets the IPv4 address of the server when using the discovery server.

NOTE

- NDI High Bandwidth cannot be selected when [Opt Mode] is [ST2110 JPEG XS].

MoIP settings screen [Media over IP]

Make settings related to MoIP (SMPTE ST2110/ST2110 JPEG XS/ NMOS/PTP).

■ Setting status

ST2110
Displays the Off/On status of the SMPTE ST2110 function, the Off/ On status of JPEG XS, and the port number used for SMPTE ST2110 transmissions.

Main video TX
Displays the transmission settings for [Main video TX] (uncompressed).
Displayed only when the JPEG XS is Off.

Main Jpeg XS video TX
Displays the transmission settings for [Main Jpeg XS video TX] (compressed).
Displayed only when the JPEG XS is On.

Sub video TX
Displays the transmission settings for [Sub video TX] (uncompressed).

TRUNK video TX
Display the transmission settings for [TRUNK video TX].

Mic1 audio TX
Display the transmission settings for [Mic1 audio TX].

Mic2 audio TX
Display the transmission settings for [Mic2 audio TX].

Mix audio TX
Display the transmission settings for [Mix audio TX].

TRUNK audio TX
Display the transmission settings for [TRUNK audio TX].

Incom1 audio TX (ENG)
Display the transmission settings for [Incom1 audio TX (ENG)].

Incom2 audio TX (PROD)
Display the transmission settings for [Incom2 audio TX (PROD)].

Return1 video RX
Displays the transmission settings for [Return1 video RX] (uncompressed).
Displayed only when the JPEG XS is Off.

Return2 video RX
Displays the transmission settings for [Return2 video RX] (uncompressed).
Displayed only when the JPEG XS is Off.

Return3 video RX
Displays the transmission settings for [Return3 video RX] (uncompressed).
Displayed only when the JPEG XS is Off.

Return4 video RX
Displays the transmission settings for [Return4 video RX] (uncompressed).
Displayed only when the JPEG XS is Off.

PROMPTER video RX
Display the transmission settings for [PROMPTER video RX].

PGM1 audio RX
Display the transmission settings for [PGM1 audio RX].

PGM2 audio RX
Display the transmission settings for [PGM2 audio RX].

PROMPTER audio RX
Display the transmission settings for [PROMPTER audio RX].

Incom1 audio RX (ENG)
Display the transmission settings for [Incom1 audio RX (ENG)].

Incom2 audio RX (PROD)
Display the transmission settings for [Incom2 audio RX (PROD)].

PTP
Display the [PTP] settings.

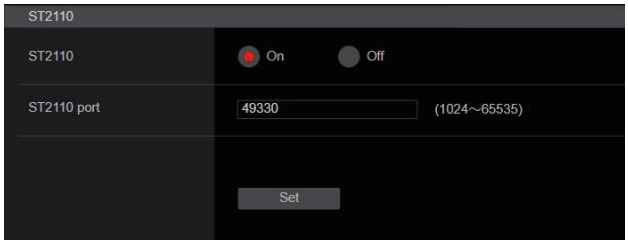
NMOS
Display the [NMOS] settings.

NMOS Master Enable
Display the [NMOS Master Enable] settings.
This setting can be switched from an NMOS controller that is on the same network as the camera. It is a setting to enable/disable SMPTE ST2110 transmitting and receiving.

NOTE

- The camera starts with this setting [On] when it is started. The setting value cannot be saved.

■ ST2110
SMPTE ST2110 can be transmitted and received from <SFP 1> and <SFP 2> terminal with this unit.
The setting is confirmed with the [Set] button.



ST2110 [On, Off]
Set On/Off for SMPTE ST2110 transmitting and receiving.
Factory settings: Off

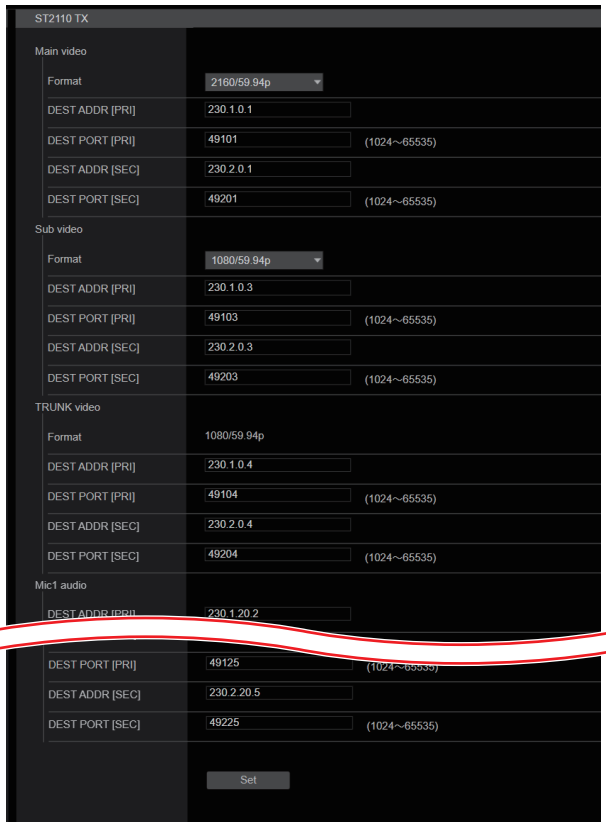
ST2110 port [1024 to 65535]
Enter the port number for SMPTE ST2110 (used when transmitting SMPTE ST2110 from this unit).
10670 cannot be set as a port number.
Factory settings: 49330

■ ST2110 TX

Make SMPTE ST2110 (uncompressed) transmission settings.
The setting is confirmed with the [Set] button.

NOTE

- This menu is not displayed when [ST2110] is [Off].



Main video
Sub video
TRUNK video

NOTE

- This is not output when [ST2110] is [Off].
- Camera images without overlays such as OSD menus are output from [Main video].
- [Main video] is not output when [Opt Mode] is [ST2110 JPEG XS].
- [Sub video] outputs the same images as the CAM output from the <SDI OUT 2> terminal. 12G SDI is not output.
- Even when [Opt mode] is [ST2110 JPEG XS], uncompressed video data is output from [Sub video].
- The following shows the factory setting for Primary. For the Secondary factory settings, instead of [230.1.xx.x], read [230.2.xx.x], and instead of [491xx] read [492xx].

Format

Sets/displays the output format.

DEST ADDR

Enter the IP address of the transmission destination.
IP addresses can be set in the following ranges:

First octet	0 to 239
Second octet	0 to 255
Third octet	0 to 255
Fourth octet	0 to 255

You cannot set 0.0.0.0, 224.0.0.0 to 224.0.1.255, or a 127 IP address for the first octet.

Factory settings:

Primary
Main video: 230.1.0.1
Sub video: 230.1.0.3
TRUNK video: 230.1.0.4

DEST PORT [1024 to 65535]

Enter the port number of the transmission destination.
10670 cannot be set as a port number.

Factory settings:

Main video: 49101
Sub video: 49103
TRUNK video: 49104

Mic1 audio
Mic2 audio
Mix audio
Incom1 audio
Incom2 audio

DEST ADDR

Enter the IP address of the transmission destination.
The setting range is the same as [Main video].

Factory settings:

Mic1 audio: 230.1.20.2
Mic2 audio: 230.1.20.3
Mix audio: 230.1.20.6
TRUNK audio: 230.1.20.1
Incom1 audio: 230.1.20.4
Incom2 audio: 230.1.20.5

DEST PORT [1024 to 65535]

Enter the port number of the transmission destination.
The setting range is the same as [Main video].

Factory settings:

Mic1 audio: 49122
Mic2 audio: 49123
Mix audio: 49126
TRUNK audio: 49121
Incom1 audio: 49124
Incom2 audio: 49125

■ ST2110 RX

Make SMPTE ST2110 (uncompressed) reception settings.
The setting is confirmed with the [Set] button.

NOTE

- This menu is not displayed when [ST2110] is [Off].

Return video Format

Format

Sets/displays the input format.

Return1 video
Return2 video
Return3 video
Return4 video
Prompter video

NOTE

- Even when [Opt mode] is [ST2110 JPEG XS], Return video input is not possible with JPEG XS (compressed) transmission. Only uncompressed video can be input.
- The following shows the factory setting for Primary. For the Secondary factory settings, instead of [230.1.xx.x], read [230.2.xx.x], and instead of [491xx] read [492xx].

DEST ADDR

Enter the multicast address of the stream to be received as [Main video].
The setting range of the IP adresses can be set.

First octet	224 to 239
Second octet	0 to 255
Third octet	0 to 255
Fourth octet	0 to 255

0.0.0.0 and 224.0.0.0 to 224.0.1.255 cannot be set as the IP address.

Factory settings:

Return1 video: 230.1.30.1
Return2 video: 230.1.30.2
Return3 video: 230.1.30.3
Return4 video: 230.1.30.4
Prompter video: 230.1.40.1

SRC ADDR

Enter the IP address of the device that is the transmission source of the stream to be received as [Main video].
The setting range of the IP adresses can be set.

First octet	0 to 223
Second octet	0 to 255
Third octet	0 to 255
Fourth octet	0 to 255

An IP address with a first octet that is 127 cannot be set.

Factory settings:

Return1 video: 0.0.0.0
Return2 video: 0.0.0.0
Return3 video: 0.0.0.0
Return4 video: 0.0.0.0
Prompter video: 0.0.0.0

NOTE

- Filtering by the transmission source address is not performed if 0.0.0.0 is set.
- If the network switch you are using does not support IGMPv3, filtering by the transmission source address is not possible.

DEST PORT [1024 to 65535]

Enter the port number of the stream to be received as [Main video].
10669 and 10670 are not available to be set as the port number.

Factory settings:

Return1 video: 49131
Return2 video: 49132
Return3 video: 49133
Return4 video: 49134
Prompter video: 49141

PGM1 audio
PGM2 audio
Prompter audio
Incom1 audio
Incom2 audio

DEST ADDR
Enter the multicast address of the stream to be received as [Main video].
The setting range of the IP adresses can be set.

First octet	224 to 239
Second octet	0 to 255
Third octet	0 to 255
Fourth octet	0 to 255

0.0.0.0 and 224.0.0.0 to 224.0.1.255 cannot be set as the IP address.
Factory settings:
PGM1 audio: 230.1.90.2
PGM2 audio: 230.1.90.3
Prompter audio: 230.1.90.1
Incom1 audio: 230.1.90.4
Incom2 audio: 230.1.90.5

SRC ADDR
Enter the IP address of the device that is the transmission source of the stream to be received as [Main video].
The setting range of the IP adresses can be set.

First octet	0 to 223
Second octet	0 to 255
Third octet	0 to 255
Fourth octet	0 to 255

An IP address with a first octet that is 127 cannot be set.
Factory settings:
PGM1 audio: 0.0.0.0
PGM2 audio: 0.0.0.0
Prompter audio: 0.0.0.0
Incom1 audio: 0.0.0.0
Incom2 audio: 0.0.0.0

NOTE

- Filtering by the transmission source address is not performed if 0.0.0.0 is set.
- If the network switch you are using does not support IGMPv3, filtering by the transmission source address is not possible.

DEST PORT [1024 to 65535]
Enter the port number of the stream to be received as [Main video].
10670 cannot be set as a port number.
Factory settings:
PGM1 audio: 49192
PGM2 audio: 49193
Prompter audio: 49191
Incom1 audio: 49194
Incom2 audio: 49195

■ JPEG XS TX

Make SMPTE ST2110 JPEG XS (compressed) transmission settings.
The setting is confirmed with the [Set] button.

NOTE

- This menu is not displayed when [ST2110] is [Off].

JPEG XS TX

Format
Sets/displays the output format.

Compression Ratio
Sets the compression ratio.

Format	Compression Ratio
2160/60p, 2160/59.94p, 2160/50p, 2160/29.97p, 2160/25p, 2160/23.98p	5:1, 8:1, 12:1, 20:1
1080/60p, 1080/59.94p, 1080/50p, 1080/29.97p, 1080/25p, 1080/23.98p	4:1, 6:1, 10:1, 15:1

Factory settings: 5:1

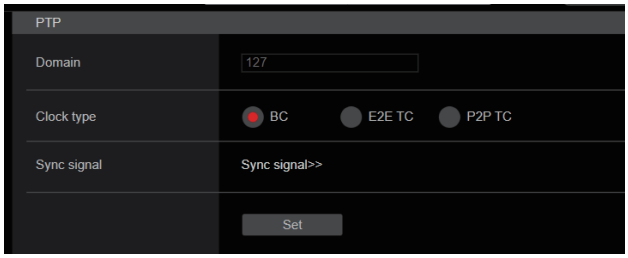
Payload type [96 to 127]
Enter the Payload type to be set in the JPEG XS TX packet.
Factory settings: 101

DEST ADDR
Enter the IP address of the transmission destination.
The setting range is the same as [Main video].
Factory settings: 230.1.0.2

DEST PORT [1024 to 65535]
Enter the port number of the transmission destination.
The setting range is the same as [Main video].
Factory settings: 49102

■ PTP

Make PTP settings.



Domain

Enter the PTP domain number.
Factory settings: 127

NOTE

- The domain number needs to be set in conjunction with the grand master. Consult the network administrator regarding settings for the grand master.
- This can only be set when [Sync signal] is [PTP].
- When [Opt Mode] is [ST2110 JPEG XS], the output timing for ST2110 JPEG XS (compressed) images is delayed by approximately 12 lines compared to the reference signal (PTP).

Clock type [BC, E2E TC, P2P TC]

Sets the CLOCK TYPE for PTP.
Factory settings: BC

Sync signal

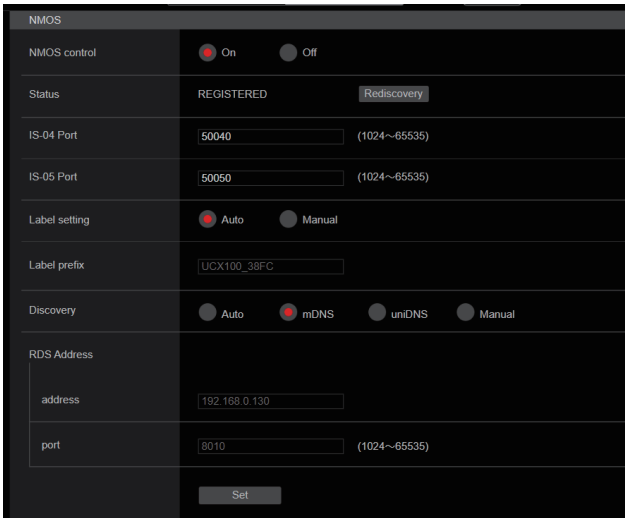
The screen for setting the synchronization signal for video/audio is displayed when you click [Sync signal>>]. (page 116)

■ NMOS

Make NMOS settings.

NOTE

- This menu is not displayed when [ST2110] is [Off].



NMOS control [On, Off]

Set Off/On for the NMOS function.
Factory settings: Off

Status

Displays the connection status of the NMOS RDS server.

UNREGISTERED	Not connected
REGISTERING	Currently discovering RDS server
REGISTERED	Registered to RDS server
P2P MODE	Connected via P2P with NMOS controller

IS-04 Port [1024 to 65535]

Enter the port number for NMOS IS-04.
Factory settings: 50040

IS-05 Port [1024 to 65535]

Enter the port number for NMOS IS-05.
Factory settings: 50050

Label setting

Select the automatic/manual label name used with NMOS.

Auto	The label name is a fixed value.
Manual	The user enters the label name manually.

Factory settings: Auto

NOTE

- The label name when set to Auto is “UCX100_****” (asterisks are the last four digits of the MAC address).

Label prefix

Enter the label name used with NMOS.
This cannot be changed if the Label setting is Auto.
Factory settings: UCX100_**** (asterisks are the last four digits of the MAC address)

Discovery

Set the RDS server discovery method.

Auto	Discover automatically in the order of uniDNS/mDNS.
mDNS	Discover with mDNS.
uniDNS	Discover with unicast DNS.
Manual	Discover manually.

Factory settings: Auto

NOTE

- If an RDS server cannot be discovered in any of the modes, the mode automatically switches to P2P.

RDS Address

Enter when specifying the RDS address.

address	Set the address of the RDS to be connected.
port	Set the port of the RDS to be connected.

Factory settings: address:192.168.0.130/port:8010

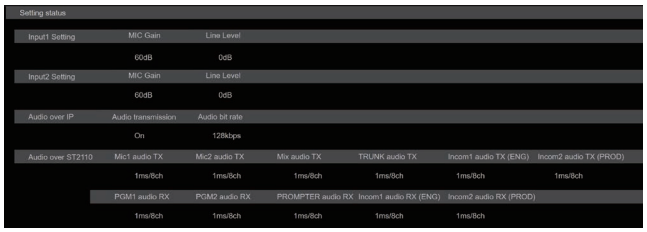
Audio setting screen [Audio]

Configure audio settings.

NOTE

- 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.

■ Setting status



Input1 Setting

Display the setting status of MIC input 1.

Input2 Setting

Display the setting status of MIC input 2.

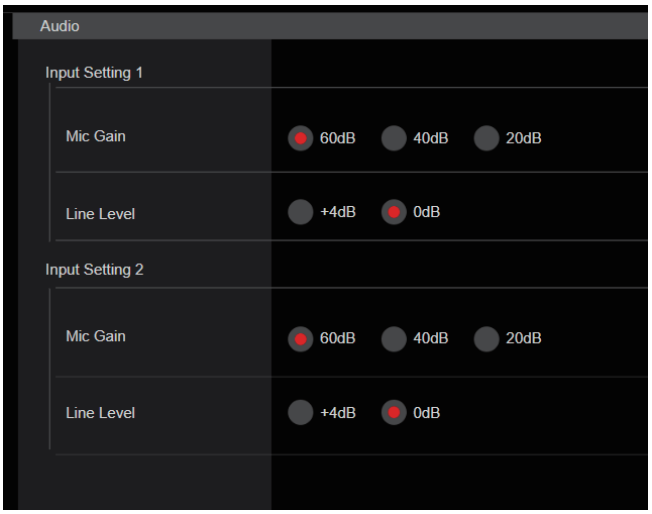
Audio over IP

Audio transmission	The setting status of audio data IP transmission is displayed.
Audio bit rate	The bit rate setting status for audio data via IP transmission is displayed.

Audio over ST2110

Display the setting status of audio data with SMPTE ST2110 transmission.

■ Audio



Input Setting 1

Mic Gain [60dB, 40dB, 20dB]

Set the microphone amplifier GAIN for the Audio Input1 microphone input.

This is enabled only when [Audio] – [Input1 Setting] – [Input Select] is [MIC] or [MIC+48V].

Factory settings: 60dB

Line Level [+4dB, 0dB]

Set the input level for the Audio Input1 line input.

This is enabled only when [Audio] – [Input1 Setting] – [Input Select] is [LINE].

Factory settings: 0dB

Input Setting 2

Mic Gain [60dB, 40dB, 20dB]

Set the microphone amplifier GAIN for the Audio Input2 microphone input.

This is enabled only when [Audio] – [Input2 Setting] – [Input Select] is [MIC] or [MIC+48V].

Factory settings: 60dB

Line Level [+4dB, 0dB]

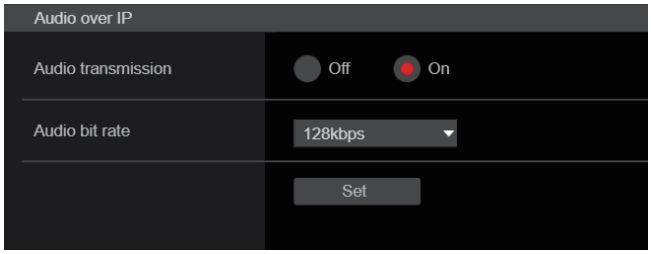
Set the input level for the Audio Input2 line input.

This is enabled only when [Audio] – [Input2 Setting] – [Input Select] is [LINE].

Factory settings: 0dB

■ Audio over IP

The setting is confirmed with the [Set] button.



Audio transmission [Off, On]

Set the communication mode used to transmit audio data to a personal computer, etc.

Off	Do not transmit audio data. All settings and controls related to audio will be disabled.
On	Transmit audio data. This allows audio as well as images to be viewed on the personal computer.

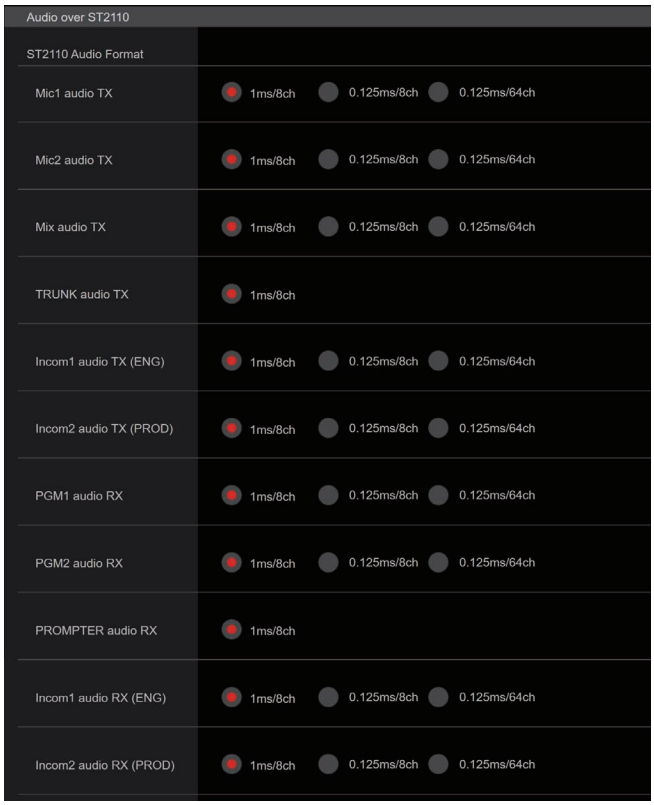
Factory settings: On

Audio bit rate [64kbps, 96kbps, 128kbps, 256kbps]

Set the bit rate for transmitting audio.

Factory settings: 128kbps

■ Audio over ST2110



ST2110 Audio Format

Mic1 audio TX [1ms/8ch, 0.125ms/8ch, 0.125ms/64ch]
Mic2 audio TX [1ms/8ch, 0.125ms/8ch, 0.125ms/64ch]
Mix audio TX [1ms/8ch, 0.125ms/8ch, 0.125ms/64ch]
TRUNK audio TX [1ms/8ch]
Incom1 audio TX (ENG) [1ms/8ch, 0.125ms/8ch, 0.125ms/64ch]
Incom2 audio TX (PROD) [1ms/8ch, 0.125ms/8ch, 0.125ms/64ch]
PGM1 audio RX [1ms/8ch, 0.125ms/8ch, 0.125ms/64ch]
PGM2 audio RX [1ms/8ch, 0.125ms/8ch, 0.125ms/64ch]
PROMPTER audio RX [1ms/8ch]
Incom1 audio RX (ENG) [1ms/8ch, 0.125ms/8ch, 0.125ms/64ch]
Incom2 audio RX (PROD) [1ms/8ch, 0.125ms/8ch, 0.125ms/64ch]

Set the format for AUDIO of SMPTE ST2110.
Factory settings: 1ms/8ch

NOTE

- If [BASIC CONFIG] – [OPT MODE] is anything other than [CCU CONNECT], for [Incom1 audio RX (ENG)] the call destination is set to <ENG> of the <PROD>/<BOTH>/<ENG> switches of intercom 1 and intercom 2, and for [Incom2 audio RX (PROD)] the call destination is set to <PROD> of the <PROD>/<BOTH>/<ENG> switches of intercom 1 and intercom 2.

Paint settings screen [Paint]

Adjust the image quality.
The settings in this screen (with the exception of [Scene] and [Matrix]) are applied immediately. After selecting the settings for [Scene] and [Matrix], you need to press the [Set] button to execute.

SCENE [Scene1 to Scene8]
USER [User1 to User3]

Switch the shooting mode depending on the shooting environment.
Select a shooting mode based on the shooting conditions or preference.
Select a shooting mode from the pull-down menu, and click the [SET] button to switch to the selected mode.

Scene1 to Scene8, User1 to User3	Modes that allow you to adjust detailed settings manually for various shooting conditions and preferences.

Camera control/Setup Menu button

You can display the camera control screen by clicking the [Camera control] button.
You can control the camera while adjusting the image quality.

BRIGHTNESS

■ GAIN SETTING

GAIN/ISO MODE [dB, ISO]

Sets the units for gain value.

Factory settings: dB

GAIN/ISO

Make adjustments to the gain of images.

Factory settings:

–6 to 18 (dB)

400 to 12800 (ISO)

■ IRIS

AUTO IRIS [OFF, ON]

Select whether to turn auto iris adjustment OFF/ON.

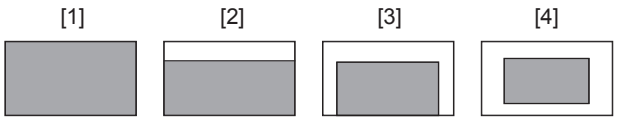
OFF	Do not adjust iris automatically.
ON	Adjust iris automatically.

Factory settings: OFF

WINDOW SELECT [1 to 4]

Set the photometry range when [AUTO IRIS] is on.

The window images appear as follows when [1] to [4] are selected:



A window area can be specified when [5] is selected.

The area can be specified using a web browser. (page 109)

Factory settings: 1

IRIS LEVEL [0 to 100]

Set the target picture level for automatic exposure compensation.

Factory settings: 50

PEAK RATIO [0 to 100]

Set the peak value and average value ratio of the photometry when [AUTO IRIS] is on.

The larger the number in the setting value, the more there is a reaction to the peak within the iris detection window.

The smaller the number in the setting value, the more there is a reaction to the average value within the iris detection window.

Factory settings: 0

IRIS SPEED [1 to 25]

Set the control speed of the iris function.

Factory settings: 15

■ SHUTTER SPEED

SHUTTER SW [Off, On]

Set On/Off for the shutter function.

SHUTTER DISP [sec, deg]

Sets the display of the shutter.

Factory settings: sec

SHUTTER MODE [STEP, SYNCHRO]

Select the shutter mode.

STEP	The step shutter is set (the steps can be changed).
SYNCHRO	The synchro shutter is set (the setting can be changed continuously).

SHUTTER SPEED

Sets the shutter speed when [SHUTTER MODE] is [STEP]. This is displayed as time (a fraction) when [SHUTTER DISP] is set to [sec], and as aperture angle when set to [deg].

When the display is [sec]

59.94i/59.94p mode	1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000
50i/50p mode	1/60, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000
29.97p mode	1/48, 1/50, 1/60, 1/96, 1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000
25p mode	1/48, 1/50, 1/60, 1/96, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000
23.98p mode	1/48, 1/50, 1/60, 1/96, 1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000
120p/100p mode	1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000
180p/150p mode	1/250, 1/500, 1/1000, 1/1500, 1/2000
240p/200p mode	1/250, 1/500, 1/1000, 1/1500, 1/2000

When the display is [deg]

HALF SHUTTER, 11.5d, 22.5d, 45.0d, 90.0d, 120.0d, 144.0d, 172.8d, 180.0d, 270.0d, 357.0d

Factory settings: [1/100]

SYNCHRO SCAN

Sets the shutter speed when [SHUTTER MODE] is [SYNCHRO].
This is displayed as time (a fraction) when [SHUTTER DISP] is set to [sec], and as aperture angle when set to [deg].
When a higher shutter speed is selected, fast-moving subjects do not become blurred easily but the images will be darker.

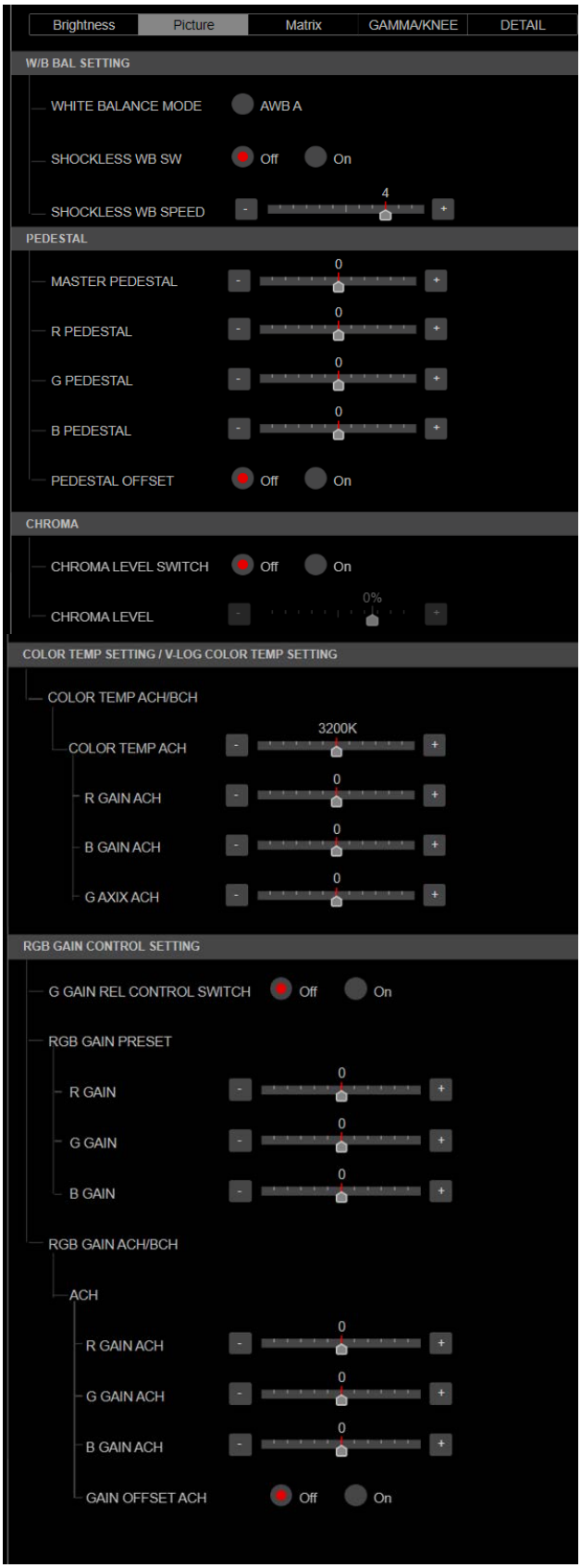
When the display is [sec]

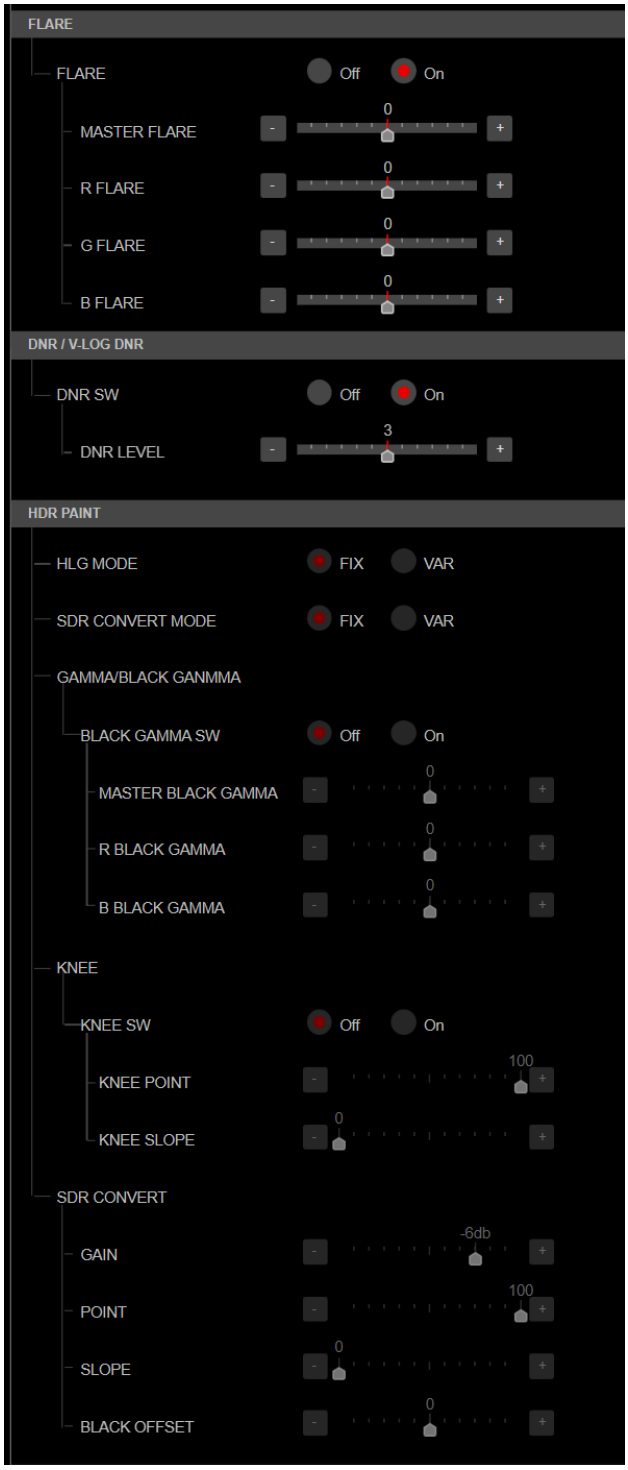
59.94i/59.94p mode	60.0Hz to 7200Hz
50i/50p mode	50.0Hz to 7200Hz
29.97p mode	30.0Hz to 7200Hz
25p mode	25.0Hz to 7200Hz
23.98p mode	24.0Hz to 7200Hz
120p mode	120.1Hz to 7200Hz
180p mode	180.2Hz to 7200Hz
240p mode	241.1Hz to 7200Hz
100p mode	100.1Hz to 7200Hz
150p mode	150.3Hz to 7200Hz
200p mode	200.5Hz to 7200Hz

When the display is [deg]

3.0 deg to 357.0 deg

PICTURE


Brightness
Picture
Matrix
GAMMA/KNEE
DETAIL
W/B BAL SETTING
WHITE BALANCE MODE
AWB A
SHOCKLESS WB SW
Off
On
SHOCKLESS WB SPEED
4
PEDESTAL
MASTER PEDESTAL
R PEDESTAL
G PEDESTAL
B PEDESTAL
PEDESTAL OFFSET
CHROMA
CHROMA LEVEL SWITCH
CHROMA LEVEL
0%
COLOR TEMP SETTING / V-LOG COLOR TEMP SETTING
COLOR TEMP ACH/BCH
COLOR TEMP ACH
3200K
R GAIN ACH
B GAIN ACH
G AXIX ACH
RGB GAIN CONTROL SETTING
G GAIN REL CONTROL SWITCH
RGB GAIN PRESET
R GAIN
G GAIN
B GAIN
RGB GAIN ACH/BCH
ACH
R GAIN ACH
G GAIN ACH
B GAIN ACH
GAIN OFFSET ACH


FLARE
FLARE
Off
On
MASTER FLARE
R FLARE
G FLARE
B FLARE
DNR / V-LOG DNR
DNR SW
DNR LEVEL
HDR PAINT
HLG MODE
FIX
VAR
SDR CONVERT MODE
GAMMA/BLACK GANMMA
BLACK GAMMA SW
MASTER BLACK GAMMA
R BLACK GAMMA
B BLACK GAMMA
KNEE
KNEE SW
KNEE POINT
KNEE SLOPE
SDR CONVERT
GAIN
-6db
POINT
SLOPE
BLACK OFFSET

■ W/B BAL SETTING

WHITE BALANCE MODE [AWB A]

Factory settings: AWB A

SHOCKLESS WB SW [Off, On]

Set the control that either transitions instantly or transitions gradually when [WHITE BALANCE MODE] is switched.

Factory settings: Off

SHOCKLESS WB SW SPEED [1 to 5]

When switching [WHITE BALANCE MODE], set the speed until it transitions.

Factory settings: 4

■ PEDESTAL

NOTE

- For all of the PEDESTAL items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].

MASTER PEDESTAL [–200 to +200]

This item is used to adjust the black level (adjust the pedestal).
These parts become darker when a negative setting is selected and, conversely, lighter when a positive setting is selected.

Factory settings: 0

R PEDESTAL [–800 to +800]

This enables the R pedestal to be adjusted.

Factory settings: 0

G PEDESTAL [–800 to +800]

This enables the G pedestal to be adjusted.

Factory settings: 0

B PEDESTAL [–800 to +800]

This enables the B pedestal to be adjusted.

Factory settings: 0

PEDESTAL OFFSET [Off, On]

Set the pedestal level of the Rch, Gch, and Bch when the auto black balance has been adjusted.

Off	Set the pedestal level to [0] for [R PEDESTAL], [G PEDESTAL], and [B PEDESTAL].
On	Maintain the values set for each of [R PEDESTAL], [G PEDESTAL], and [B PEDESTAL].

Factory settings: Off

■ CHROMA

NOTE

- For all of the CHROMA items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].

CHROMA LEVEL SWITCH [Off, On]

Select Off/On for the color intensity setting for images.

Off	Set the color intensity setting for images to Off.
On	Set the color intensity setting for images to On.

CHROMA LEVEL [–100% to 40%]

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

Factory settings: 0%

■ COLOR TEMP SETTING / V-LOG COLOR TEMP SETTING

NOTE

- For all of the COLOR TEMP SETTING / V-LOG COLOR TEMP SETTING items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].

COLOR TEMP ACH/BCH

Set the color temperature when the [WHITE BALANCE MODE] is [AWB A] or [AWB B].
Varying the output balance of Ach and Bch enables the varying of the color temperature.

COLOR TEMP ACH [2000K to 15000K]

This displays the color temperature when [WHITE BALANCE MODE] is [AWB A].

Factory settings: 3200K

R GAIN ACH [–400 to +400]

This enables adjustments to R Gain when [WHITE BALANCE MODE] is [AWB A].

Factory settings: 0

B GAIN ACH [–400 to +400]

This enables adjustments to B Gain when [WHITE BALANCE MODE] is [AWB A].

Factory settings: 0

G AXIS ACH [–400 to +400]

You can adjust the gain in the G-Mg direction when the [WHITE BALANCE MODE] is [AWB A].

Factory settings: 0

■ RGB GAIN CONTROL SETTING

NOTE

- For all of the RGB GAIN CONTROL SETTING items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].

G GAIN REL CONTROL SWITCH [Off, On]

Set On/Off for the relative value control of the G gain.
Factory settings: Off

RGB GAIN PRESET

Set the gain when the [WHITE BALANCE MODE] is [3200K], [5600K], or [VAR].

R GAIN [–1000 to +1000]
This enables the R gain to be adjusted.
Factory settings: 0

G GAIN [–1000 to +1000]
This enables the G gain to be adjusted.
Factory settings: 0

B GAIN [–1000 to +1000]
This enables the B gain to be adjusted.
Factory settings: 0

RGB GAIN ACH/BCH

Set the gain when the [WHITE BALANCE MODE] is [AWB A] or [AWB B].

ACH

R GAIN ACH [–1000 to +1000]
You can adjust the R gain when the [WHITE BALANCE MODE] is [AWB A].
Factory settings: 0

G GAIN ACH [–1000 to +1000]
You can adjust the G gain when the [WHITE BALANCE MODE] is [AWB A].
Factory settings: 0

B GAIN ACH [–1000 to +1000]
You can adjust the B gain when the [WHITE BALANCE MODE] is [AWB A].
Factory settings: 0

GAIN OFFSET ACH [Off, On]
When auto white balance is performed by setting [WHITE BALANCE MODE] to [AWB A], set the values for R gain and B gain.

Off	Makes the [R GAIN ACH] and [B GAIN ACH] values [0].
On	Leaves the values set in [R GAIN ACH] and [B GAIN ACH] as they are.

Factory settings: Off

■ FLARE

NOTE

- For all of the FLARE items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].

FLARE [Off, On]

Set Off/On for flare compensation.
Factory settings: Off

MASTER FLARE [–200 to 0 to +200]
Adjust the master flare.
Factory settings: 0

R FLARE [–200 to 0 to +200]
Adjust the Rch flare.
Factory settings: 0

G FLARE [–200 to 0 to +200]
Adjust the Gch flare.
Factory settings: 0

B FLARE [–200 to 0 to +200]
Adjust the Bch flare.
Factory settings: 0

DNR / V-LOG DNR

NOTE

- For all of the DNR / V-LOG DNR items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].

DNR SW [Off, On]
Select OFF/ON for the digital noise reduction effect which can achieve output of bright, clear images without noise, even at night and low-light conditions.
Factory settings: Off

DNR LEVEL [1 to 5]
Set the digital noise reduction level.
Factory settings: 3

■ HDR PAINT

HLG MODE [FIX, VAR]

Select image quality setting mode for HDR.
Factory settings: FIX

NOTE

- This is disabled when [V-LOG] is [On].

SDR CONVERT MODE [FIX, VAR]

Select the mode for converting to SDR.

FIX	Fixed mode (Gain fixed to –10 dB)
VAR	Variable mode

Factory settings: FIX

GAMMA/BLACK GAMMA

BLACK GAMMA SW [Off, On]
Select On/Off for the gamma curve for dark areas.
Factory settings: Off

MASTER BLACK GAMMA [–32 to +32]
Adjust the master black gamma correction level.
Factory settings: 0

R BLACK GAMMA [–32 to +32]
Make adjustments to the black gamma correction level for the Rch.
Factory settings: 0

B BLACK GAMMA [–32 to +32]
Make adjustments to the black gamma correction level for the Bch.
Factory settings: 0

KNEE

NOTE

- For all of the KNEE items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].
- For all of the KNEE items, setting is not possible when [HDR] is [On].
- When [DRS] is enabled, the knee setting is disabled.

KNEE SW [Off, On]
Set On/Off for the operating mode for gradation compression (knee).
Factory settings: On

KNEE POINT [–25.00% to 25.00% (0.25% step)]
Set the compression level (knee point) position for high-brightness video signals.
This is only enabled when [KNEE SW] is set to [On].
Factory settings: 0

KNEE SLOPE [–25.00% to 25.00% (0.25% step)]
Set the incline of knee.
This is only enabled when [KNEE SW] is set to [On].
Factory settings: 0

SDR CONVERT

The setting is disabled when [FIX] is selected in [SDR CONVERT MODE] and it cannot be set.

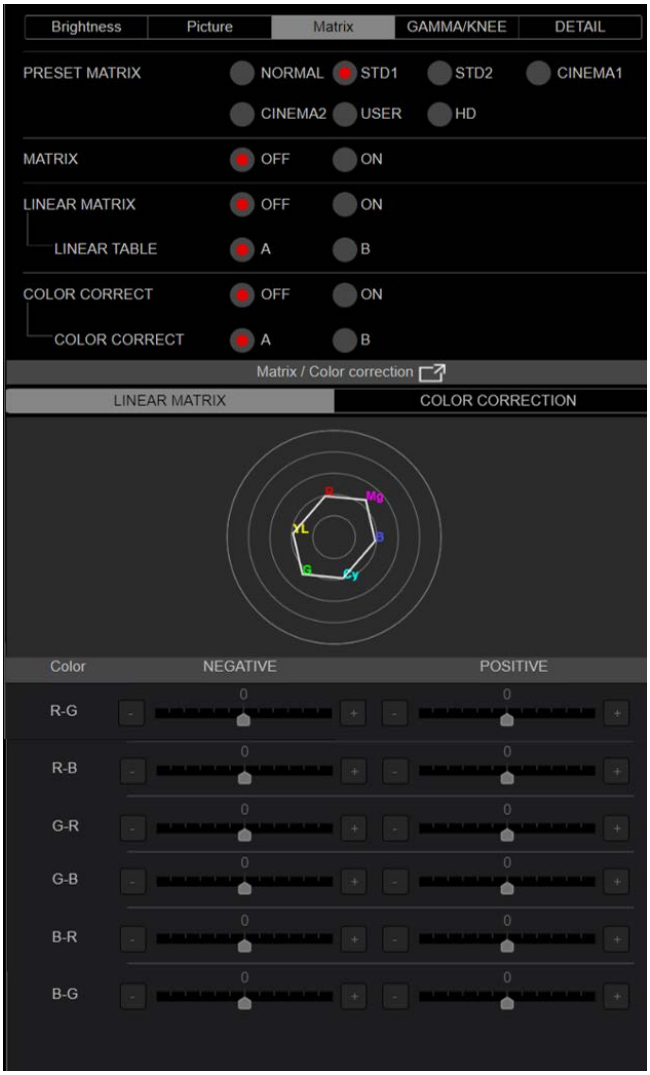
GAIN [0dB, –5dB, –6dB, –7dB, –8dB, –9dB, –10dB, –11dB, –12dB]
Set the gain of SDR images.
Factory settings: –6

POINT [0 to 100]
Set the image level to start SDR image compression.
Factory settings: 0

SLOPE [0 to 127]
Set the incline for compression of SDR images.
Factory settings: 0

BLACK OFFSET [–100 to +100]
Adjust the black level offset of SDR images.
Factory settings: 0

MATRIX



NOTE

- The [LINEAR MATRIX] and [COLOR CORRECTION] setting screen opens in a separate window when you click the icon next to [Matrix/Color correction].

PRESET MATRIX [NORMAL, STD1, STD2, CINEMA1, CINEMA2, USER, HD]

Select the type of matrix.

NORMAL	Matrix setting that puts emphasis on outdoor settings. Set [GAMMA] to [NORMAL] for use.
STD1	Matrix setting conforming to Panasonic studio camera AK-UC4000G (NORM-NORMAL). Set [GAMMA] to [HD] for use.
STD2	Matrix setting conforming to Panasonic studio camera AK-UC4000G (NORM-0E.11). Set [GAMMA] to [HD] for use.
CINEMA1	High contrast matrix setting. Set [GAMMA] to [CINEMA1] for use.
CINEMA2	Sedate matrix setting. Set [GAMMA] to [CINEMA2] for use.
USER	Matrix setting conforming to Panasonic remote camera AW-UE150. Set [GAMMA] to [HD] for use.
HD	Matrix setting conforming to Panasonic broadcasting devices. Set [GAMMA] to [HD] for use.

Factory settings: HD

MATRIX [OFF, ON]

Set ON/OFF for the matrix (linear matrix/color correction).
Factory settings: OFF

LINEAR MATRIX [OFF, ON]

Set ON/OFF for the linear matrix function.
Factory settings: OFF

LINEAR TABLE [A, B]

Select the table for the linear matrix.
Factory settings: A

COLOR CORRECT [OFF, ON]

Set ON/OFF for the color correction function.
Factory settings: OFF

COLOR CORRECT [A, B]

Select the table for color correction.
Factory settings: A

LINEAR MATRIX

Make adjustments to the linear matrix.

NOTE

- For all of the LINEAR MATRIX items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].

COLOR R-G

NEGATIVE [–31 to +31]	Set N direction of R-G.
POSITIVE [–31 to +31]	Set P direction of R-G.

COLOR R-B

NEGATIVE [–31 to +31]	Set N direction of R-B.
POSITIVE [–31 to +31]	Set P direction of R-B.

COLOR G-R

NEGATIVE [–31 to +31]	Set N direction of G-R.
POSITIVE [–31 to +31]	Set P direction of G-R.

COLOR G-B

NEGATIVE [–31 to +31]	Set N direction of G-B.
POSITIVE [–31 to +31]	Set P direction of G-B.

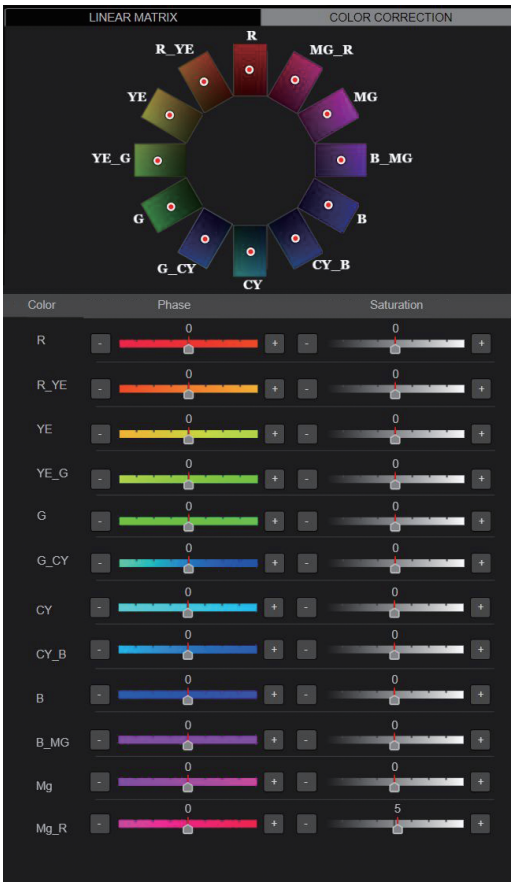
COLOR B-R

NEGATIVE [–31 to +31]	Set N direction of B-R.
POSITIVE [–31 to +31]	Set P direction of B-R.

COLOR B-G

NEGATIVE [–31 to +31]	Set N direction of B-G.
POSITIVE [–31 to +31]	Set P direction of B-G

Factory settings: 0



COLOR CORRECTION

Make adjustments to the color saturation and hue.

NOTE

- For all of the COLOR CORRECTION items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].

COLOR R

PHASE [–127 to 0 to 126]	Adjusts the hue of red.

COLOR R_YE

PHASE [–127 to 0 to 126]	Adjusts the hue between red and yellow.

COLOR YE

PHASE [–127 to 0 to 126]	Adjusts the hue of yellow.

COLOR YE_G

PHASE [–127 to 0 to 126]	Adjusts the hue between yellow and green.

COLOR G

PHASE [–127 to 0 to 126]	Adjusts the hue of green.

COLOR G_CY

PHASE [–127 to 0 to 126]	Adjusts the hue between green and cyan.

COLOR CY

PHASE [–127 to 0 to 126]	Adjusts the hue of cyan.

COLOR CY_B

PHASE [–127 to 0 to 126]	Adjusts the hue between cyan and blue.

COLOR B

PHASE [–127 to 0 to 126]	Adjusts the hue of blue.

COLOR B_MG

PHASE [–127 to 0 to 126]	Adjusts the hue between blue and magenta.

COLOR MG

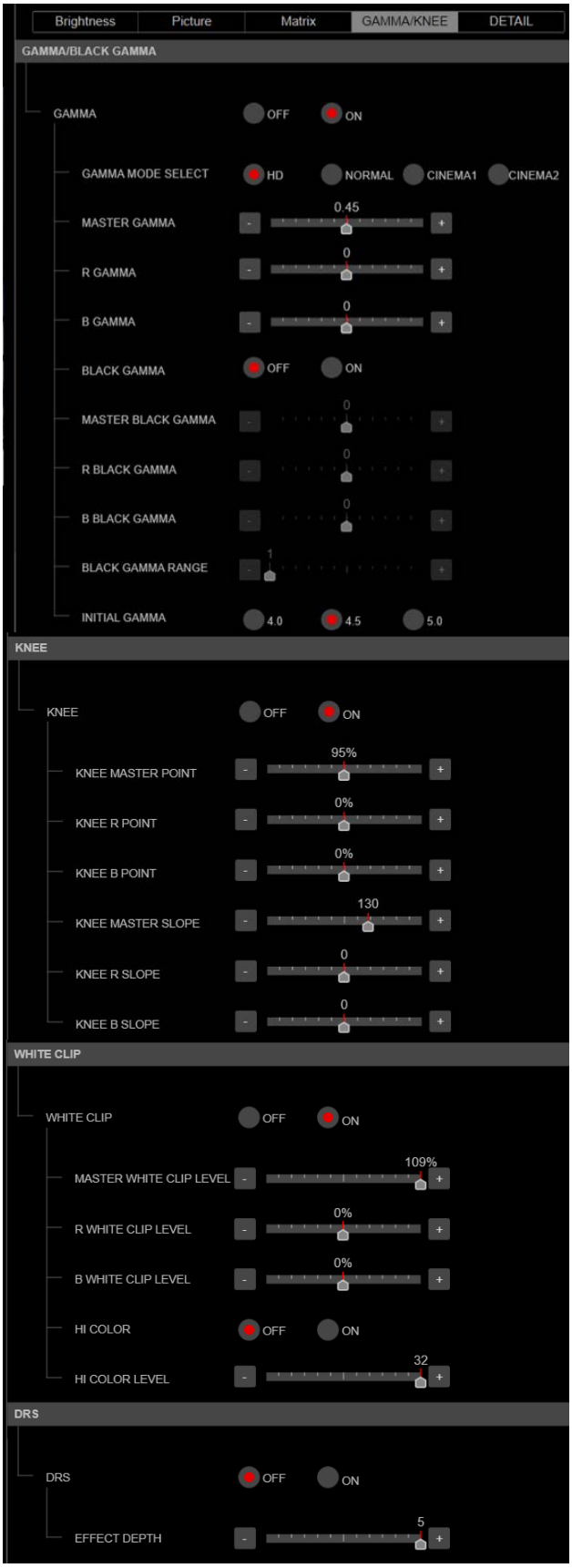
PHASE [–127 to 0 to 126]	Adjusts the hue of magenta.

COLOR MG_R

PHASE [–127 to 0 to 126]	Adjusts the hue between magenta and red.

Factory settings: 0

GAMMA/KNEE



■ GAMMA/BLACK GAMMA

NOTE

- For all of the GAMMA/BLACK GAMMA items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].
- For all of the GAMMA/BLACK GAMMA items, setting is not possible when [HDR] is [On].

GAMMA [OFF, ON]

Select ON/OFF for the gamma mode.
Factory settings: OFF

GAMMA MODE SELECT
[HD, NORMAL, CINEMA1, CINEMA2]
Select the gamma curve type.

HD	Video gamma characteristics conforming to Panasonic broadcasting devices.
NORMAL	Gamma characteristics that emphasize face tones.
CINEMA1	High contrast gamma characteristic.
CINEMA2	Sedate gamma characteristic.

Factory settings: HD

MASTER GAMMA [0.15 to 0.75]
Adjust the master gamma correction level.
Factory settings: 0.45

R GAMMA [–75 to +75]
Set the gamma for the Rch.
Factory settings: 0

B GAMMA [–75 to +75]
Set the gamma for the Bch.
Factory settings: 0

BLACK GAMMA [OFF, ON]
Select ON/OFF for the gamma curve for dark areas.
Factory settings: OFF

MASTER BLACK GAMMA [–48 to +48]
Adjust the master black gamma correction level.

–48 to –1	Compresses dark parts.
+1 to +48	Expands dark parts.

Factory settings: 0

R BLACK GAMMA [–20 to +20]
Make adjustments to the black gamma correction level for the Rch.
Factory settings: 0

B BLACK GAMMA [–20 to +20]
Make adjustments to the black gamma correction level for the Bch.
Factory settings: 0

BLACK GAMMA RANGE [1 to 3]
Set the maximum level of compression/expansion for the gamma curve for dark areas.

1	About 20%
2	About 30%
3	About 40%

Factory settings: 3

INITIAL GAMMA [4.0, 4.5, 5.0]
Set the rising slope for the gamma curve.
This is only enabled when [GAMMA MODE SELECT] is set to [HD].
Factory settings: 4.0

■ KNEE

NOTE

- For all of the KNEE items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].
- For all of the KNEE items, setting is not possible when [HDR] is [On].

KNEE [OFF, ON]

Set ON/OFF for the operating mode for gradation compression (knee).
Factory settings: ON

KNEE MASTER POINT
[80.00% to 110.00% (0.25% step)]
Set the compression level (knee point) position for high-brightness video signals.
This is only enabled when [KNEE MODE] is set to [MANUAL].
Factory settings: 0.95

KNEE R POINT
[–25.00% to 25.00% (0.25% step)]
Make positional settings for the compression level (knee point) of the Rch against the [KNEE MASTER POINT].
This is only enabled when [KNEE MODE] is set to [MANUAL].
Factory settings: 0

KNEE B POINT
[–25.00% to 25.00% (0.25% step)]
Make positional settings for the compression level (knee point) of the Bch against the [KNEE MASTER POINT].
This is only enabled when [KNEE MODE] is set to [MANUAL].
Factory settings: 0

KNEE MASTER SLOPE [0 to 199]
Set the incline of knee.
This is only enabled when [KNEE MODE] is set to [MANUAL].
Factory settings: 130

KNEE R SLOPE [–99 to +99]
Set the incline of the Rch against the [KNEE MASTER SLOPE].
This is only enabled when [KNEE MODE] is set to [MANUAL].
Factory settings: 0

KNEE B SLOPE [–99 to +99]
Set the incline of the Bch against the [KNEE MASTER SLOPE].
This is only enabled when [KNEE MODE] is set to [MANUAL].
Factory settings: 0

■ WHITE CLIP

NOTE

- For all of the WHITE CLIP items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].
- For all of the WHITE CLIP items, setting is not possible when [HDR] is [On].

WHITE CLIP [OFF, ON]

Set ON/OFF for the white clip function.
Factory settings: OFF

MASTER WHITE CLIP LEVEL [80% to 109%]
Set the master white clip level.
Factory settings: 1.09

R WHITE CLIP LEVEL [–15% to +15%]
Set the white clip level of the Rch against the [MASTER WHITE CLIP LEVEL].
This is only enabled when [WHITE CLIP] is set to [ON].
Factory settings: 0

B WHITE CLIP LEVEL [–15% to +15%]
Set the white clip level of the Bch against the [MASTER WHITE CLIP LEVEL].
This is only enabled when [WHITE CLIP] is set to [ON].
Factory settings: 0

HI COLOR [OFF, ON]
Set the control of the mode to expand the dynamic range of colors. This improves the color reproducibility in very bright parts.
Factory settings: OFF

HI COLOR LEVEL [1 to 32]
Set the level of the mode to expand the dynamic range of colors.
Factory settings: 32

■ DRS

NOTE

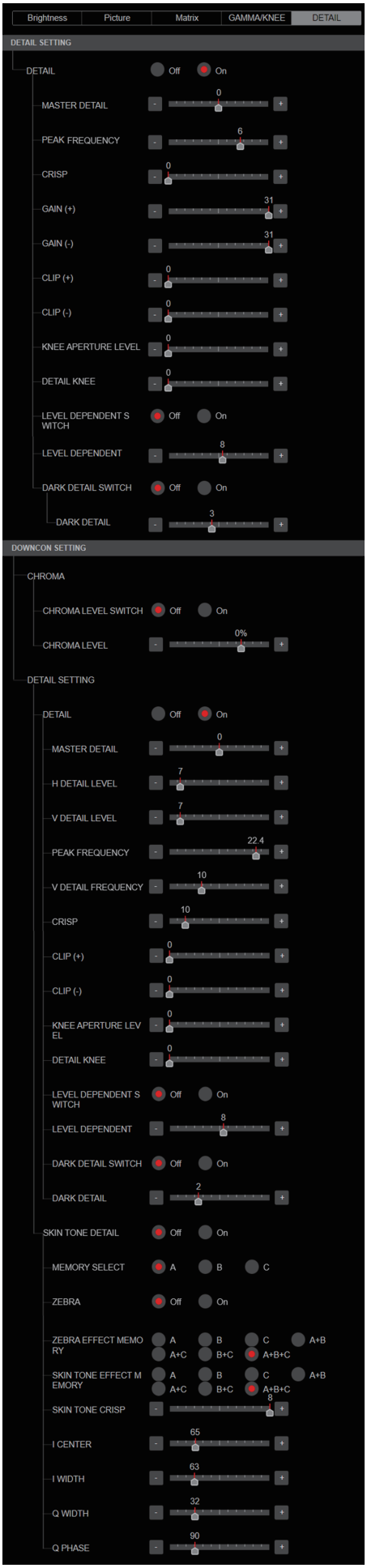
- For all of the DRS items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].

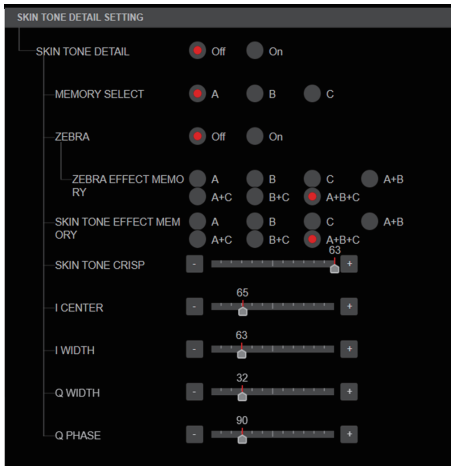
DRS [OFF, ON]

Set ON/OFF for the DRS function which makes appropriate corrections when recording video that has a large light/dark contrast.
Factory settings: OFF

EFFECT DEPTH [1 to 5]
Set the effect level of the DRS function. The effect level increases as the number increases.
Factory settings: 5

DETAIL





■ DETAIL SETTING

NOTE

- For all of the DETAIL SETTING items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].

DETAIL [Off, On]

Set On/Off for image contour (image sharpness) adjustments.
Factory settings: On

MASTER DETAIL [–31 to +31]
Adjust the contour correction level (master).
This is only enabled when [DETAIL] is set to [On].
Factory settings: 0

PEAK FREQUENCY [1 to 8]
Set the boost frequency of detail.
This is only enabled when [DETAIL] is set to [On].
Factory settings: 6

CRISP [0 to 63]
Set the level of noise reduction for the detail signal.
This is only enabled when [DETAIL] is set to [On].
Factory settings: 0

GAIN(+) [–31 to +31]
Set the level of the detail signal in the plus direction (brighter direction).
This is only enabled when [DETAIL] is set to [On].
Factory settings: 0

GAIN(–) [–31 to +31]
Set the level of the detail signal in the minus direction (darker direction).
This is only enabled when [DETAIL] is set to [On].
Factory settings: 0

CLIP(+) [0 to 63]
Set the level of clipping of the detail signal in the plus direction (brighter direction).
This is only enabled when [DETAIL] is set to [On].
Factory settings: 0

CLIP(–) [0 to 63]
Set the level of clipping of the detail signal in the minus direction (darker direction).
This is only enabled when [DETAIL] is set to [On].
Factory settings: 0

KNEE APERTURE LEVEL [0 to 39]
Adjust the level of detail for very bright parts.
This is only enabled when [DETAIL] is set to [On].
Factory settings: 0

DETAIL KNEE [0 to 15]
Adjust the detail component of knee.
This is only enabled when [DETAIL] is set to [On].
Factory settings: 0

LEVEL DEPENDENT SWITCH [Off, On]
Set On/Off for the level of reduction in detail in dark parts.
This is only enabled when [DETAIL] is set to [On].
Factory settings: Off

LEVEL DEPENDENT [0 to 15]
Set the level of reduction in detail in dark parts.
This is only enabled when [DETAIL] is set to [On].
Factory settings: 0

DARK DETAIL SWITCH [Off, On]
Set On/Off for the control that adds detail in dark parts.
This is only enabled when [DETAIL] is set to [On].
Factory settings: Off

DARK DETAIL [0 to 7]
Set the level of detail in dark parts.
This is only enabled when [DETAIL] is set to [On].
Factory settings: 3

■ DOWNCON SETTING

Adjust the contours and colors of images down-converted from 4K to HD.
This is enabled when [Format] is one of the following:
2160/59.94p, 2160/29.97p, 2160/23.98p, 2160/50p, 2160/25p

NOTE

- For all of the DOWNCON SETTING items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].

CHROMA

CHROMA LEVEL SWITCH [Off, On]
Set On/Off for the chroma level control.
Factory settings: Off

CHROMA LEVEL [–100% to 80%]
Set here the color intensity (chroma level) of the images.
Factory settings: 0

DETAIL SETTING

DETAIL [Off, On]
Turn On/Off the contour (sharpness of images) adjustment of images.
Factory settings: On

MASTER DETAIL [–31 to +31]
Make adjustments the contour correction level (master).
This is only enabled when [DETAIL] is set to [On].
Factory settings: 0

H DETAIL LEVEL [0 to 63]
Adjust the contour correction level in the horizontal direction.
This is only enabled when [DETAIL] is set to [On].
Factory settings: 7

V DETAIL LEVEL [0 to 63]
Adjust the contour correction level in the vertical direction.
This is only enabled when [DETAIL] is set to [On].
Factory settings: 7

PEAK FREQUENCY [12.4MHz to 37.1MHz]
Set the boost frequency of detail.
This is only enabled when [DETAIL] is set to [On].
Factory settings: 22.4MHz

V DETAIL FREQUENCY [0 to 31]
Set the boost frequency of detail (vertically).

0: Low frequency
to
31: High frequency

When a high frequency is selected, the detail effect is added to subjects with more definition.
This is only enabled when [DETAIL] is set to [On].
Factory settings: 10

CRISP [0 to 63]
Set the level of noise reduction for the detail signal.
This is only enabled when [DETAIL] is set to [On].
Factory settings: 10

CLIP(+) [0 to 63]
Set the level of clipping of the detail signal in the plus direction (brighter direction).
This is only enabled when [DETAIL] is set to [On].
Factory settings: 0

CLIP(–) [0 to 63]
Set the level of clipping of the detail signal in the minus direction (darker direction).
This is only enabled when [DETAIL] is set to [On].
Factory settings: 0

KNEE APERTURE LEVEL [0 to 39]
Adjust the level of detail for very bright parts.
This is only enabled when [DETAIL] is set to [On].
Factory settings: 0

DETAIL KNEE [0 to 15]
Adjust the detail component of knee.
This is only enabled when [DETAIL] is set to [On].
Factory settings: 0

LEVEL DEPENDENT SWITCH [Off, On]
Set On/Off for the level of reduction in detail in dark parts.
This is only enabled when [DETAIL] is set to [On].
Factory settings: Off

LEVEL DEPENDENT [0 to 15]
Set the level of reduction in detail in dark parts.
This is only enabled when [DETAIL] is set to [On].
Factory settings: 8

DARK DETAIL SWITCH [Off, On]
Set On/Off for the control that adds detail in dark parts.
This is only enabled when [DETAIL] is set to [On].
Factory settings: Off

DARK DETAIL [0 to 7]
Set the level of detail in dark parts.
Factory settings: 2

SKIN TONE DETAIL [Off, On]

This function smooths skin and produces a more beautiful image.
Set On/Off for the skin tone detail function.
Factory settings: Off

MEMORY SELECT [A, B, C]
Select the skin tone table of the subject for the skin tone effect.
Factory settings: A

ZEBRA [Off, On]
Set On/Off for the zebra display of the skin tone area.
The zebra pattern is displayed only on devices connected to the SDI OUT2 connector.
Factory settings: Off

NOTE

- This cannot be set when [ZEBRA] in [SKIN TONE DETAIL SETTING] is [On].

ZEBRA EFFECT MEMORY
[A, B, C, A+B, A+C, B+C, A+B+C]
Select the skin tone table for the zebra display.
Factory settings: A+B+C

SKIN TONE EFFECT MEMORY
[A, B, C, A+B, A+C, B+C, A+B+C]
Select the skin tone table for the skin tone effect.
Factory settings: A+B+C

SKIN TONE CRISP [0 to 8]
Adjust the skin tone detail.
Factory settings: 8

I CENTER [0 to 255]
Set the central position above the I axis (area where skin tone is to take effect).
Factory settings: 65

I WIDTH [0 to 255]
Set the width of the area where the skin tone is to take effect above the I axis, centered on [I CENTER].
Factory settings: 63

Q WIDTH [0 to 127]
Set the width of the area where the skin tone is to take effect above the Q axis, centered on [I CENTER].
Factory settings: 32

Q PHASE [0 to 359]
Set the phase of the area where skin tone is to take effect based on the Q axis.
Factory settings: 90

■ SKIN TONE DETAIL SETTING

NOTE

- For all of the SKIN TONE DETAIL SETTING items, setting is not possible when [V-LOG] is [On] and [V-LOG PAINT SW] is [Off].

SKIN TONE DETAIL [Off, On]

This function smooths skin and produces a more beautiful image.
Set On/Off for the skin tone detail function.
Factory settings: Off

MEMORY SELECT [A, B, C]
Select the skin tone table of the subject for the skin tone effect.
Factory settings: A

ZEBRA [Off, On]
Set On/Off for the zebra display of the skin tone area.
The zebra pattern is displayed only on devices connected to the SDI OUT2 connector.
Factory settings: Off

NOTE

- This cannot be set when [ZEBRA] in [DOWNCON SETTING] is [On].

ZEBRA EFFECT MEMORY
[A, B, C, A+B, A+C, B+C, A+B+C]
Select the skin tone table for the zebra display.
Factory settings: A+B+C

SKIN TONE EFFECT MEMORY
[A, B, C, A+B, A+C, B+C, A+B+C]
Select the skin tone table for the skin tone effect.
Factory settings: A+B+C

SKIN TONE CRISP [–63 to 0 to +63]
Adjust the skin tone detail.
Factory settings: 63

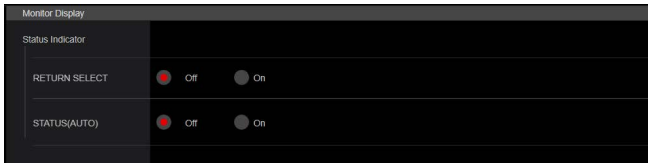
I CENTER [0 to 255]
Set the central position above the I axis (area where skin tone is to take effect).
Factory settings: 65

I WIDTH [0 to 255]
Set the width of the area where the skin tone is to take effect above the I axis, centered on [I CENTER].
Factory settings: 63

Q WIDTH [0 to 255]
Set the width of the area where the skin tone is to take effect above the Q axis, centered on [I CENTER].
Factory settings: 32

Q PHASE [0 to 359]
Set the phase of the area where skin tone is to take effect based on the Q axis.
Factory settings: 90

Monitor display setting display [Monitor Display]



Status Indicator

For items that have been set to [On], when the designated status is reached and where [CHAR] is [ON], the statuses are displayed in the images of connectors where [OUTPUT ITEM] is set to [STATUS].

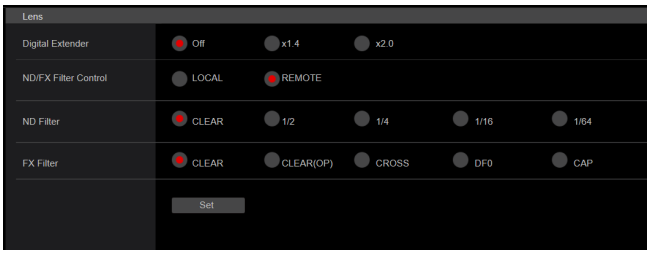
RETURN SELECT [Off, On]
When [On], the character string set in [RETURN] – [RETURN1 ID] is displayed as OSD in the region at the top center of the screen.
The RETURN SELECT character string is displayed only on devices connected to the SDI OUT2 connector.

STATUS(AUTO) [Off, On]
When [On], the following status indications are displayed on the OSD:
- Display of the results after auto white balance is run
- Display of the results after auto black balance is run
- Error display when an error occurs

Factory settings: Off

Lens setting screen [Lens]

The setting is confirmed with the [Set] button.



Digital Extender [Off, ×1.4, ×2.0]

Make settings for the digital extender function.

Off	Turn the digital extender function Off.
×1.4	The digital zoom will be fixed at 1.4×.
×2.0	The digital zoom will be fixed at 2.0×.

Factory settings: Off

ND/FX Control [LOCAL, REMOTE]

This switch sets whether to adjust the <ND> filter and <FX> filter manually or remotely.

Factory settings: LOCAL

ND Filter [CLEAR, 1/2, 1/4, 1/16, 1/64]

This dial selects the filter to suit the brightness of the subject.

CLEAR	Does not use the ND filter.
1/2	Reduces the amount of light entering the MOS sensor to 1/2.
1/4	Reduces the amount of light entering the MOS sensor to 1/4.
1/16	Reduces the amount of light entering the MOS sensor to 1/16.
1/64	Reduces the amount of light entering the MOS sensor to 1/64.

Factory settings: CLEAR

FX Filter [CLEAR, CLEAR(OP), CROSS, DF0, CAP]

Select the filter for the desired effect.

CLEAR	Does not use the FX filter.
CLEAR(OP)	Does not use the FX filter.
CROSS	Sets the cross filter.
DF0	Sets the diffusion filter.
CAP	Shuts out light from entering the MOS sensor.

Factory settings: CLEAR

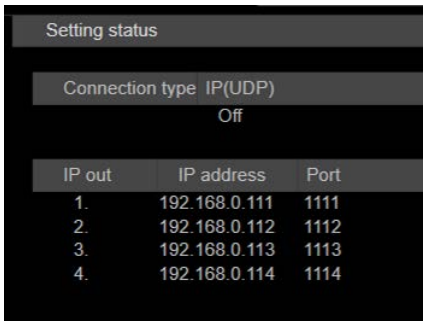
Collaboration capability [Linkage]

Tracking data output settings screen [Tracking Data Output]

Select the output mode of the tracking data and the communication destination in the IP mode.
Up to four addresses can be specified when the IP mode is enabled.

■ Setting status

Displays the destinations in IP mode.



■ Connection type

Camera ID [0 to 255]

Sets the Camera ID for tracking data.
The setting is confirmed with the [Set] button.

Factory settings: 255

IP(UDP) [On, Off]

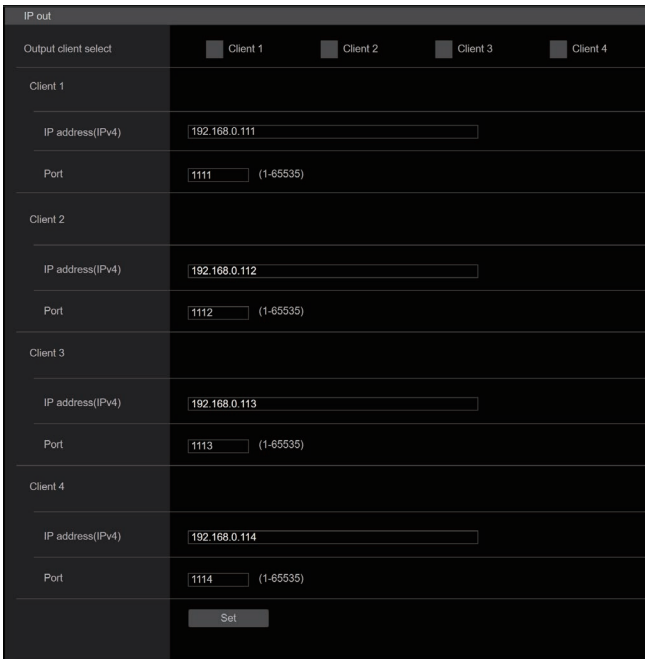
Sets the UDP output function [On] or [Off] to output tracking data, such as Zoom or other information from the IP output, synchronized with the Genlock signal. (page 94)
When [IP(UDP)] is set to [On], a warning message is displayed. Click the [OK] button to enable the settings.

Factory settings: Off

NOTE

- When [IP(UDP)] is [On], video transmission via IP may be delayed or the video may suffer frame loss.
  We recommend setting [IP(UDP)] to [Off] to avoid the delay or frame loss due to the video transmission via IP.
- In the following cases, the tracking data output may be delayed or the value may not be updated.
  - When performing video transmission via IP (M-JPEG/H.264/H.265/RTMP/RTMPS/NDI/SRT)
  - When opening the web screen (live screen [Live] or the web setting screen [Setup])
  - While viewing the OSD menu
  - When executing AWB/ABB
  - When a red or a green tally signal input has been changed between Off and On
  - After switching [SCENE]
  - After switching [IRIS]
  - After switching [WHITE BALANCE MODE]
  - After switching each item of [COLOR TEMP SETTING]
  - After switching [Gamma]
  - After switching [MATRIX]
  - After switching [DIGITAL EXTENDER]
  - After switching [FAN SETTING]
  - When executing [Reset to the default (Except the network settings)] of [Maintenance]

■ IP out



Output client select [Client 1 to 4]

Enable or disable up to four clients to forward the tracking data when [IP(UDP)] is [On].
Forwards the tracking data via UDP such as Zoom or other information to the clients that are set to enable on this screen.
The setting is confirmed with the [Set] button.

Factory settings:

Client1: Disable
Client2: Disable
Client3: Disable
Client4: Disable

NOTE

- Disable the client that does not require the forwarding of the tracking data because the UDP packet is transmitted to the enabled client at the system frequency interval.
- When multiple clients are enabled, the timing of transmitting the UDP packet to the second and subsequent clients will always be delayed relative to the Genlock signal.
  (Approximately 200 to 300 µs delay will occur for each client. The latency may be increased depending on the system status or the network environment of the unit.)

Client1 to 4

IP address(IPv4)

Sets the destination IP address to forward the tracking data such as Zoom or other information via UDP.
The setting is confirmed with the [Set] button.

Factory settings:

Client1: 192.168.0.111
Client2: 192.168.0.112
Client3: 192.168.0.113
Client4: 192.168.0.114

NOTE

- The address to forward the tracking data can only be configured as IPv4.
- A multicast address cannot be specified for the destination address.

Port

Sets the destination port number to forward the tracking data such as Zoom or other information via UDP.
The setting is confirmed with the [Set] button.
The following port numbers are used by the unit so they cannot be used.
20, 21, 23, 25, 42, 53, 67, 68, 69, 80, 110, 123, 161, 162, 443, 554, 995, 10669, 10670, 59000 to 61000

Factory settings:

Client1: 1111
Client2: 1112
Client3: 1113
Client4: 1114

NOTE

- You cannot set up clients having a combination of two or more IP addresses with duplicated ports.

User management screen [Access mng.]

The users and personal computers (IP addresses) that can access the unit from personal computers and mobile terminals are registered in the User management screen [Access mng.].
The User management screen [Access mng.] consists of [User auth.], [Host auth.] and [Rop].

User authentication screen [User auth.]

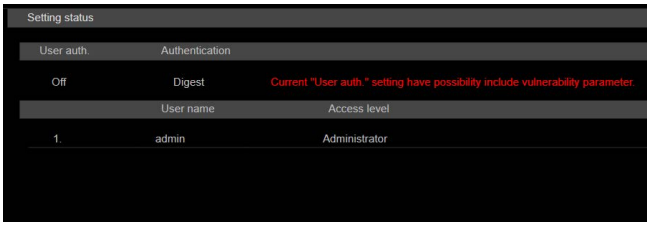
Click the [User auth.] of User management screen [Access mng.].
Configure the user authentication settings for the personal computers and mobile terminals that can access the unit.
Up to 9 users can be registered.

NOTE

- If user authentication fails more than 8 times within a 30-second period from the same IP address (personal computer), access to the unit will be disabled for a certain period.

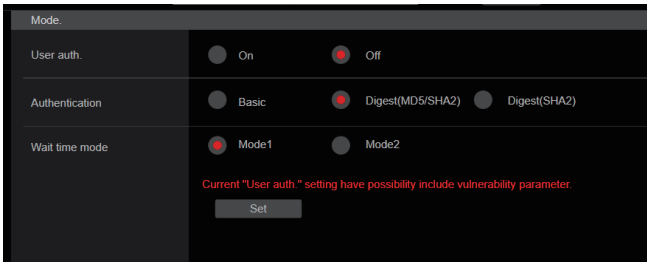
■ Setting status

The current user authentication settings and user authentication method are displayed. The currently registered account information is also displayed.



■ Mode

The setting is confirmed with the [Set] button.



User auth. [On, Off]

User authentication is set to [On] or [Off] here.
Factory settings: Off

Authentication [Basic, Digest(MD5/SHA2), Digest(SHA2)]

Specify the method of user authentication to use.

Basic	Use basic authentication.
Digest(MD5/SHA2)	Use digest authentication which enables connection to both MD5 and SHA2.
Digest(SHA2)	Use digest authentication which enables connection to just SHA2.

Factory settings: Digest(MD5/SHA2)

Wait time mode [Mode1, Mode2]

Set the wait time mode for re-entry of user authentication after authentication fails when controlling the unit from a personal computer or a Panasonic controller.

Mode1	The wait time for re-entry is longer compared to [Mode2]. This is the setting recommended if security is to be prioritized.
Mode2	The wait time for re-entry is shorter. This is the setting recommended if operability is to be prioritized.

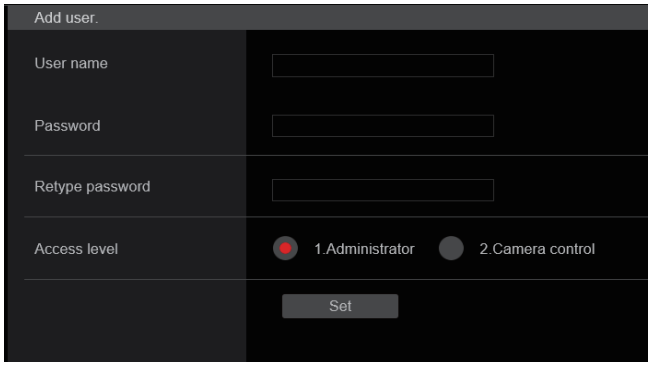
Factory settings: Mode1

NOTE

- When using the ROP, set [Wait time mode] to [Mode2] when using digest authentication.
  Smooth operation may be diminished when [Wait time mode] is set to [Mode1].
- Depending on the web browser you are using, you may not be able to access properly using digest authentication.

■ Add user

The setting is confirmed with the [Set] button.



User name
[1 to 32 characters]

The user name is input here.

- The following characters can be displayed.

Numeric characters	0123456789
Alphabetical characters (upper and lower cases)	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz
Symbols	! $ % ' ( ) * + , - . / ? @ [ ] ^ _ ` ~

Password
Retype password
[4 to 32 characters]

The password is input here.

Access level [1.Administrator, 2.Camera control]

Select the user access level.

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: 1.Administrator

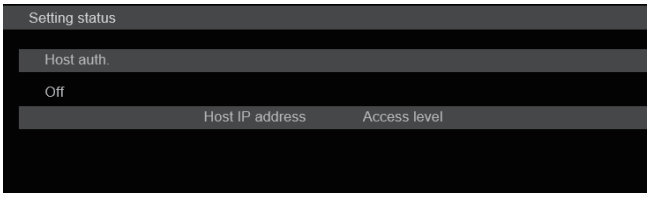
■ Delete user

Delete the user accounts registered in the unit.
You can delete selected users by clicking the [Delete] button at the right.

Host authentication screen [Host auth.]

Click the [Host auth.] of User management screen [Access mng.].
Configure the host authentication settings that restrict the personal computers (IP addresses) that can access the unit.

■ Setting status

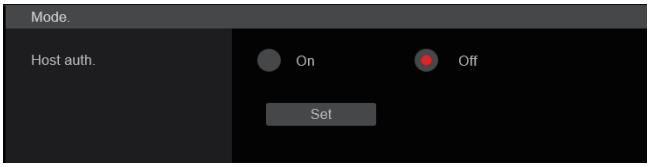


Host auth.
The host authentication settings are displayed.

Host IP address
The host IP address is displayed.

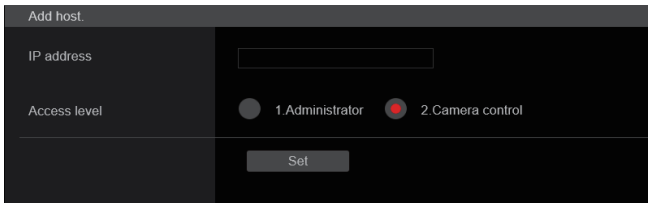
Access level
The host access level is displayed.

■ Mode



Host auth. [On, Off]
Host authentication is set to [On] or [Off] here.
The setting is confirmed with the [Set] button.
Factory settings: Off

■ Add host



IP address
The IP address of the personal computer from which access to the camera is allowed is input here. The host name cannot be input as the IP address.

NOTE

- When the “IP address/subnet mask length” is input, the personal computers which are allowed to access the camera can be restricted on a subnet by subnet basis.
  If, for instance, “192.168.0.1/24” has been input and the [2. Camera control] setting has been selected as the [Access level] setting, the personal computers from “192.168.0.1” to “192.168.0.254” will be able to access the camera at the [2. Camera control] access level.
- When an already registered IP address is input and the [Set] button is clicked, the host information will be overwritten.

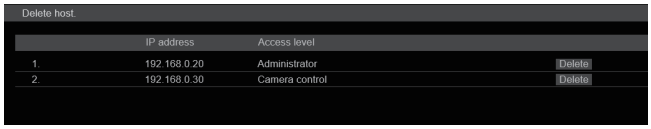
Access level [1.Administrator, 2.Camera control]
Select the host access level.
The setting is confirmed with the [Set] button.

1.Administrator	This access level allows the user to perform all the unit’s operations.
2.Camera control	This access level allows you to display images and control the unit. The unit cannot be set.

Factory settings: 2.Camera control

■ Delete host

Delete the host information registered in the unit.
You can delete selected host information by clicking the [Delete] button at the right.



ROP authentication screen [Rop]

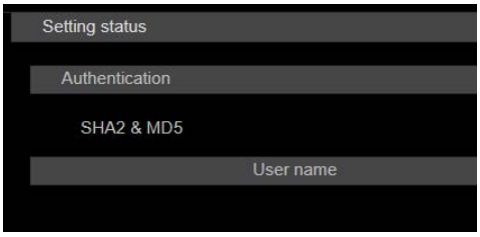
Click the [Rop] of User management screen [Access mng.].
Configure the ROP authentication settings for the ROP that can access the unit.
Up to 9 users can be registered.

NOTE

- If ROP authentication fails more than 8 times within a 30-second period from the same IP address (personal computer), access to the unit will be disabled for a certain period.

■ Setting status

The current user authentication settings and user authentication method are displayed. The currently registered account information is also displayed.



■ Mode

Rop auth. [SHA2 & MD5, SHA2]

Specify the method of user authentication to use.
The setting is confirmed with the [Set] button.

SHA2 & MD5	Setting that enables access to both SHA2 and MD5.
SHA2	Setting that enables access to SHA2 only.

Factory settings: SHA2 & MD5

■ Add user

The setting is confirmed with the [Set] button.

User name
[1 to 8 characters]

The user name is input here.

- The following characters can be displayed.

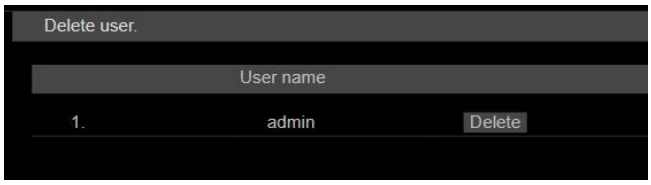
Numeric characters	0123456789
Alphabetical characters (upper and lower cases)	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz
Symbols	- _ #

Password
Retype password
[1 to 31 characters]

The password is input here.

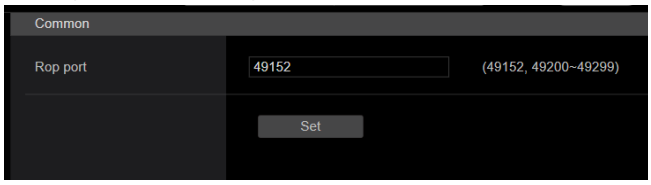
■ Delete user

Delete the user accounts registered in the unit.
You can delete selected users by clicking the [Delete] button at the right.



■ Common

Set the port number to accept ROP access.



Rop port [49152, 49200 to 49299]

The setting is confirmed with the [Set] button.
Factory settings: 49152

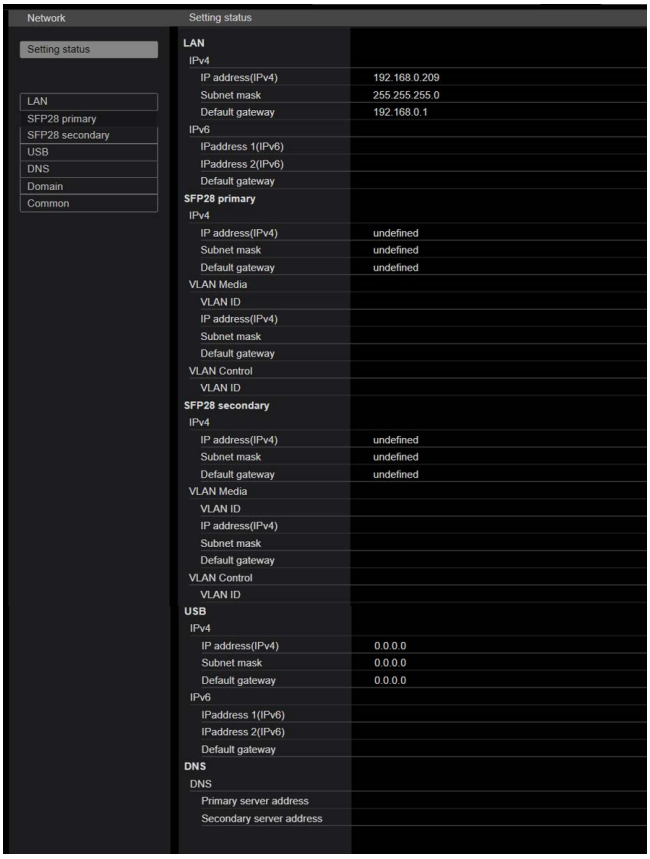
Network setup screen [Network]

Configure network settings in the Network setup screen [Network].
The Network setup screen [Network] consists of [Network] and [Advanced].

Network setup screen [Network]

Click the [Network] of the Network setup screen [Network].
Make the settings on the pages for the items.
The following information is required to configure network settings.
Consult your network administrator or Internet service provider.

- IP address
- Subnet mask
- Default gateway (when using a gateway server or router)
- HTTP port
- DNS primary and secondary server addresses (when using DNS), domain



NOTE

- If the subnet of the IP address set for the LAN, SFP28 Primary, SFP28 Secondary, and USB is duplicated, the network connectivity of the unit cannot be guaranteed, so take note of the IP addresses set manually and the IP addresses allocated by the DHCP.
- When connecting to IP addresses that have differing subnets, set so the metric of the interface to be used is the minimum value.
  For example, when connecting to IP addresses where the domain name has been resolved, set the metric of the interface to be used to the minimum value.
- When multicast transmission is to be used, set the metric of the interface to be used to the minimum value.
- Multicast transmissions other than with the Media over IP function using the SFP28 Primary/SFP28 Secondary interface are not possible.
- If the same subnet was set and you cannot access this unit, set an IP address with a different subnet with the EasyIP Setup tool, then revise the settings again from the web page.
- If the metric values are set to the same values for each of the interfaces, the network connectivity of the unit cannot be guaranteed, so take note of the IP addresses set manually and the IP addresses allocated by the DHCP.

■ LAN

IPv4 network

DHCP [On, Off]

Select the method in which the IP address is configured.
Factory settings: Off

NOTE

- When [DHCP] is set to [On], the ROP's automatic configuration of IP address (AUTO IP) cannot be used.

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.

IPv6 network

Manual [On, Off]

Enable or disable manual configuration of the IPv6 address.

On	Enter the IPv6 address manually.
Off	Disable manual entry of the IPv6 address.

Factory settings: Off

IP address(IPv6)

When [Manual] is set to [On], 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

When [Manual] is set to [On] for [IPv6 network], enter the default gateway for the unit's IPv6 network.

Factory settings: blank

NOTE

- It is not possible to set the default gateway when [DHCPv6] is [On].

DHCPv6 [On, Off]

Enable or disable use of the IPv6 DHCP function.

Configure the DHCP server so that the same IP address is not configured for a personal computer that does not use the DHCP function and other network cameras. For details on server settings, consult your network administrator.

On	Use the IPv6 DHCP function.
Off	Do not use the IPv6 DHCP function.

Factory settings: Off

Metric [100 to 110]

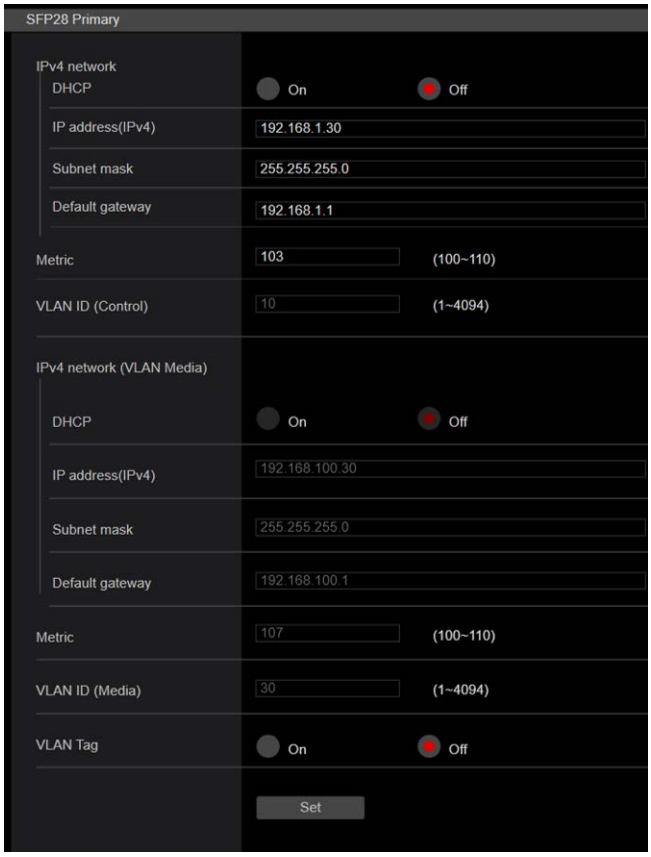
Set the LAN interface priority for this unit.

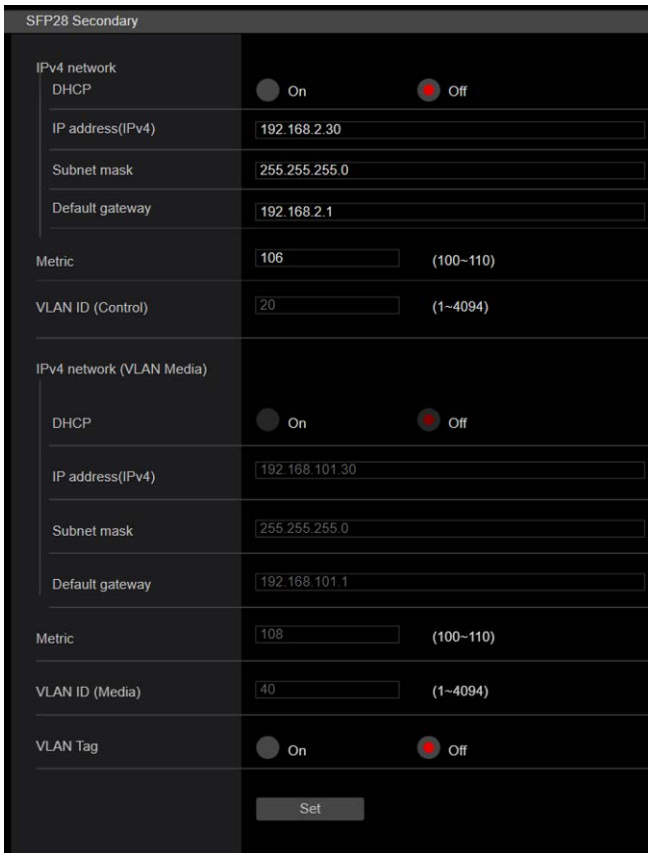
Packets are output with priority to the interface with the lower number compared to the value set in [SFP 1]/[SFP 2]/[USB].

Factory settings: 100

■ SFP28 Primary/SFP28 Secondary

The setting is confirmed with the [Set] button.





NOTE

- This cannot be set when the [Basic Config] – [Opt Mode] is [CCU CONNECT].

IPv4 network

DHCP [On, Off]

Select the method for setting the IP address.

Factory settings: Off

NOTE

- When [DHCP] has been set to [On], it is not possible to use the automatic IP address setting (AUTO IP) from the ROP.

IP address(IPv4)

When not using the DHCP function, enter the unit's IP address.
Enter so that the address does not duplicate the IP addresses of the personal computer or other network cameras.

Factory settings: 192.168.0.10

NOTE

- Even when using the DHCP function, it is not possible to use multiple IP addresses. Consult the network administrator regarding the settings for the DHCP server.

Subnet mask

When not using the DHCP function, enter the unit's subnet mask.

Factory settings: 255.255.255.0

Default gateway

When not using the DHCP function, enter the unit's default gateway.

Factory settings: 192.168.0.1

NOTE

- Even when using the DHCP function, it is not possible to use multiple IP addresses with the default gateway.
  Consult the network administrator regarding the settings for the DHCP server.

Metric [100 to 110]

Set the priority of the interface for SFP28Primary on this unit.
Packets are output with priority to the interface with the lower number compared to the value set in [LAN]/[SFP28Primary/Secondary]/[USB].

Factory settings: 103

VLAN ID (Control) [1 to 4094]

Set the VLAN ID for control.

Factory settings: 10

IPv4 network (VLAN Media)

DHCP [On, Off]

Select the method for setting the IP address.

Factory settings: Off

NOTE

- When [DHCP] has been set to [On], it is not possible to use the automatic IP address setting (AUTO IP) from the ROP.

IP address(IPv4)

When not using the DHCP function, enter the unit's IP address.
Enter so that the address does not duplicate the IP addresses of the personal computer or other network cameras.

Factory settings: 192.168.0.10

NOTE

- Even when using the DHCP function, it is not possible to use multiple IP addresses. Consult the network administrator regarding the settings for the DHCP server.

Subnet mask

When not using the DHCP function, enter the unit's subnet mask.

Factory settings: 255.255.255.0

Default gateway

When not using the DHCP function, enter the unit's default gateway.

Factory settings: 192.168.0.1

NOTE

- Even when using the DHCP function, it is not possible to use multiple IP addresses with the default gateway.
  Consult the network administrator regarding the settings for the DHCP server.

Metric [100 to 110]

Set the priority of the interface for SFP28 on this unit.
Packets are output with priority to the interface with the lower number compared to the value set in [LAN]/[SFP28Primary/Secondary]/[USB].

Factory settings: 103

VLAN ID (Media) [1 to 4094]

Set the VLAN ID for media transmission.

Factory settings: 30

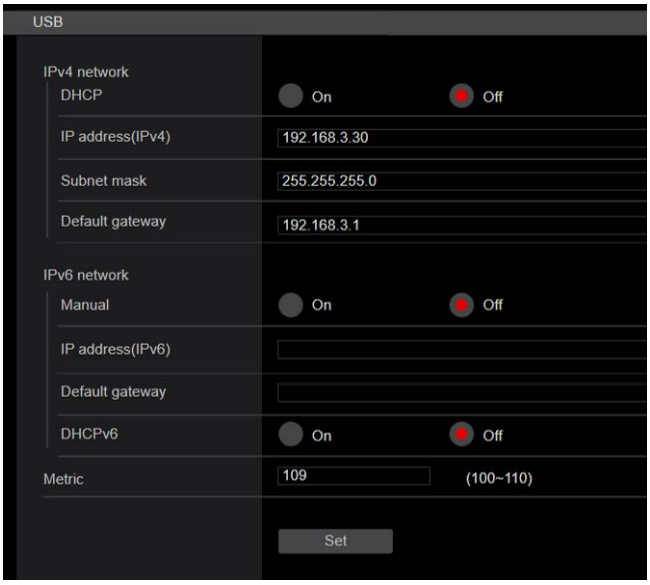
VLAN Tag [On, Off]

Set to [On] when setting a VLAN with both control and media within the same interface.

Factory settings: Off

■ USB

The setting is confirmed with the [Set] button.



IPv4 network

DHCP [On, Off]

Select the method for setting the IP address.

Factory settings: Off

NOTE

- When [DHCP] has been set to [On], it is not possible to use the automatic IP address setting (AUTO IP) from the ROP.

IP address(IPv4)

When not using the DHCP function, enter the unit's IP address.
Enter so that the address does not duplicate the IP addresses of the personal computer or other network cameras.

Factory settings: 192.168.3.10

NOTE

- Even when using the DHCP function, it is not possible to use multiple IP addresses. Consult the network administrator regarding the settings for the DHCP server.

Subnet mask

When not using the DHCP function, enter the unit's subnet mask.

Factory settings: 255.255.255.0

Default gateway

When not using the DHCP function, enter the unit's default gateway.

Factory settings: 192.168.3.1

NOTE

- Even when using the DHCP function, it is not possible to use multiple IP addresses with the default gateway.
  Consult the network administrator regarding the settings for the DHCP server.

IPv6 network

Manual [On, Off]

Enable or disable manual configuration of the IPv6 address.

On	Enter the IPv6 address manually.
Off	Disable manual entry of the IPv6 address.

Factory settings: Off

IP address(IPv6)

When [Manual] is set to [On], 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

When [Manual] is set to [On] for [IPv6 network], enter the default gateway for the unit's IPv6 network.

Factory settings: blank

NOTE

- It is not possible to set the default gateway when [DHCPv6] is [On].

DHCPv6 [On, Off]

Enable or disable use of the IPv6 DHCP function.
Configure the DHCP server so that the same IP address is not configured for a personal computer that does not use the DHCP function and other network cameras. For details on server settings, consult your network administrator.

On	Use the IPv6 DHCP function.
Off	Do not use the IPv6 DHCP function.

Factory settings: Off

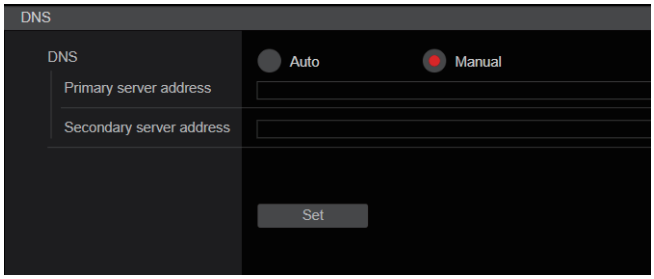
Metric [100 to 110]

Set the USB interface priority for this unit.
Packets are output with priority to the interface with the lower number compared to the value set in [LAN]/[SFP 1]/[SFP 2].

Factory settings: 109

■ DNS

The setting is confirmed with the [Set] button.



DNS [Auto, Manual]

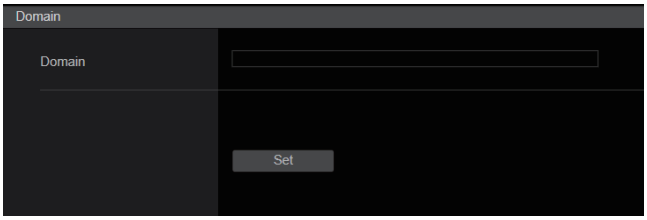
Select the method for setting the DNS server.
Consult the system administrator regarding the settings.
Factory settings: Manual

Primary server address

Secondary server address
Enter the IPv4/IPv6 address for the DNS server.
Consult the system administrator regarding the IPv4/IPv6 address for the DNS server.

■ Domain

The setting is confirmed with the [Set] button.

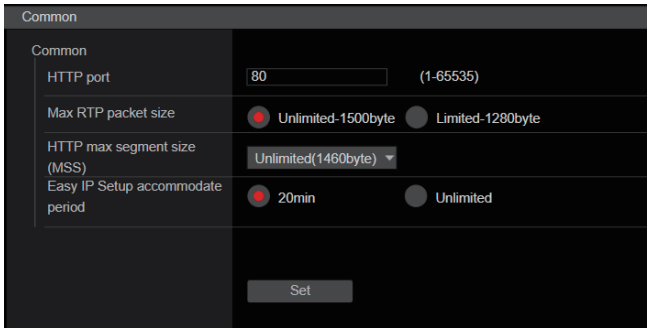


Domain

Set the domain that this unit belongs to.

■ Common (to IPv6/IPv4)

The setting is confirmed with the [Set] button.



HTTP port [1 to 65535]

Port numbers are allocated separately.
The following port numbers are used by the unit so they cannot be used.
20, 21, 23, 25, 42, 53, 67, 68, 69, 110, 123, 161, 162, 443, 546, 547, 554, 995, 5960 to 5985, 7960 to 8060, 10669, 10670, 11900, 59000 to 61000
Factory settings: 80

Max RTP packet size [Unlimited-1500byte, Limited-1280byte]

Specify whether to limit the size of RTP packets sent from the camera when using RTP to view camera images.

Unlimited-1500byte	Unlimited (1500 byte)
Limited-1280byte	Limited (1280 byte)

Factory settings: Unlimited-1500byte

Normally, it is recommended that the [Unlimited-1500byte] setting be used.
Select [Limited-1280byte] when the packet size of the used communication line is limited. For details on the maximum packet size of communication lines, consult your network administrator.

HTTP max segment size (MSS) [Unlimited(1460byte), Limited(1280byte), Limited(1024byte)]

Select whether to limit the maximum segment size (MSS) transmitted by a camera when viewing camera images using HTTP.

Unlimited(1460byte)	Unlimited (1460 byte)
Limited(1280byte)	Limited (1280 byte)
Limited(1024byte)	Limited (1024 byte)

Factory settings: Unlimited(1460byte)

Normally, it is recommended that the default setting be used.
Select [Limited(1024byte)]/[Limited(1280byte)] when the maximum segment size (MSS) of the used communication line is limited. For details on the maximum segment size (MSS) of communication lines, consult your network administrator.

Easy IP Setup accommodate period [20min, Unlimited]

Sets the time allowed for network setting operations from EasyIP Setup Tool Plus. 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 for just 20 minutes after start up of this unit.
Unlimited	Allows camera setting operations on the EasyIP Setup Tool Plus at any time.

Factory settings: 20min

NOTE

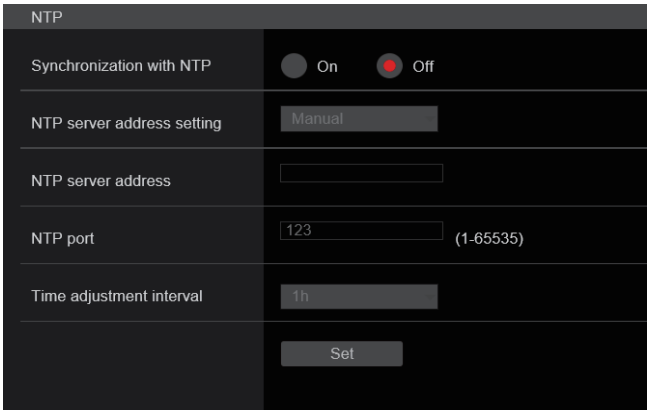
- Camera display on the EasyIP Setup Tool Plus is enabled all the time, and the camera screen can be opened.
- For details on the address settings of each server, consult your network administrator.
- The port forwarding function converts a global IP address to a private IP address, and includes “static IP masquerade” and “network address translation (NAT)”. This function is set to the router.
- 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.

Advanced network setting screen [Advanced]

Click the [Advanced] in the network setup screen [Network].
Settings relating to the NTP and HTTPS functions are performed here.
Click the links to each item to move to the respective setting page.

■ NTP

Settings relating to the NTP server address and port No. are performed here.
The setting is confirmed with the [Set] button.



Synchronization with NTP [On, Off]

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 screen [Date&Time] will be used as this unit's standard time.

Factory settings: Off

NTP server address setting [Auto, Manual]

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, [DHCP] or [DHCPv6] must be set to [On] in the [Network] of the network setup screen [Network]. (page 158)

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	1 to 128 characters
Characters that can be entered	Alphanumeric characters, 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]. (page 158)
- This does not work when link local address is set in [NTP server address].

NTP port [1 to 65535]

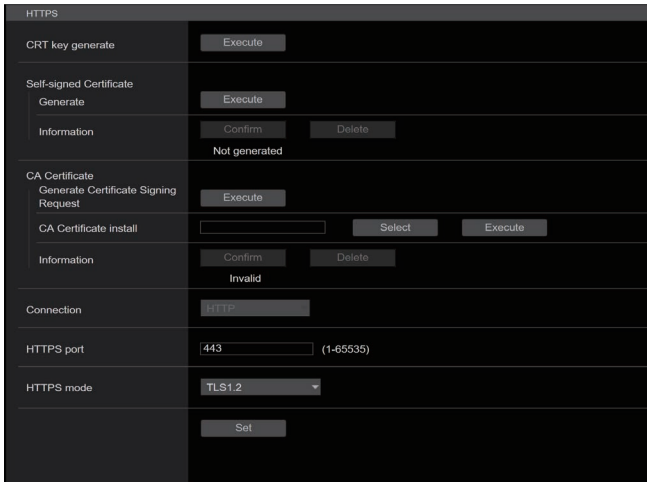
Input the port No. of the NTP server.
The following port numbers are used by the unit so they cannot be used.
20, 21, 23, 25, 42, 53, 67, 68, 69, 80, 110, 161, 162, 443, 546, 547, 554, 995, 5960 to 5985, 7960 to 8060, 10669, 10670, 11900, 59000 to 61000
Factory settings: 123

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

■ HTTPS

Using the HTTPS function enables access to the camera to be encrypted and communication safety to be improved.
The setting is confirmed with the [Set] button.
See page 169 for details on the HTTPS setup method.



CRT key generate

A CRT key (SSL encryption key) is generated by HTTPS.
To generate a CRT key, click the [Execute] button to display the [CRT key generate] dialog.
For details, refer to "Generating a CRT key (SSL encryption key)" (page 170).

Self-signed Certificate - Generate

A self-signed security certificate is generated by HTTPS. (Self-signed Certificate)
To generate a self-signed certificate (security certificate), click the [Execute] button to display the [Self-signed Certificate - Generate] dialog and perform the operation.
For details, refer to "Generating a self-signed certificate (security certificate)" (page 170).

Self-signed Certificate - Information

This displays information relating to the self-signed certificate (security certificate).
When the [Confirm] button is clicked, the registered content of the generated self-signed certificate (security certificate) is displayed in the [Self-signed Certificate - Confirm] dialog.
Click the [Delete] button to delete the generated self-signed certificate (security certificate).

CA Certificate - Generate Certificate Signing Request

When using a security certificate issued by the Certificate Authority (CA) as a security certificate for HTTPS, a Certificate Signing Request (CSR) is generated for application to the Certificate Authority (CA).
To generate a Certificate Signing Request (CSR), click the [Execute] button to display the [CA Certificate - Generate Certificate Signing Request] dialog and perform the operation.
For details, refer to “Generating a Certificate Signing Request (CSR)” (page 171).

CA Certificate - CA Certificate install

This displays information relating to server certificates (security certificates) issued by the Certificate Authority (CA), which are to be or are already installed.
In the [File Open] dialog, which is displayed by clicking the [Select] button, select the file of the server certificate (security certificate) issued by the Certificate Authority (CA) and click the [Execute] button to install the server certificate (security certificate).
If the server certificate (security certificate) is installed, its file name will be displayed.
For details, refer to “Installing a Server Certificate” (page 172).

CA Certificate - Information

This displays information relating to the server certificate (security certificate).
When the [Confirm] button is clicked, the registered content of the installed server certificate (security certificate) is displayed in the [Server Certificate - Confirm] dialog. If the server certificate (security certificate) is not installed, the content of the generated Certificate Signing Request (CSR) is displayed.
Click the [Delete] button to delete the installed server certificate (security certificate).

NOTE

- To delete an enabled server certificate (security certificate), confirm that there is a backup to the said certificate in your personal computer or recording media. A server certificate (security certificate) will be needed to reinstall it.

Connection [HTTP, HTTPS]

This sets the method to connect to the unit.

HTTP	Only HTTP connection is possible.
HTTPS	Only HTTPS connection is possible.

Factory settings: HTTP
For details, refer to “Setting the Connection Method” (page 173).

NOTE

- When using an HTTPS connection, network connection with the ROP will be disabled.

HTTPS port [1 to 65535]

This sets the Port No. to be used with HTTPS.
The following port numbers are used by the unit so they cannot be used.
20, 21, 23, 25, 42, 53, 67, 68, 69, 80, 110, 123, 161, 162, 546, 547, 554, 995, 5960 to 5985, 7960 to 8060, 10669, 10670, 11900, 59000 to 61000
Factory settings: 443

NOTE

- This unit will restart if the connection method is changed.
- When using a self-signed certificate:
  A warning screen is displayed when accessing the camera by HTTPS for the first time. Install the self-signed certificate (security certificate) in your personal computer in accordance with the screen instructions. (page 174)
- When using a server certificate:
  Install the Certificate Authority (CA) root certificate or intermediate certificate in your web browser in advance.
  Follow the Certificate Authority (CA) procedures to acquire and install root certificates and intermediate certificates.
- When accessing the camera by HTTPS, the image display speed and frame rate of the moving image may reduce.
- When accessing the camera by HTTPS, it may take some time for the images to be displayed.
- When accessing the camera by HTTPS, images may be disturbed and sound may be interrupted.
- The maximum number of cameras that can be connected simultaneously depends on the maximum image size and distribution format.

HTTPS mode [TLS1.0/1.1/1.2/1.3, TLS1.2, TLS1.3]

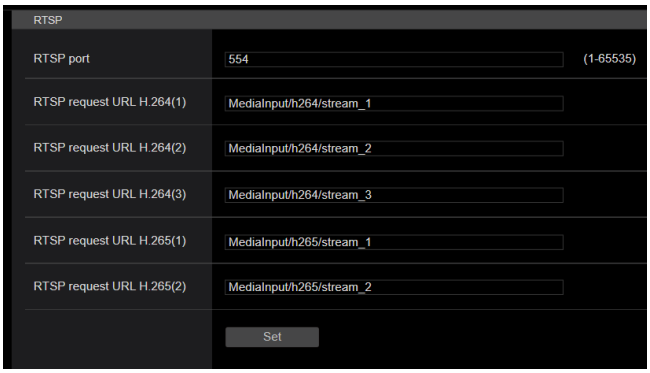
This sets the encryption protocol when accessing the camera with HTTPS.

TLS1.0/1.1/1.2/1.3	Permits connection with TLS1.0/1.1/1.2/1.3 when HTTPS is enabled.
TLS1.2	Permits connection with TLS1.2 when HTTPS is enabled.
TLS1.3	Permits connection with TLS1.3 when HTTPS is enabled.

Factory settings: TLS1.2

■ RTSP

This performs settings related to the RTSP function. The RTSP function sets the RTSP transmission port and RTSP request URL used during IP image transmission.
The setting is confirmed with the [Set] button.



RTSP port [1 to 65535]

Sets the RTSP reception port no.
The following port numbers are used by the unit so they cannot be used.
20, 21, 23, 25, 42, 53, 67, 68, 69, 80, 110, 123, 161, 162, 443, 546, 547, 995, 5960 to 5985, 7960 to 8060, 10669, 10670, 11900, 59000 to 61000
Factory settings: 554

RTSP request URL

Sets up the URL for RTSP when making IP image transmission demands to this unit.

RTSP request URL H.264(1)	RTSP URL for H.264(1) image transmission
RTSP request URL H.264(2)	RTSP URL for H.264(2) image transmission
RTSP request URL H.264(3)	RTSP URL for H.264(3) image transmission
RTSP request URL H.265(1)	RTSP URL for H.265(1) image transmission
RTSP request URL H.265(2)	RTSP URL for H.265(2) image transmission

Factory settings:

RTSP request URL H.264(1)	MediaInput/h264/stream_1
RTSP request URL H.264(2)	MediaInput/h264/stream_2
RTSP request URL H.264(3)	MediaInput/h264/stream_3
RTSP request URL H.265(1)	MediaInput/h265/stream_1
RTSP request URL H.265(2)	MediaInput/h265/stream_2

- Up to 255 characters can be entered.
- The following characters can be displayed.

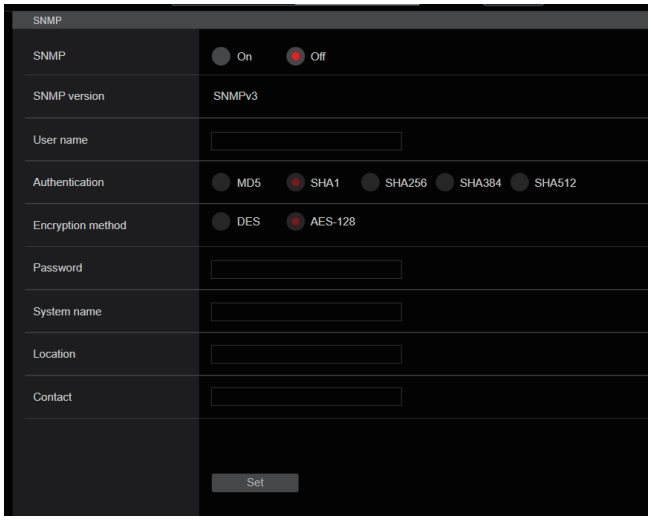
Numeric characters	0123456789
Alphabetical characters (upper and lower cases)	ABCDEFGHIJKLMNOPQRSTUVWXYZ abcdefghijklmnopqrstuvwxyz
Symbols	/ - _

NOTE

- RTSP request URL cannot have the same URL.

■ SNMP

Make SNMP functionality related settings. You can check the status of the unit by using the SNMP manager to connect.
The setting is confirmed with the [Set] button.



SNMP [On, Off]

Sets whether to use the SNMP function.
Factory settings: Off

User name

Sets the user name used for user authentication.
You need to specify the same user name that you set here in the SNMPv3 manager.

Maximum number of characters	0 to 32 characters
Characters that cannot be entered	Double-byte

Authentication

Sets the algorithm used for user authentication.

MD5	MD5 is used as the algorithm for user authentication.
SHA1	SHA1 is used as the algorithm for user authentication.
SHA256	SHA256 is used as the algorithm for user authentication.
SHA384	SHA384 is used as the algorithm for user authentication.
SHA512	SHA512 is used as the algorithm for user authentication.

Factory settings: SHA1

Encryption method

Sets the encryption method used for communications.

DES	DES is used as the encrypted communication method for SNMPv3.
AES-128	AES-128 is used as the encrypted communication method for SNMPv3.

Factory settings: AES-128

Password

Sets the password used for user authentication.
You need to specify the same password that you specified here in the SNMPv3 manager.

Maximum number of characters	When [Authentication] is set to [MD5]: 8 to 16 characters When [Authentication] is set to [SHA1]: 8 to 20 characters
Characters that cannot be entered	Double-byte

System name

Enter the device name used to manage this unit using SNMP functionality.

Maximum number of characters	0 to 32 characters
Characters that cannot be entered	Double-byte

Location

Sets the location where this unit has been installed.

Maximum number of characters	0 to 32 characters
Characters that cannot be entered	Double-byte

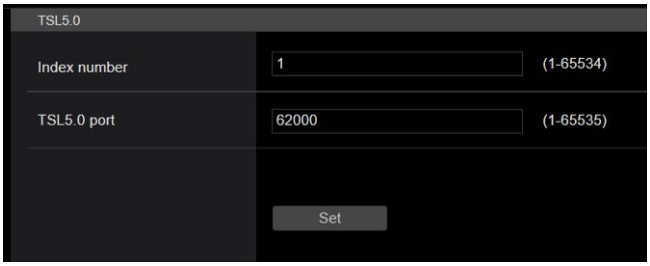
Contact

Enter the email address or phone number of the administrator.

Maximum number of characters	0 to 255 characters
Characters that cannot be entered	Double-byte

■ TSL5.0

Make settings related to TSL protocol version 5.0. Set the information required to control the tallies of this unit from a device that supports the TSL5.0 protocol with the TSL5.0 function.
The setting is confirmed with the [Set] button.



Index number [1 to 65534]

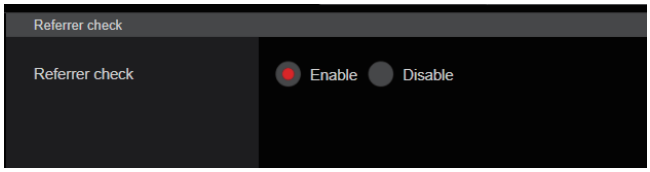
By matching the INDEX set on the TSL5.0 control device and the Index number of this unit, you can control the tallies of this unit individually.
Factory settings: 1

TSL5.0 port [1 to 65535]

Sets the port number that will receive controls via the TSL 5.0 protocol.
Factory settings: 62000

■ Referrer check

By enabling Referrer check, you can confirm that the device requesting access to the camera is legitimate.
Access is refused if it is determined that the device attempting access is unauthorized.
Depending on the environment in which the unit is being used, it may not be possible to access the unit when Referrer check is enabled.
If this occurs, you can access the unit by disabling Referrer check, but you will no longer be able to determine if the device attempting access is unauthorized.

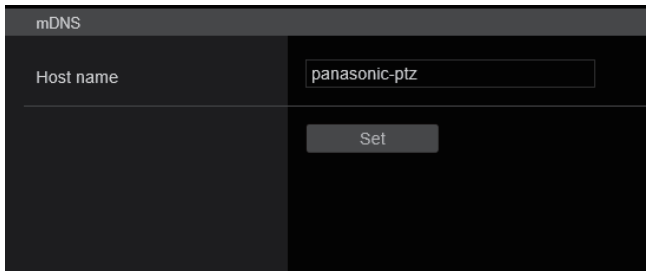


Enable	The Referrer check function is used.
Disable	The Referrer check function is not used.

Factory settings: Enable

■ mDNS

By setting an [mDNS] [Host name], it is possible to access this unit via http://Host name.local.
The setting is confirmed with the [Set] button.



Maximum number of characters	63 characters
Characters that can be entered	Alphanumeric characters, symbols : -

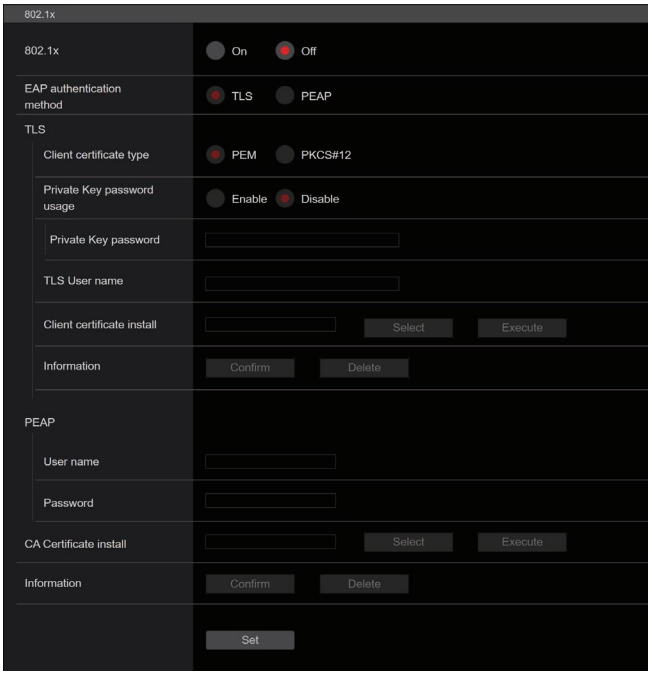
Factory settings: panasonic-ptz

NOTE

- Proper operation cannot be guaranteed if there is another camera with the same settings in the same network.

■ 802.1X

Makes settings for the IEEE 802.1X client.
The setting is confirmed with the [Set] button.



NOTE

- You will require 802.1X knowledge in order to complete the settings. Consult the network administrator for details.
- It is necessary to make settings for an authentication server and Authenticator separately when building a system that uses this function.
  Consult the network administrator for details.
- In a system configuration where 802.1X is enabled, it is not possible to control the camera from the ROP.
- Before setting, go to either the [Date&Time] settings screen or the [NTP] settings screen to set the time for this unit.
  Proper operation may not be possible if the time has not be set correctly for the unit.
- Before setting, in the [Date&Time] settings screen, set [Memory] to [Enable].

802.1x [On, Off]

Sets whether to use the 802.1X function.
Factory settings: Off

EAP authentication method [TLS, PEAP]

Makes settings for the authentication method used for the 802.1X function.
This unit supports authentication methods using TLS or PEAP.
Factory settings: TLS

NOTE

- Proper operation may not be possible if it does not match the authentication method permitted by the authentication server.

TLS

Makes settings for when the TLS authentication method is used.

Client certificate type [PEM, PKCS#12]
Makes settings for the client certificate method used with TLS authentication.
This unit supports the PEM and PKCS#12 methods.

NOTE

- When a private key is to be used, the private key information must be included in the client certificate.
  Set [Private Key password usage] to [Enable] and set the correct password.
- When installing a client certificate with the PKCS#12 method, it is necessary to set [Private Key password usage] to [Enable] and to set the correct password.
- If the PKCS#12 method is selected, the PKCS#12 password and the [Private Key password] need to match.

Private Key password usage [Enable, Disable]
Sets whether to use a private key in the client certificate.

Enable	Select when a private key is to be used.
Disable	Select when a private key is not to be used.

NOTE

- If [Enable] is selected, the correct value needs to be set for [Private Key password].

Private Key password
Makes settings for the password set in the private key.

NOTE

- When installing a PKCS#12 method client certificate, enter the same password as the one set for PKCS#12.

TLS User name
Sets a user name permitted by TLS authentication.

NOTE

- Consult the network administrator regarding valid user names.

Client certificate install
Installs the client certificate.

NOTE

- The client certificate installed must be the correct one issued by the certificate authority.
- Before installing the certificate, check that the settings for [Client certificate type], [Private Key password usage], and [Private Key password] have been completed.
  The certificate may not be installed correctly if the above settings have not been completed.

PEAP

Makes settings for when the PEAP authentication method is used.

User name

Sets a user name permitted by PEAP authentication.

NOTE

- Consult the network administrator regarding valid user names.

Password

Sets the password attached to the User name in PEAP authentication.

NOTE

- Consult the network administrator regarding valid passwords.

CA Certificate install

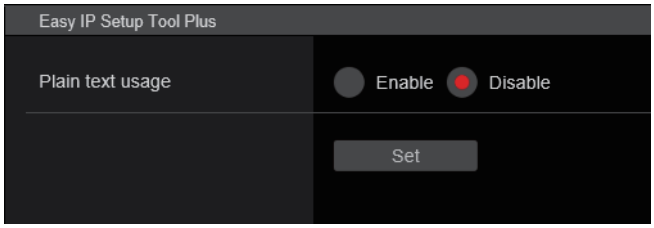
Installs the CA certificate used in IEEE 802.1X authentication.

NOTE

- The CA certificate installed must be one issued by the correct certificate authority.

■ Easy IP Setup Tool Plus

Makes settings related to Easy IP Setup Tool Plus.
The setting is confirmed with the [Set] button.

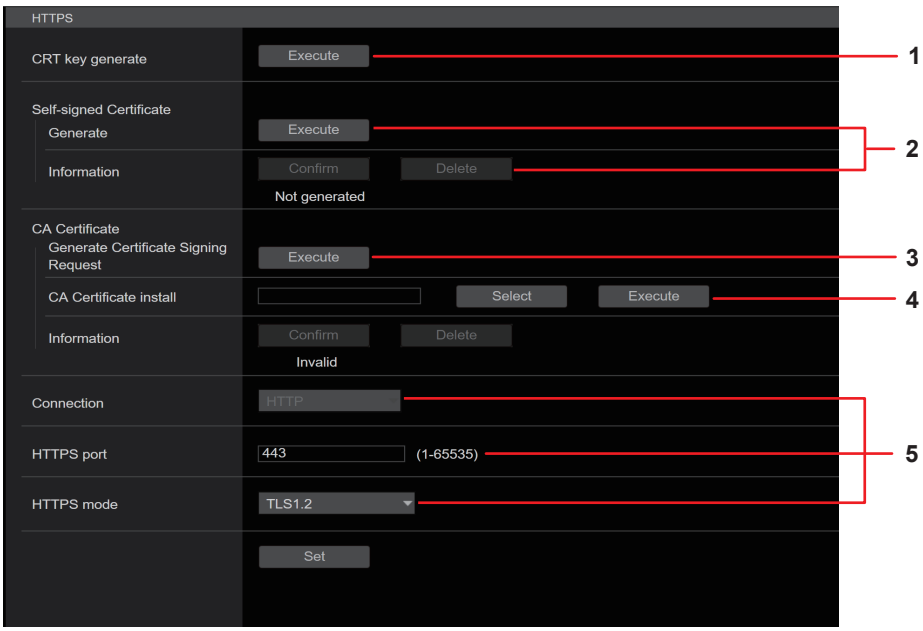


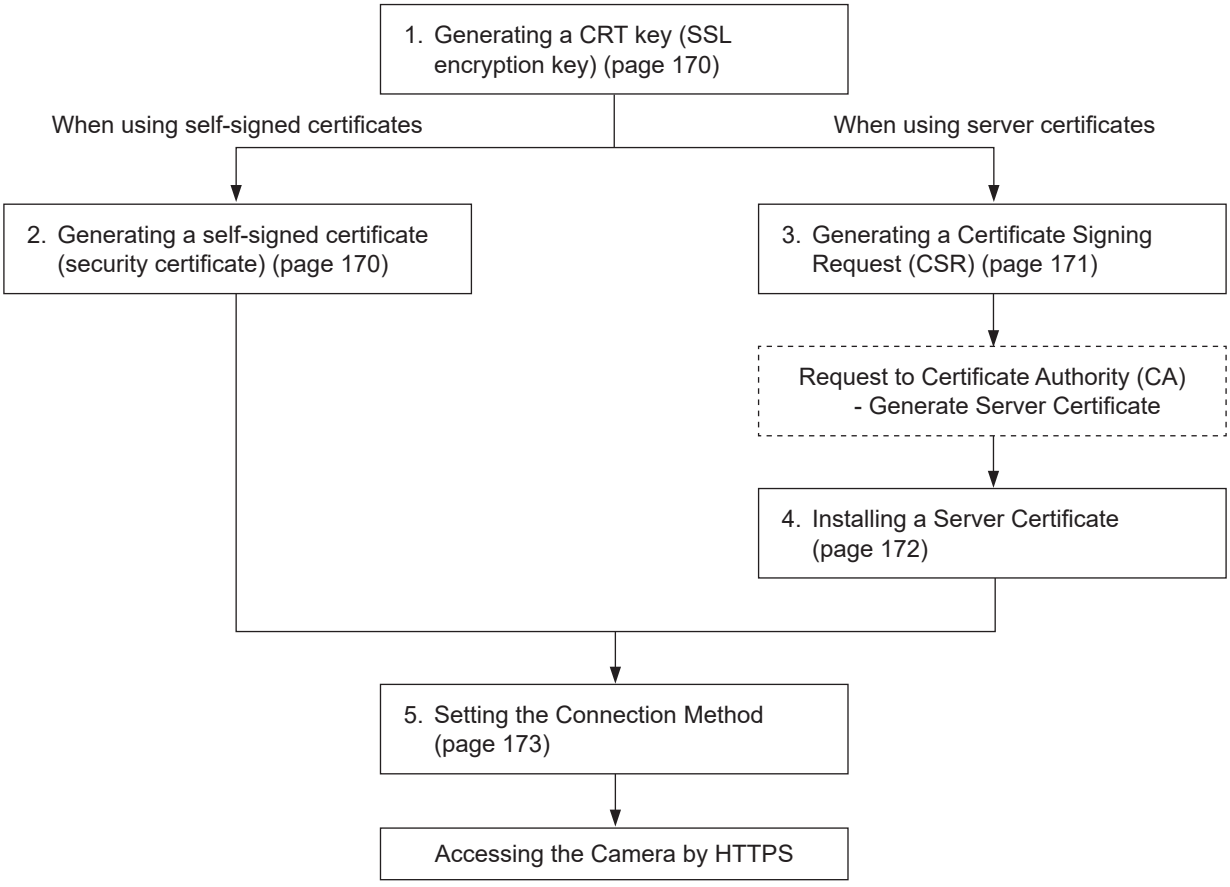
Plain text usage [Enable, Disable]

Sets whether to encrypt the communications with Easy IP Setup Tool Plus.
Factory settings: Disable

HTTPS settings [HTTPS]

This encrypts access to the camera and sets HTTPS to improve communication safety.
Setting HTTPS is performed by following the procedures below.
The setting is confirmed with the [Set] button.





NOTE

- When using a server certificate, the process from applying to the Certificate Authority (CA) to issuing a server certificate must be performed between customers and the Certificate Authority (CA).
- Use either a self-signed certificate or server certificate. When simultaneously generating a self-signed certificate and installing a server certificate, this unit will prioritize the server certificate.

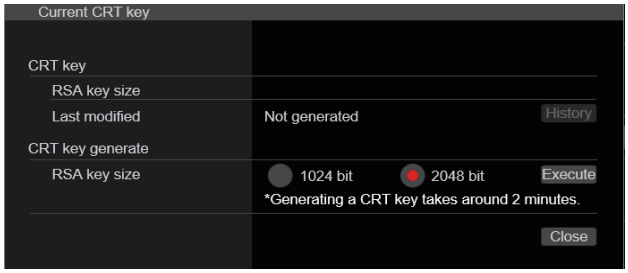
Generating a CRT key (SSL encryption key) [CRT key generate]

NOTE

- A CRT key cannot be generated when self-signed certificates and server certificates are enabled.
- The size of the key that can be used by the Certificate Authority (CA) differs when using a server certificate. Confirm in advance the the size of the key that can be used.
- Generating a CRT key takes about 1 minute for 1024 bit and about 2 minutes for 2048 bit. Do not operate the web browser until CRT key generation is complete. Image display and communication speed may reduce while generating a CRT key.

1. Click the [Execute] button in [CRT key generate].

The [Current CRT key] dialog is displayed.



2. The size of the generated CRT key is selected from [1024bit]/[2048bit] in [CRT key generate] – [RSA key size].

NOTE

- When using a server certificate, the RSA key size must be in accordance with the demands of the Certificate Authority (CA) which will be applied to.

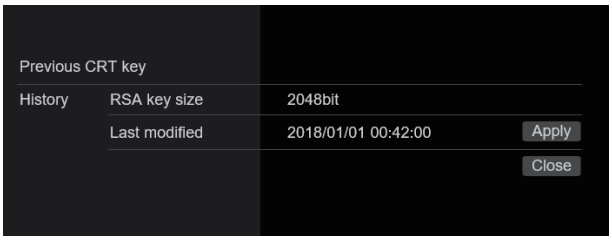
3. Click the [Execute] button.

CRT key generation starts.

The length of the generated CRT key and the date/time that generation completed are displayed in [Current CRT key] when CRT key generation finishes.

NOTE

- Perform procedures 1 to 3 to change (update) the generated CRT key. Because the CRT key, self-signed certificate and server certificate are enabled as a set, it will be necessary to once again generate a self-signed certificate or apply for a server certificate when the CRT key is changed.
- When the CRT key is changed, previous CRT keys are historically managed one at a time. Clicking the [History] button in the [CRT key] of the [Current CRT key] dialog displays the [Previous CRT key] dialog, allowing confirmation of the key size and the date and time generation was completed.
  Clicking the [Apply] button in [Previous CRT key] allows the previous CRT key to be switched to the current CRT key.



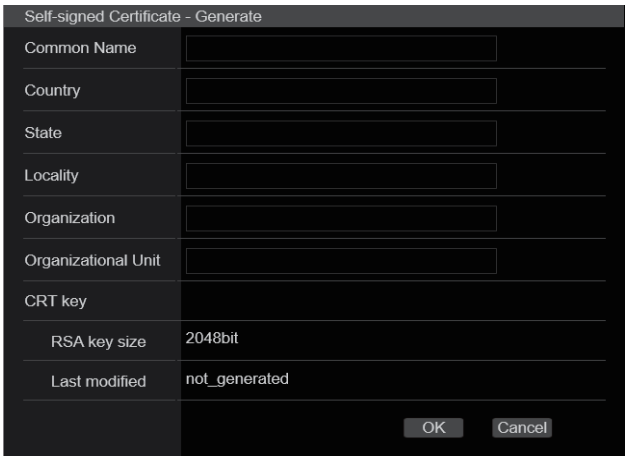
Generating a self-signed certificate (security certificate) [Self-signed Certificate - Generate]

NOTE

- A self-signed certificate cannot be generated when a CRT key has not been generated.

1. Click the [Execute] button in [Self-signed Certificate] - [Generate].

[Self-signed Certificate - Generate] is displayed.



2. Input information relating to the certificate to be generated.

Items to be entered are as follows.

Item	Description	Maximum number of characters
Common Name	Inputs the camera address or host name.	64 characters
Country	Inputs the country code. (May be omitted)	2 characters: country code
State	Inputs the name of the state. (May be omitted)	128 characters
Locality	Inputs the name of the city. (May be omitted)	128 characters
Organization	Inputs the name of the organization. (May be omitted)	64 characters
Organizational Unit	Inputs the name of the organizational unit. (May be omitted)	64 characters
CRT key	Displays the size of the current CRT key and the date and time generation was completed.	

NOTE

- Characters that can be input for [Common Name], [Country], [State], [Locality], [Organization], [Organizational Unit] are 0 to 9, A to Z, a to z, and the following symbols: -. _ , + / ( ).
- When connecting the camera to the Internet, set the address or host name to be accessed from the Internet in [Common Name]. In this case, when accessing the camera locally, a security warning screen is displayed every time the camera is accessed even when a security certificate is installed.
- When inputting the IPv6 address in [Common Name], surround the address with [ ].
  e.g. [2001:db8::10]

3. Click the [OK] button after inputting the address.

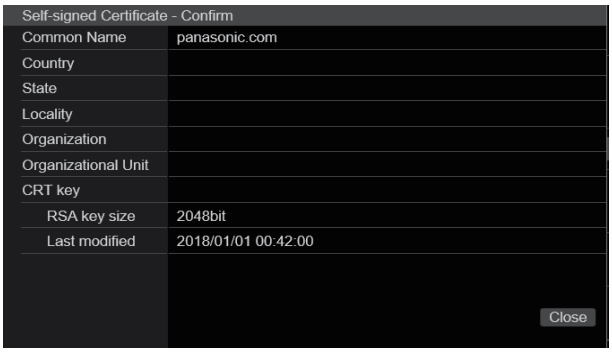
A self-signed certificate is generated.

NOTE

- Information relating to the generated self-signed certificate is displayed in [Self-signed Certificate] - [Information]. The following is displayed depending on the status of the self-signed certificate (security certificate).

Displayed content	Description
Not generated	When the self-signed certificate is not generated
Invalid (Reason: CA Certificate installed)	When the self-signed certificate is already generated and the server certificate is already installed • The server certificate is enabled in this case.
[Common Name] of self-signed certificate	When the self-signed certificate is already generated and enabled

- When the [Confirm] button is clicked, the registered content of the generated self-signed certificate (security certificate) is displayed in the [Self-signed Certificate - Confirm] dialog.



- Click the [Delete] button to delete the generated self-signed certificate (security certificate).
- When [HTTPS] is selected in [Connection], the self-signed certificate (security certificate) cannot be deleted.

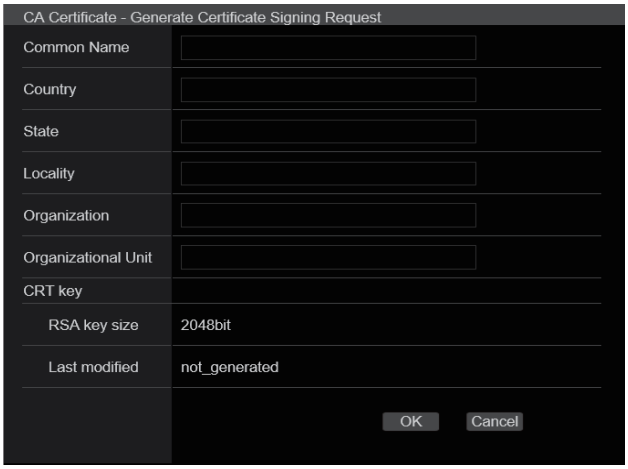
Generating a Certificate Signing Request (CSR) [CA Certificate - Generate Certificate Signing Request]

NOTE

- A certificate signing request (CSR) cannot be generated if a CRT key has not been generated.
- To generate a certificate signing request (CSR), perform the following settings in advance in the web browser Internet options. Perform the following settings in the [Security] tab (accessed from [Tools] in the menu bar - [Internet Options] - [Security]).
- Register the camera as a “Trusted Site”.
- In [Level Customize], go to [File Download] from [Download] and set to [Enable].
- In [Level Customize], go to [Automatically Display Dialog when Downloading File] from [Download] and set to [Enable].

1. Click the [Execute] button in [CA Certificate - Generate Certificate Signing Request].

The [CA Certificate - Generate Certificate Signing Request] dialog is displayed.



2. Input information relating to the certificate to be generated.

Items to be entered are as follows.

Item	Description	Maximum number of characters
Common Name	Inputs the camera address or host name.	64 characters
Country	Inputs the country code.	2 characters: country code
State	Inputs the name of the state.	128 characters
Locality	Inputs the name of the city.	128 characters
Organization	Inputs the name of the organization.	64 characters
Organizational Unit	Inputs the name of the organizational unit.	64 characters
CRT key	Displays the size of the current CRT key and the date and time generation was completed.	

NOTE

- When using a server certificate, the information to be input must be in accordance with the demands of the Certificate Authority (CA), which will be applied to.
- Characters that can be input for [Common Name], [Country], [State], [Locality], [Organization], [Organizational Unit] are 0 to 9, A to Z, a to z, and the following symbols: -. _ , + / ( ).

3. Click the [OK] button after inputting the address.
The [Save As] dialog is displayed.

4. In the [Save As] dialog, assign a file name to the Certificate Signing Request (CSR) and save it in personal computer.
Apply to the Certificate Authority (CA) using the saved Certificate Signing Request (CSR).

NOTE

- A server certificate is issued for both the generated Certificate Signing Request (CSR) and CRT key. The issued server certificate can no longer be used when generating/updating the CRT key after applying to the Certificate Authority (CA).
- The Certificate Signing Request (CSR) generated by this unit is in a PEM format.

Installing a Server Certificate [CA Certificate - CA Certificate install]

NOTE

- A server certificate (security certificate) cannot be installed if a Certificate Signing Request (CSR) has not been generated.
- The server certificate must have been issued by the Certificate Authority (CA) in order to install it.

1. Click the [Select] button in [CA Certificate - CA Certificate install].
The [Open File] dialog is displayed.

2. Select the server certificate file and click [Open]. Then click the [Execute] button.
The server certificate is installed.

NOTE

- The name of the host registered to the installed server certificate is displayed in [CA Certificate] - [Information]. The following is also displayed depending on the status of the server certificate.

Displayed content	Description
Invalid	When the server certificate is not installed
[Common Name] of server certificate	When the server certificate is already installed and enabled
Expired	When the effective period of the server certificate has expired

- When the [Confirm] button is clicked, the content of the installed server certificate (security certificate) is displayed in the [CA Certificate - Confirm] dialog. (An asterisk is displayed in the [Organizational Unit] field only.)

- Click the [Delete] button to delete the installed server certificate (security certificate).
- When [HTTPS] is selected in [Connection], the server certificate (security certificate) cannot be deleted.
- Perform STEP 1 to STEP 2 to update a server certificate.
- To delete an enabled server certificate (security certificate), confirm that there is a backup to the said certificate in your personal computer or recording media. A server certificate (security certificate) will be needed to reinstall it.
- The HTTPS function can no longer be used when the effective period of the server certificate has expired. In such a case, the connection method is changed to HTTP when the unit is restarted. Update the server certificate before its effective period expires.
- The effective period of the server certificate can be confirmed by double-clicking the server certificate file issued by the Certificate Authority (CA).

Setting the Connection Method [Connection]

1. Set the method to access the camera in [Connection].

HTTP: Only HTTP connection is possible.
HTTPS: Only HTTPS connection is possible.

NOTE

- When using an HTTPS connection, network connection with the ROP will be disabled.

2. Set the Port No. to be used with HTTPS in [HTTPS port].

Port No. that can be selected: 1 to 65535
The following port numbers are used by the unit so they cannot be used.
20, 21, 23, 25, 42, 53, 67, 68, 69, 80, 110, 123, 161, 162, 443, 546, 547, 554, 995, 5960 to 5985, 7960 to 8060, 10669, 10670, 11900, 59000 to 61000
Factory settings: 443

3. Set the encryption protocol used with HTTPS in [HTTPS mode].

TLS1.0/1.1/1.2: Connection with TLS1.0/1.1/1.2 is possible.
TLS1.2: Connection with TLS1.2 is possible.

4. Click the [Set] button.

The camera restarts and access to the camera via HTTPS is enabled.

NOTE

- This unit will restart if the connection method is changed.
- **Using a self-signed certificate**
  A warning screen is displayed when accessing the camera by HTTPS for the first time. Install the self-signed certificate (security certificate) in your personal computer in accordance with the screen instructions. (page 174)
- **Using a server certificate**
  Install the Certificate Authority (CA) root certificate or intermediate certificate in your web browser in advance. Follow the Certificate Authority (CA) procedures to acquire and install root certificates and intermediate certificates.
- When accessing the camera by HTTPS, the image display speed and frame rate of the moving image may reduce.
- When accessing the camera by HTTPS, it may take some time for the images to be displayed.
- When accessing the camera by HTTPS, images may be disturbed and sound may be interrupted.
- The maximum number of cameras that can be connected simultaneously depends on the maximum image size and distribution format.

Accessing the Camera by HTTPS

1. Launch the web browser in your personal computer.

2. Input the camera's IP address in the address bar of the web browser.

Input address: https://192.168.0.10/

NOTE

- When the HTTPS port No. is changed from "443", input "https:// camera IP address: Port No." in the address bar.
  E.g. https://192.168.0.11:61443
- When this unit is in a local network, set a proxy server from the web browser (menu bar: [Tools] - [Internet Options]) to ensure that a proxy server is not used for a local address.

3. Press the [Enter] key.

The live screen [Live] is displayed.
The security certificate is installed when the security warning screen is displayed. (page 174)
When [User auth.] is set to [On], the user name and password input screen is displayed before the live screen [Live] appears.

NOTE

- When HTTPS is used, screen and image display may slow down and image update interval (frame rate) may also slow down.

■ Install the security certificate

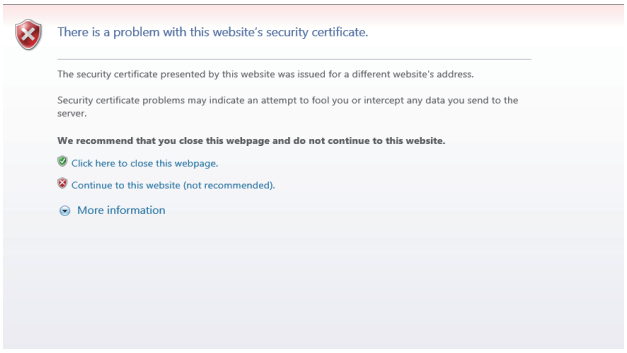
When using HTTPS to access the camera, the security warning screen will be displayed if the security certificate of the said camera has not been installed in your personal computer. To prevent this warning screen being displayed, the security certificate must be installed in accordance with the following procedures. If it is not installed, the security warning screen will be displayed every time the camera is accessed.

NOTE

- The security certificate will be installed to your personal computer based on the content set for [Common Name]. The content set for the “Host Name” must therefore match that set for the address/ host name used to access the camera. If the content differs, a security warning screen will be displayed every time the camera is accessed.
- A security warning screen will be displayed if the camera address/ host name is changed even when a security certificate has been installed. Reinstall the security certificate.
- When connecting the camera to the Internet, set the address or host name to be accessed from the Internet in [Common Name]. In this case, when accessing the camera locally, a security warning screen is displayed every time the camera is accessed even when a security certificate is installed.
- When the security certificate is correctly installed, an icon of the key will be displayed in the address bar of the web browser accessing the camera.

1. Accessing the Camera by HTTPS.

2. When the security warning screen is displayed, click [Continue to this website (not recommended).].

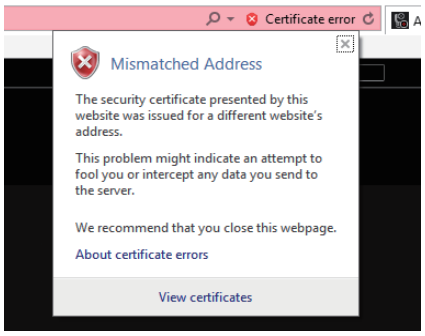


The live screen [Live] is displayed.
When the authentication screen is displayed, input the user name and password.

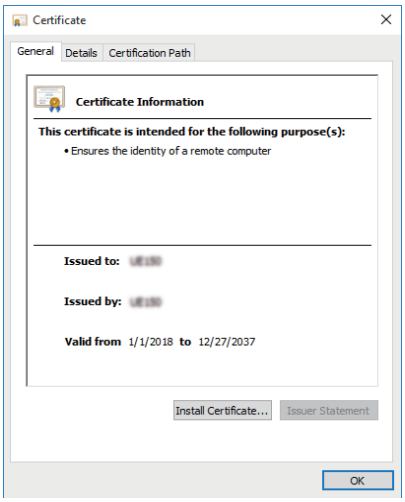
NOTE

- When the above screen is displayed after accessing a device apart from the camera or a website, there may be a security problem, so check this carefully.

3. Click [Certificate error] in the URL and then click [View certificates].



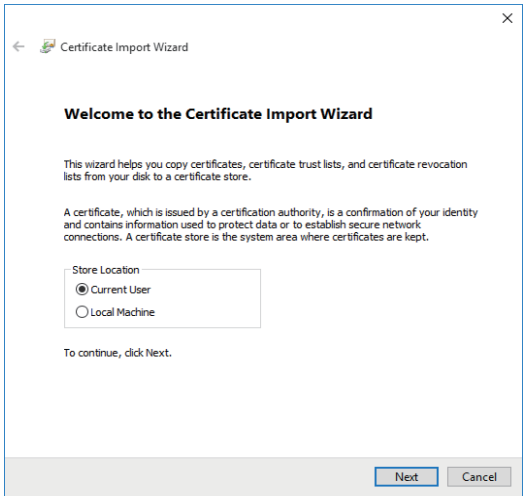
4. Click [Install Certificate...].



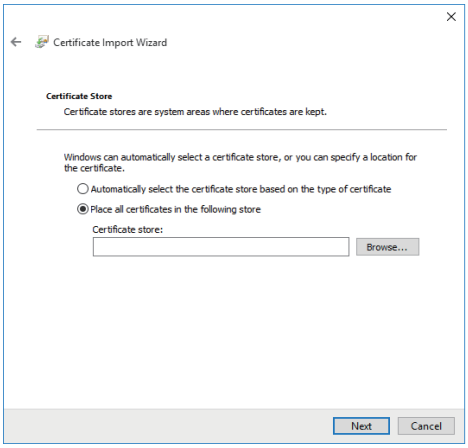
NOTE

- If [Install Certificate...] is not displayed, close Internet Explorer and restart it by selecting [Run as Administrator].
  Right-click on [Start] - [Program] - [Internet Explorer] and click [Execute as Administrator (A)..].

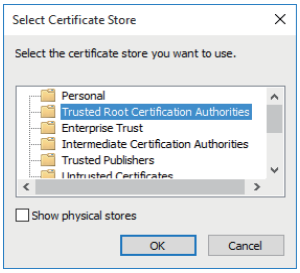
5. Click [Next], which is displayed in the certificate import wizard.



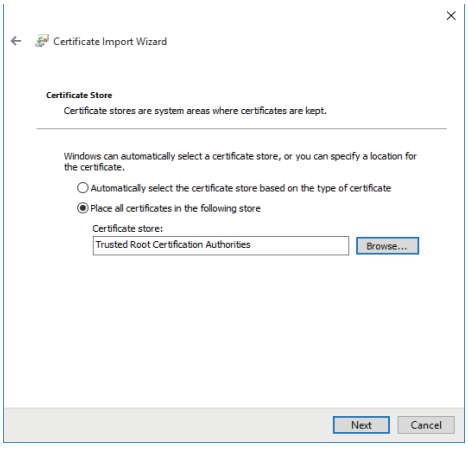
6. Select [Place all certificates in the following store] and click [Browse...].



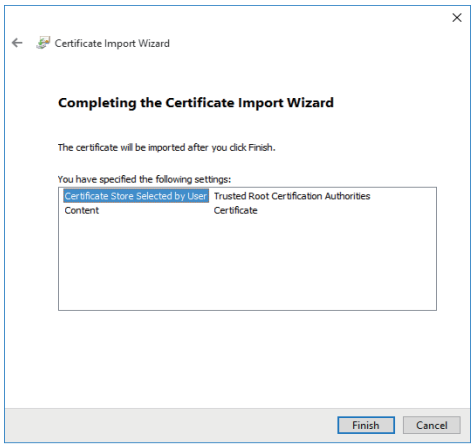
7. Select [Trusted Root Certification Authorities] and click [OK].



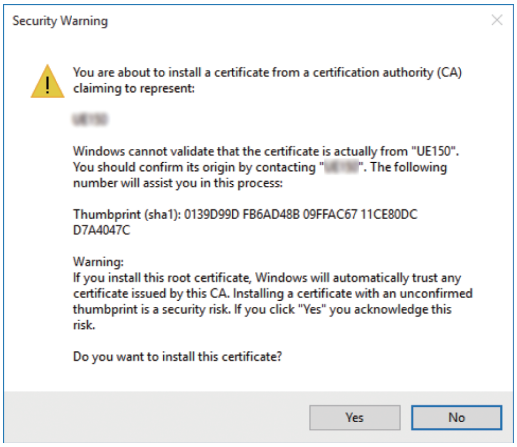
8. Click [Next].



9. Click [Finish].

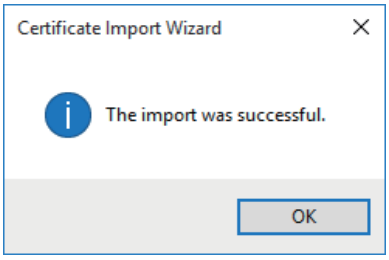


10. Click [Yes].



When importing is finished, the “The import was successful.” screen is displayed.

11. Click [OK].



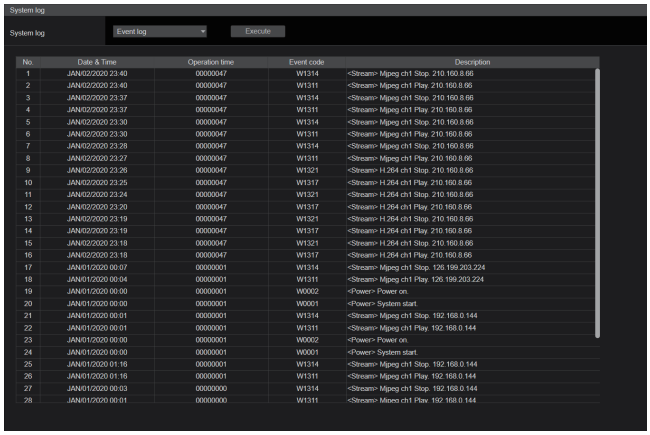
Closing the web browser after importing the certificate and reconnecting to it will stop the “Certificate error” screen being displayed.

Maintenance screen [Maintenance]

On this screen, you can check the system logs, check the version of the software, initialize the unit, etc.
The Maintenance screen consists of four settings: [System log], [Maintenance], [Product info.] and [Backup].

System log screen [System log]

A maximum of 1000 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.



NOTE

• When the system log screen is displayed, the event log is displayed.

System log [Event log, Error log1, Error log2]

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 log1	Displays the error logs.
Error log2	Displays the error logs.

[Event log]

No.

Displays the log sequence numbers.
"1" indicates the latest information, and up to 1000 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.

Operation time

Displays the dates and times when the events occurred.
The dates and times when the events occurred are indicated with the hour meter (0h to 99999h) of the unit.

Event code

Displays the event code numbers.

Description

Displays the event descriptions.
Display examples:
– <Power> Power on.
– <Stream> H.264 ch1 Play.
– <Stream> H.264 ch1 Stop.

[Error log1, Error log2]

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.

Operation time

Displays the dates and times when the errors occurred.
The dates and times when the errors occurred are indicated with the hour meter (0h to 99999h) of the unit.

Error code

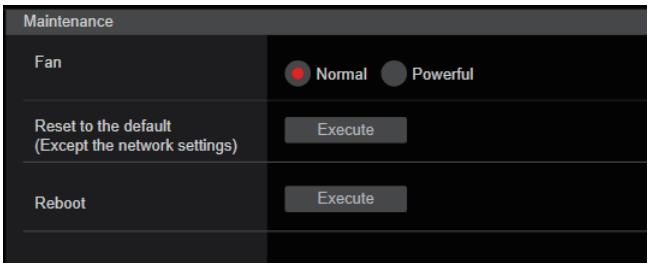
Displays the error code numbers.

Error description

Displays the error descriptions.
Display examples:
– Temp Sensor Error

Maintenance screen [Maintenance]

Initialize the setting data of the unit, reboot the unit, etc.



Fan [Normal, Powerful]

Set the behavior of cooling fan.

Reset to the default (Except the network settings)

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

- The following setting items will not be returned to defaults.
  - [Live page - Automatic installation of viewer software]
  - [Live page - Smoother live video display on the browser(buffering)]
  - All settings under [Access mng.]
  - All settings under [Network - Network]
  - [HTTPS - Connection]
  - [HTTPS - HTTPS port]
  - [HTTPS - HTTPS mode]
  - HTTPS: CRT key, server certificate
  - All settings under [UPnP]
- [AWB] and [ABB] adjustment values will not be returned to defaults.
- The settings for [Format] and [Frequency] (page 114) are not initialized.

Reboot

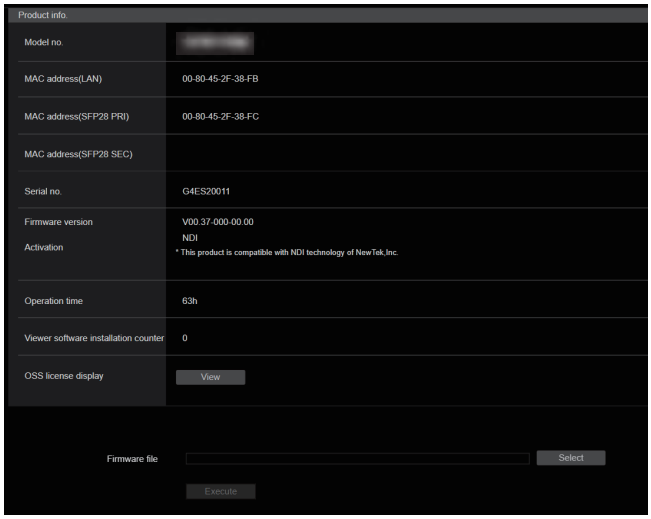
When the [Execute] button is clicked, the unit is rebooted.

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.

Product information screen [Product info.]

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

The [Model no.], [MAC address(LAN)], [MAC address(SFP28 PRI)], [Serial no.], [Firmware version] and other information about the unit is displayed.



Model no.

Display the unit's model number.

MAC address(LAN)

Display the MAC address of the LAN of this unit.

MAC address(SFP28 PRI)

Display the MAC address of the SFP1 of this unit.

MAC address(SFP28 SEC)

Display the MAC address of the SFP2 of this unit.

Serial no.

Display the unit's serial number.

Firmware version

Display the overall system version of the unit.

Activation

Display information on the activated function.

Operation time

Display the hours the unit has been operating.

Viewer software installation counter

The number of plug-in viewer software applications which have been installed automatically from the unit is displayed by this counter.

OSS license display

When you press the [View] button, the OSS license appears.

Press the [Close] button to close the OSS license display screen.

Firmware file

Upgrade the firmware.

For details on how to upgrade, see "Upgrading the firmware (Firmware file)" (page 178).

■ **Upgrading the firmware (Firmware file)**

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 [Select] button, and specify the downloaded software.

3. Click the [Execute] button.

The software upgrade check screen is displayed.
After upgrading the software version, be absolutely sure to delete the temporary Internet files.

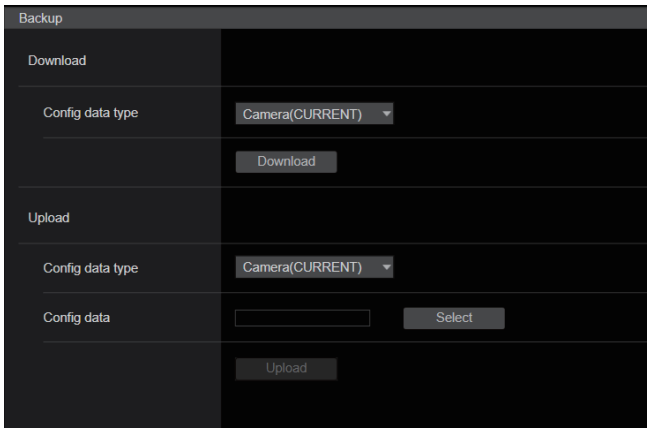
NOTE

- An upgrade progress bar appears after you click the [Execute] button, and the process will take about 1 minute.
- Use the personal computer on the same subnet as the camera to upgrade the software version.
- Before using the version upgrading software, be absolutely sure to check the precautions to be observed, and follow the instructions.
- Use the following files specified by Panasonic Connect Co., Ltd. as the software used for version upgrading.

  UPDATE.bin
- While upgrading, the status display lamp of the unit appears as follows:
  - Blinking orange: files being transferred
  - Blinking red: data being written
- Do not turn off the unit's power while a software version is being upgraded. (A pop-up screen will appear to indicate that the process is complete.)
- While a software version is being upgraded, do not attempt to execute any other operations until the version has been upgraded.
- Close the web browser once after performing a version upgrade.
- A maximum of about one hour may be required to upgrade the firmware of the unit.
- If the version is upgraded while [DHCP] is [On], the IP address of the unit may be changed after the restart of the unit after version upgrading. If this occurs, the pop-up screen indicating completion of the version upgrade will not be shown in the web browser, and a timeout may occur. Use the status display lamp of the unit to confirm that the version upgrade is complete.

Back up 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.



Download

Config data type
[Camera(CURRENT), Camera(SCENE1) to Camera(SCENE8), Camera(USER1) to Camera(USER3), Camera(LENS1) to Camera(LENS32), Camera(OPERATION), Network, Camera(All), Camera(All Scene), Camera(All User), Camera(All Lens)]
Specify the type of settings to save when saving the unit's configuration data on the personal computer.

Setting value	Content to be saved	Extension of saving file
Camera(CURRENT)	Current settings	.cs
Camera(SCENE1)	Settings for Scene1	.cs
⋮	⋮	⋮
Camera(SCENE8)	Settings for Scene8	.cs
Camera(USER1)	Settings for User1	.us
Camera(USER2)	Settings for User2	.us
Camera(USER3)	Settings for User3	.us
Camera(LENS1)	Settings for LENS1	.lns
⋮	⋮	⋮
Camera(LENS32)	Settings for LENS32	.lns
Camera(OPERATION)	Settings for Operation	.ope
Network	Settings of the Web screen Network settings	.nal
Camera(All)	Settings for all of Scene, User, and LENS	.cs .us .lns
Camera(All Scene)	Settings for Scene1 to 8	.cs
Camera(All User)	Settings for User1 to 3	.us
Camera(All Lens)	Settings for LENS1 to 32	.lns

Download
Save the unit's settings onto the personal computer.
When the destination dialog box appears after clicking the [Download] button, specify the destination folder.

NOTE

- After the [Download] button is clicked, the amount of time it takes for the destination dialog box to appear is about 50 seconds for a camera settings file and about 10 seconds for a network settings file.
- Depending on the status of the unit, it may not be possible to download configuration files. In this case, the unit automatically restarts.

Upload

Config data type
[Camera(CURRENT), Camera(SCENE1) to Camera(SCENE8), Camera(USER1) to Camera(USER3), Camera(LENS1) to Camera(LENS32), Camera(OPERATION), Network, Camera(All), Camera(All Scene), Camera(All User), Camera(All Lens)]
Specify the type of configuration data when reflecting the configuration data saved on a personal computer to this unit.

Setting value	File extension suitable for upload
Camera(CURRENT)	.cs
Camera(SCENE1)	.cs
⋮	⋮
Camera(SCENE8)	.cs
Camera(USER1)	.us
Camera(USER2)	.us
Camera(USER3)	.us
Camera(LENS1)	.lns
⋮	⋮
Camera(LENS32)	.lns
Camera(OPERATION)	.ope
Network	.nal
Camera(All)	.cs .us .lns
Camera(All Scene)	.cs
Camera(All User)	.us
Camera(All Lens)	.lns

Upload
The unit's setting files, which were saved in the personal computer by the download function, are uploaded.
Click the [Select] button to display the dialog box, and specify the saved file.
When you click the [OK] button in the message dialog box that appears after you click the [Upload] button, uploading starts.
Another message dialog box appears after uploading is complete.
When you click the [OK] button, the unit will restart automatically.

NOTE

- Use the files downloaded by the unit as the data to be used for uploading.
- Do not turn off the unit's power while downloading or uploading is underway.
- Do not attempt to perform any operations while downloading or uploading is underway. Instead, wait until the downloading or uploading is completed.
- It takes about 3 minutes for the upload complete dialog box to appear for camera settings files.

Chapter 6 Maintenance

This chapter describes the warning displays and after-sales services of the camera.

Troubleshooting

For operations

Problem	Cause/solution
The camera cannot be turned on.	Does the power cable plugged into the power outlet securely?
The camera cannot be operated from the ROP that is connected via IP.	Is the power turned on? • If the power lamp of the camera is not lit, the power of the camera is off.
	Is a valid IP address of the camera set?
	Is the correct camera to be operated selected?
	Is the camera connected with the ROP correctly? • Also refer to the Operating Instructions of the ROP.
	Has digest authentication for this unit been set to ON ([User auth.] is [On] and [Authentication] is [Digest]) and the [Wait time mode] has been set to [Mode1]? • When using the ROP, set [Wait time mode] to [Mode2] when using digest authentication. Smooth operation may be diminished when [Wait time mode] is set to [Mode1].
	The ROP may require upgrading to support the camera. • Contact your dealer.
The camera cannot be accessed from the web browser.	Is the camera connected via the <LAN> terminal using a LAN cable of category 5e or higher?
	Is the lamp of the <LAN> terminal lit? • If it is not lit, the camera may not be connected to LAN correctly, or the connected network is not functioning properly. Check the contact and wiring of the LAN cable.
	Is the power turned on? • If the <POWER> lamp of the camera is not lit, the power of the camera is off.
	Is a valid IP address of the camera set?
	Does the camera access a wrong IP address? (Windows) • Execute >ping [the IP address set for the camera] on Windows command prompt. If the camera responds, the camera is operating normally. If the camera does not respond, restart the camera and change its IP address within 20 minutes using EasyIP Setup Tool Plus.
	Does the camera access a wrong IP address? (Mac) • Execute >ping -c 10 [the IP address set for the camera] on Terminal of OS X. If the camera respond, the camera is operating normally. If the camera does not respond, restart the camera and change its IP address within 20 minutes using EasyIP Setup Tool Plus.
	Are you accessing via "http://" while the HTTPS function is enabled? • Perform access via "https://" when using the HTTPS function. Entry of the port number is also required.
	Is the port number set to 554? • Set an HTTP port number other than the following port numbers that are used by the camera. [20], [21], [23], [25], [42], [53], [67], [68], [69], [110], [123], [161], [162], [554], [995], [10669], [10670], [49152], [59000]…[59999], [60000]…[61000]
	Does the set IP address conflict with another device? • Check the IP addresses of the camera, access devices (computer, controller, etc.), and other cameras.
	Does the set subnet mask match the subnet of the network where the camera is installed? • Check the subnet mask set for the camera and access devices, and consult your network administrator.
	Is [Use a proxy server] set on the web browser? (When the camera and computer are connected to the same subnet) • If a proxy server is set in [Proxy settings] of the web browser, it is recommended that an address that is excluded from proxy is set for the IP address.
	Is the default gateway set for the camera wrong? (When the camera and computer are connected to separate subnets) • Check the default gateway set for the camera, and consult your network administrator.
The setting values on the web setup screen [Setup] are not updated successfully or not displayed.	Press the F5 key on the keyboard of your computer to request update of the setting values. (Windows)
	Press the Command + R keys on the keyboard of your computer to request update of the setting values. (Mac)
	Delete the temporary Internet files as described below. (Windows) 1) Select […] - [History] in Microsoft Edge. 2) Select […] - [Clear browsing data]. 3) Select the [Browsing history], [Download history], [Cookies and other site data], and [Cached images and files] checkboxes and click [Clear now].
	Perform the following procedure to delete Internet temporary files (cache). (Mac) 1) Select [Safari] - [Empty Cache] on Safari. 2) Click the [Delete] button under [Browsing history].
	The port of the camera may be filtered by the firewall function of the anti-virus software, etc. • Change the HTTP port number of the camera to another port number that is excluded from filtering.
The setting file cannot be downloaded.	Are pop-up windows blocked? (Windows) Perform the following. 1) In Microsoft Edge, select [...]-[Settings]. 2) Select [Cookies and site permissions]. 3) Select [Pop-ups and redirects]. 4) Turn off [Block(recommended)].

Problem	Cause/solution
The screen for authentication is displayed continuously.	Has the user name or password been changed? • While accessing the camera, if the user name or password for the user who has logged in from a separate web browser is changed, the screen for authentication appears every time the screen is switched. Close the web browser and access the camera again.
	Has the setting for user authentication method been changed? • If the setting of [User auth.] - [Authentication] has been changed, close the web browser and access again.
It takes long before the image is displayed.	Is the camera on the same local network accessed via proxy? • Configure your web browser so that the camera is not accessed via proxy.
	Is access being performed in HTTPS mode? • Screen displays may take a while to appear in HTTPS mode due to signal processing.
	Are multiple users viewing the IP images on the camera at the same time? • When multiple users access the IP images on the camera at the same time, it may take longer to display the images on the screen, or the refresh rate of IP images may decrease.

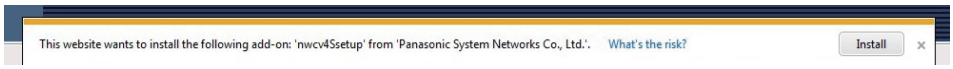
For IP images

Problem	Cause/solution
The image is blurry.	Has the focus been adjusted properly? • Check the focus adjustment.
The screen does not update images.	Troubles in image updating may occur depending on the web browser or version being used. Crowded network or heavy access to the camera may interrupt image display. If the IP image setting of the camera has been changed, the image may be interrupted temporarily. • Check the access status to the camera and terminate accesses that can be disconnected. Press the F5 key on the keyboard of your computer to request update of the setting values. (Windows) • Check the access status to the camera and terminate accesses that can be disconnected. Then, press the Command + R keys on the keyboard of your computer to request update of the setting values. (Mac)
Images are not updated successfully or not displayed.	Delete the temporary Internet files as described below. (Windows) 1) Select […] - [History] in Microsoft Edge. 2) Select […] - [Clear browsing data]. 3) Select the [Browsing history], [Download history], [Cookies and other site data], and [Cached images and files] checkboxes and click [Clear now].
	Perform the following procedure to delete Internet temporary files (cache). (Mac) 1) Select [Safari] - [Empty Cache] on Safari. 2) Click the [Empty] button in the [Are you sure you want to empty the cache?] pop-up window.
	The port of the camera may be filtered by the firewall function of the anti-virus software, etc. • Change the HTTP port number of the camera to another port number that is excluded from filtering.
Images are interrupted.	Image information may not be transmitted properly due to congestion in the transmission path, etc., causing the images to be interrupted. • Consult your network administrator.
	The sequence of packets may be changed in the transmission path, causing the images to be interrupted. • It may be avoided by using the same Internet service provider on the camera and on the computer. Consult your network administrator.
Images stop in applications that support NDI High Bandwidth	When a personal computer and this unit are connected via a commercially available USB LAN conversion adaptor, the images may stop due to network problems on the personal computer side. • If this phenomena occurs, firstly disable the network adaptor that is connecting the personal computer to this unit, then change [Streaming mode] in [Video over IP] to [H.264]. After this, re-enable the network adaptor that you disabled and the images will be output when you change the [Streaming mode] to [NDI High Bandwidth].

Web screen

The following problems may occur depending on the OS of your computer. When these problems occur, take the respective measures.
These measures do not affect on the operation of other applications.
“Information bar” described in this section refers to the message bar displayed on Microsoft Edge. (Windows)

■ Microsoft Edge



The “Information bar” will be displayed under the address bar of Microsoft Edge.

Problem	Cause/solution
Frame dropping is observed in images	The personal computer may be lacking in performance. • Check the requirements for the personal computer environment.
	This phenomenon may be improved by pressing the button for switching real time updating to disable the web browser real time updating function.
The following message appears in the information bar. [This webpage wants to run the following add-on: 'WebVideo Module' from 'Panasonic System Networks Co.,Ltd.'.]	Perform the following procedure to grant the permission. 1) Select [Grant(A)].
The following message appears in the information bar. [This website wants to install the following add-on: 'nwcv4SSetup.exe' from 'Panasonic System Networks Co.,Ltd.'.]	Perform the following procedure to grant the permission. 1) Select [install(I)]. A security warning screen appears. 2) Click the [install(I)] button.
IP images do not match the display frame.	When the DPI setting for image is set to 120 DPI or above, the image may not be displayed properly. Perform the following setting. 1) Right-click on the computer screen and click [Display settings] - [Change the size of text, apps, and other items]. 2) Set it to [100% (Recommended)].
	When the zoom level for the zooming function of Microsoft Edge is set to other than 100%, the image may not be displayed properly. Perform the following setting. 1) Go to […] - [Zoom] in Microsoft Edge and click [-] and [+] to set to [100%].

Checking the operating time

The operating time can be checked in [ALL MENU] → [MAINTENANCE] → [HOUR METER].

Warning displays

Warning displays appear when errors have occurred in camera's auto functions.

Camera warning displays

■ When AWB (automatic white balance) is executed

[AWB BREAK]	Automatic white balance has been interrupted.
[AWB HIGH LIGHT NG]	Automatic white balance cannot be executed because the light amount is excessive. Set the light amount to an appropriate level.
[AWB LOW LIGHT NG]	Automatic white balance cannot be executed because the light amount is insufficient. Set the light amount to an appropriate level.
[AWB NG]	Automatic white balance failed. Try again.
[AWB NG CHECK FILTER]	Automatic white balance cannot be executed because of erroneous filter position. Set the correct filter position.
[AWB RCH OUT RANGE]	The white balance convergence for red cannot be achieved. Shoot a uniformly white object on the screen, and execute AWB.
[AWB BCH OUT RANGE]	The white balance convergence for blue cannot be achieved. Shoot a uniformly white object on the screen, and execute AWB.

■ When ABB (automatic black balance) is executed

[ABB BREAK]	Automatic black balance has been interrupted.
[ABB RCH OUT RANGE]	The black balance convergence for red cannot be achieved. Check if there are any errors in the image.
[ABB BCH OUT RANGE]	The black balance convergence for blue cannot be achieved. Check if there are any errors in the image.
[ABB GCH OUT RANGE]	The black balance convergence for green cannot be achieved. Check if there are any errors in the image.
[ABB NG]	The lens iris may not be closed.

Other warning displays

[FIRMWARE UPDATE FAILED] [ERRCODE:01]	The version update file is missing or may be corrupt. Store the correct version update file in the USB memory device, and execute the update again. Also confirm that the USB memory device is working properly.
[FIRMWARE UPDATE FAILED] [ERRCODE:02]	An error occurred when overwriting the version update file. Confirm that connections are correct to the unit, the external DC power supply, and the USB memory device, then restart the unit and try again.
[FIRMWARE UPDATE FAILED] [ERRCODE:03]	Other system error. (Communication error, etc.) Confirm that connections are correct to the unit, the external DC power supply, and the USB memory device, then restart the unit and try again.
[FIRMWARE UPDATE FAILED] [ERRCODE:04]	A fan error has occurred. Check if the fan has stopped. If there is no problem, restart the unit and try again.
[FIRMWARE UPDATE FAILED] [ERRCODE:05]	A power supply error has occurred. Use an external DC power supply, set the <POWER> switch on the unit to <EXT>, and try again.
[TEMP OVER!] [FORCE POWER OFF!]	The internal temperature is high. The power is turned off forcefully.
[DATE/TIME HAS BEEN RESET]	The clock function was reset because the internal battery for the clock was temporarily low. Reset [DATE/TIME]. (page 99, page 118) It is recommended to regularly supply power to the camera.

Updating the camera firmware

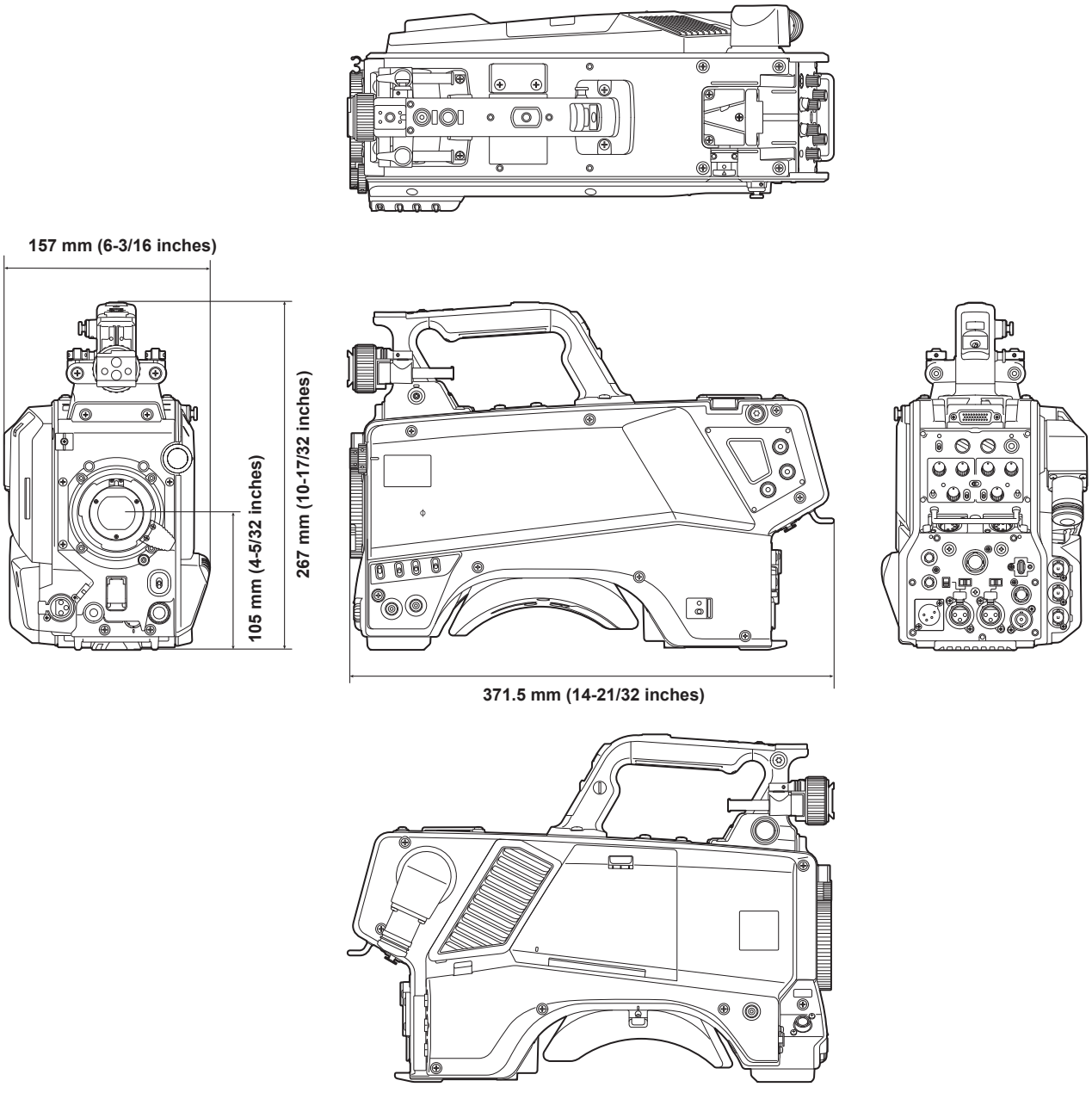
Refer to the following website for new updates of the firmware and for operating instructions.
https://pro-av.panasonic.net/en/

Chapter 7 Specifications

This chapter describes the specifications of this product.

Specifications

Dimensions



Specifications

General

Power
DC ⎓ 12 V (when using an external power supply)
AC ∼ 240 V, 50 Hz/60 Hz (when AK-UCU700P/AK-UCU700PS/AK-UCU700E/AK-UCU700ES/AK-UCU710P/AK-UCU710PS/AK-UCU710E/AK-UCU710ES/AK-CFA100PS/AK-CFA100ES is connected)
Power consumption
119 W (maximum, when connecting to an external 12 V and including supply to an externally connected devices)
360 W (maximum, when AK-UCU700P/AK-UCU700PS/AK-UCU700E/AK-UCU700ES/AK-UCU710P/AK-UCU710PS/AK-UCU710E/AK-UCU710ES/AK-CFA100PS/AK-CFA100ES is conncected and including supply to an externally connected devices)

▭ indicates safety information.

Ambient operating temperature	–10 °C to 45 °C (14 °F to 113 °F) (Preheating required under a temperature 0 °C (32 °F) or below)
Storage temperature	–20 °C to 60 °C (–4 °F to 140 °F)
Ambient operating humidity	85% or less (relative humidity)

Weight	Approx. 4.55 kg (10.01 lbs.) (body only, excluding the accessories)
Dimensions (W×H×D)	Body only 157 mm × 267 mm × 371.5 mm (6-3/16 inches × 10-17/32 inches × 14-21/32 inches) (excluding protrusions)

Camera unit

Pickup device	19.29 million pixels, MOS Sensor
Optical filter	FX: CLEAR, CLEAR(OP*), CROSS, Diffusion, CAP * Option: HD Low Pass Filter ND: CLEAR, 1/2, 1/4, 1/16, 1/64
Lens mount	2/3-type bayonet
Sensitivity	Two shooting modes [LOW LIGHT]: F10 (59.94 Hz)/F11 (50 Hz) [NORMAL]: F6 (59.94 Hz)/F7 (50 Hz) 2000 lx, 3200 K, when white reflectivity is 89.9%
S/N	62 dB or above
Horizontal resolution	4K: 2000 TV lines or above (center) HD: 1000 TV lines or above (center)
Gain switching	–6, –3, 0, 3, 6, 9, 12, 15, 18
Shutter speed	• [59.94i]/[59.94p] mode: 1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000 • [29.97p] mode: 1/48, 1/50, 1/60, 1/96, 1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000 • [23.98p] mode: 1/48, 1/50, 1/60, 1/96, 1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000 • [50i]/[50p] mode: 1/60, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000 • [25p] mode: 1/48, 1/50, 1/60, 1/96, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/1500, 1/2000
System format	3840 × 2160, 59.94p, 50p, 29.97p, 25p, 23.98p 1920 × 1080, 59.94p, 50p, 29.97p, 25p, 23.98p (Support for 29.97p, 25p, and 23.98p is planned for the future)

Video input/output

<SDI OUT 1> terminal	BNC × 1 12G/6G/3G/1.5G-SDI: 0.8 V [p-p], 75 Ω
<SDI OUT 2> terminal	BNC × 1 12G/6G/3G/1.5G-SDI: 0.8 V [p-p], 75 Ω
<TRUNK IN> terminal	BNC × 1 3G/1.5G-SDI: 0.8 V [p-p], 75 Ω
<G/L IN/REF OUT> terminal	BNC × 1 <G/L IN>: Tri-level SYNC or black burst <REF OUT>: Black (no burst) signal

Audio input/output

<MIC 1> terminal	XLR × 1, 3-pin <LINE>/<MIC>/<+48V> switchable For <MIC>, <FRONT>/<REAR> switchable <LINE>: 0 dBu, +4 dBu menu selection available <MIC>: –60 dBu, –40 dBu, or –20 dBu menu can be selected
<MIC 2> terminal	XLR × 1, 3-pin <LINE>/<MIC>/<+48V> switchable <LINE>: 0 dBu, +4 dBu menu selection available <MIC>: –60 dBu, –40 dBu, or –20 dBu menu can be selected
<MIC> terminal (front)	XLR × 1, 3-pin Switchable with <MIC 1> terminal

Intercom

<INTERCOM1> terminal	XLR × 1, 5-pin
<INTERCOM2> terminal	XLR × 1, 5-pin
<EARPHONE> terminal	Stereo mini jack × 1, 3-pin

Other input/output

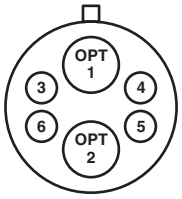
<SFP 1> terminal	SFP28 × 1
<SFP 2> terminal	SFP28 × 1
<OPT FIBER> terminal	Optical composite connector × 1
<LENS> terminal	12-pin × 1
<VF> terminal	20-pin × 1
<VF> terminal (rear)	29-pin × 1
<DC IN> terminal	XLR × 1, 4-pin, DC 12 V
<DC OUT 12V 1A> terminal	4-pin × 1
<RET CTRL> terminal	6-pin × 1
<EXT I/O> terminal	20-pin × 1, DC 12 V, 0.5 A
<REMOTE> terminal	10-pin × 1
<DC OUT 12V 2.5A> terminal	2-pin × 1
<LAN> terminal	RJ-45 × 1
<USB3.0 HOST> terminal	Type C connector
Build-up terminal	20-pin × 1

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

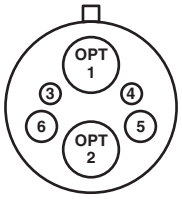
~	AC
⎓	DC

Details of the connector signals

OPT FIBER

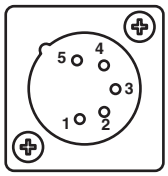


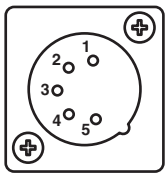
1	OPT-RX(Mark Band=IN)
2	OPT-TX(Mark Band=OUT)
3	AC240 V(C)
4	AC240 V(H)
5	STBY-CONT
6	STBY-SIG
TAJIMI ELECTRONICS	



1	OPT-RX(Mark Band=IN)
2	OPT-TX(Mark Band=OUT)
3	STBY-SIG
4	STBY-CONT
5	AC240 V(H)
6	AC240 V(C)
LEMO	

INTERCOM



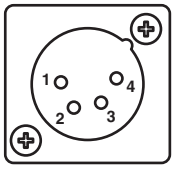


1	TALK GND
2	TALK
3	RECEIVE GND
4	RECEIVE CH1
5	RECEIVE CH2
XLR-5-31-F77 (ITT Cannon)	

RET CTRL

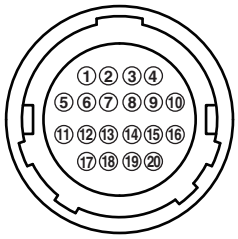
1	INTERCOM1 MIC ON
2	INTERCOM2 MIC ON
3	GND
4	RET CONT3
5	RET CONT1
6	RET CONT2
HR10A-7R-6SB(73) (Hirose Electric Co.)	

DC IN



1	UNREG GND
2	Not used
3	Not used
4	+12 V
XLR-4-32-F512 (ITT Cannon)	

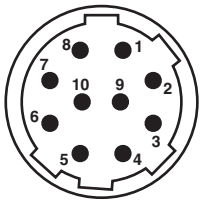
EXT IO



1	CRANE DATA(H)
2	CRANE DATA(C)
3	CRANE CONT(H)
4	CRANE CONT(C)
5	GND
6	CRANE INTERCOM RECEIVE
7	CRANE INTERCOM RECEIVE GND
8	CRANE INTERCOM TALK
9	CRANE INTERCOM TALK GND
10	CRANE PGM1 LEVEL
11	CRANE PGM2 LEVEL
12	Not used
13	Not used
14	G TALLY VF
15	R TALLY VF
16	T TALLY VF
17	CRANE ACT
18	UNREG +12 V
19	Not used
20	UNREG GND

HR10A-13R-20SC (Hirose Electric Co.)

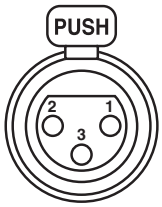
REMOTE



1	CAM DATA (H)
2	CAM DATA (C)
3	CAM CONT(H)
4	CAM CONT(C)
5	Not used
6	Not used
7	Not used
8	Not used
9	UNREG +12 V
10	UNREG GND

HR10A-10R-10SC (Hirose Electric Co.)

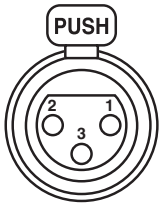
MIC (front)



1	GND
2	AUDIO IN (H)
3	AUDIO IN (C)

XLM-3-31-PCS-F (ITT Cannon)

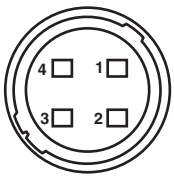
MIC (rear)



1	GND
2	AUDIO IN (H)
3	AUDIO IN (C)

XLM-3-31PCS-F (ITT Cannon)

DC OUT 1.0 A



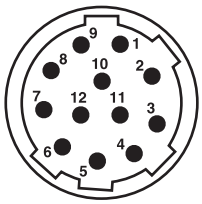
1	GND
2	R TALLY (open collector)
3	G TALLY (open collector)
4	UNREG +12 V (max. 1.0 A)

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

EARPHONE

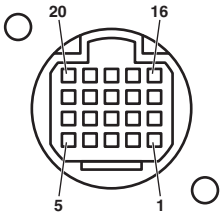
—	1	GND
	2	AUDIO OUT1
	3	AUDIO OUT2

LENS



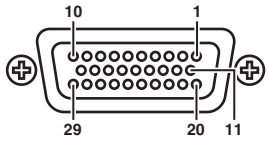
1	RET-SW
2	REC
3	GND
4	IRIS-AUTO
5	IRIS-CONT
6	UNREG +12 V
7	IRIS-POSI
8	IRIS-G-MAX
9	EXT-POSI
10	ZOOM-POSI
11	FOCUS POSI/LENS RXD
12	IRIS AUTO/LENS TXD
	HR10A-10R-12SC (Hirose Electric Co.)

VF (front)



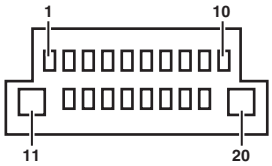
1	UNREG -12 V
2	UNREG -12 V
3	+9 V
4	VF-P_B-OUT-GND
5	VF-P_R-OUT-GND
6	VF-Y-OUT
7	VF-Y-OUT-GND
8	VF-CLK
9	VF-WR
10	VF-DATA
11	UNREG-GND
12	ZEBRA-SW
13	PEAKING
14	TA BOX ACT
15	VF-P_B-OUT
16	VF-P_R-OUT
17	VF-SW3
18	FRONT-VR
19	TA TALLY
20	GND
	HR12-14RF-20SDL (Hirose Electric Co.)

VF (rear)



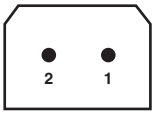
1	VF-Y-OUT
2	VF-P_B-OUT
3	VF-P_R-OUT
4	CAM DETECT
5	I2C DATA
6	R TALLY
7	T TALLY
8	UNREG +12 V
9	UNREG +12 V
10	UNREG +12 V
11	VF-Y-OUT-GND
12	VF-P_B-OUT-GND
13	VF-P_R-OUT-GND
14	AGND
15	DGND
16	Not used
17	UNREG GND
18	Not used
19	FGND
20	LCD ACT (Not used)
21	Not used
22	Not used
23	PEAKING CONT (Not used)
24	I2C CLK
25	G TALLY
26	VF P REQ
27	RESERVED
28	RESERVED
29	RESERVED
D02F-29SF-N-F0 (Japan Aviation Electronics Industry)	

BUILD UP



1	Not used
2	VF-P_B-OUT-GND
3	VF-P_B-OUT
4	VF-P_R-OUT-GND
5	VF-P_R-OUT
6	VF-Y-OUT
7	VF-Y-OUT-GND
8	CAM DATA
9	CAM CONT
10	Not used
11	AC(H)
12	Not used
13	IRIS POS
14	GND
15	IRIS CNT
16	FOCUS POS/L2C DATA
17	C2L DATA
18	BU ACT
19	Not used
20	AC(C)
QR/P8-20S-C (Hirose Electric Co.)	

DC OUT 2.5 A



1	UNREG +12 V
2	UNREG GND
VJS4444 (Panasonic)	

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Disposal of Old Equipment and Batteries
Only for European Union and countries with recycling systems
These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries must not be mixed with general household waste.
For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points in accordance with your national legislation.

By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment.

For more information about collection and recycling, please contact your local municipality, dealer or supplier.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

Note for the battery symbol (bottom symbol):
This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

Panasonic Entertainment & Communication Co., Ltd.
Web Site: https://pro-av.panasonic.net/en/