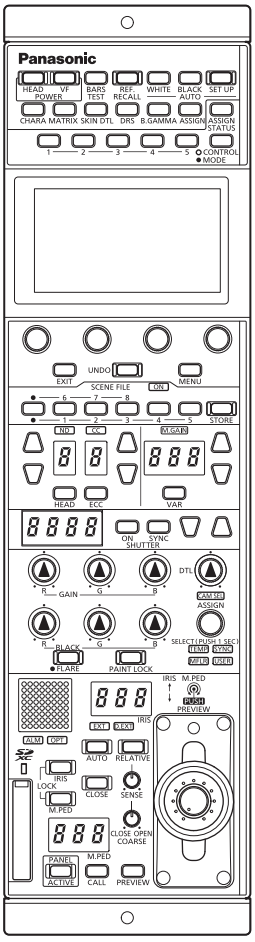
Panasonic

Operating Instructions

Remote Operation Panel

Model No. **AK-HRP1010G**



Please carefully read this manual, and save this manual for future use.
Before using this product, be sure to read “Read this first!” (pages 2 to 4) .

Read this first!

WARNING:
- To reduce the risk of fire, do not expose this equipment to rain or moisture.
- To reduce the risk of fire, 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 memory cards (optional accessory) 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:
To reduce the risk of fire or electric shock and annoying interference, use the recommended accessories only.

indicates safety information.

FCC NOTICE(USA)

Supplier's Declaration of Conformity
Trade Name: Panasonic
Model Number: AK-HRP1010G
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 Warning:
To assure continued FCC emission limit compliance, follow the attached installation instructions and the user must use only shielded interface cables when connecting to host computer or peripheral devices.
Also, any unauthorized changes or modifications to this equipment could void the user's authority to operate this device.

FCC CAUTION:
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.

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

indicates safety information.

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 (LAN, RS-422)
  Use shielded cables, which provide quality performance for high-frequency applications, as connecting cables.
- 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.

Turkey Only
AEEE Yönetmeliğine Uygundur.
AEEE Complies with Directive of Turkey.

Note:
The rating plate (serial number plate) is on the bottom of the unit.

Manufactured by: Panasonic Corporation, Osaka, Japan
Importer's name and address of pursuant to EU rules:
Panasonic Marketing Europe GmbH
Panasonic Testing Centre
Winsbergring 15, 22525 Hamburg, Germany

Disposal of Old Equipment

Only for European Union and countries with recycling systems

This symbol on the products, packaging, and/or accompanying documents means that used electrical and electronic products must not be mixed with general household waste.
For proper treatment, recovery and recycling of old products, 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 authority, dealer or supplier.
Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

< 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.

ІНФОРМАЦІЯ ПРО ПІДТВЕРДЖЕННЯ ВІДПОВІДНОСТІ ПРОДУКТУ

Виробник:	Panasonic Corporation	Панасонік Корпорейшн
Адреса виробника:	Kadoma, Osaka, Japan	Кадома, Осака, Японія
Країна походження:	Japan	Японія

Імпортер:	ТОВ “ПАНАСОНІК УКРАЇНА ЛТД”
Адреса Імпортера:	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 (6 – 2016, 7 – 2017,…0 – 2020)
Місяць: A – Січень, B – Лютий… L – Грудень

■ The symbols on this product (including the accessories) represent the following. (Some symbols are not displayed on this unit.)

I	ON
⏻	Standby (OFF)
~	AC
⎓	DC
⧈	Class II equipment (The construction of the product is double-insulated.)

Table of Contents

Introduction

How to View This Manual

About trademarks and registered trademarks

- Microsoft®, Windows® 10, Microsoft Edge and Internet Explorer® are either registered trademarks or trademarks of Microsoft Corporation in the United States and other countries.
- Intel® Core™ is a trademark or registered trademark of Intel Corporation and its subsidiaries in the United States and/or other countries.
- SDXC logo is a trademark of SD-3C and LLC.
- Other names of companies or products in this manual are either registered trademarks or trademarks of their respective owners.

About copyright

Distributing, copying, disassembling, reverse compiling, reverse engineering and also exporting in violation of export laws of the software provided with this unit are expressly prohibited.

Illustrations and screen displays featured in the manual

- What is shown in the manual's illustrations and screen displays may differ from how it actually appears.
- The screenshots are used in accordance with the guidelines of Microsoft Corporation.

Abbreviations

The following abbreviations are used in this manual.

- The term memory card will be used below as a generic term for both SD, SDHC and SDXC memory cards. SD, SDHC or SDXC will be used in descriptions that refer to only one of the two card types.
- A studio handy camera is referred to as a camera in this manual.
- A camera control unit is referred to as a CCU in this manual.
- A remote operation panel is referred to as an ROP in this manual.

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

Model number of unit	Model number given in manual
AK-HC5000G	AK-HC5000
AK-HC5000GS	
AK-UC3300G	AK-UC3300
AK-UC3300GS	
AK-UC4000G	AK-UC4000
AK-UC4000GS	
AK-HRP1010G	AK-HRP1010
AK-UCU500P	AK-UCU500
AK-UCU500PS	
AK-UCU500E	
AK-UCU500ES	
AK-UCU600P	AK-UCU600
AK-UCU600PS	
AK-UCU600E	
AK-UCU600ES	

Overview

This unit is a remote operation panel for controlling a studio handy camera (AK-HC5000/AK-UC3300/AK-UC4000; sold separately) and a camera control unit (AK-UCU500/AK-UCU600; sold separately).

Use a dedicated optical fiber multi cable to connect a studio handy camera to a camera control unit and use an ROP cable or IP connection to connect this unit to the camera control unit.

When IP connections are used, up to 99 camera control units can be controlled.

Notice

Personal computer requirements

For the software supplied with the unit, use a personal computer specified on the following website.

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

Disclaimer of warranty

IN NO EVENT SHALL Panasonic Corporation BE LIABLE TO ANY PARTY OR ANY PERSON, EXCEPT FOR REPLACEMENT OR REASONABLE MAINTENANCE OF THE PRODUCT, FOR THE CASES, INCLUDING BUT NOT LIMITED TO BELOW:

- ANY DAMAGE AND LOSS, INCLUDING WITHOUT LIMITATION, DIRECT OR INDIRECT, SPECIAL, CONSEQUENTIAL OR EXEMPLARY, ARISING OUT OF OR RELATING TO THE PRODUCT;
- PERSONAL INJURY OR ANY DAMAGE CAUSED BY INAPPROPRIATE USE OR NEGLIGENT OPERATION OF THE USER;
- UNAUTHORIZED DISASSEMBLE, REPAIR OR MODIFICATION OF THE PRODUCT BY THE USER;
- INCONVENIENCE OR ANY LOSS ARISING WHEN IMAGES ARE NOT DISPLAYED, DUE TO ANY REASON OR CAUSE INCLUDING ANY FAILURE OR PROBLEM OF THE PRODUCT;
- ANY PROBLEM, CONSEQUENTIAL INCONVENIENCE, OR LOSS OR DAMAGE, ARISING OUT OF THE SYSTEM COMBINED BY THE DEVICES OF THIRD PARTY;
- ANY INCONVENIENCE, DAMAGES OR LOSSES RESULTING FROM ACCIDENTS CAUSED BY AN INADEQUATE INSTALLATION METHOD OR ANY FACTORS OTHER THAN A DEFECT IN THE PRODUCT ITSELF;
- LOSS OF REGISTERED DATA CAUSED BY ANY FAILURE;
- ANY DAMAGE OR CLAIMS DUE TO LOSS OR LEAKAGE OF IMAGE DATA OR SETTING DATA SAVED ON THIS UNIT OR ON A MEMORY CARD OR PERSONAL COMPUTER.

Network security

This unit also has functions which are used when it is connected to a network.

Using the unit when it is connected to a network may possibly give rise to the following.

- Leakage or disclosure of information transmitted via this unit
- Unauthorized use of this unit by a third person with malicious intent
- Interference or stoppage of this unit by a third person with malicious intent

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

- Use this unit in a network secured by a firewall, etc.
- If this unit is used in a system with a personal computer connected, make sure that checks for and removal of computer viruses and malicious programs are implemented regularly.

Also observe the following points.

- Do not install the unit in a location where the unit, cables, and other parts may be easily damaged.

User authentication

In order to protect device settings from exposure on the network, when connecting to a network, please enable user authentication to restrict access as appropriate.

Restrictions on use

It is recommended that the remote operation panel and all devices to be used with the remote operation panel be connected to the same network segment.

Events related to settings of network devices may occur if devices are connected to different segments, so verify operation carefully before placing devices into service.

Memory cards

Memory cards used with the unit should conform to SDHC or SDXC standards.

Be sure to use the unit to format memory cards.

Memory cards with the following capacity can be used with the unit.

SDHC:	4 GB to 32 GB
SDXC:	64 GB

For the latest information not described in the Operating Instructions, refer to the following website.

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

Observe the following points when using and storing this unit.

- Avoid high temperature and humidity.
- Avoid water droplets.
- Avoid static electricity.

Upgrade software

You can obtain the upgrade software from Service and Support on the following website.

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

For the upgrade procedure, refer to the instructions included with the download file.

Software for peripheral equipment

Software updates will also become necessary for the peripheral equipment that is connected to this unit (cameras or CCUs).

For details, consult your dealer.

File types handled by the unit

Scene file	Data for creating the required image characteristics.
Reference file	The term reference file is a generic term for user files and factory files.
User file	A user file is system setting data composed of scene files and operation data. The user can record user files.
Factory file	A file that contains camera settings that were stored at the factory.
Lens file	Data for correcting specific lens characteristics.
ROP configuration file	ROP specific setting data.

Features

- This unit is a remote operation panel for controlling a studio handy camera (AK-HC5000/AK-UC3300/AK-UC4000) and a camera control unit (AK-UCU500/AK-UCU600).
- Scene files, user files, and lens files can be saved to a memory card.
- The unit can be connected to one CCU (AK-UCU500/AK-UCU600) via a serial connection.
- Eliminate the need for individual ROP cables by connecting up to 99 CCUs via a network hub (100base-TX switching hub).
- The unit is equipped with PoE*1, allowing connection to a network device that supports the PoE standard (IEEE802.3af compliant)*2.
- The ROP Setup Software can be used to set the camera connections.

*1: Power over Ethernet. Referred to as "PoE" in this manual.
*2: For details on PoE power supply devices for which operation has been verified, consult your dealer or Panasonic representative.

Precautions for Use

In addition to the safety precautions given in “Read this first!”, also observe the following instructions.

Handle carefully

- Do not drop the unit or expose it to strong impacts or vibrations. Do not carry the unit by the [IRIS] lever. Doing so may cause a failure or accident.

Use the product in an ambient temperature of 0 °C to 40 °C (32 °F to 104 °F)

- Exposure to temperatures below 0 °C (32 °F) or above 40 °C (104 °F) could adversely affect Internal components.

Power off before connecting or disconnecting cables

- Connect and disconnect cables when the unit is turned off.

Avoid humidity and dust

- Avoid using the product in a very humid or dusty place because a lot of humidity and dust will cause damage to the internal components.

Cleaning

- Turn the power off and wipe the product with a dry cloth.
  To remove stubborn dirt, dip a cloth into a diluted solution of kitchen detergent (neutral detergent), wring it out well, and wipe the product gently. Then, wipe the product with a cloth dampened with water. Finally, wipe the product with a dry cloth.

NOTE

- Avoid using benzine, paint thinners and other volatile fluids.
- If a chemical cleaning cloth is to be used, carefully read through the precautions for its use.

Avoid open flames

- Do not place candles and other sources open flame near the unit.

Avoid exposure to water

- Make sure that the unit is not directly exposed to water. Exposure to water could damage it.

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.

LCD panels

- The pixels of the LCD panel are controlled to obtain high precision with 99.99% of the effective pixels. This leaves less than 0.01% of pixels that may not light or may remain on all the time.
- This is normal and will have no effect on the images you shoot.
- There may be some unevenness on the screen depending on the image displayed.
- Wiping or rubbing the LCD screen with a rough cloth may damage it.
- LCD response time and brightness vary with operating temperature.
- When the unit is left in a high-temperature and high-humidity location for prolonged periods, the LCD panel characteristics may change and result in uneven image quality.
  Due to the characteristics of LCD panels, prolonged display of bright still images or prolonged operation in high-temperature or high-humidity environments may result in residual images, luminance reduction, burn-in, banding, or panel defects and degradation that result in areas of permanently changed brightness.
  In addition, avoid prolonged continuous use in the following types of environments.
  - Confined areas with high temperature and humidity
  - Near the exhaust vent of air conditioning equipment, etc.

  Prolonged use involving the images and environments described above will accelerate deterioration of the LCD panel over time.
  To prevent deterioration over time and its related phenomena, we recommend the following.
  - Do not display bright still images for prolonged periods.
  - Lower the brightness.
  - Turn off the power of the unit (and the power of the CCU and hub) when the unit is not in use.

  Residual images will gradually disappear as different images are displayed.

Precautions for Installation

In addition to the safety precautions given in “Read this first!”, also observe the following instructions.

Be sure to ask your dealer to perform the installation and connection work for the unit.

Cable connections

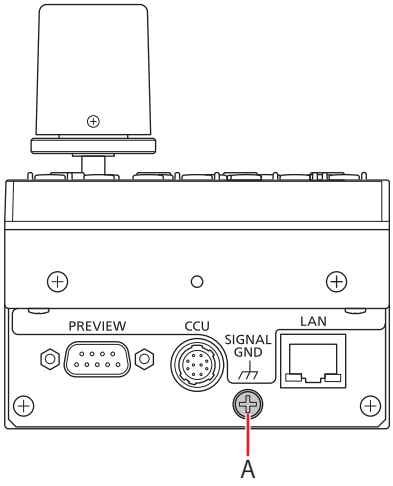
- Be sure to use dedicated ROP cables (Hirakawa Hewtech Corp. 20379-FG-SV-10 cables or equivalent).
- If the unit will not be used for an extended period of time, disconnect the ROP cables to save electricity.

Concerning PoE power supply

- The unit complies with the IEEE802.3af standard. Use a compatible Ethernet hub and PoE injector to use a PoE power supply. For details on Ethernet hubs and PoE injectors for which operations have been verified, consult your dealer.

Grounding

- Ground the system via the <SIGNAL GND> terminal on the unit.



A. <SIGNAL GND> terminal

Handle carefully

- Dropping the unit or subjecting it to a strong impact or vibration may cause a failure or accident.

Do not allow any foreign objects to enter inside the unit.

- Allowing water, metal items, food or drink, or other foreign objects to enter inside the unit may cause a fire or electric shock.

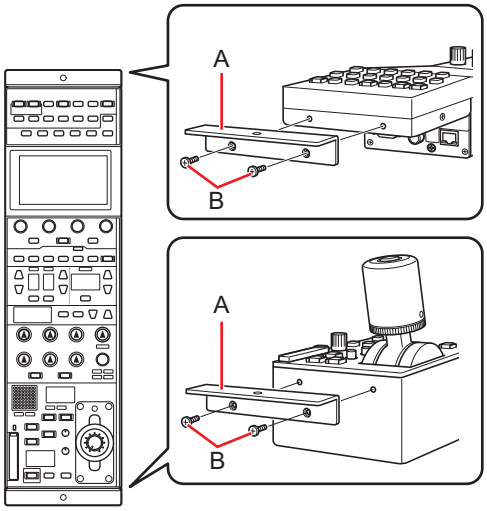
Installation location

- This unit is designed for indoor use only.
- Use the unit on a stable and horizontal surface that is sufficiently capable of supporting its weight.
- When the unit will be recessed into a panel or table, make sure that enough space is provided for ventilation and cables.
- Do not install the unit in a location where it and the cables can be easily damaged.
- Do not install the unit in a cold place where the temperature drops below 0 °C (32 °F) or in a hot place where the temperature rises above 40 °C (104 °F).
- Avoid installing the unit where it will be exposed to direct sunlight or near an outlet from which hot air is blown out.
- Installing the unit in a location with a lot of humidity, dust, or vibration may result in a failure.

Installing and removing rack mount brackets

The unit is shipped from the factory with the rack mount brackets installed.

The customer can remove the four screws that hold the rack mount brackets in place using a Phillips screwdriver.



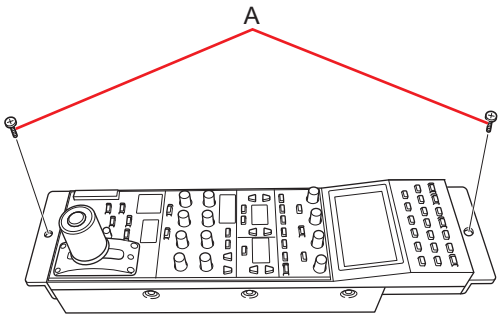
A. Rack mount bracket
B. Securing screws

- After detaching, store the rack mount brackets and the screws in a location easily accessible when required.
- The next time you use the rack mount brackets to secure the unit, tighten the four screws to a torque of 50 N•cm or more.

Rack installation (rack mounting)

Secure the unit to the rack using two securing screws.

- The securing screws are not supplied with the unit. Purchase screws that will fit the φ5 mm (3/16 inch) in diameter holes before rack mounting.
- The temperature in the rack must be between 0 °C (32 °F) and 40 °C (104 °F).



A. Securing screws (commercially available)

Connection

Operation Modes

Operation mode setting procedure

In the factory default state, connect the CCU to the unit and then set the operation mode.

Connect the CCU to the unit in the factory default state.

Connect with serial

1. Set the setting of “CONNECT MODE” to “Serial” under [SYSTEM] > [CONNECT SETTING] in the ROP menu.
2. Connect the CCU, and start operations.

Operate with IP

1. Set the IP address of the unit under [SYSTEM] > [ROP IP SETTING].

When setting the IP address of the connection destination manually

2. Set the IP address of the CCU to be connected under [SYSTEM] > [MANUAL IP SETTING].
3. Set the setting of “CONNECT MODE” to assign for each camera control number to “LAN” under [SYSTEM] > [CONNECT SETTING] in the ROP menu.
4. Set the account information of the connection destination device under [SYSTEM] > [CAMERA AUTH SETTING].

When setting the IP address of the connection destination by searching

2. Search for the IP addresses of devices and then set the camera to assign to each camera control number under [SYSTEM] > [CAM IP SEARCH].
3. Set the account information of the connection destination device under [SYSTEM] > [CAMERA AUTH SETTING].

Connect with the CCU via an IP connection and start operation.

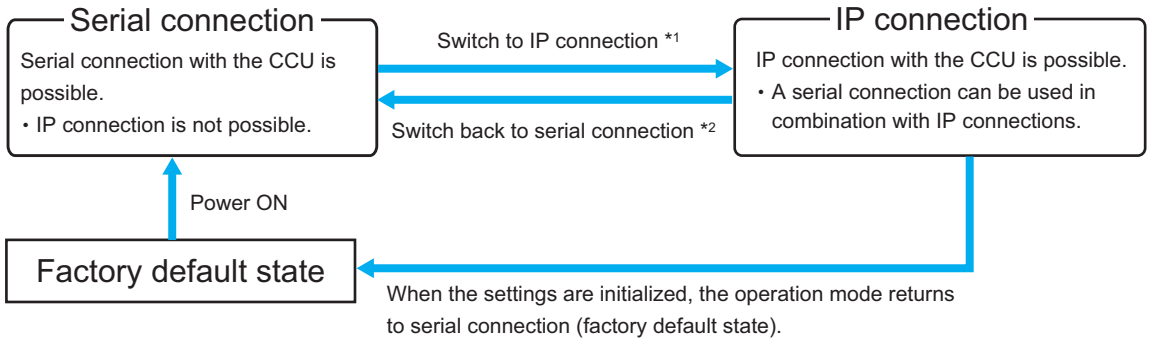
Switching between serial connection and IP connection

Switch between serial connection and IP connection via the [CONNECT SETTING] settings of the ROP menu or via the serial/LAN settings of the ROP Setup Software.

➡ “CONNECT SETTING” (see page 128)
➡ “ROP Setup Software” (see page 133)

When the settings are initialized, the operation mode returns to serial connection (factory default state).

➡ “ALL” (see page 119)



*1: If an ROP configuration file that was saved to a memory card in IP connection is loaded in serial connection, the operation mode becomes IP connection.
*2: If an ROP configuration file that was saved to a memory card in serial connection is loaded in IP connection, the operation mode becomes serial connection.

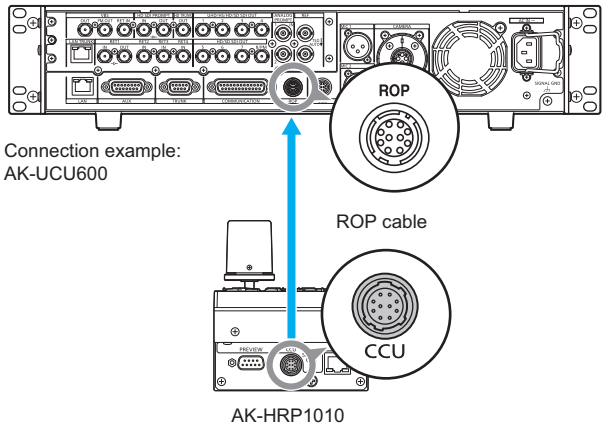
System Connection Configuration

The unit can be connected to a CCU via a serial connection or IP connection.

- Up to 99 CCUs can be controlled.
- Only one CCU can be connected via a serial connection.
- A configuration with one serial connection and 98 IP connections is possible.

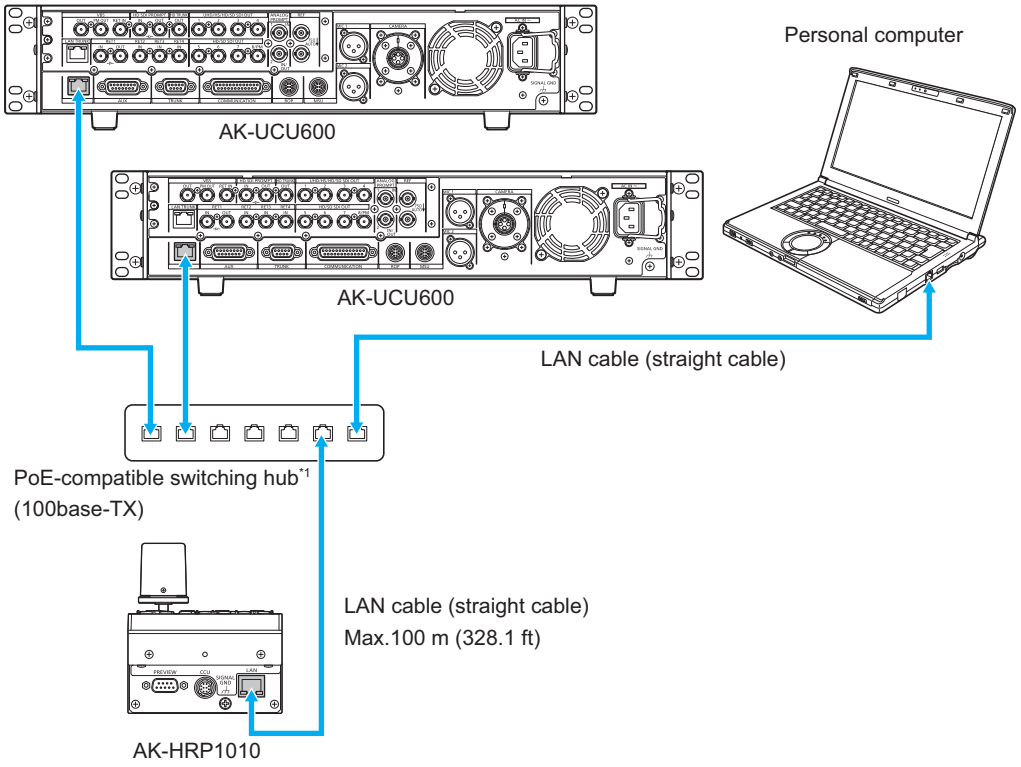
CCU connections

Serial connection



1. **Connect the <CCU> connector on this unit to the <ROP> connector on the CCU using a dedicated ROP cable (sold separately).**
2. **When you have finished connecting the equipment, turn on the main power of the CCU.**
   - If a camera is not connected, some of the control functions from the unit to the CCU will be limited.
   - Turn off the CCU before disconnecting the ROP cable.

IP connection

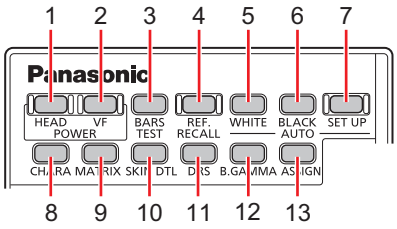


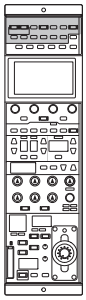
*1: The CCU does not support PoE.

1. **Connect the <LAN> connector on this unit to the <LAN> connector on the CCU rear panel using a LAN cable (sold separately).**
   - The unit can be powered with PoE. Use a switching hub with PoE support.
   - Use a straight cable (category 5e or higher) for the LAN cable*2 (Max. 100 m (328.1 ft))
     *2: STP (shielded twisted pair)
2. **When you have finished connecting the equipment, turn on the power of the CCU.**
   - If a camera is not connected, some of the control functions from the unit to the CCU will be limited.
   - Up to 99 CCUs (AK-UCU500/AK-UCU600) can be controlled from the unit.
   - To operate CCUs via an IP connection, you need to configure the [CONNECT SETTING] settings of the ROP menu or the ROP Setup Software settings. Before using ROP Setup Software, connect the unit to the personal computer with a LAN cable.
     ➡ “CONNECT SETTING” (see page 128)
     ➡ “ROP Setup Software” (see page 133)

Parts and their functions

Front panel 1



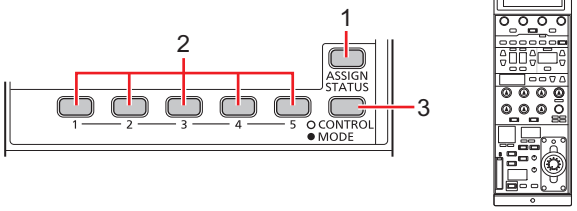


1	**[POWER HEAD] button**	Use this button to control camera power remotely. However, it will not function unless the CCU and the camera are turned on. Each press of the button turns the power of the camera on or off. **Status displays** On (green): The camera is turned on. On (red): The camera is turned off. Flashing (red): The camera has been turned off from the unit. Off: When the camera is not connected ■ When the camera is powered from an external DC power supply, the button lights green and the camera power supply cannot be remotely controlled from this unit.
2	**[POWER VF] button**	Use this button to control the viewfinder power remotely. When the camera is turned on by the unit, the viewfinder is also turned on. Each press of the button turns the power On (power on) and Off (power off). **Status displays** On: Both the camera and viewfinder are On. Off: The viewfinder has been turned off from the unit ■ On/off operation for the viewfinder cannot be performed if the power on the viewfinder is turned off.
3	**[BARS/TEST] button**	Use this button to output the CCU color bar signal from the camera video output on the CCU rear panel. ● To select a CCU color bar type, select [FUNCTION] > [SYSTEM CCU INFO] > [BARS HD] or [BARS SD] in the ROP menu. ➡ "BARS HD" (see page 104) ➡ "BARS SD" (see page 104) ● When the video signal is a camera signal or a color bar signal, press and hold the [BARS/TEST] button to select the TEST signal. To switch from TEST signal output, press the [BARS/TEST] button to select camera video output. **Status displays** On (yellow): CCU color bar On On (green): TEST signal On Off: Camera video
4	**[REF. RECALL] button**	Press and hold this button to recall the reference setting information (reference file) of the camera. Assign the user file and factory file under [FUNCTION] > [SYSTEM CAM INFO] > [REF.RECALL] of the ROP menu. ➡ "ASU RECALL" (see page 103) **Status displays** On: Recalling Off: Recall complete

5	**[AUTO WHITE] button**	Use this button to perform auto white balance adjustment. **Status displays** On: Indicates that the auto white balance adjustment has started. Flashing: Warns that the automatic white balance adjustment ended without being completed. When highlights and lowlights are lost, white balance is returned to its previous value. When correct white balance cannot be obtained, adjustment stops at the last obtained value. Off: Indicates that the auto white balance has been adjusted correctly. ■ Press and hold the [AUTO WHITE] button during white balance adjustment (lamp on) cancels adjustment and turns the lamp off. ("BREAK" appears on the picture monitor (PM) of the CCU.) Then the white balance value returns to the value it had prior to auto white balance adjustment.
6	**[AUTO BLACK] button**	Use this button to perform auto black balance adjustment. **Status displays** On: Indicates that the auto black balance adjustment has started. Flashing: Warns that the automatic black balance adjustment ended without being completed. Auto black balance returns to the value it had prior to adjustment. Off: Indicates that the auto black balance has been adjusted correctly. ■ Press and hold the [AUTO BLACK] button during white balance adjustment (lamp on) cancels adjustment and turns the lamp off. ("BREAK" appears on the picture monitor (PM) of the CCU.) Then the black balance value returns to the value it had prior to auto black balance adjustment.
7	**[AUTO SET UP] button**	Use this button to start auto setup. The setup status is output to the picture monitor (PM). ➡ "Auto Setup" (see page 36)
8	**[CHARA] button**	Use this button to switch on and off the character display of the status screen on the CCU picture monitor (PM). **Status displays (button press method)** On (short press): Displays characters on the picture monitor (PM). Each short press changes the display data. Off (long press): Turns off the picture monitor (PM) character display.
9	**[MATRIX] button**	Use this button to enable the function to correct saturation and color phase according to the gain setting of each color component in matrix memory. Each press of the button turns the function on or off. **Status displays** On: ON Off: OFF
10	**[SKIN DTL] button**	Use this button to apply coring to the detail enhancement of the skin tone areas in the video output to soften or increase the enhancement of skin tone details. Each press of the button turns the function on or off. You can select "UHD" or "HD" as the target for skin tone detail control under [MAINTENANCE] > [ROP VOL/BUTTON] > [SKIN DTL SW] in the ROP menu. ➡ "SKIN DTL SW" (see page 116) **Status displays** On: ON Off: OFF
11	**[DRS] button**	Use this button to enable or disable the dynamic range stretcher. **Status displays** On: ON Off: OFF
12	**[B.GAMMA] button**	Use this button to enable or disable the black gamma correction. You can select "HDR" (HLG B.GAMMA) or "SDR" (B.GAMMA) as the target for enabling or disabling under [MAINTENANCE] > [ROP VOL/BUTTON] > [B.GAMMA SW] of the ROP menu. ➡ "B. GAMMA SW" (see page 116) **Status displays** On: ON Off: OFF

13	**[ASSIGN] button**	Use this button to enable or disable the menu function assigned to the button. **Status displays** When “FLARE”, “GAMMA”, “KNEE”, “W.CLIP”, “HD.D”, “UHD.D”, or “SD.D” are assigned to the buttons On: OFF Off: ON When functions other than the above are assigned On: ON Off: OFF ■ Set the function assigned to the [ASSIGN] button in [MAINTENANCE] > [ROP VOL/BUTTON] > [ASSIGN BUTTON] in the ROP menu. ➡ “ASSIGN BUTTON” (see page 115)

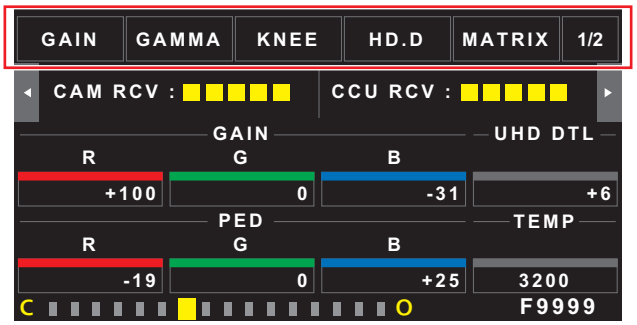
Front panel 2



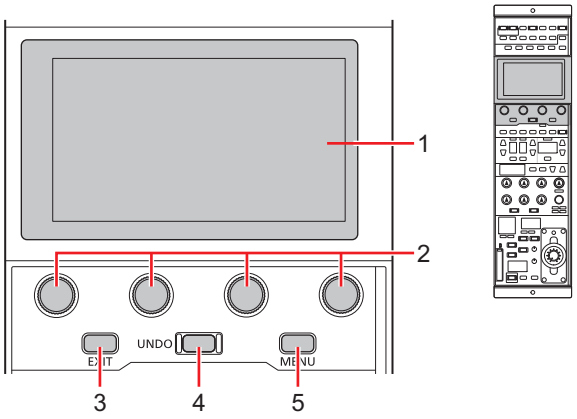
1	**[ASSIGN STATUS] button**	Use this button to display the ASSIGN status screen. The functions assigned to the [1] to [5] (CONTROL/MODE) buttons and [ASSIGN] button are displayed on the LCD panel. ● When you press this button while the menu screen is displayed, the ASSIGN status screen will not appear. Press the button after turning off the menu screen display. ➡ "ASSIGN status screen" (see page 52) **Status displays** On: ASSIGN status screen is displayed Off: ASSIGN status screen is hidden
2	**Buttons [1] to [5] (CONTROL/MODE)**	Use these buttons to select users 1 to 5 when the [CONTROL/MODE] button is set to CONTROL. When the [CONTROL/MODE] button is set to MODE, pressing these buttons enables/disables the functions assigned to each button. Set the functions to assign to the [CONTROL/MODE] buttons in [MAINTENANCE] > [ROP VOL/BUTTON] > [CONTROL1] to [CONTROL5] and [MODE1] to [MODE5] in the ROP menu. ➡ "CONTROL1" to "CONTROL5" (see page 114) ➡ "MODE1" to "MODE5" (see page 115) **Status displays** When "FLARE", "GAMMA", "KNEE", "W.CLIP", "HD.D", "UHD.D", or "SD.D" are assigned to the buttons On: OFF Off: ON When functions other than the above are assigned On: ON Off: OFF
3	**[CONTROL/MODE] button**	Use this button to switch between the control items and mode items that appear under buttons [1] to [5].

NOTE

- The button settings configured with the above operations will appear at the top of the status screen.

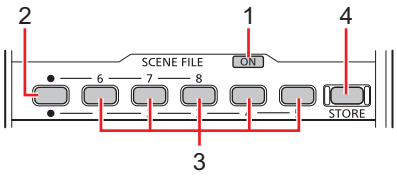


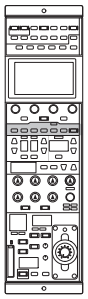
Front panel 3



1	**LCD panel**	This panel displays the menu screen or status screen.
2	**[MENU] dials**	Use these dials to perform operations according to the menu items displayed on the LCD panel.
3	**[EXIT] button**	Use this button to return to the previous menu level.
4	**[UNDO] button**	Use this button to restore the values controlled during the setting operation to the values prior to control. It is enabled when lit. ● The operation will be applied to the single menu item currently being controlled.
5	**[MENU] button**	Use this button to display the menu screen on the LCD panel. **Status displays** On: Menu screen is displayed Off: Menu screen is hidden (status screen is displayed)

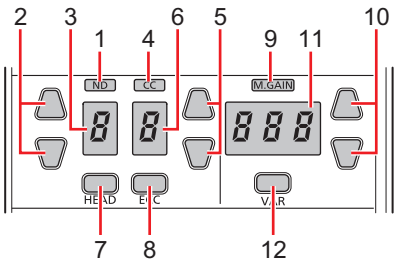
Front panel 4

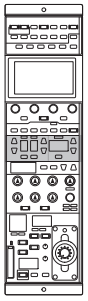




1	**[ON] indicator (SCENE FILE)**	This indicator is lit when a scene file is selected. **Status displays** On: A scene file is selected. Off: A scene file is not selected.
2	**Scene file page switching button**	Use this button to switch between scene file pages 1 to 5 and 6 to 8. Buttons [1] to [5] and buttons [6] to [8] will light / turn off in sequence with each press of the button. **Status displays** On: Scene files [6] to [8] can be selected. Off: Scene files [1] to [5] can be selected.
3	**[1/6], [2/7], [3/8], [4], and [5] buttons (SCENE FILE)**	Use these buttons to recall the corresponding scene files as necessary. ➡ "Scene file" (see page 37) **Status displays** On: A scene file is selected. Off: A scene file is not selected.
4	**[STORE] button**	Use this button to register scene files. ➡ "Storing scene files" (see page 37) **Status displays** On: Scene files can be registered Off: During normal use

Front panel 5

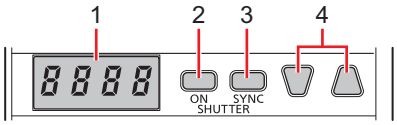


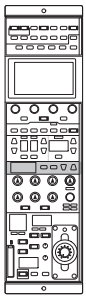


1	**[ND] indicator**	This indicator indicates the ND filter setting status. **Status displays** Lit (green): Standard position set in the ROP menu. Lit (orange): Updated from the standard position set in the ROP menu. ■ The standard position of the ND filter can be set in [MAINTENANCE] > [ROP VOL/BUTTON] > [STD POSI ND] in the ROP menu. ➡ "STD POSI ND" (see page 116)
2	**[ND] setting buttons**	Use the up and down buttons to select the ND filter setting. ● When [HEAD] button off Changes the ND filter setting. ● When [HEAD] button lit Only displays the ND filter position. (Switching is not possible.) ➡ "ND filter" (see page 39)
3	**[ND] display**	This displays the ND filter position.
4	**[CC] indicator**	This indicator indicates the CC filter setting status. **Status displays** Lit (green): Standard position set in the ROP menu. Lit (orange): Updated from the standard position set in the ROP menu. ■ The standard position of the CC filter can be set in [MAINTENANCE] > [ROP VOL/BUTTON] > [STD POSI CC] in the ROP menu. ➡ "STD POSI CC" (see page 116)
5	**[CC] setting buttons**	Use the up and down buttons to select the CC filter setting. ● When [HEAD] button off Changes the CC filter setting. ● When [HEAD] button lit Only displays the CC filter position. (Switching is not possible.) ➡ "CC filter" (see page 40) ● When [ECC] button lit When [MAINTENANCE] > [ROP VOL/BUTTON] > [ECC BUTTON CTRL] is set to "VAR" in the ROP menu, you can configure the [ECC] > [COLOR TEMP] values in the ROP menu. ➡ "COLOR TEMP" (see page 76) When [MAINTENANCE] > [ROP VOL/BUTTON] > [ECC BUTTON CTRL] is set to "MEM" in the ROP menu, the setting values registered to memory presets A to E in the [ECC] menu are recalled. The recalled memory preset appears on the [CC] display. In this state, the display will remain as the recalled memory preset, even if the [PAINT] > [ECC] > [COLOR TEMP] settings in the ROP menu are changed.
6	**[CC] display**	This displays the CC filter position.
7	**[HEAD] button**	Use this button to enable filter control on the camera side. The [HEAD] button also lights when the camera's [FILTER LOCAL] switch is pressed and lit. **Status displays** On: Filter control enabled on the camera side Off: Filter control enabled on the ROP (this unit) side

8	**[ECC] button**	When this button is lit, [PAINT] > [ECC] > [COLOR TEMP SW] in the ROP menu can be enabled or disabled. ➡ "Color temperature (ECC)" (see page 41) **Status displays** On: ECC operation ([COLOR TEMP SW] enabled) Off: CC filter operation ([COLOR TEMP SW] disabled)
9	**[M.GAIN] indicator**	This displays the master gain configuration status. **Status displays** Lit (green): Standard position set in the ROP menu. Lit (orange): Updated from the standard position set in the ROP menu. ■ The standard position of the master gain can be set in [MAINTENANCE] > [ROP VOL/BUTTON] > [STD POSI M.GAIN] in the ROP menu. ➡ "STD POSI M. GAIN" (see page 116)
10	**[M.GAIN] setting buttons**	Use the up and down buttons to select the master gain (video input sensitivity) setting. ➡ "Master gain (M.GAIN)" (see page 42)
11	**[M.GAIN] display**	This displays the combined value of the master gain (M.GAIN) adjustment value and the VAR value.
12	**[VAR] button**	Use this button to change the step of the [M.GAIN] value. **Status displays** On: Adjustment is in 0.1 dB steps. (±2.9 range) Off: Adjustment is in 1 dB steps.

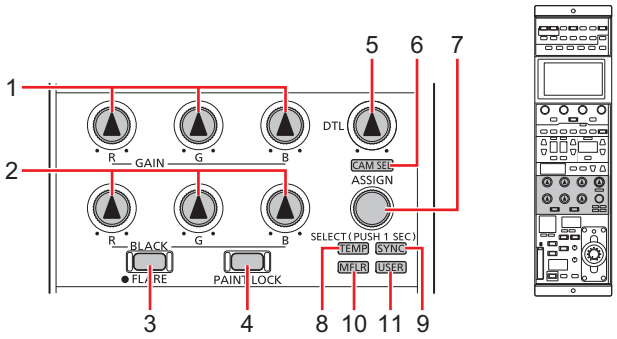
Front panel 6

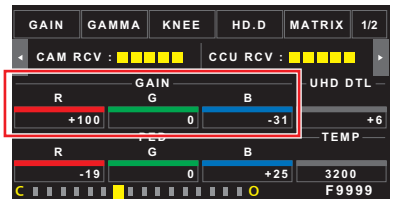
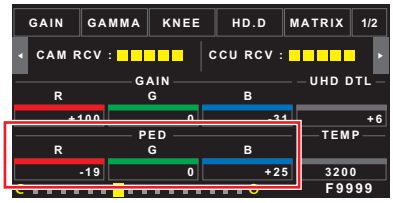
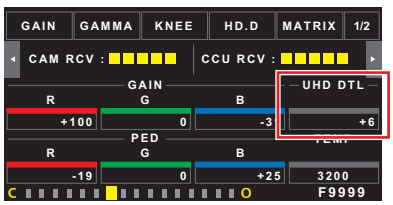


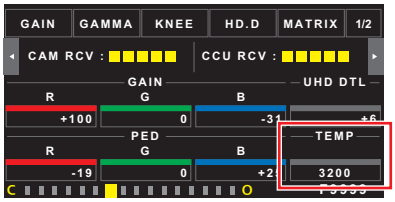


1	**[SHUTTER] display**	The display shows the shutter value.
2	**[ON] button (SHUTTER)**	Turns the shutter on or off. **Status displays** On: ON Off: OFF
3	**[SYNC] button (SHUTTER)**	Use this button switch between the shutter and sync shutter. **Status displays** On: Sync shutter Off: Step shutter
4	**[SHUTTER] setting buttons**	Use the up and down buttons to select the shutter speed setting. ➡ "Shutter (SHUTTER)" (see page 43)

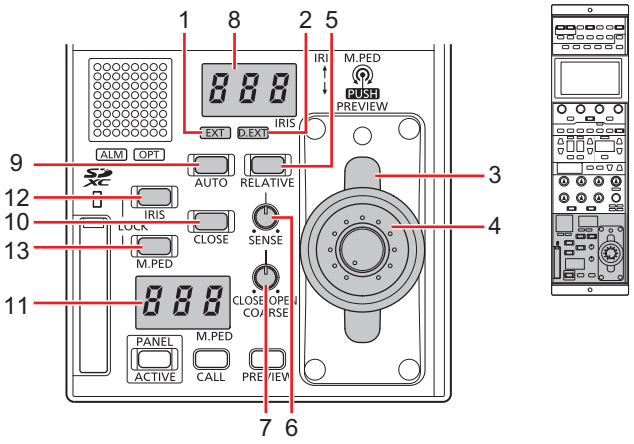
Front panel 7



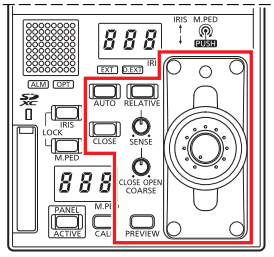
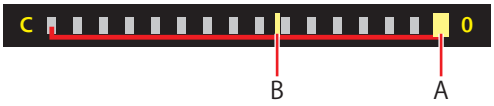
1	**[GAIN R], [GAIN G], and [GAIN B] dials**	Use these control dials to adjust the white balance (R, G, B). Turning a dial changes the gain control value in the status screen. The setting values can be viewed in the [GAIN] area of the LCD panel (status screen).  ● This is a target of the paint control lock (PAINT LOCK).
2	**[BLACK R], [BLACK G], and [BLACK B] dials**	Use these control dials to adjust the pedestal (R, G, B) or flare (R, G, B). Turning a dial changes the pedestal or flare control value in the status screen. The setting values can be viewed in the [PED] area of the LCD panel (status screen). When adjusting the flare, the [PED] area will appear as the [FLARE] area.  ● This is a target of the paint control lock (PAINT LOCK).
3	**[FLARE] button**	When this button is lit, the [BLACK (R, G, B)] dial can be used as a flare (R, G, B) adjustment dial. When the button is not lit, the dial is used as the pedestal (R, G, B) adjustment dial. **Status displays** On: Flare adjustment Off: Pedestal adjustment
4	**[PAINT LOCK] button**	Lock (disable) the paint control operations. The [GAIN (R, G, B)], [BLACK (R, G, B)], and [DTL] dials will be disabled. Each press of the button turns the function on or off. ● The target paint controls are [GAIN R, G, B], [BLACK/FLARE R, G, B], and [DTL]. **Status displays** On: ON (locks the paint control values) Off: OFF (paint control values change)
5	**[DTL] dial**	Use this dial to adjust the detail level. The setting values can be viewed in the [DTL] area of the LCD panel (status screen). You can configure whether to perform [DTL] adjustment for UHD, HD, or SD under [MAINTENANCE] > [ROP VOL/BUTTON] > [DTL VOL] of the ROP menu.  ● This is a target of the paint control lock (PAINT LOCK).

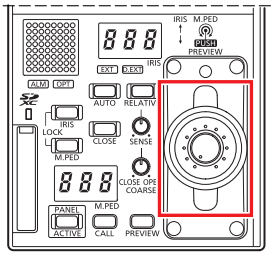
6	**[CAM SEL] indicator**	This indicator is lit in camera selection mode. **Status displays** On: Camera selection mode Off: Camera selection mode canceled
7	**[SELECT] dial**	Use this dial to select and adjust any of [TEMP], [CAM SEL], [SYNC], [USER], and [MFLR]. The setting values can be viewed in the [TEMP] area of the LCD panel (status screen). Depending on the selected property, the [TEMP] area will appear as the [USER], [SYNC], [B.GAM], or [M.FLR] area.  For the operating procedure, see the following page. ➡ “[SELECT] dial” (see page 47)
8	**[TEMP] indicator**	This indicator lights when [TEMP] is selected with the [SELECT] dial. ➡ “[SELECT] dial” (see page 47)
9	**[SYNC] indicator**	This indicator lights when [SYNC] is selected with the [SELECT] dial. ➡ “[SELECT] dial” (see page 47)
10	**[MFLR] indicator**	This indicator lights when [MFLR] is selected with the [SELECT] dial. ➡ “[SELECT] dial” (see page 47)
11	**[USER] indicator**	This indicator lights when [USER] is selected with the [SELECT] dial. ➡ “[SELECT] dial” (see page 47)

Front panel 8

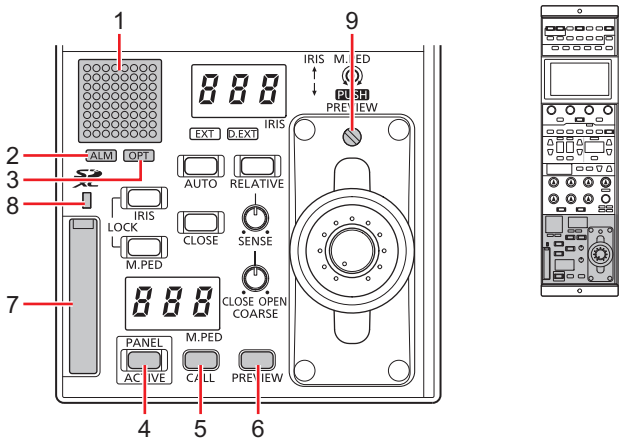


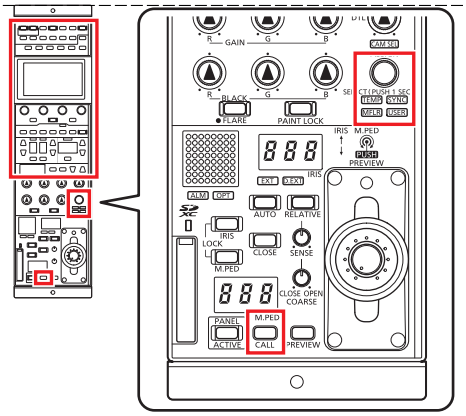
1	**[EXT] indicator**	This indicator lights to warn that the lens extender is set to something other than 1x. **Status displays** On: The lens extender is set to something other than 1x. Off: This indicates that the lens extender is not being used or that it is not available.
2	**[D.EXT] indicator**	This indicator lights to warn that the digital extender is set to something other than 1x. **Status displays** On: The digital extender is set to something other than 1x. Off: This indicates that the digital extender is not being used or that it is not available.
3	**[IRIS] lever**	Use this lever to adjust the iris level. The iris can be adjusted manually. For details on adjusting the iris, see the following page. ➡ "Iris (IRIS)" (see page 45) **Lever position** Forward: Adjusts in the CLOSE direction. Backward: Adjusts in the OPEN direction.
4	**[M.PED] dial**	Use this dial to adjust the master pedestal level. Turn it right (clockwise) to increase the master pedestal. For details on adjusting the master pedestal, see the following page. ➡ "Master pedestal (M.PED)" (see page 44)
5	**[RELATIVE] button**	Use this button to set whether the variable range of the [IRIS] lever will be dependent on the [SENSE] dial and [COARSE] dial. **Status displays** On: The [IRIS] lever is dependent on the settings of the [SENSE] dial and [COARSE] dial. Off: Sets the variable range of the [IRIS] lever to the entire range from OPEN to CLOSE.
6	**[SENSE] dial**	Use this dial to adjust the iris variable range when the [IRIS] lever is moved from OPEN to CLOSE. The variable range differs depending on the setting of [MAINTENANCE] > [IRIS LEVER SETTING] > [RELATIVE MODE]. **Variable range** FULL: Adjusts the aperture range within the range of OPEN to CLOSE. NORMAL: Adjusts within the range of ±1/2 to 2 f-stops. **Dial operation** This is enabled only when [MAINTENANCE] > [IRIS LEVER SETTING] > [LEVER MODE] is set to "ABS". Turn right (clockwise): Widens the variable range ([IRIS] lever sensitivity increases). Turn left (counterclockwise): Narrows the variable range ([IRIS]lever sensitivity decreases).

7	**[COARSE] dial**	Adjusts how much the iris is opened or closed when the [IRIS] lever is moved. **Dial operation** This is enabled only when [MAINTENANCE] > [IRIS LEVER SETTING] > [LEVER MODE] is set to “ABS”. Turn right (clockwise) (OPEN): The [IRIS] lever will operate at its most sensitive range. Turn left (counterclockwise) (CLOSE): The [IRIS] lever will operate at its least sensitive range.
8	**[IRIS] display**	This display shows the current iris setting.
9	**[AUTO] button**	Use this button to enable the auto iris function. For details on the auto iris function, see the following page. ➡ “Iris (IRIS)” (see page 45) **Status displays** On: Enables the auto iris function. Off: Enables manual adjustment of the iris using the [IRIS] lever.
10	**[CLOSE] button**	Use this button to forcibly set the iris to CLOSE (closed). **Status displays** On: Forcibly sets the iris to CLOSE. Off: Cancels iris CLOSE.
11	**[M.PED] display**	This display shows the master pedestal value.
12	**[IRIS LOCK] button**	Use this button to disable (lock) iris operation. **Lock range**  **Status displays** Off: Iris can be controlled. Lit: Iris operation is disabled (locked). Flashing: Due to iris adjustment from another device, the adjustment value and the [IRIS] lever position do not match. ■ If you adjust the [IRIS] lever to match the iris position of the camera while viewing the iris gauge that appears at the bottom of the LCD panel (status screen), the button will turn off and normal control will be possible.  A. IRIS position of the camera B. [IRIS] lever position ■ This also flashes if the camera adjustment values and [IRIS] lever position are offset when the control target camera is switched. At the point in time when the [IRIS] lever is moved to the position that matches the camera adjustment values, the button turns off and normal control becomes possible.

13	**[M.PED LOCK] button**	Use this button to disable (lock) master pedestal operation. **Lock range**  **Status displays** Off: Master pedestal can be controlled. Lit: Operation is disabled (locked). ■ When the [M.PED] dial is returned to the lock position, the button turns off and normal control becomes possible. ■ This also flashes if the camera adjustment values and [M.PED] dial position are offset when the control target camera is switched. At the point in time when the [M.PED] dial is moved to the position that matches the camera adjustment values, the button turns off and normal control becomes possible.

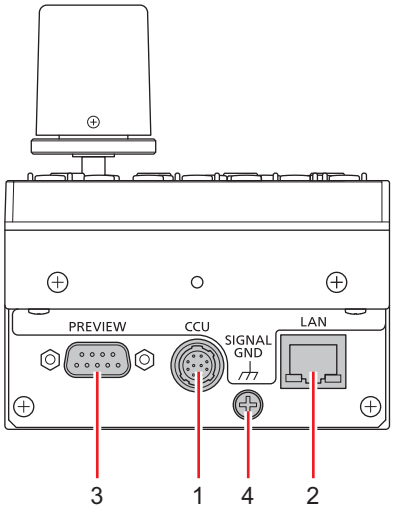
Front panel 9



1	**Camera number/tally display**	This display shows the camera number information and tally information.
2	**[ALM] indicator**	This is the camera and CCU warning indicator lamp. Consult your dealer if a failure occurs. ● The indicator lights to indicate when the camera and CCU optical reception level is not strong enough, when a data error has occurred in the CCU optical transmission/reception section, or when a fan error or temperature error has occurred on the camera or CCU.
3	**[OPT] indicator**	This is the camera cable warning indicator lamp. **Status displays** Lit (orange): Warns that an optical transmission error has occurred. Lit (red): Indicates that the camera is not connected to the CCU. Off: The camera cable is connected normally.
4	**[PANEL ACTIVE] button**	Use this button to lock (disable) the panel operation. When disabled, the LCD panel display will turn off. The [ND], [CC], [M.GAIN], and [SHUTTER] setting buttons will also turn off. **Lock range**  **Status displays** On: Enabled Off: Disabled
5	**[CALL] button**	Press this button to call the camera operator. The call switch on the camera and CCU is lit while this button is pressed. Also, when the call switch is pressed on the camera or CCU, this switch lights and a buzzer sound is output. **Status displays** On: Indicates that the call switch on the camera or CCU is pressed. Off: Indicates that the call switch on the camera or CCU is not pressed.
6	**[PREVIEW] button**	Use this button to output a preview signal from the preview connector. ● Pressing the [IRIS] lever also outputs the preview signal. **Status displays** On: Preview output is On Off: Preview output is Off

7	**Memory card slot**	Insert a memory card into this slot. You can save the settings of the unit and the scene files, user files, and other files to a memory card. ➡ "Memory cards" (see page 10)
8	**Memory card access indicator**	This indicator lights when data is read from or written to a memory card.
9	**Torque adjustment screw**	Use a flat-bladed screwdriver to adjust the torque of the iris lever.

Connectors



1	**<CCU> connector**	This connector is for serial connections to the CCU.
2	**<LAN> connector**	Use a LAN cable to connect to a CCU or personal computer that supports IP connections.
3	**<PREVIEW> connector**	This connector outputs preview signals.
4	**<SIGNAL GND> terminal**	Connect this to the system ground.

Adjustment and settings

Auto Setup

Starting auto setup

Before starting auto setup

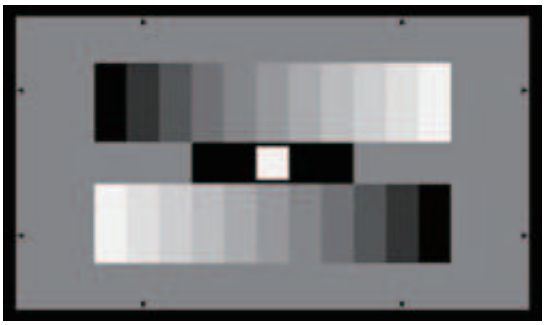
Choose [FUNCTION] > [SYSTEM CAM INFO] > [ASU MODE] in the ROP menu to select “FULL” or “EASY” mode.

“ASU MODE” (see page 103)

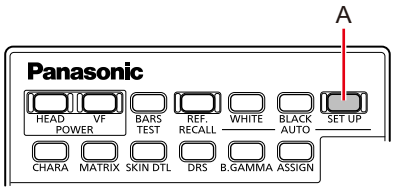
FULL	Standard setup based on an outdoor shooting chart
EASY	Easy setup based on an outdoor shooting chart

Align the position of the gray scale wedge with the angle of view in the vertical direction of the viewfinder. Be sure to correctly select the position from which you shoot the chart since some positions may not enable a satisfactory auto setup.

- **Recommended gray scale**



Starting auto setup



A. [AUTO SET UP] button

Operating procedure

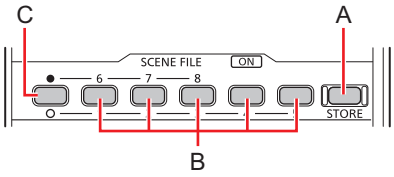
1. **Press the [AUTO SET UP] button (A).**
   The [AUTO SET UP] button flashes while the auto setup start preparation mode is established, and a square marker appears in the center of the camera viewfinder. Align the white at the center of the gray scale with this square marker. (To cancel setup, press and hold this button.)
2. **Press the [AUTO SET UP] button (A) again.**
   The [AUTO SET UP] button lights as auto setup starts. (Holding down the [AUTO SET UP] button during the auto setup operation will abort auto setup.)
   The [AUTO SET UP] button goes off when auto setup ends successfully.
   - If the [AUTO SET UP] button flashes at approximately 1-second intervals, auto setup has ended without being completed. During the auto setup operation, the picture monitor (PM) displays characters to indicate operation status.
   - If auto setup is not completed, check the message on the picture monitor (PM) on the CCU.

Scene file

Storing and opening scene files

Storing scene files

You can register the data currently being operated as a scene file.



A. [STORE] button
B. [1/6], [2/7], [3/8], [4], and [5] buttons
C. Scene file page switching button

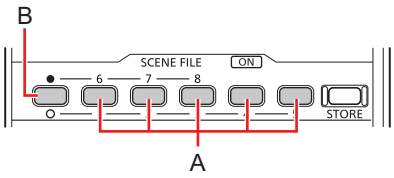
Operating procedure

1. **Press the [STORE] button (A).**
   The button lights.
2. **Press the desired scene number button (B).**
   The scene file page can be switched between [1] to [5] and [6] to [8] with the scene file page switching button (C).
   When a button is pressed, the scene file storage starts.
   The [STORE] button (A) turns off when storage ends.

NOTE

- If adjustments are made after opening a scene file and then the store operation is performed, the state at that point in time is stored in the scene file.

Opening a scene file



A. [1/6], [2/7], [3/8], [4], and [5] buttons
B. Scene file page switching button

Operating procedure

1. **Press the desired scene number button (A).**
   The scene file page can be switched between [1] to [5] and [6] to [8] with the scene file page switching button (B).
   The pressed button lights and the scene file opens.
   To cancel opening of a scene file, press the button that is currently lit to turn it off.
   - The setting information that was temporarily saved before the scene file was opened is now restored, and the setting state prior to opening the scene file is also restored.
   - If another number button is pressed, the scene file registered to the pressed button is newly opened.

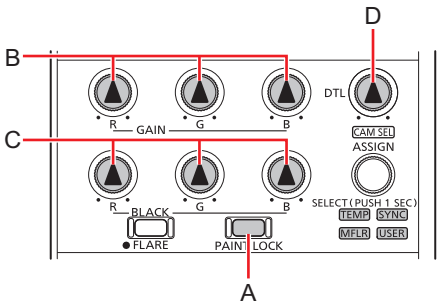
PAINT LOCK

Using the PAINT LOCK

Lock (disable) the paint control operations.

The following operations are targets of the paint control lock (PAINT LOCK).

- [GAIN R], [GAIN G], and [GAIN B] dials (B): White balance adjustment
- [BLACK R], [BLACK G], and [BLACK B] (C) dials: Pedestal or flare adjustment
- [DTL] dial (D): Detail enhancer adjustment



A. [PAINT LOCK] button
B. [GAIN R], [GAIN G], and [GAIN B] dials
C. [BLACK R], [BLACK G], and [BLACK B] dials
D. [DTL] dial

Operating procedure

1. **Adjust each item with the control dials.**
2. **Press the [PAINT LOCK] button (A).**
   The button lights.
3. **Turn the control dial to its center position.**
4. **Press the [PAINT LOCK] button (A) again.**
   The button turns off.
   The value of the adjustment position at that point in time will be the center.

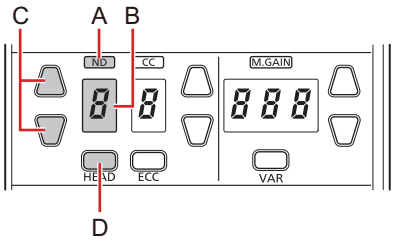
ND filter

Displaying and setting the ND filter

The adjustment value of the ND filter is displayed on the [ND] display (B).

When the setting value is changed from the standard position set in the ROP menu, the [ND] indicator (A) is orange lit. (The standard position remains set while the indicator is green lit.)

➡ “STD POSI ND” (see page 116)



A. [ND] indicator
B. [ND] display
C. [ND] setting buttons
D. [HEAD] button

Operating procedure

1. **Press the [ND] setting buttons (C).**
   This allows you to change the ND filter setting value.
   - The setting cannot be changed while the [HEAD] button (D) is lit. Only position display is performed. (The [HEAD] button also lights when operating from the camera.)

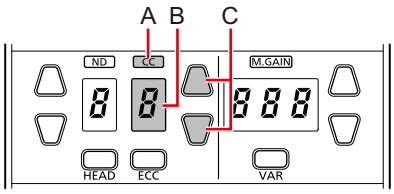
CC filter

Displaying and setting the CC filter

The adjustment value of the CC filter is displayed on the [CC] display (B).

When the setting value is changed from the standard position set in the ROP menu, the [CC] indicator (A) is orange lit. (The standard position remains set while the indicator is green lit.)

“STD POSI CC” (see page 116)



A. [CC] indicator
B. [CC] display
C. [CC] setting buttons

Operating procedure

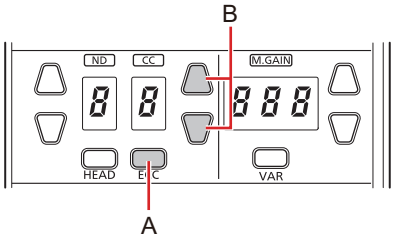
1. **Press the [CC] setting buttons (C)**
   This allows you to change the CC filter setting value.
   - The setting cannot be changed while the [HEAD] button is lit. Only position display is performed. (The [HEAD] button also lights when operating from the camera.)

Color temperature (ECC)

Setting the color temperature (ECC)

When the [ECC] button (A) is lit, you can select and change the preset color temperature. You can verify the adjustment value on the status screen.

“ECC” (see page 51)

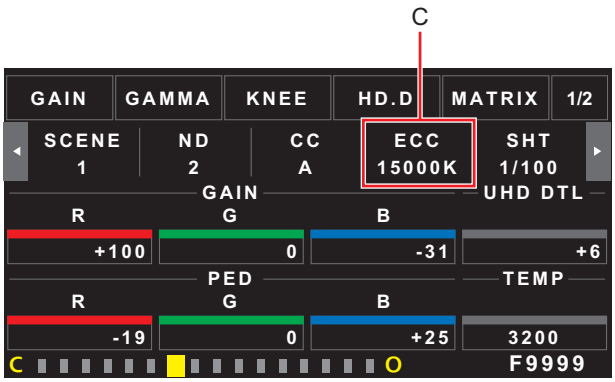


A. [ECC] button
B. [CC] setting buttons

Operating procedure

1. Press the [ECC] button (A) to light the button.

- The color temperature (ECC) adjustment mode is enabled when the [ECC] button is lit. When the [ECC] button is lit, the ECC function is enabled. (The function is disabled when the button is unlit.)
- When you set [SCENE] to be displayed on the status screen, you can verify the [ECC] setting (C).



2. Press the [CC] setting buttons (B)

This allows you to change the color temperature setting value.

NOTE

- When you set [SCENE] to be displayed on the status screen, you can verify the adjustment value in the [TEMP] field.

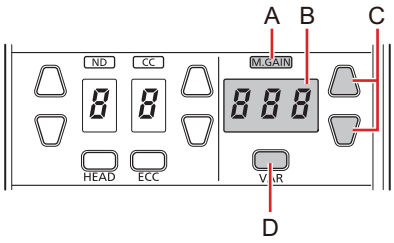
Master gain (M.GAIN)

Displaying and setting the master gain (M.GAIN)

The adjustment value of the master gain (M.GAIN) is displayed on the [M.GAIN] display (B).

When the setting value is changed from the standard position set in the ROP menu, the [M.GAIN] indicator (A) is orange lit. (The standard position remains set while the indicator is green lit.)

➡ “STD POSI M. GAIN” (see page 116)



A. [M.GAIN] indicator
B. [M.GAIN] display
C. [M.GAIN] setting buttons
D. [VAR] button

Operating procedure

1. **Press the [M.GAIN] setting buttons (C)**
   This allows you to change the master gain setting value.
   - When the [VAR] button (D) is pressed to turn on the button, the master gain can make fine adjustments. (Range of ±2.9 in 0.1 dB steps)

Shutter (SHUTTER)

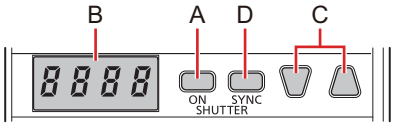
Displaying and setting the shutter (SHUTTER)

You can turn the shutter on or off by pressing the [ON] button (SHUTTER) (A). (The shutter is turned on when the button is lit.)

The shutter value is displayed in the [SHUTTER] display (B) and can be adjusted using the [SHUTTER] setting buttons (C).

Step shutter adjustment is enabled when the [SYNC] button (SHUTTER) (D) is not lit, and sync shutter adjustment is enabled when the button is lit. Turn the [SYNC] button (SHUTTER) (D) on or off (lit or not lit) to switch between step and sync shutter.

The current setting value is displayed in the [SHUTTER] display (B).



A. [ON] button (SHUTTER)
B. [SHUTTER] display
C. [SHUTTER] setting buttons
D. [SYNC] button (SHUTTER)

Operating procedure

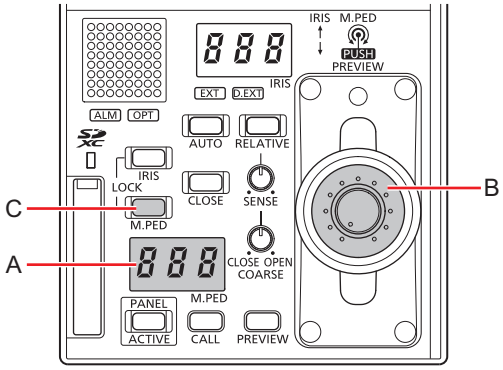
1. **Press the [ON] button (SHUTTER) (A) to turn on the button.**
   The shutter is enabled.
   To adjust the sync shutter, press the [SYNC] button (SHUTTER) (D) to turn on the button.
2. **Press the [SHUTTER] setting buttons (C)**
   This allows you to change the shutter value.
   The shutter value can be adjusted even when the shutter is turned off. However, the value will not be applied until the shutter is turned on.
3. **Press the [ON] button (SHUTTER) (A) to turn off the button.**
   The shutter is disabled.

Master pedestal (M.PED)

Displaying and setting the master pedestal (M.PED)

The master pedestal (M.PED) setting is displayed on the [M.PED] display (A) when the [M.PED] dial (B) is operated.

- Adjustment is possible while the [M.PED LOCK] button (C) is off (canceled).



A. [M.PED] display
B. [M.PED] dial
C. [M.PED LOCK] button

Operating procedure

1. **Turn the [M.PED] dial (B).**
   The setting value is displayed on the [M.PED] display (A).

Iris (IRIS)

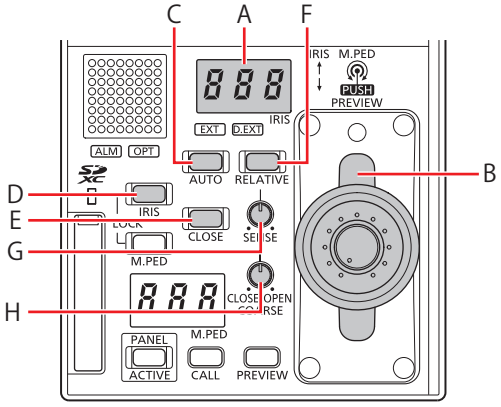
Displaying and setting the iris (IRIS)

Manual adjustment

When the auto iris is not on, the iris can be adjusted manually.

The iris value is displayed on the [IRIS] display (A).

- Adjustment is possible while the [AUTO] button (C) is off (AUTO is canceled).
- Adjustment is possible while the [IRIS LOCK] button (D) is off (iris lock is canceled).
- Adjustment is possible while the [CLOSE] button (E) is off (iris force CLOSE is canceled).



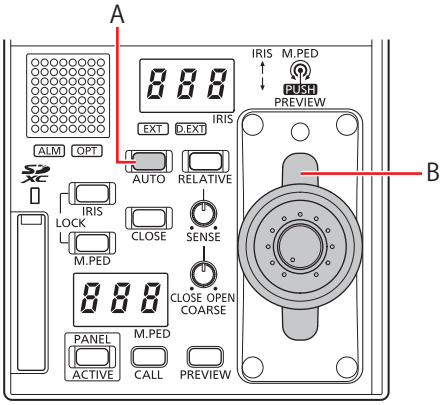
A. [IRIS] display
B. [IRIS] lever
C. [AUTO] button
D. [IRIS LOCK] button
E. [CLOSE] button
F. [RELATIVE] button
G. [SENSE] dial
H. [COARSE] dial

Operating procedure

1. **Adjust the iris level with the [IRIS] lever (B).**
   Moving it forward adjusts the level in the CLOSE direction and moving it backward adjusts the level in the OPEN direction.
   - Use the [SENSE] dial (G) to adjust the iris variable range when the [IRIS] lever (B) is moved from the center to the upper and lower edges.
     ➡ "[SENSE] dial" (see page 30)
   - Use the [COARSE] dial (H) to adjust the iris value when the [IRIS] lever (B) is moved to the center.
     ➡ "[COARSE] dial" (see page 31)
   - To cancel the restriction placed on the variable range by the [SENSE] dial (G) and [COARSE] dial (H) in order to use the entire range from OPEN to CLOSE, press the [RELATIVE] button (F) to turn off the button.

Automatic adjustment

Adjust the iris automatically. (Auto iris)



A. [AUTO] button
B. [IRIS] lever

Operating procedure

1. **Press the [AUTO] button (A) to turn on the button.**
   The auto iris turns on.
   - When the auto iris is on, the convergence level of the iris can be adjusted with the [IRIS] lever (B). Moving it forward adjusts the level in the CLOSE direction and moving it backward adjusts the level in the OPEN direction.

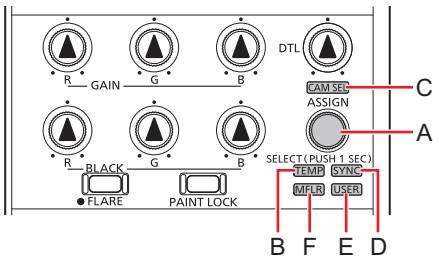
[SELECT] dial

Using the select dial

Use the [SELECT] dial (A) to select and adjust the function of any of [TEMP], [CAM SEL], [SYNC], [USER], and [MFLR].

Indicator	Function
TEMP	The value of [COLOR TEMP] can be changed with the dial. ➡ "COLOR TEMP" (see page 77)
SYNC	The value of [SHUTTER SYNCHRO] can be changed with the dial. ➡ "SYNCHRO" (see page 70)
MFLR	The value of [MASTER FLARE] can be changed with the dial.
USER	The value of the function assigned with [USER ASSIGN] in the ROP menu can be changed with the dial. ➡ "USER ASSIGN" (see page 115)
CAM SEL	The target camera for control via the unit can be selected with the dial. ➡ "Camera selection" (see page 48)

- [USER] adjusts the function set with [MAINTENANCE] > [ROP VOL/BUTTON] > [USER ASSIGN] in the ROP menu.



A. [SELECT] dial
B. [TEMP] indicator
C. [CAM SEL] indicator
D. [SYNC] indicator
E. [USER] indicator
F. [MFLR] indicator

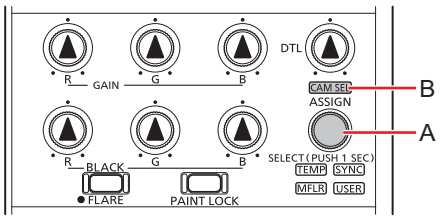
Operating procedure

1. **Press the [SELECT] dial (A) for at least approximately 1 second.**
   This allows you to select [TEMP], [CAM SEL], [SYNC], [USER], and [MFLR].
2. **Turn the [SELECT] dial (A) to select any of [TEMP] (B), [CAM SEL] (C), [SYNC] (D), [USER] (E), and [MFLR] (F).**
   The lit indicator is switched between [TEMP], [CAM SEL], [SYNC], [USER], and [MFLR] each time the dial is turned.
3. **Press the [SELECT] dial (A).**
   The selection is confirmed.
4. **Turn the [SELECT] dial (A) to adjust the selected function.**

Camera selection

Select the camera to be the target for control with the unit.

Select the camera after switching to camera selection mode.



A. [SELECT] dial
B. [CAM SEL] indicator

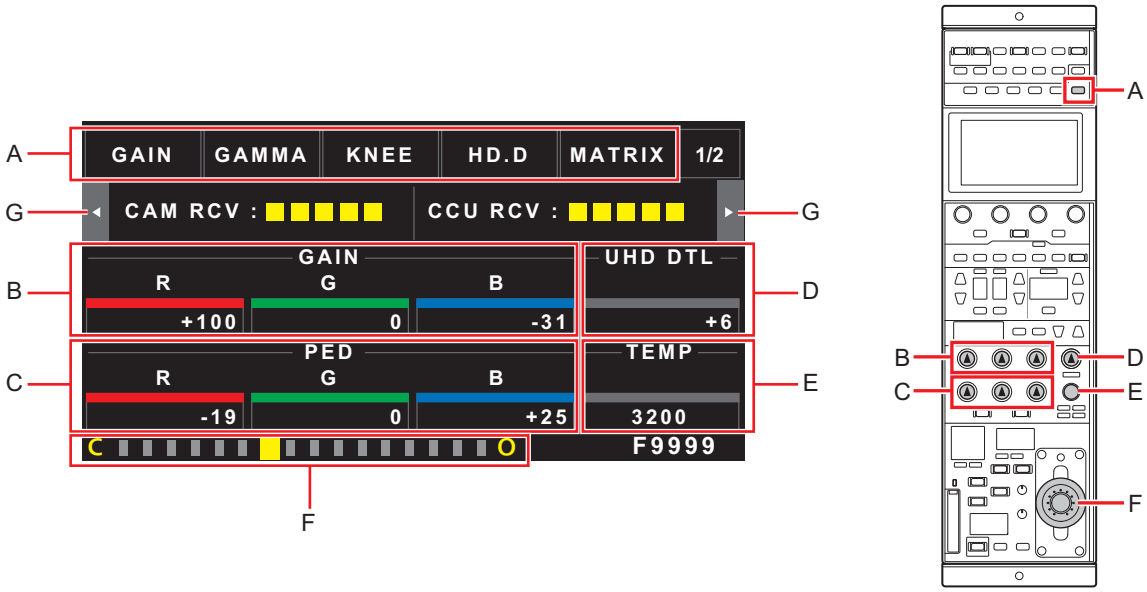
Operating procedure

1. **Press the [SELECT] dial (A) for at least approximately 1 second.**
   This allows you to select [TEMP], [CAM SEL], [SYNC], [USER], and [MFLR].
2. **Turn the [SELECT] dial (A) to select [CAM SEL].**
   Turn the dial until the [CAM SEL] indicator (B) lights.
3. **Press the [SELECT] dial (A).**
   The mode changes to camera selection mode.
4. **Turn the [SELECT] dial (A) to select the camera.**
   Turning the dial changes the camera number displayed on the status screen.
5. **Press the [SELECT] dial (A).**
   The camera selection is confirmed and the camera with the selected camera number becomes the control target.

Status screen

Displaying and operating the status screen

The status screen is displayed on the LCD panel of the unit when the ROP menu (REMOTE OPERATION MENU) is not being used (i.e., the menu is turned OFF).



A: Displays the functions assigned to each button. Pressing the [CONTROL/MODE] button switches the display items.
CONTROL: Recalls menu shortcuts.
MODE: Switches settings ON/OFF.
For the display items, you can change the menus assigned to buttons [1] to [5] under [MAINTENANCE] > [ROP VOL/BUTTON] > [CONTROL]. In addition, you can change the ON/OFF assigned to buttons [1] to [5] under [MAINTENANCE] > [ROP VOL/BUTTON] > [MODE].

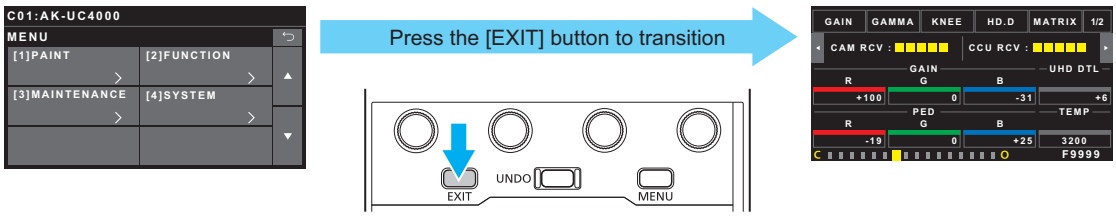
B to E: Displays the adjustment value for each dial.

F: Displays the iris adjustment value as a scale. (The displayed position is only a reference.)

G: Pressing "◀" and "▶" on both sides of the status screen changes the page of the status screen.

When the ROP menu is displayed, pressing the [EXIT] button closes the ROP menu and switches to the status screen.

■ Transitioning from the MENU screen

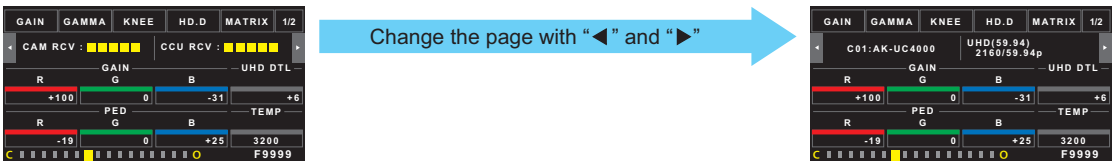


When the status screen is displayed, pressing "◀" and "▶" on both sides changes the information displayed on the status screen.

- The information is changed in the order of [OPT LEVEL] → [CAM INFO] → [SCENE] → [ASSIGN] each time "▶" is pressed.

"Items displayed on the status screen" (see page 50)

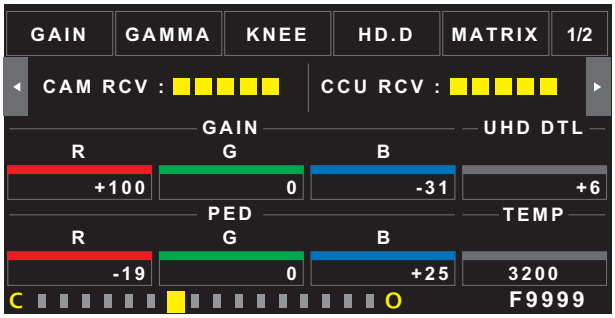
■ Switching pages in the status screen



Items displayed on the status screen

OPT LEVEL

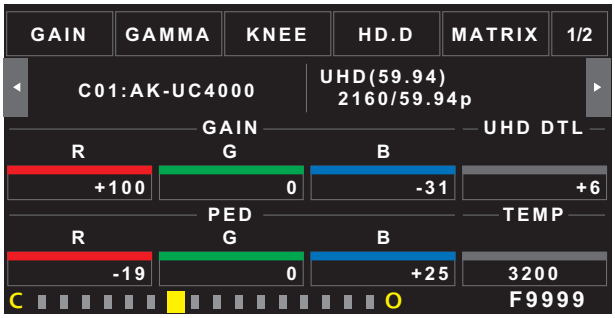
This displays the optical transmission strength.



Display	Item
CAM RCV	Displays the optical transmission/reception strength on the camera side.
CCU RCV	Displays the optical transmission/reception strength on the CCU side.

CAM INFO

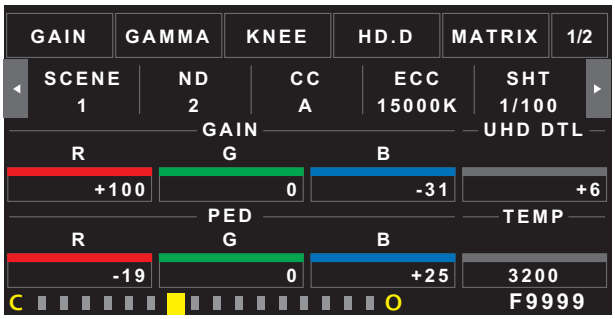
This displays the camera information.



Display	Item
C**	Displays the name of the currently selected camera. ➡ “Camera selection” (see page 48)
FORMAT	Displays the currently selected “FORMAT MODE(push)” and “FORMAT”. ➡ “FORMAT” (see page 104)

SCENE

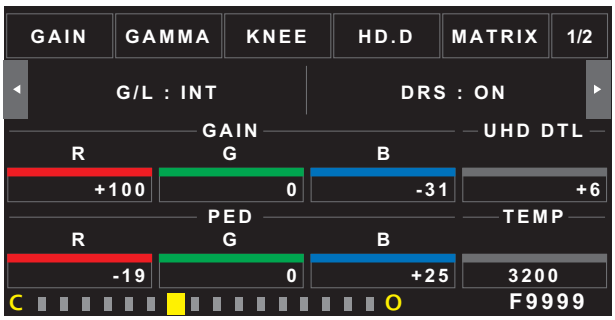
This displays the scene setting information.



Display	Item
SCENE	Displays the currently set scene number. ➡ "Scene file" (see page 37)
ND	Displays the ND filter name acquired from the CCU. ➡ "ND filter" (see page 39)
CC	Displays the CC filter name acquired from the CCU. ➡ "CC filter" (see page 40)
ECC	Displays the current information of [ECC] > [COLOR TEMP] in the ROP menu. ➡ "Color temperature (ECC)" (see page 41)
SHT	Displays the currently set shutter value. ➡ "Shutter (SHUTTER)" (see page 43)

ASSIGN

This displays the ASSIGN information.

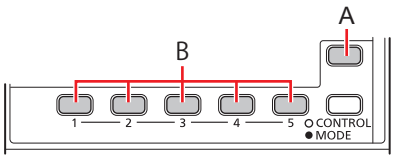


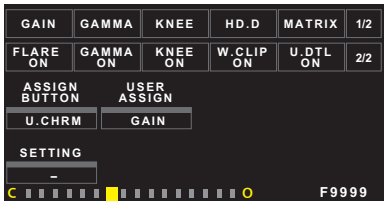
Display	Item
G/L	The status of the GENLOCK is displayed here. NG: UNLOCK EXT: Externally synced INT: Internally synced
DRS	Displays the current information of [PAINT SWITCH] > [DRS] in the ROP menu. ➡ "DRS" (see page 69)

ASSIGN status screen

The items assigned to the [1] to [5] buttons (B), [ASSIGN] button, and [USER] indicator and the SETTING number loaded in [MAINTENANCE] > [ROP SETTING] > [SETTING LOAD] can be checked on the LCD panel.

Press the [ASSIGN STATUS] button (A) to display the assignments.





A. [ASSIGN STATUS] button
B. Buttons [1] to [5]

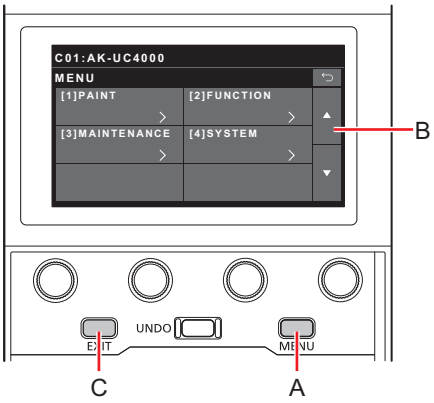
ROP menu

Displaying menus

The LCD panel of the unit can be used to operate the ROP menu (REMOTE OPERATION MENU).

ROP menu operation is a function that is enabled when the unit is connected to a camera or CCU.

Follow the procedure below to display the ROP menu. The ROP menu is displayed on the LCD panel (B) of the unit.



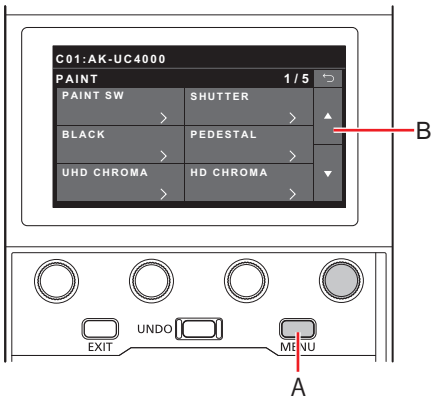
A. [MENU] button
B. LCD panel
C. [EXIT] button

Operating procedure

1. **Press the [MENU] button (A).**
   The ROP menu appears on the LCD panel (B).
   - Pressing the [EXIT] button (C) returns you to the status screen.
2. **Press the menu item you wish to set.**
   You can select from the following menu items.
   - For the menu operating procedures, see the following page.
     ➡ “Basic menu operations” (see page 54)
   - For details on menu setting items, see the following page.
     ➡ “ROP menu list” (see page 56)

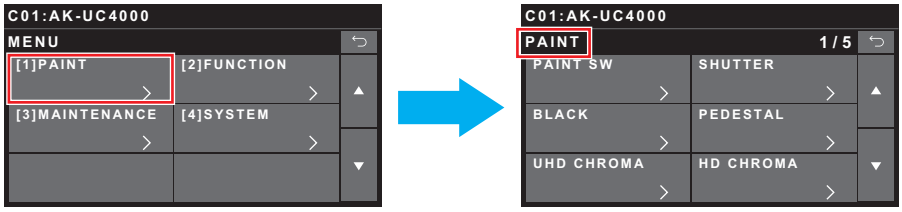
Basic menu operations

1. **Press the [MENU] button (A)**
   The menu appears on the LCD panel (B).

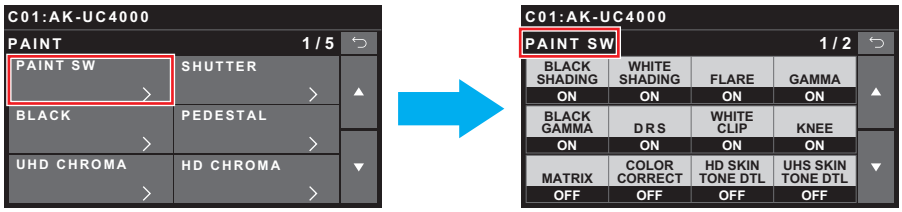


   A. [MENU] button
   B. LCD panel

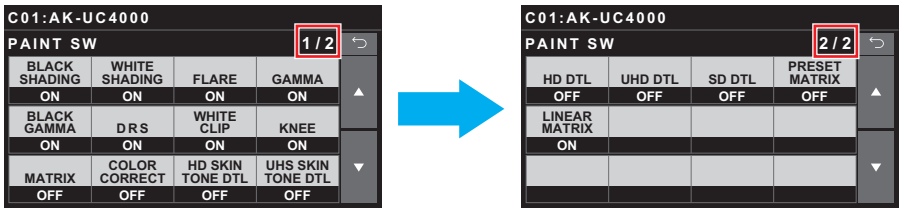
2. **Press the menu item you wish to set**
   The screen transitions to the list of the selected menu.



3. **Press the menu item you wish to set**
   The screen transitions to the selected menu screen.
   (The following shows the example of [PAINT SW].)



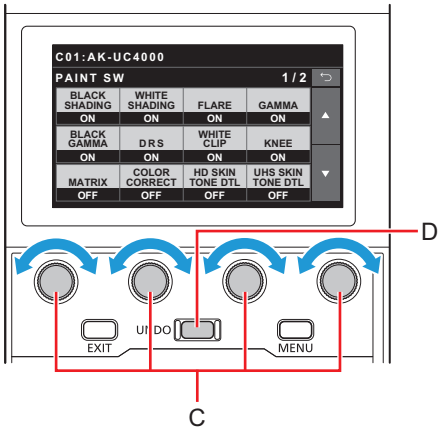
4. **Press "▲" or "▼" on the right side to scroll through the pages and press the menu item you wish to set**
   You can change the setting of the selected menu item.



5. Turn the [MENU] dial (C) to set the items

Turn the dial at the same position as each item in the screen.

As long as you do not move the cursor after changing a setting, you can restore the value prior to the change with the [UNDO] button (D). The item for which you can restore the value prior to the change is the item on the selected line.



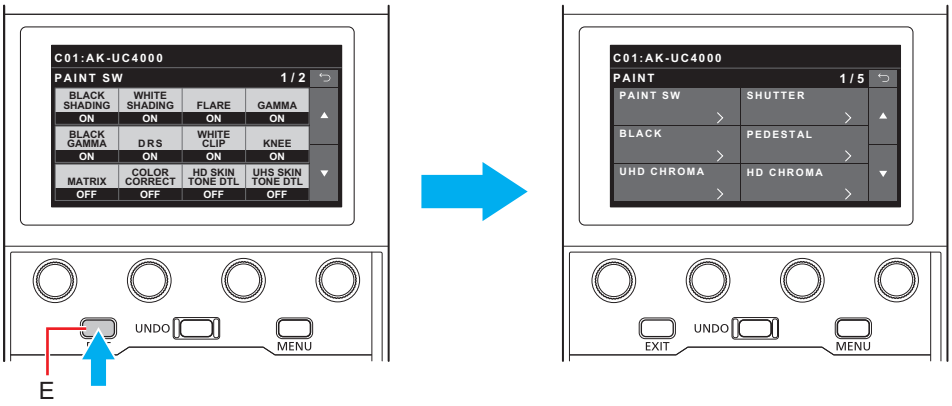
C. [MENU] dial
D. [UNDO] button

Other menu operations

Returning to the menu selection screen

1. Press the [EXIT] button (E)

This returns you to the previous screen.



E. [EXIT] button

ROP menu list

PAINT

PAINT SW	BLACK SHADING	➔ “BLACK SHADING” (see page 69)
	WHITE SHADING	➔ “WHITE SHADING” (see page 69)
	FLARE	➔ “FLARE” (see page 69)
	GAMMA	➔ “GAMMA” (see page 69)
	BLACK GAMMA	➔ “BLACK GAMMA” (see page 69)
	DRS	➔ “DRS” (see page 69)
	WHITE CLIP	➔ “WHITE CLIP” (see page 69)
	KNEE	➔ “KNEE” (see page 69)
	MATRIX	➔ “MATRIX” (see page 69)
	COLOR CORRECT	➔ “COLOR CORRECT” (see page 69)
	HD SKIN TONE DTL	➔ “HD SKIN TONE DTL” (see page 69)
	UHD SKIN TONE DTL	➔ “UHD SKIN TONE DTL” (see page 69)
	HD DTL	➔ “HD DTL” (see page 69)
	UHD DTL	➔ “UHD DTL” (see page 69)
	SD DTL	➔ “SD DTL” (see page 69)
	PRESET MATRIX	➔ “PRESET MATRIX” (see page 69)
	LINEAR MATRIX	➔ “LINEAR MATRIX” (see page 69)
SHUTTER	SPEED	➔ “SPEED” (see page 70)
	SYNCHRO	➔ “SYNCHRO” (see page 70)
	MODE	➔ “MODE” (see page 70)
	SW	➔ “SW” (see page 70)
BLACK SHADING	H SAW R	➔ “H SAW R” (see page 71)
	H SAW G	➔ “H SAW G” (see page 71)
	H SAW B	➔ “H SAW B” (see page 71)
	H PARA R	➔ “H PARA R” (see page 71)
	H PARA G	➔ “H PARA G” (see page 71)
	H PARA B	➔ “H PARA B” (see page 71)
	V SAW R	➔ “V SAW R” (see page 71)
	V SAW G	➔ “V SAW G” (see page 71)
	V SAW B	➔ “V SAW B” (see page 71)
	V PARA R	➔ “V PARA R” (see page 71)
	V PARA G	➔ “V PARA G” (see page 71)
	V PARA B	➔ “V PARA B” (see page 71)
	CORRECT SW	➔ “CORRECT SW” (see page 71)
PEDESTAL	R PED	➔ “R PED” (see page 72)
	G PED	➔ “G PED” (see page 72)
	B PED	➔ “B PED” (see page 72)
	M.PED	➔ “M.PED” (see page 72)
	M. PED ABS DISP	➔ “M. PED ABS DISP” (see page 72)
	PED OFFSET	➔ “PED OFFSET” (see page 72)
	M.PED RANGE	➔ “M.PED RANGE” (see page 72)
UHD CHROMA	LEVEL	➔ “LEVEL” (see page 73)
	LEVEL SW	➔ “LEVEL SW” (see page 73)
HD CHROMA	LEVEL	➔ “LEVEL” (see page 74)
	LEVEL SW	➔ “LEVEL SW” (see page 74)

RGB GAIN	R GAIN	➔ “R GAIN” (see page 75)
	G GAIN	➔ “G GAIN” (see page 75)
	B GAIN	➔ “B GAIN” (see page 75)
	GAIN OFFSET	➔ “GAIN OFFSET” (see page 75)
	GAIN ABS	➔ “GAIN ABS” (see page 75)
	G GAIN REL CONT	➔ “G GAIN REL CONT” (see page 75)
COLOR TEMP	R GAIN	➔ “R GAIN” (see page 76)
	G AXIS	➔ “G AXIS” (see page 76)
	B GAIN	➔ “B GAIN” (see page 76)
	COLOR TEMP	➔ “COLOR TEMP” (see page 76)
ECC	R GAIN	➔ “R GAIN” (see page 77)
	G AXIS	➔ “G AXIS” (see page 77)
	B GAIN	➔ “B GAIN” (see page 77)
	COLOR TEMP	➔ “COLOR TEMP” (see page 77)
	COLOR TEMP SW	➔ “COLOR TEMP SW” (see page 77)
	PRI.MEM (push)	➔ “PRI.MEM (push)” (see page 77)
	PRI.MEM INFO	➔ “PRI.MEM INFO” (see page 77)
	R GAIN (INFO)	➔ “R GAIN (INFO)” (see page 77)
	G AXIS (INFO)	➔ “G AXIS (INFO)” (see page 77)
	B GAIN (INFO)	➔ “B GAIN (INFO)” (see page 77)
	C.TEMP (INFO)	➔ “C.TEMP (INFO)” (see page 77)
CAM USER SW TEMP	R GAIN	➔ “R GAIN” (see page 78)
	G AXIS	➔ “G AXIS” (see page 78)
	B GAIN	➔ “B GAIN” (see page 78)
	COLOR TEMP	➔ “COLOR TEMP” (see page 78)
WHITE SHADING	H SAW R	➔ “H SAW R” (see page 79)
	H SAW G	➔ “H SAW G” (see page 79)
	H SAW B	➔ “H SAW B” (see page 79)
	H PARA R	➔ “H PARA R” (see page 79)
	H PARA G	➔ “H PARA G” (see page 79)
	H PARA B	➔ “H PARA B” (see page 79)
	V SAW R	➔ “V SAW R” (see page 79)
	V SAW G	➔ “V SAW G” (see page 79)
	V SAW B	➔ “V SAW B” (see page 79)
	V PARA R	➔ “V PARA R” (see page 79)
	V PARA G	➔ “V PARA G” (see page 79)
	V PARA B	➔ “V PARA B” (see page 79)
	CORRECT SW	➔ “CORRECT SW” (see page 79)
FLARE	R FLARE	➔ “R FLARE” (see page 80)
	G FLARE	➔ “G FLARE” (see page 80)
	B FLARE	➔ “B FLARE” (see page 80)
	M.FLARE	➔ “M.FLARE” (see page 80)
	SW	➔ “SW” (see page 80)

GAMMA	R GAMMA	➔ “R GAMMA” (see page 81)
	B GAMMA	➔ “B GAMMA” (see page 81)
	M.GAMMA	➔ “M.GAMMA” (see page 81)
	GAMMA MODE	➔ “GAMMA MODE” (see page 81)
	INITIAL GAMMA	➔ “INITIAL GAMMA” (see page 81)
	BLACK STRCH LV	➔ “BLACK STRCH LV” (see page 81)
	DYNAMIC LEVEL	➔ “DYNAMIC LEVEL” (see page 81)
	KNEE POINT	➔ “KNEE POINT” (see page 81)
	KNEE SLOPE	➔ “KNEE SLOPE” (see page 81)
	DRS EFFECT	➔ “DRS EFFECT” (see page 81)
	DRS SW	➔ “DRS SW” (see page 81)
	SW	➔ “SW” (see page 81)
BLACK GAMMA	B.GAMMA R	➔ “B.GAMMA R” (see page 82)
	B.GAMMA B	➔ “B.GAMMA B” (see page 82)
	MASTER B.GAMMA	➔ “MASTER B.GAMMA” (see page 82)
	SW	➔ “SW” (see page 82)
KNEE	POINT % R	➔ “POINT % R” (see page 83)
	POINT % B	➔ “POINT % B” (see page 83)
	POINT % MASTER	➔ “POINT % MASTER” (see page 83)
	SLOPE R	➔ “SLOPE R” (see page 83)
	SLOPE B	➔ “SLOPE B” (see page 83)
	SLOPE MASTER	➔ “SLOPE MASTER” (see page 83)
	SW	➔ “SW” (see page 83)
WHITE CLIP	LEVEL % R	➔ “LEVEL % R” (see page 84)
	LEVEL % B	➔ “LEVEL % B” (see page 84)
	LEVEL % MASTER	➔ “LEVEL % MASTER” (see page 84)
	HI-COLOR LEVEL	➔ “HI-COLOR LEVEL” (see page 84)
	SW	➔ “SW” (see page 84)
	HI-COLOR SW	➔ “HI-COLOR SW” (see page 84)
DRS	EFFECT DEPTH	➔ “EFFECT DEPTH” (see page 85)
	SW	➔ “SW” (see page 85)
UHD DTL	M.DTL	➔ “M.DTL” (see page 86)
	H DTL LEVEL	➔ “H DTL LEVEL” (see page 86)
	V DTL LEVEL	➔ “V DTL LEVEL” (see page 86)
	PEAK FRQ	➔ “PEAK FRQ” (see page 86)
	CRISP	➔ “CRISP” (see page 86)
	CLIP+	➔ “CLIP+” (see page 86)
	CLIP-	➔ “CLIP-” (see page 86)
	KNEE APERTURE	➔ “KNEE APERTURE” (see page 86)
	DTL KNEE	➔ “DTL KNEE” (see page 86)
	LEVEL DEPEND	➔ “LEVEL DEPEND” (see page 86)
	DARK DTL	➔ “DARK DTL” (see page 86)
	DTL SW	➔ “DTL SW” (see page 86)
	LEVEL DPND SW	➔ “LEVEL DPND SW” (see page 86)
	DRK DTL SW	➔ “DRK DTL SW” (see page 86)

HD DTL	M.DTL	➡ “M.DTL” (see page 87)
	H DTL LEVEL	➡ “H DTL LEVEL” (see page 87)
	V DTL LEVEL	➡ “V DTL LEVEL” (see page 87)
	PEAK FRQ	➡ “PEAK FRQ” (see page 87)
	V DTL FRQ	➡ “V DTL FRQ” (see page 87)
	CRISP	➡ “CRISP” (see page 87)
	LEVEL DEPEND	➡ “LEVEL DEPEND” (see page 87)
	DARK DTL	➡ “DARK DTL” (see page 87)
	DTL SOURCE	➡ “DTL SOURCE” (see page 87)
	GAIN (+)	➡ “GAIN (+)” (see page 87)
	GAIN (-)	➡ “GAIN (-)” (see page 87)
	CLIP+	➡ “CLIP+” (see page 87)
	CLIP-	➡ “CLIP-” (see page 87)
	KNEE APERTURE	➡ “KNEE APERTURE” (see page 87)
	DTL KNEE	➡ “DTL KNEE” (see page 87)
	DTL SW	➡ “DTL SW” (see page 87)
	LEVEL DPND SW	➡ “LEVEL DPND SW” (see page 87)
	DRK DTL SW	➡ “DRK DTL SW” (see page 87)
SD DTL	H DTL LEVEL	➡ “H DTL LEVEL” (see page 88)
	V DTL LEVEL	➡ “V DTL LEVEL” (see page 88)
	PEAK1 FRQ	➡ “PEAK1 FRQ” (see page 88)
	PEAK2 FRQ	➡ “PEAK2 FRQ” (see page 88)
	CRISP	➡ “CRISP” (see page 88)
	LEVEL DEPEND	➡ “LEVEL DEPEND” (see page 88)
	DARK DTL	➡ “DARK DTL” (see page 88)
	SW	➡ “SW” (see page 88)
UHD SKIN TONE DTL	MEMORY SELECT	➡ “MEMORY SELECT” (see page 89)
	CURSOR	➡ “CURSOR” (see page 89)
	H POS	➡ “H POS” (see page 89)
	V POS	➡ “V POS” (see page 89)
	SKIN GET	➡ “SKIN GET” (see page 89)
	ZEBRA SW	➡ “ZEBRA SW” (see page 89)
	ZEBRA EFFECT	➡ “ZEBRA EFFECT” (see page 89)
	EFFECT MEMORY	➡ “EFFECT MEMORY” (see page 89)
	SKIN CRISP	➡ “SKIN CRISP” (see page 89)
	I CENTER	➡ “I CENTER” (see page 89)
	I WIDTH	➡ “I WIDTH” (see page 89)
	Q WIDTH	➡ “Q WIDTH” (see page 89)
	Q PHASE	➡ “Q PHASE” (see page 89)
	SW	➡ “SW” (see page 89)

HD SKIN TONE DTL	MEMORY SELECT	➔ “MEMORY SELECT” (see page 90)
	CURSOR	➔ “CURSOR” (see page 90)
	H POS	➔ “H POS” (see page 90)
	V POS	➔ “V POS” (see page 90)
	SKIN GET	➔ “SKIN GET” (see page 90)
	ZEBRA SW	➔ “ZEBRA SW” (see page 90)
	ZEBRA EFFECT	➔ “ZEBRA EFFECT” (see page 90)
	EFFECT MEMORY	➔ “EFFECT MEMORY” (see page 90)
	SKIN CRISP	➔ “SKIN CRISP” (see page 90)
	I CENTER	➔ “I CENTER” (see page 90)
	I WIDTH	➔ “I WIDTH” (see page 90)
	Q WIDTH	➔ “Q WIDTH” (see page 90)
	Q PHASE	➔ “Q PHASE” (see page 90)
	SW	➔ “SW” (see page 90)
LINEAR MATRIX	PRESET MATRIX	➔ “PRESET MATRIX” (see page 91)
	LINEAR TABLE	➔ “LINEAR TABLE” (see page 91)
	COLOR CORRECT	➔ “COLOR CORRECT” (see page 91)
	R-G P	➔ “R-G P” (see page 91)
	R-G N	➔ “R-G N” (see page 91)
	R-B P	➔ “R-B P” (see page 91)
	R-B N	➔ “R-B N” (see page 91)
	G-R P	➔ “G-R P” (see page 91)
	G-R N	➔ “G-R N” (see page 91)
	G-B P	➔ “G-B P” (see page 91)
	G-B N	➔ “G-B N” (see page 91)
	B-R P	➔ “B-R P” (see page 91)
	B-R N	➔ “B-R N” (see page 91)
	B-G P	➔ “B-G P” (see page 91)
	B-G N	➔ “B-G N” (see page 91)
	MATRIX SW	➔ “MATRIX SW” (see page 91)
	COLOR CORRECT	➔ “COLOR CORRECT” (see page 91)
	LINEAR MATRIX	➔ “LINEAR MATRIX” (see page 91)

COLOR CORRECTION	PRESET MATRIX	➔ “PRESET MATRIX” (see page 92)
	LINEAR TABLE	➔ “LINEAR TABLE” (see page 92)
	COLOR CORRECT	➔ “COLOR CORRECT” (see page 92)
	CURSOR	➔ “CURSOR” (see page 92)
	H POS	➔ “H POS” (see page 92)
	V POS	➔ “V POS” (see page 92)
	GET	➔ “GET” (see page 92)
	COLOR CORRECT	➔ “COLOR CORRECT” (see page 93)
	SAT	➔ “SAT” (see page 93)
	PHASE	➔ “PHASE” (see page 93)
	SAT G	➔ “SAT G” (see page 93)
	PHASE G	➔ “PHASE G” (see page 93)
	SAT G_CY	➔ “SAT G_CY” (see page 93)
	PHASE G_CY	➔ “PHASE G_CY” (see page 93)
	SAT CY	➔ “SAT CY” (see page 93)
	PHASE CY	➔ “PHASE CY” (see page 93)
	SAT CY_B	➔ “SAT CY_B” (see page 93)
	PHASE CY_B	➔ “PHASE CY_B” (see page 93)
	SAT B	➔ “SAT B” (see page 93)
	PHASE B	➔ “PHASE B” (see page 93)
	SAT B_MG	➔ “SAT B_MG” (see page 93)
	PHASE B_MG	➔ “PHASE B_MG” (see page 93)
	SAT MG	➔ “SAT MG” (see page 93)
	PHASE MG	➔ “PHASE MG” (see page 93)
	SAT MG_R	➔ “SAT MG_R” (see page 93)
	PHASE MG_R	➔ “PHASE MG_R” (see page 93)
	SAT R	➔ “SAT R” (see page 93)
	PHASE R	➔ “PHASE R” (see page 93)
	SAT R_YE	➔ “SAT R_YE” (see page 93)
	PHASE R_YE	➔ “PHASE R_YE” (see page 93)
	SAT YE	➔ “SAT YE” (see page 93)
	PHASE YE	➔ “PHASE YE” (see page 93)
	SAT YE_G	➔ “SAT YE_G” (see page 93)
	PHASE YE_G	➔ “PHASE YE_G” (see page 93)
	MATRIX SW	➔ “MATRIX SW” (see page 93)
	COLOR CORRECT	➔ “COLOR CORRECT” (see page 93)
	LINEAR MATRIX	➔ “LINEAR MATRIX” (see page 93)
SKIN CORRECTION	HUE	➔ “HUE” (see page 94)
	TONE	➔ “TONE” (see page 94)
	TABLE	➔ “TABLE” (see page 94)
	SW	➔ “SW” (see page 94)
DNR	LEVEL	➔ “LEVEL” (see page 95)
	SW	➔ “SW” (see page 95)

HDR-PAINT	R HLG B.GAMMA	➔ “R HLG B.GAMMA” (see page 96)
	B HLG B.GAMMA	➔ “B HLG B.GAMMA” (see page 96)
	M.HLG B.GAMMA	➔ “M.HLG B.GAMMA” (see page 96)
	HLG KNEE POINT	➔ “HLG KNEE POINT” (see page 96)
	HLG KNEE SLOPE	➔ “HLG KNEE SLOPE” (see page 96)
	HLG B.GAMMA	➔ “HLG B.GAMMA” (see page 96)
	HLG KNEE	➔ “HLG KNEE” (see page 96)
	HLG TYPE	➔ “HLG TYPE” (see page 96)
	HLG MODE	➔ “HLG MODE” (see page 96)
	SDR CONV MD	➔ “SDR CONV MD” (see page 96)
	SHOOTING MODE	➔ “SHOOTING MODE” (see page 96)
	DNR LEVEL	➔ “DNR LEVEL” (see page 96)
	DNR SW	➔ “DNR SW” (see page 96)
	SDR CONV GAIN	➔ “SDR CONV GAIN” (see page 96)
	SDR CONV CLIP	➔ “SDR CONV CLIP” (see page 96)
	SDR CONV BLACK	➔ “SDR CONV BLACK” (see page 96)
	SDR CONV POINT	➔ “SDR CONV POINT” (see page 96)
	SDR CONV SLOPE	➔ “SDR CONV SLOPE” (see page 97)
NON LINEAR MATRIX	R-G P	➔ “R-G P” (see page 98)
	R-G N	➔ “R-G N” (see page 98)
	R-B P	➔ “R-B P” (see page 98)
	R-B N	➔ “R-B N” (see page 98)
	G-R P	➔ “G-R P” (see page 98)
	G-R N	➔ “G-R N” (see page 98)
	G-B P	➔ “G-B P” (see page 98)
	G-B N	➔ “G-B N” (see page 98)
	B-R P	➔ “B-R P” (see page 98)
	B-R N	➔ “B-R N” (see page 98)
	B-G P	➔ “B-G P” (see page 98)
	B-G N	➔ “B-G N” (see page 98)
	SW	➔ “SW” (see page 98)

COLOR ADJUSTMENT	COLOR CORRECT	➡ “COLOR CORRECT” (see page 100)
	SAT	➡ “SAT” (see page 100)
	PHASE	➡ “PHASE” (see page 100)
	SAT R	➡ “SAT R” (see page 100)
	PHASE R	➡ “PHASE R” (see page 100)
	SAT R-R-Mg	➡ “SAT R-R-Mg” (see page 100)
	PHASE R-R-Mg	➡ “PHASE R-R-Mg” (see page 100)
	SAT R-Mg	➡ “SAT R-Mg” (see page 100)
	PHASE R-Mg	➡ “PHASE R-Mg” (see page 100)
	SAT R-Mg-Mg	➡ “SAT R-Mg-Mg” (see page 100)
	PHASE R-Mg-Mg	➡ “PHASE R-Mg-Mg” (see page 100)
	SAT Mg	➡ “SAT Mg” (see page 100)
	PHASE Mg	➡ “PHASE Mg” (see page 100)
	SAT Mg-Mg-B	➡ “SAT Mg-Mg-B” (see page 100)
	PHASE Mg-Mg-B	➡ “PHASE Mg-Mg-B” (see page 100)
	SAT Mg-B	➡ “SAT Mg-B” (see page 100)
	PHASE Mg-B	➡ “PHASE Mg-B” (see page 100)
	SAT Mg-B-B	➡ “SAT Mg-B-B” (see page 100)
	PHASE Mg-B-B	➡ “PHASE Mg-B-B” (see page 100)
	SAT B	➡ “SAT B” (see page 100)
	PHASE B	➡ “PHASE B” (see page 100)
	SAT B-B-Cy	➡ “SAT B-B-Cy” (see page 100)
	PHASE B-B-Cy	➡ “PHASE B-B-Cy” (see page 100)
	SAT B-Cy	➡ “SAT B-Cy” (see page 100)
	PHASE B-Cy	➡ “PHASE B-Cy” (see page 100)
	SAT B-Cy-Cy	➡ “SAT B-Cy-Cy” (see page 100)
	PHASE B-Cy-Cy	➡ “PHASE B-Cy-Cy” (see page 100)
	SAT Cy	➡ “SAT Cy” (see page 100)
	PHASE Cy	➡ “PHASE Cy” (see page 100)
	SAT Cy-Cy-G	➡ “SAT Cy-Cy-G” (see page 100)
	PHASE Cy-Cy-G	➡ “PHASE Cy-Cy-G” (see page 100)
	SAT Cy-G	➡ “SAT Cy-G” (see page 100)
	PHASE Cy-G	➡ “PHASE Cy-G” (see page 100)
	SAT Cy-G-G	➡ “SAT Cy-G-G” (see page 100)
	PHASE Cy-G-G	➡ “PHASE Cy-G-G” (see page 100)
	SAT G	➡ “SAT G” (see page 100)
	PHASE G	➡ “PHASE G” (see page 100)
	SAT G-G-YI	➡ “SAT G-G-YI” (see page 100)
	PHASE G-G-YI	➡ “PHASE G-G-YI” (see page 100)
	SAT G-YI	➡ “SAT G-YI” (see page 100)
	PHASE G-YI	➡ “PHASE G-YI” (see page 100)

COLOR ADJUSTMENT	SAT G-YI-YI	➡ “SAT G-YI-YI” (see page 100)
	PHASE G-YI-YI	➡ “PHASE G-YI-YI” (see page 100)
	SAT YI	➡ “SAT YI” (see page 100)
	PHASE YI	➡ “PHASE YI” (see page 100)
	SAT YI-YI-R	➡ “SAT YI-YI-R” (see page 100)
	PHASE YI-YI-R	➡ “PHASE YI-YI-R” (see page 100)
	SAT YI-R	➡ “SAT YI-R” (see page 101)
	PHASE YI-R	➡ “PHASE YI-R” (see page 101)
	SAT YI-R-R	➡ “SAT YI-R-R” (see page 101)
	PHASE YI-R-R	➡ “PHASE YI-R-R” (see page 101)
	SW	➡ “SW” (see page 101)

FUNCTION

SYSTEM CAM INFO	FORMAT	➡ “FORMAT” (see page 102)
	TALK OFF INCOM1	➡ “TALK OFF INCOM1” (see page 102)
	TALK OFF INCOM2	➡ “TALK OFF INCOM2” (see page 102)
	MIC1 GAIN	➡ “MIC1 GAIN” (see page 102)
	MIC1 LINE LV	➡ “MIC1 LINE LV” (see page 102)
	MIC1 AMP	➡ “MIC1 AMP” (see page 102)
	MIC2 GAIN	➡ “MIC2 GAIN” (see page 102)
	MIC2 LINE LV	➡ “MIC2 LINE LV” (see page 102)
	MIC2 AMP	➡ “MIC2 AMP” (see page 102)
	SHOOTING MODE	➡ “SHOOTING MODE” (see page 102)
	CAM FAN	➡ “CAM FAN” (see page 102)
	HDR SW	➡ “HDR SW” (see page 102)
	TALLY GUARD	➡ “TALLY GUARD” (see page 103)
	ASU FILTER	➡ “ASU FILTER” (see page 103)
	ASU MODE	➡ “ASU MODE” (see page 103)
	ASU M. PED	➡ “ASU M. PED” (see page 103)
	ASU REF.FILE	➡ “ASU REF.FILE” (see page 103)
	ASU RECALL	➡ “ASU RECALL” (see page 103)
	CABLE CONNECT	➡ “CABLE CONNECT” (see page 103)
	CTRL ROTATION	➡ “CTRL ROTATION” (see page 103)
	TALLY CONTROL	➡ “TALLY CONTROL” (see page 103)
	TALLY INPUT	➡ “TALLY INPUT” (see page 103)
	TALLY SIGNAL	➡ “TALLY SIGNAL” (see page 103)
	TALLY CONT MD	➡ “TALLY CONT MD” (see page 103)

SYSTEM CCU INFO	FORMAT MODE(push)	➔ “FORMAT MODE(push)” (see page 104)
	FORMAT	➔ “FORMAT” (see page 104)
	CAMERA NUM	➔ “CAMERA NUM” (see page 104)
	D/C MODE	➔ “D/C MODE” (see page 104)
	U/C MODE	➔ “U/C MODE” (see page 104)
	RETURN FS	➔ “RETURN FS” (see page 104)
	RETURN1 SELECT	➔ “RETURN1 SELECT” (see page 104)
	RETURN2 SELECT	➔ “RETURN2 SELECT” (see page 104)
	RETURN3 SELECT	➔ “RETURN3 SELECT” (see page 104)
	RETURN4 SELECT	➔ “RETURN4 SELECT” (see page 104)
	BARS HD	➔ “BARS HD” (see page 104)
	BARS SD	➔ “BARS SD” (see page 104)
	C/B SETUP	➔ “C/B SETUP” (see page 104)
	SDI8 OUT	➔ “SDI8 OUT” (see page 104)
	HD H COARSE	➔ “HD H COARSE” (see page 104)
	HD H FINE	➔ “HD H FINE” (see page 105)
	SD H COARSE	➔ “SD H COARSE” (see page 105)
	SD H FINE	➔ “SD H FINE” (see page 105)
	SD-HD V	➔ “SD-HD V” (see page 105)
	SCH	➔ “SCH” (see page 105)
	CABLE CONNECT	➔ “CABLE CONNECT” (see page 105)
AUTO IRIS SETTING	WINDOW SELECT	➔ “WINDOW SELECT” (see page 106)
	PEAK RATIO	➔ “PEAK RATIO” (see page 106)
	IRIS GAIN	➔ “IRIS GAIN” (see page 106)
	IRIS SPEED	➔ “IRIS SPEED” (see page 106)
	IRIS LEVEL	➔ “IRIS LEVEL” (see page 106)
	IRIS RANG	➔ “IRIS RANG” (see page 106)
	LENS EXT COMP SW	➔ “LENS EXT COMP SW” (see page 106)
	LENS EXT COMP LV	➔ “LENS EXT COMP LV” (see page 106)
LENS CONTROL	FOCUS	➔ “FOCUS” (see page 107)
	FOCUS SPEED	➔ “FOCUS SPEED” (see page 107)
	ZOOM	➔ “ZOOM” (see page 107)
	ZOOM SPEED	➔ “ZOOM SPEED” (see page 107)
	CONTROL SW	➔ “CONTROL SW” (see page 107)
SHUTTER SELECT	POSI1	➔ “POSI1” (see page 108)
	POSI2	➔ “POSI2” (see page 108)
	POSI3	➔ “POSI3” (see page 108)
	POSI4	➔ “POSI4” (see page 108)
	POSI5	➔ “POSI5” (see page 108)
	POSI6	➔ “POSI6” (see page 108)
	POSI7	➔ “POSI7” (see page 108)
	POSI8	➔ “POSI8” (see page 108)
	SHUT OFF	➔ “SHUT OFF” (see page 108)

LENS FILE EDIT	MODE	➡ “MODE” (see page 109)
	FILE No.	➡ “FILE No.” (see page 109)
	LENS FILE SW	➡ “LENS FILE SW” (see page 109)
	FILE NAME	➡ “FILE NAME” (see page 110)
	EXECUTE	➡ “EXECUTE” (see page 110)
	EXTENDER	➡ “EXTENDER” (see page 110)
	FILE NUM	➡ “FILE NUM” (see page 110)
	FILE NAME	➡ “FILE NAME” (see page 110)
	R FLARE	➡ “R FLARE” (see page 110)
	G FLARE	➡ “G FLARE” (see page 110)
	B FLARE	➡ “B FLARE” (see page 110)
	R GAIN	➡ “R GAIN” (see page 110)
	B GAIN	➡ “B GAIN” (see page 110)
	W H SAW R	➡ “W H SAW R” (see page 110)
	W H SAW G	➡ “W H SAW G” (see page 110)
	W H SAW B	➡ “W H SAW B” (see page 110)
	W H PAR R	➡ “W H PAR R” (see page 110)
	W H PAR G	➡ “W H PAR G” (see page 110)
	W H PAR B	➡ “W H PAR B” (see page 110)
	W V SAW R	➡ “W V SAW R” (see page 110)
	W V SAW G	➡ “W V SAW G” (see page 110)
	W V SAW B	➡ “W V SAW B” (see page 110)
	W V PAR R	➡ “W V PAR R” (see page 110)
	W V PAR G	➡ “W V PAR G” (see page 110)
	W V PAR B	➡ “W V PAR B” (see page 110)
	STORE NUM	➡ “STORE NUM” (see page 110)
	STORE	➡ “STORE” (see page 110)
	CANCEL	➡ “CANCEL” (see page 110)
MONITOR	R	➡ “R” (see page 111)
	G	➡ “G” (see page 111)
	B	➡ “B” (see page 111)
	SEQ	➡ “SEQ” (see page 111)
	ENC	➡ “ENC” (see page 111)
REFERENCE	REF.CALL(push)	➡ “REF.CALL(push)” (see page 112)
	STORE REF	➡ “STORE REF” (see page 112)
	STORE EXEC	➡ “STORE EXEC” (see page 112)

MAINTENANCE

CAMERA/CCU MENU CONTROL	CAM MENU SW	➡ “CAM MENU SW” (see page 113)
	CAM MENU CURSOR	➡ “CAM MENU CURSOR” (see page 113)
	CAM MENU EXECUTE	➡ “CAM MENU EXECUTE” (see page 113)
	CCU MENU SW	➡ “CCU MENU SW” (see page 113)
	CCU MENU CURSOR	➡ “CCU MENU CURSOR” (see page 113)
	CCU MENU EXECUTE	➡ “CCU MENU EXECUTE” (see page 113)

ROP VOL/BUTTON	CONTROL1	➔ “CONTROL1” (see page 114)
	CONTROL2	➔ “CONTROL2” (see page 114)
	CONTROL3	➔ “CONTROL3” (see page 114)
	CONTROL4	➔ “CONTROL4” (see page 114)
	CONTROL5	➔ “CONTROL5” (see page 114)
	MODE1	➔ “MODE1” (see page 115)
	MODE2	➔ “MODE2” (see page 115)
	MODE3	➔ “MODE3” (see page 115)
	MODE4	➔ “MODE4” (see page 115)
	MODE5	➔ “MODE5” (see page 115)
	ASSIGN BUTTON	➔ “ASSIGN BUTTON” (see page 115)
	USER ASSIGN	➔ “USER ASSIGN” (see page 115)
	ECC BUTTON	➔ “ECC BUTTON” (see page 115)
	DTL VOL	➔ “DTL VOL” (see page 115)
	SKIN DTL SW	➔ “SKIN DTL SW” (see page 116)
	B. GAMMA SW	➔ “B. GAMMA SW” (see page 116)
	PAINT VOL MD	➔ “PAINT VOL MD” (see page 116)
	STD POSI M. GAIN	➔ “STD POSI M. GAIN” (see page 116)
	STD POSI VAR	➔ “STD POSI VAR” (see page 116)
	STD POSI ND	➔ “STD POSI ND” (see page 116)
	STD POSI CC	➔ “STD POSI CC” (see page 116)
IRIS LEVER SETTING	LEVER MODE	➔ “LEVER MODE” (see page 117)
	PRIORITY	➔ “PRIORITY” (see page 117)
	RELATIVE MODE	➔ “RELATIVE MODE” (see page 117)
	CALIB TOP	➔ “CALIB TOP” (see page 117)
	CALIB BOTTOM	➔ “CALIB BOTTOM” (see page 117)
ROP SETTING	LCD BRIGHT	➔ “LCD BRIGHT” (see page 118)
	LED BRIGHT	➔ “LED BRIGHT” (see page 118)
	7SEG-1 BRIGHT	➔ “7SEG-1 BRIGHT” (see page 118)
	7SEG-2 BRIGHT	➔ “7SEG-2 BRIGHT” (see page 118)
	BUZZER	➔ “BUZZER” (see page 118)
	CALL PERIOD	➔ “CALL PERIOD” (see page 118)
	CALL CYCLE	➔ “CALL CYCLE” (see page 118)
	PC_LINK	➔ “PC_LINK” (see page 118)
	SETTING STORE	➔ “SETTING STORE” (see page 118)
	SETTING LOAD	➔ “SETTING LOAD” (see page 118)
ROP INITIALIZE	ALL	➔ “ALL” (see page 119)
	ROP/IRIS ITEM	➔ “ROP/IRIS ITEM” (see page 119)
ROP VERSION	UPGRADE	➔ “UPGRADE” (see page 120)
	SYSTEM VERSION	➔ “SYSTEM VERSION” (see page 120)
	SOFT VERSION	➔ “SOFT VERSION” (see page 120)
	FPGA VERSION	➔ “FPGA VERSION” (see page 120)

SD CARD DATA SAVE	ROP DATA	➡ “ROP DATA” (see page 121)
	SETTING DATA	➡ “SETTING DATA” (see page 121)
	CONNECT DATA	➡ “CONNECT DATA” (see page 121)
	CAM ALL DATA	➡ “CAM ALL DATA” (see page 121)
	REF.FILE	➡ “REF.FILE” (see page 121)
	USER FILE	➡ “USER FILE” (see page 121)
	SCENE FILE	➡ “SCENE FILE” (see page 121)
	LENS FILE	➡ “LENS FILE” (see page 121)
	CARD FORMAT	➡ “CARD FORMAT” (see page 121)
SD CARD DATA LOAD	FILE SELECT	➡ “FILE SELECT” (see page 122)
	GET FILE(push)	➡ “GET FILE(push) ” (see page 122)
	PUT FILE	➡ “PUT FILE” (see page 123)
	EXECUTE	➡ “EXECUTE” (see page 123)

SYSTEM

ROP IP SETTING	NETWORK SETTING	➡ “NETWORK SETTING” (see page 124)
	IP	➡ “IP” (see page 124)
	PORT	➡ “PORT” (see page 124)
	SUBNET	➡ “SUBNET” (see page 125)
	DEFAULT GATEWAY	➡ “DEFAULT GATEWAY” (see page 125)
	MAC ADDRESS	➡ “MAC ADDRESS” (see page 125)
	SAVE	➡ “SAVE” (see page 125)
CAM IP SEARCH	CAM IP SEARCH	➡ “CAM IP SEARCH” (see page 126)
	SAVE	➡ “SAVE” (see page 126)
	HIT	➡ “HIT” (see page 126)
	CAM No.	➡ “CAM No.” (see page 126)
MANUAL IP SETTING	CAM No. SELECT	➡ “CAM No. SELECT” (see page 127)
	CAM IP	➡ “CAM IP” (see page 127)
	PORT	➡ “PORT” (see page 127)
	SAVE	➡ “SAVE” (see page 127)
CONNECT SETTING	CAM No. SELECT	➡ “CAM No. SELECT” (see page 128)
	CONNECT MODE	➡ “CONNECT MODE” (see page 128)
	CAM1	➡ “CAM1” (see page 128)
	CAM2 to CAM99	➡ “CAM2 to CAM99” (see page 128)
CAMERA AUTH SETTING	CAM No. SELECT	➡ “CAM No. SELECT” (see page 129)
	USER NAME	➡ “USER NAME” (see page 129)
	PASSWORD	➡ “PASSWORD” (see page 129)
	SAVE	➡ “SAVE” (see page 129)
	RETYPE PASSWORD	➡ “RETYPE PASSWORD” (see page 129)
ROP AUTH SETTING	NEW ID	➡ “NEW ID” (see page 130)
	OLD ID	➡ “OLD ID” (see page 130)
	NEW PASSWORD	➡ “NEW PASSWORD” (see page 130)
	OLD PASSWORD	➡ “OLD PASSWORD” (see page 130)
	RETYPE PASSWORD	➡ “RETYPE PASSWORD” (see page 130)
	SAVE	➡ “SAVE” (see page 130)

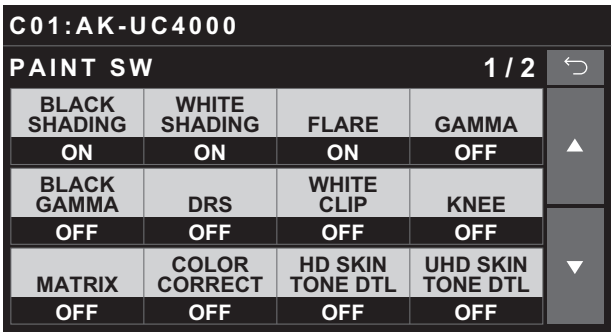
PAINT

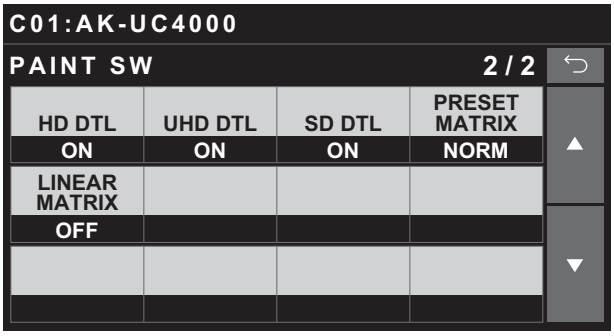
PAINT SW

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.





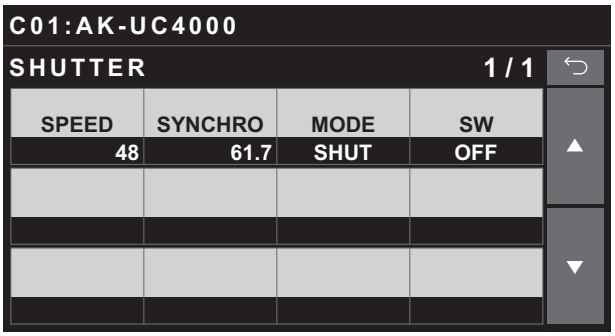
Item	Setting details
BLACK SHADING	Enables or disables black shading (sawtooth waveform or parabolic waveform).
WHITE SHADING	Enables or disables white shading (sawtooth waveform or parabolic waveform).
FLARE	Enables or disables the flare.
GAMMA	Enables or disables the gamma.
BLACK GAMMA	Enables or disables the black gamma.
DRS	Enables or disables the dynamic range stretcher function. When this is enabled, contrast is adjusted automatically.
WHITE CLIP	Enables or disables the white clip function.
KNEE	Enables or disables the knee.
MATRIX	Enables or disables the matrix (linear matrix / 12-axis color correction).
COLOR CORRECT	Enables or disables 12-axis color correction.
HD SKIN TONE DTL	Enables or disables the HD skin tone detail.
UHD SKIN TONE DTL	Enables or disables the UHD skin tone detail.
HD DTL	Enables or disables the HD detail.
UHD DTL	Enables or disables the UHD detail.
SD DTL	Enables or disables the SD detail.
PRESET MATRIX	Sets the preset matrix.
LINEAR MATRIX	Enables or disables the linear matrix.

SHUTTER

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



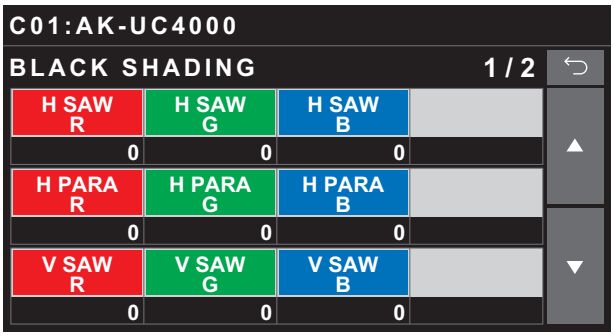
Item	Setting details
SPEED	Sets the shutter speed for when [MODE] is set to "SHUT".
SYNCHRO	Sets the shutter speed for when [MODE] is set to "SYNC".
MODE	Selects the shutter operation mode. **SHUT** The shutter speed set in [SPEED] is used. **SYNC** The shutter speed set in [SYNCHRO] is used.
SW	Enables or disables the shutter function.

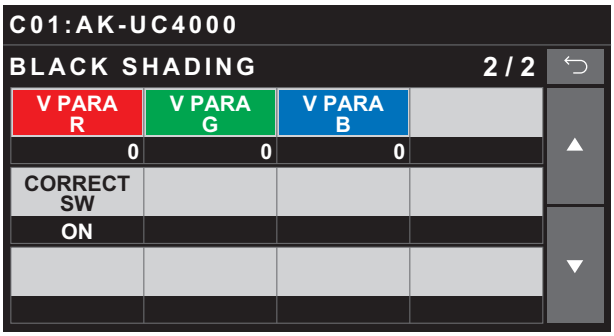
BLACK SHADING

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.





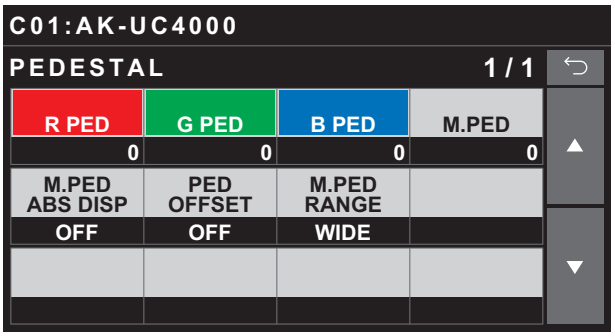
Item	Setting details
H SAW R	Adjusts the black shading gain for R, G, and Bch in the horizontal direction using a sawtooth waveform.
H SAW G	
H SAW B	
H PARA R	Adjusts the black shading gain for R, G, and Bch in the horizontal direction using a parabolic waveform.
H PARA G	
H PARA B	
V SAW R	Adjusts the black shading gain for R, G, and Bch in the vertical direction using a sawtooth waveform.
V SAW G	
V SAW B	
V PARA R	Adjusts the black shading gain for R, G, and Bch in the vertical direction using a parabolic waveform.
V PARA G	
V PARA B	
CORRECT SW	Enables or disables black shading (sawtooth waveform or parabolic waveform) correction.

PEDESTAL

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



Item	Setting details
R PED	Sets the red correction level for the master pedestal.
G PED	Sets the green correction level for the master pedestal.
B PED	Sets the blue correction level for the master pedestal.
M.PED	Indicates set master pedestal value.
M. PED ABS DISP	Sets the master pedestal display setting.
PED OFFSET	Sets whether to retain the Rch, Gch, and Bch pedestal levels when the auto black balance is adjusted.
M.PED RANGE	Sets the amount of variability for the master pedestal.

UHD CHROMA

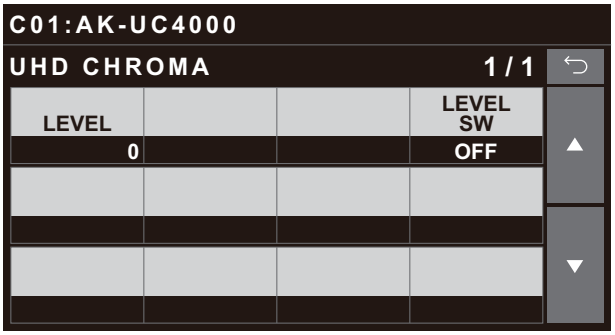
The control destination differs depending on the unit configuration.

- When the camera is an AK-UC4000 or AK-UC3300
  The control is performed for the camera.
- When the camera is other than the above
  The control is performed for the CCU.

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



Item	Setting details
LEVEL	Adjusts the chroma gain.
LEVEL SW	Enables or disables the chroma gain adjustment.

HD CHROMA

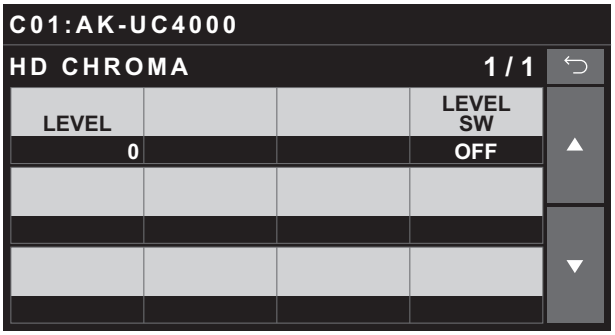
The control destination differs depending on the unit configuration.

- When the camera is an AK-UC4000 or AK-UC3300
  The control is performed for the camera.
- When the camera is other than the above
  When the system format is set to UHD, the control is performed for the CCU. Otherwise, the control is performed for the camera.

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



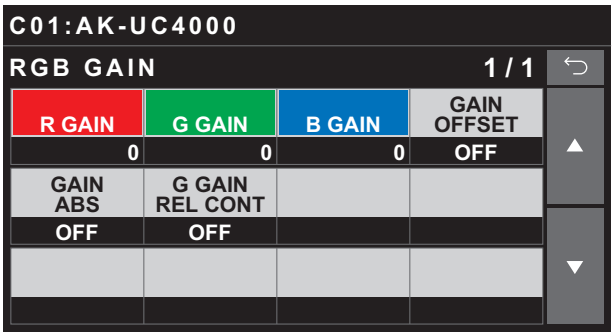
Item	Setting details
LEVEL	Adjusts the chroma gain.
LEVEL SW	Enables or disables the chroma gain adjustment.

RGB GAIN

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



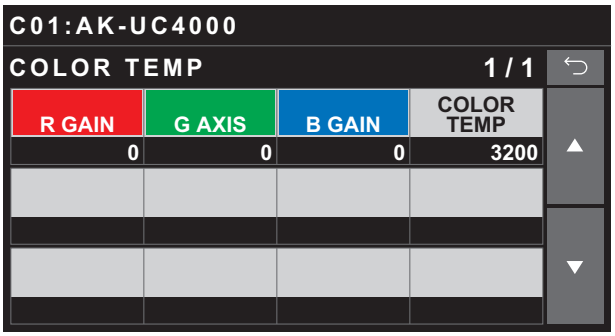
Item	Setting details
R GAIN	Sets the red correction level for the gain.
G GAIN	Sets the green correction level for the gain.
B GAIN	Sets the blue correction level for the gain.
GAIN OFFSET	Sets whether to retain the Rch, Gch, and Bch gain levels when the auto white balance is adjusted.
GAIN ABS	Sets whether to display the absolute value for the RGB gain. • When this is set to "ON" and the [R GAIN], [G GAIN], [B GAIN] values are changed, the [UNDO] button will be lit but its operation will be disabled.
G GAIN REL CONT	Enables or disables relative value control for the Gch gain.

COLOR TEMP

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



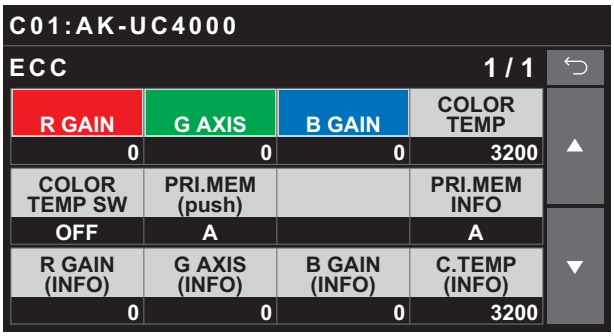
Item	Setting details
R GAIN	Sets the red correction level for the color temperature.
G AXIS	Sets the green correction level for the color temperature.
B GAIN	Sets the blue correction level for the color temperature.
COLOR TEMP	Set color temperature settings.

ECC

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by “-”.

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



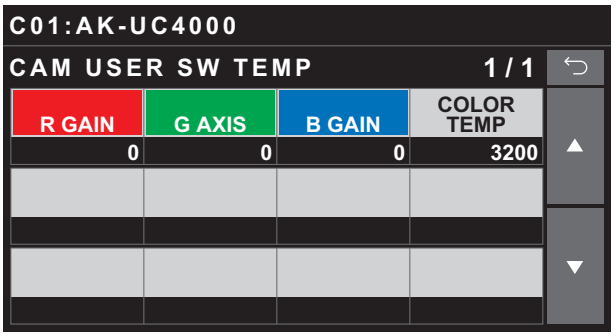
Item	Setting details
R GAIN	Sets the red correction level for the color temperature.
G AXIS	Sets the green correction level for the color temperature.
B GAIN	Sets the blue correction level for the color temperature.
COLOR TEMP	Sets the color temperature when [COLOR TEMP SW] is set to “ON”. An arrow will appear on the right if the value is too high or low.
COLOR TEMP SW	Turn this on when adjusting the color temperature manually.
PRI.MEM (push)	Stores the [C.TEMP (INFO)], [R GAIN], [G AXIS], and [B GAIN] setting values to the five ROP memories ([A] to [E]). They can be recalled by assigning them in [ROP VOL/BUTTON] > [MODE1] to [MODE5]. They are unset by default, so will be ignored (in the OFF state) even when assigned to buttons. The initial setting values of [A] to [E] are “0” for R GAIN/G AXIS/B GAIN, and “3200” for C.TEMP. In addition, the unset state will be restored when the ROP is initialized.
PRI.MEM INFO	This is for checking the values of the set memory. Also, items other than [PRI.MEM INFO] are display only. When unset (NULL), “---” is displayed.
R GAIN (INFO)	
G AXIS (INFO)	
B GAIN (INFO)	
C.TEMP (INFO)	

CAM USER SW TEMP

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



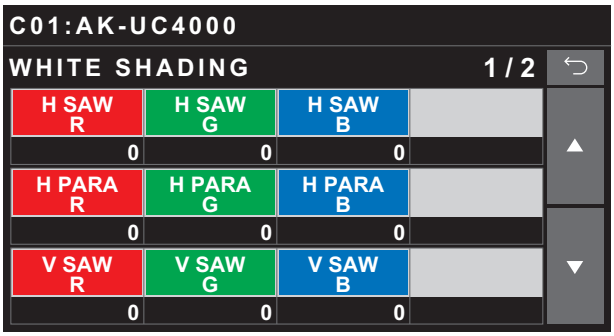
Item	Setting details
R GAIN	Sets the red correction level for the color temperature.
G AXIS	Sets the green correction level for the color temperature.
B GAIN	Sets the blue correction level for the color temperature.
COLOR TEMP	Sets the color temperature for when "C.TEMP" is assigned to the [USER 1], [USER 2], [USER 3], or [USER 4] button on the camera and the function is enabled.

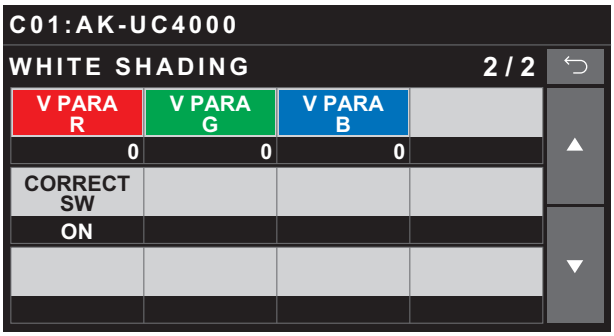
WHITE SHADING

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.





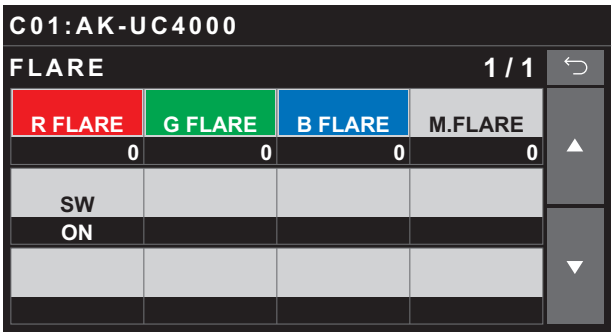
Item	Setting details
H SAW R	Adjusts the white shading gain for R, G, and Bch in the horizontal direction using a sawtooth waveform.
H SAW G	
H SAW B	
H PARA R	Adjusts the white shading gain for R, G, and Bch in the horizontal direction using a parabolic waveform.
H PARA G	
H PARA B	
V SAW R	Adjusts the white shading gain for R, G, and Bch in the vertical direction using a sawtooth waveform.
V SAW G	
V SAW B	
V PARA R	Adjusts the white shading gain for R, G, and Bch in the vertical direction using a parabolic waveform.
V PARA G	
V PARA B	
CORRECT SW	Enables or disables white shading (sawtooth waveform or parabolic waveform) correction.

FLARE

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



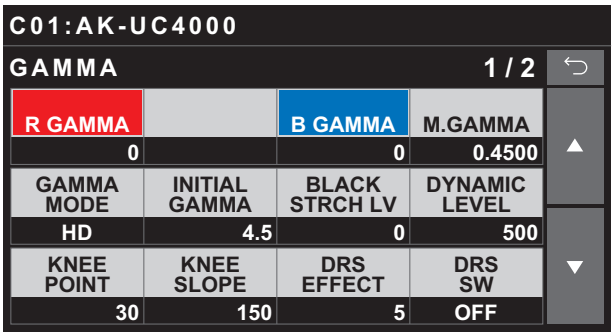
Item	Setting details
R FLARE	Adjusts the Rch flare.
G FLARE	Adjusts the Gch flare.
B FLARE	Adjusts the Bch flare.
M.FLARE	Adjusts the master flare.
SW	Enables or disables flare correction.

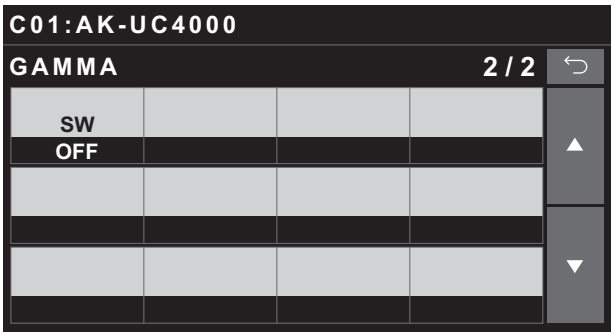
GAMMA

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by “-”.

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.





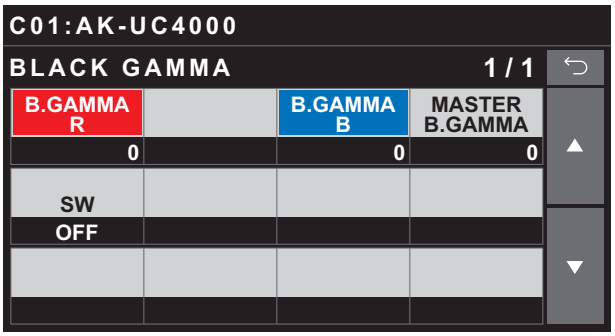
Item	Setting details
R GAMMA	Adjusts the red gamma characteristic for the master gamma.
B GAMMA	Adjusts the blue gamma characteristic for the master gamma.
M.GAMMA	Adjusts the gamma characteristic.
GAMMA MODE	Sets the gamma characteristic type.
INITIAL GAMMA	Sets the rising slope for the gamma.
BLACK STRCH LV	Sets the gamma stretch position for when [GAMMA MODE] is set to “FILM REC”.
DYNAMIC LEVEL	Sets the dynamic range for when [GAMMA MODE] is set to “FILM REC”.
KNEE POINT	Sets the knee point for when [GAMMA MODE] is set to “VIDEO REC”.
KNEE SLOPE	Sets the knee slope for when [GAMMA MODE] is set to “VIDEO REC”.
DRS EFFECT	Sets the compression level for high-brightness areas of the dynamic range stretcher function. Higher values increase the compression level for high-brightness areas.
DRS SW	Enables or disables the dynamic range stretcher function. When this is enabled, contrast is adjusted automatically.
SW	Enables or disables gamma correction.

BLACK GAMMA

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by “-”.

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



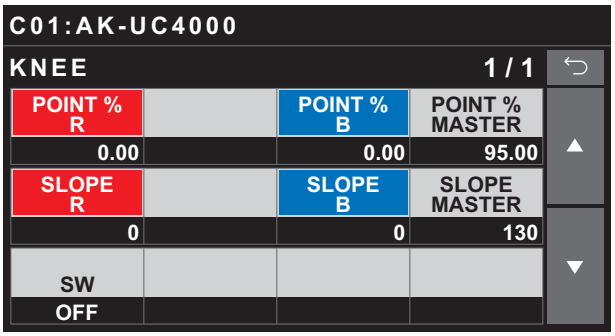
Item	Setting details
B.GAMMA R	Adjusts the red gamma characteristic near black for the master gamma.
B.GAMMA B	Adjusts the blue gamma characteristic near black for the master gamma.
MASTER B.GAMMA	Adjusts the gamma characteristic near black.
SW	Enables or disables the black gamma. • This setting is not available when [DRS] of [PAINT SWITCH] is set to “ON”.

KNEE

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



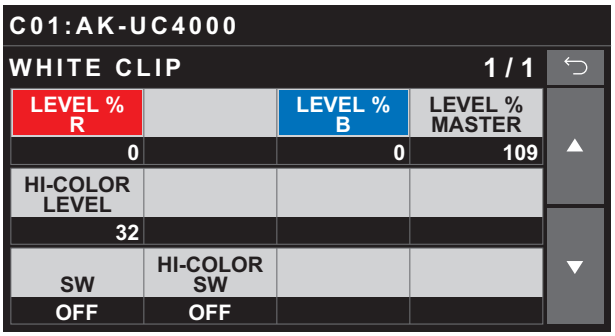
Item	Setting details
POINT % R	Adjusts the red knee point for [POINT % MASTER].
POINT % B	Adjusts the blue knee point for [POINT % MASTER].
POINT % MASTER	Sets the knee point position.
SLOPE R	Adjusts the red knee slope for [SLOPE MASTER].
SLOPE B	Adjusts the blue knee slope for [SLOPE MASTER].
SLOPE MASTER	Set the knee slope.
SW	Enables or disables the knee function.

WHITE CLIP

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



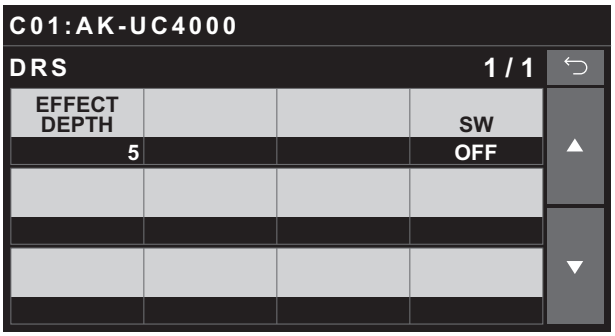
Item	Setting details
LEVEL % R	Adjusts red for [LEVEL % MASTER].
LEVEL % B	Adjusts blue for [LEVEL % MASTER].
LEVEL % MASTER	Set the white clip level.
HI-COLOR LEVEL	Sets the level for the mode that expands dynamic range for colors.
SW	Enables or disables the white clip function.
HI-COLOR SW	Sets whether to improve color reproducibility for high-brightness areas.

DRS

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



Item	Setting details
EFFECT DEPTH	Sets the compression level for high-brightness areas of the dynamic range stretcher function. Higher values increase the compression level for high-brightness areas.
SW	Enables or disables the dynamic range stretcher function. When this is enabled, contrast is adjusted automatically.

UHD DTL

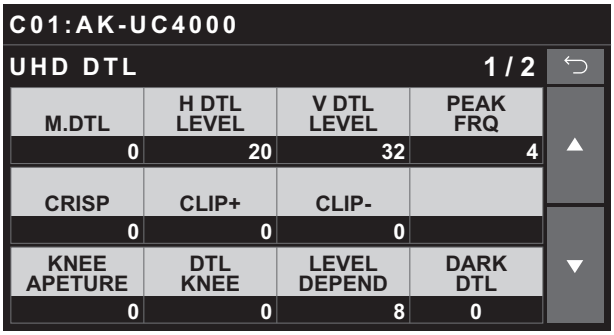
The control destination differs depending on the unit configuration.

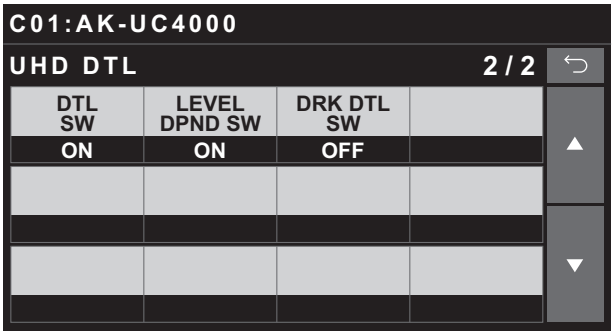
- When the camera is an AK-UC4000 or AK-UC3300
  The control is performed for the camera.
- When the camera is other than the above
  The control is performed for the CCU.

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.





Item	Setting details
M.DTL	Adjusts the level of master detail.
H DTL LEVEL	Adjusts the level of horizontal detail.
V DTL LEVEL	Adjusts the level of vertical detail.
PEAK FRQ	Selects the contour correction frequency band (boost frequency or peak frequency). Changes the contour width.
CRISP	Set the noise elimination level for the detail signals.
CLIP+	Adjusts detail clipping to minimize scintillation resulting from excessive detail application.
CLIP-	This limits the length of the undershoot portion of the detail edge component.
KNEE APERTURE	Adjusts the knee aperture level.
DTL KNEE	Adjusts the knee detail component.
LEVEL DEPEND	Removes dark details. • Cannot be set simultaneously with [DARK DTL].
DARK DTL	Set the level of dark detail enhancement. • Cannot be set simultaneously with [LEVEL DEPEND].
DTL SW	Enables or disables the UHD detail effect.
LEVEL DPND SW	Removes dark details.
DRK DTL SW	Enhances dark details.

HD DTL

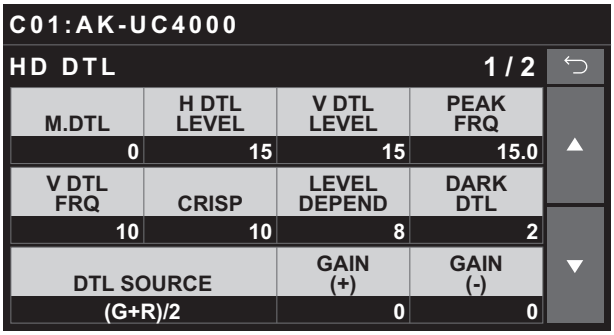
The control destination differs depending on the unit configuration.

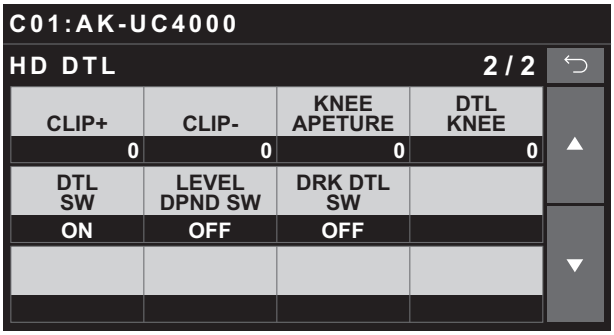
- When the camera is an AK-UC4000 or AK-UC3300
  The control is performed for the camera.
- When the camera is other than the above
  When the system format is set to UHD, the control is performed for the CCU. Otherwise, the control is performed for the camera.

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.





Item	Setting details
M.DTL	Adjusts the level of master detail.
H DTL LEVEL	Adjusts the level of horizontal detail.
V DTL LEVEL	Adjusts the level of vertical detail.
PEAK FRQ	Sets the peak frequency for the horizontal detail.
V DTL FRQ	Set the V DETAIL frequency.
CRISP	Set the noise elimination level for the detail signals.
LEVEL DEPEND	Set the level of dark detail removal.
DARK DTL	Set the level of dark detail enhancement.
DTL SOURCE	Selects the source signals for creating the detail components.
GAIN (+)	Changes the detail gain level in the + (up) direction.
GAIN (-)	Changes the detail gain level in the - (down) direction.
CLIP+	Adjusts detail clipping to minimize scintillation resulting from excessive detail application.
CLIP-	This limits the length of the undershoot portion of the detail edge component.
KNEE APERTURE	Adjusts the knee aperture level.
DTL KNEE	Adjusts the knee detail component.
DTL SW	Enables or disables the HD detail effect.
LEVEL DPND SW	Removes dark details.
DRK DTL SW	Enhances dark details.

SD DTL

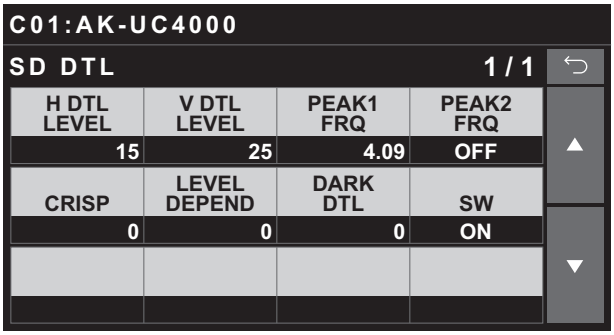
The control destination differs depending on the unit configuration.

- When the camera is an AK-UC4000 or AK-UC3300
  The fixed value is displayed. The setting cannot be changed.
- When the camera is other than the above
  The control is performed for the CCU. Otherwise, the control is performed for the camera.

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



Item	Setting details
H DTL LEVEL	Adjusts the level of horizontal detail.
V DTL LEVEL	Adjusts the level of vertical detail.
PEAK1 FRQ	Selects the contour correction frequency band (boost frequency or peak frequency). Changes the contour width.
PEAK2 FRQ	Selects the contour correction frequency band (boost frequency or peak frequency). Changes the contour width.
CRISP	Set the noise elimination level for the detail signals.
LEVEL DEPEND	Set the level of dark detail removal.
DARK DTL	Set the level of dark detail enhancement.
SW	Enables or disables the SD detail effect.

UHD SKIN TONE DTL

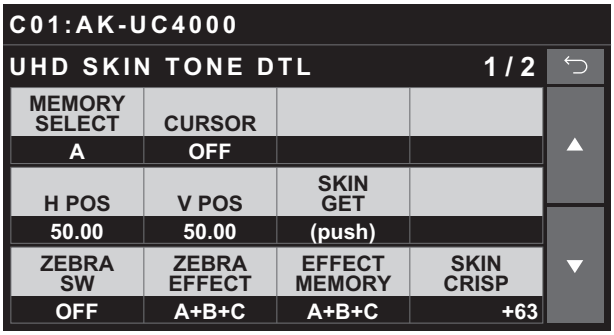
The control destination differs depending on the unit configuration.

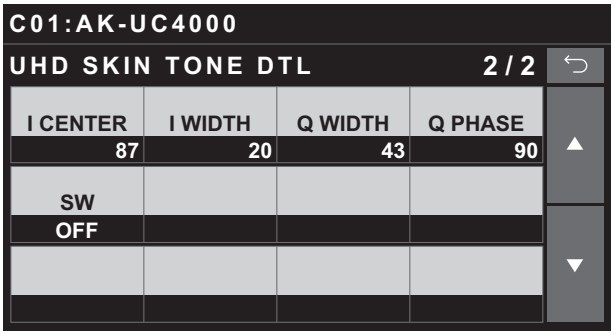
- When the camera is an AK-UC4000 or AK-UC3300
  The control is performed for the camera.
- When the camera is other than the above
  The control is performed for the CCU.

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.





Item	Setting details
MEMORY SELECT	Changes memory for saving the skin tone detail setting values(CRISP, PHASE, WIDTH and SATURATION).
CURSOR	Enables or disables the position cursor that obtains the saturation and color phase information for controlling skin tone detail effects.
H POS	Sets horizontal cursor position.
V POS	Sets vertical cursor position.
SKIN GET	Automatically acquire saturation and hue information from the cursor position.
ZEBRA SW	Sets whether to add a zebra pattern to the Y signals of the PM output to make areas subject to skin tone detail effects easily identifiable.
ZEBRA EFFECT	Selects the memory to which skin tone detail effects will be added.
EFFECT MEMORY	Selects the memory to which skin tone detail effects will be added.
SKIN CRISP	Removes very faint noise components from detail components in skin tone areas.
I CENTER	Sets the center position (area to which skin tone is applied) on the I axis.
I WIDTH	Sets the width of the area to which skin tone is applied on the I axis using the [I CENTER] setting as the center.
Q WIDTH	Expands the width of skin tone areas.
Q PHASE	Changes the color phase of skin tone areas on a vector display.
SW	Enables or disables the skin tone detail function.

HD SKIN TONE DTL

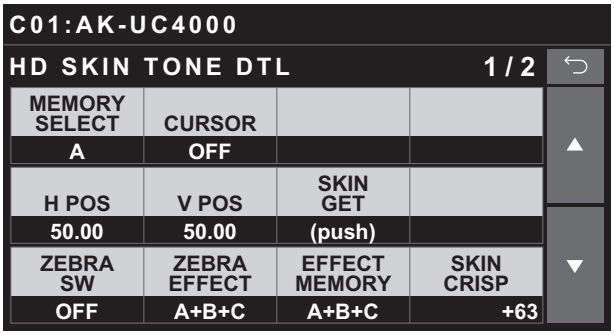
The control destination differs depending on the unit configuration.

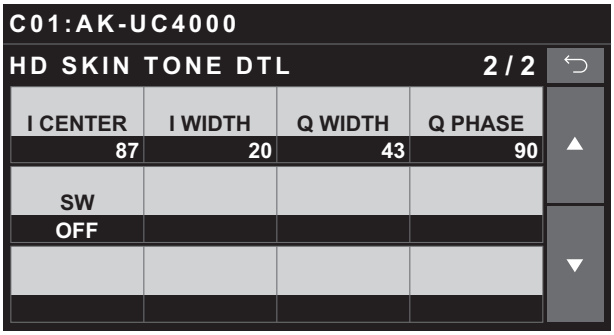
- When the camera is an AK-UC4000 AK-UC3300
  The control is performed for the camera.
- When the camera is other than the above
  When the system format is set to UHD, the control is performed for the CCU. Otherwise, the control is performed for the camera.

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.





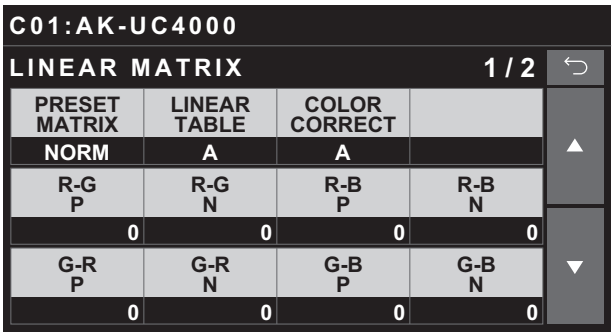
Item	Setting details
MEMORY SELECT	Changes memory for saving the skin tone detail setting values(CRISP, PHASE, WIDTH and SATURATION).
CURSOR	Enables or disables the position cursor that obtains the saturation and color phase information for controlling skin tone detail effects.
H POS	Sets horizontal cursor position.
V POS	Sets vertical cursor position.
SKIN GET	Automatically acquire saturation and hue information from the cursor position.
ZEBRA SW	Sets whether to add a zebra pattern to the Y signals of the PM output to make areas subject to skin tone detail effects easily identifiable.
ZEBRA EFFECT	Selects the memory to which skin tone detail effects will be added.
EFFECT MEMORY	Selects the memory to which skin tone detail effects will be added.
SKIN CRISP	Removes very faint noise components from detail components in skin tone areas.
I CENTER	Sets the center position (area to which skin tone is applied) on the I axis.
I WIDTH	Sets the width of the area to which skin tone is applied on the I axis using the [I CENTER] setting as the center.
Q WIDTH	Expands the width of skin tone areas.
Q PHASE	Changes the color phase of skin tone areas on a vector display.
SW	Enables or disables the skin tone detail function.

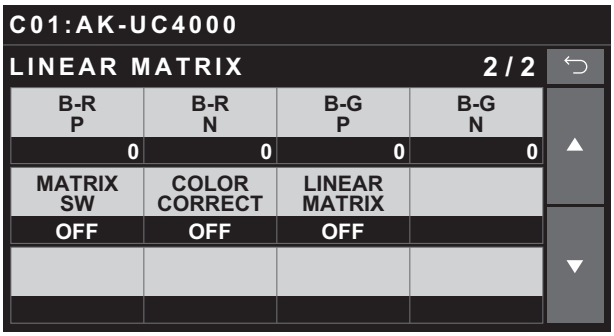
LINEAR MATRIX

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.





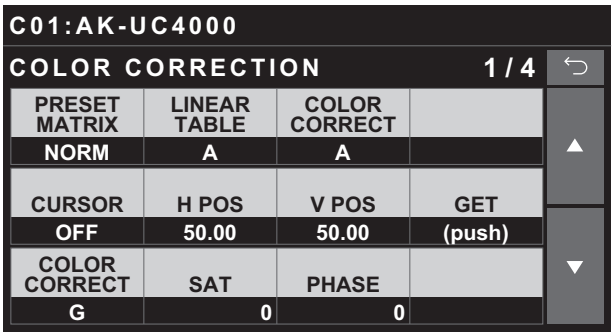
Item	Setting details
PRESET MATRIX	Sets the preset matrix.
LINEAR TABLE	Selects the linear matrix table.
COLOR CORRECT	Selects the color correction table.
R-G P	Adjusts the linear matrix between red and green.
R-G N	
R-B P	Adjusts the linear matrix between red and blue.
R-B N	
G-R P	Adjusts the linear matrix between green and red.
G-R N	
G-B P	Adjusts the linear matrix between green and blue.
G-B N	
B-R P	Adjusts the linear matrix between blue and red.
B-R N	
B-G P	Adjusts the linear matrix between blue and green.
B-G N	
MATRIX SW	Enables or disables the matrix function.
COLOR CORRECT	Enables or disables the 12-axis color correction function.
LINEAR MATRIX	Enables or disables the linear matrix function.

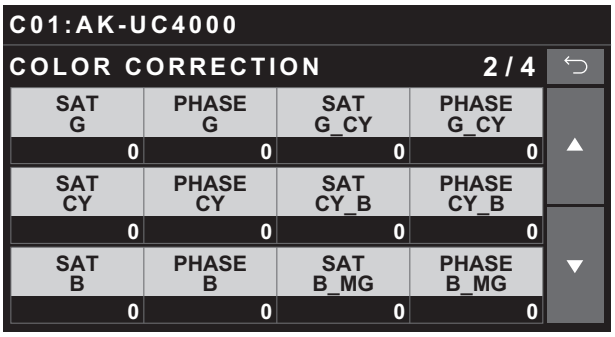
COLOR CORRECTION

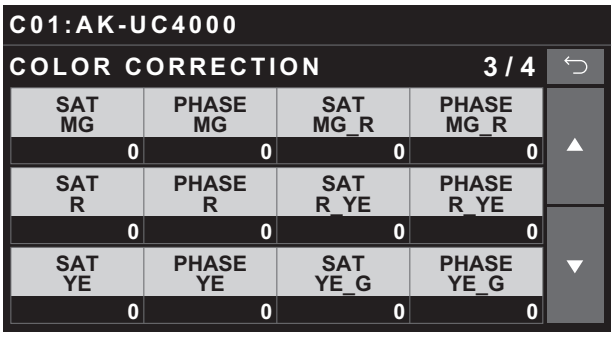
The setting values will vary also depending on the connected camera.

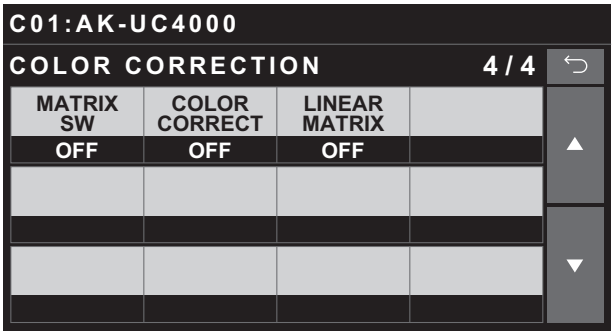
Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.









Item	Setting details
PRESET MATRIX	Sets the preset matrix.
LINEAR TABLE	Selects the linear matrix table.
COLOR CORRECT	Selects the color correction table.
CURSOR	Set whether to display the box cursor on the camera output image.
H POS	Adjusts the horizontal position of the cursor.
V POS	Adjusts the vertical position of the cursor.
GET	Automatically obtains color information from the cursor position, and applies the information of the axis for which you want to match colors to [COLOR CORRECT].

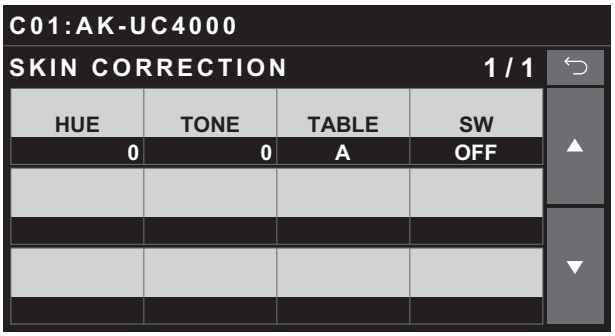
Item	Setting details
COLOR CORRECT	Selects the color component in 12-axis matrix memory to adjust.
SAT	Adjusts the saturation of the color component selected in [COLOR CORRECT].
PHASE	Adjusts the color phase of the color component selected in [COLOR CORRECT].
SAT G	Adjusts the color saturation of green.
PHASE G	Adjusts the color phase of green.
SAT G_CY	Adjusts the color saturation between green and cyan.
PHASE G_CY	Adjusts the color phase between green and cyan.
SAT CY	Adjusts the color saturation of cyan.
PHASE CY	Adjusts the color phase of cyan.
SAT CY_B	Adjusts the color saturation between cyan and blue.
PHASE CY_B	Adjusts the color phase between cyan and blue.
SAT B	Adjusts the color saturation of blue.
PHASE B	Adjusts the color phase of blue.
SAT B_MG	Adjusts the color saturation between blue and magenta.
PHASE B_MG	Adjusts the color phase between blue and magenta.
SAT MG	Adjusts the color saturation of magenta.
PHASE MG	Adjusts the color phase of magenta.
SAT MG_R	Adjusts the color saturation between magenta and red.
PHASE MG_R	Adjusts the color phase between magenta and red.
SAT R	Adjusts the color saturation of red.
PHASE R	Adjusts the color phase of red.
SAT R_YE	Adjusts the color saturation between red and yellow.
PHASE R_YE	Adjusts the color phase between red and yellow.
SAT YE	Adjusts the color saturation of yellow.
PHASE YE	Adjusts the color phase of yellow.
SAT YE_G	Adjusts the color saturation between yellow and green.
PHASE YE_G	Adjusts the color phase between yellow and green.
MATRIX SW	Enables or disables the matrix function.
COLOR CORRECT	Enables or disables the 12-axis color correction function.
LINEAR MATRIX	Enables or disables the linear matrix function.

SKIN CORRECTION

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



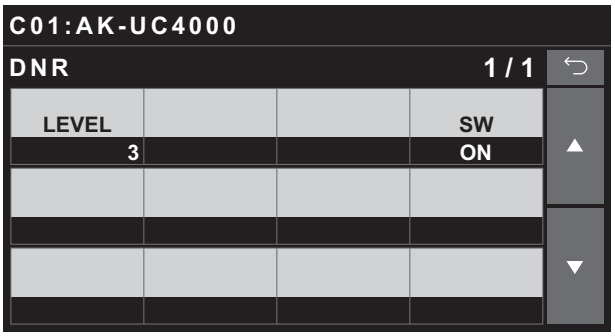
Item	Setting details
HUE	Finely adjusts the hue of the skin area.
TONE	Finely adjusts the tone of the skin area.
TABLE	Selects the skin area table.
SW	Enables or disables the fine adjustment function for near skin tone color.

DNR

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



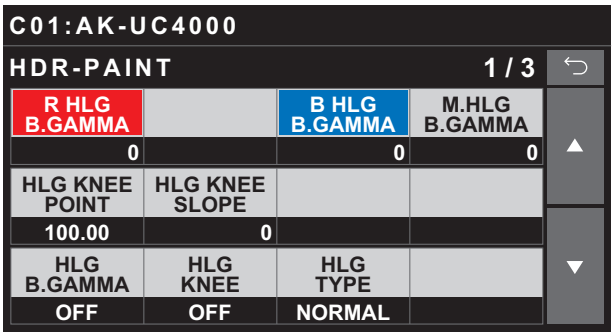
Item	Setting details
LEVEL	Sets the level for the noise reduction.
SW	Enables/disables the noise reduction function.

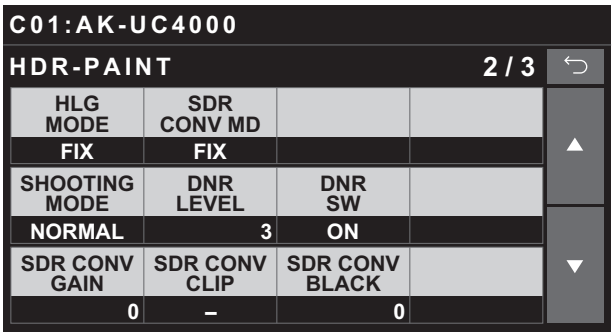
HDR-PAINT

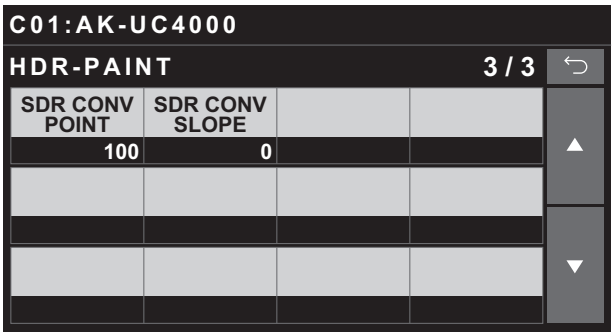
The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by “-”.

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.







Item	Setting details
R HLG B.GAMMA	Adjusts the red gamma characteristic near black for the master gamma.
B HLG B.GAMMA	Adjusts the blue gamma characteristic near black for the master gamma.
M.HLG B.GAMMA	Adjusts the gamma characteristic near black.
HLG KNEE POINT	Sets the knee point for when [GAMMA MODE] is set to “VIDEO REC”.
HLG KNEE SLOPE	Sets the knee slope for when [GAMMA MODE] is set to “VIDEO REC”.
HLG B.GAMMA	Enables or disables the black gamma.
HLG KNEE	Enables or disables the knee function.
HLG TYPE	Sets the HLG type.
HLG MODE	Sets the HLG mode.
SDR CONV MD	Sets the SDR mode.
SHOOTING MODE	Sets the shooting mode.
DNR LEVEL	Sets the level for the noise reduction.
DNR SW	Enables/disables the noise reduction function.
SDR CONV GAIN	Sets the SDR gain.
SDR CONV CLIP	Sets the SDR clip.
SDR CONV BLACK	Adjusts the black level offset of the SDR video.
SDR CONV POINT	Sets the SDR point.

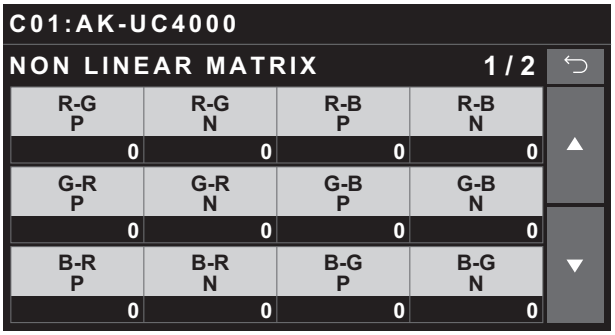
Item	Setting details
SDR CONV SLOPE	Sets the SDR slope.

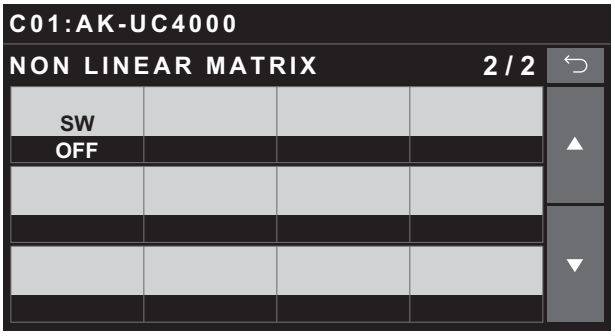
NON LINEAR MATRIX

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.





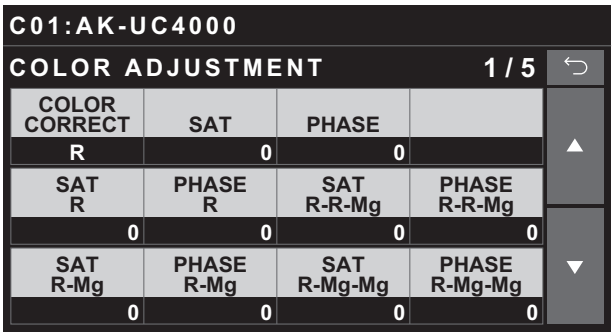
Item	Setting details
R-G P	Adjusts the matrix between red and green.
R-G N	
R-B P	Adjusts the matrix between red and blue.
R-B N	
G-R P	Adjusts the matrix between green and red.
G-R N	
G-B P	Adjusts the matrix between green and blue.
G-B N	
B-R P	Adjusts the matrix between blue and red.
B-R N	
B-G P	Adjusts the matrix between blue and green.
B-G N	
SW	Enables or disables the non linear matrix function.

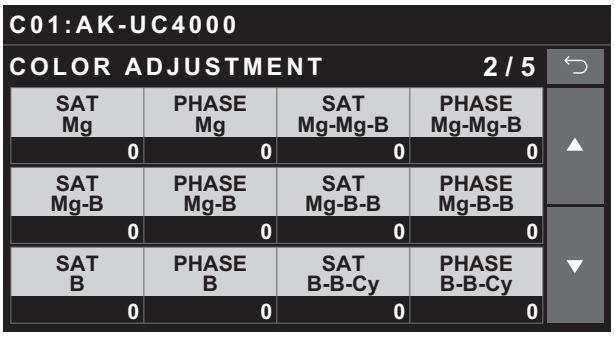
COLOR ADJUSTMENT

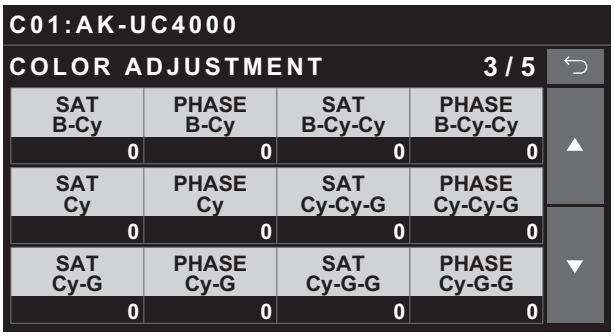
The setting values will vary also depending on the connected camera.

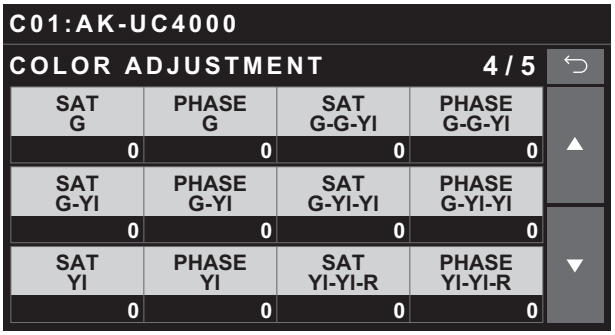
Items with the function disabled are indicated by "-".

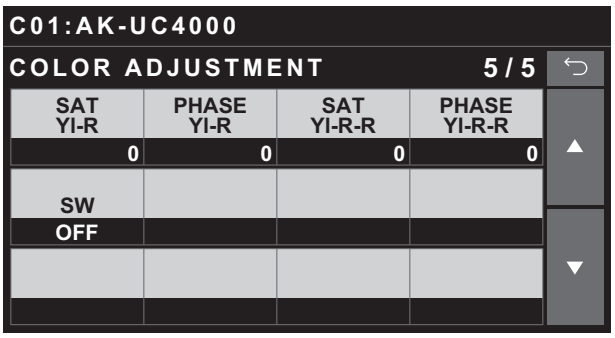
For details on each setting item, check also the operating instructions of the camera and CCU to be connected.











Item	Setting details
COLOR CORRECT	Selects the color component in 12-axis matrix memory to adjust.
SAT	Adjusts the saturation of the color component selected in [COLOR CORRECT].
PHASE	Adjusts the color phase of the color component selected in [COLOR CORRECT].
SAT R	Adjusts the color saturation of red.
PHASE R	Adjusts the color phase of red.
SAT R-R-Mg	Adjusts the color saturation between red and “color between red and magenta”.
PHASE R-R-Mg	Adjusts the color phase between red and “color between red and magenta”.
SAT R-Mg	Adjusts the color saturation between red and magenta.
PHASE R-Mg	Adjusts the color phase between red and magenta.
SAT R-Mg-Mg	Adjusts the color saturation between “color between red and magenta” and magenta.
PHASE R-Mg-Mg	Adjusts the color phase between “color between red and magenta” and magenta.
SAT Mg	Adjusts the color saturation of magenta.
PHASE Mg	Adjusts the color phase of magenta.
SAT Mg-Mg-B	Adjusts the color saturation between magenta and “color between magenta and blue”.
PHASE Mg-Mg-B	Adjusts the color phase between magenta and “color between magenta and blue”.
SAT Mg-B	Adjusts the color saturation between magenta and blue.
PHASE Mg-B	Adjusts the color phase between magenta and blue.
SAT Mg-B-B	Adjusts the color saturation between “color between magenta and blue” and blue.
PHASE Mg-B-B	Adjusts the color phase between “color between magenta and blue” and blue.
SAT B	Adjusts the color saturation of blue.
PHASE B	Adjusts the color phase of blue.
SAT B-B-Cy	Adjusts the color saturation between blue and “color between blue and cyan”.
PHASE B-B-Cy	Adjusts the color phase between blue and “color between blue and cyan”.
SAT B-Cy	Adjusts the color saturation between blue and cyan.
PHASE B-Cy	Adjusts the color phase between blue and cyan.
SAT B-Cy-Cy	Adjusts the color saturation between “color between blue and cyan” and cyan.
PHASE B-Cy-Cy	Adjusts the color phase between “color between blue and cyan” and cyan.
SAT Cy	Adjusts the color saturation of cyan.
PHASE Cy	Adjusts the color phase of cyan.
SAT Cy-Cy-G	Adjusts the color saturation between cyan and “color between cyan and green”.
PHASE Cy-Cy-G	Adjusts the color phase between cyan and “color between cyan and green”.
SAT Cy-G	Adjusts the color saturation between cyan and green.
PHASE Cy-G	Adjusts the color phase between cyan and green.
SAT Cy-G-G	Adjusts the color saturation between “color between cyan and green” and green.
PHASE Cy-G-G	Adjusts the color phase between “color between cyan and green” and green.
SAT G	Adjusts the color saturation of green.
PHASE G	Adjusts the color phase of green.
SAT G-G-YI	Adjusts the color saturation between green and “color between green and yellow”.
PHASE G-G-YI	Adjusts the color phase between green and “color between green and yellow”.
SAT G-YI	Adjusts the color saturation between green and yellow.
PHASE G-YI	Adjusts the color phase between green and yellow.
SAT G-YI-YI	Adjusts the color saturation between “color between green and yellow” and yellow.
PHASE G-YI-YI	Adjusts the color phase between “color between green and yellow” and yellow.
SAT YI	Adjusts the color saturation of yellow.
PHASE YI	Adjusts the color phase of yellow.
SAT YI-YI-R	Adjusts the color saturation between yellow and “color between yellow and red”.
PHASE YI-YI-R	Adjusts the color phase between yellow and “color between yellow and red”.

Item	Setting details
SAT YI-R	Adjusts the color saturation between yellow and red.
PHASE YI-R	Adjusts the color phase between yellow and red.
SAT YI-R-R	Adjusts the color saturation between “color between yellow and red” and red.
PHASE YI-R-R	Adjusts the color phase between “color between yellow and red” and red.
SW	Enables or disables the color adjustment function.

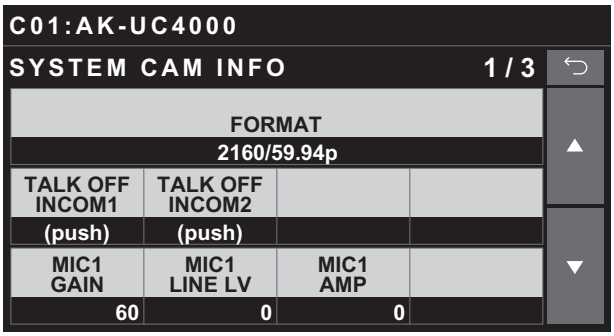
FUNCTION

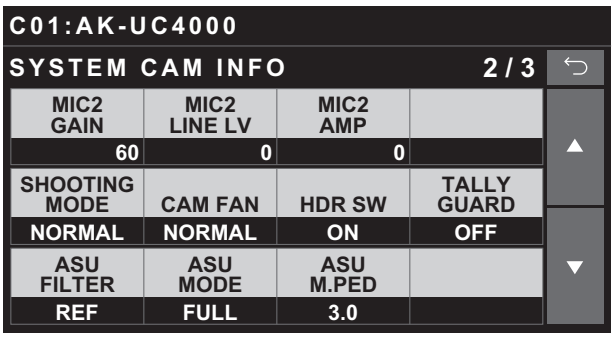
SYSTEM CAM INFO

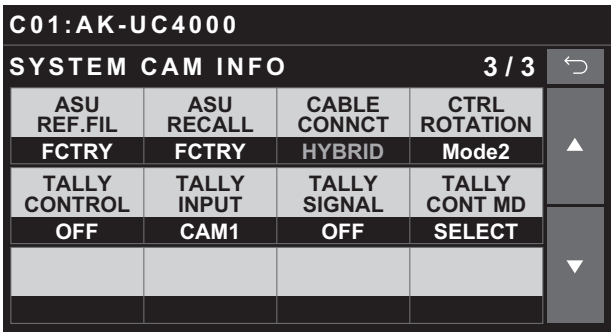
The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.







Item	Setting details
FORMAT	Set the camera format. When the unit is connected to a CCU, this item is only displayed and cannot be changed.
TALK OFF INCOM1	Sets TALK for INCOM1 to OFF.
TALK OFF INCOM2	Sets TALK for INCOM2 to OFF.
MIC1 GAIN	Makes coarse adjustments of the MIC1 gain.
MIC1 LINE LV	Adjusts the level for input to the camera's <MIC 1> connector.
MIC1 AMP	Makes fine adjustments of the MIC1 gain. (1 dB increments)
MIC2 GAIN	Makes coarse adjustments of the MIC2 gain.
MIC2 LINE LV	Adjusts the level for input to the camera's <MIC 2> connector.
MIC2 AMP	Makes fine adjustments of the MIC2 gain. (1 dB increments)
SHOOTING MODE	Sets the shooting mode.
CAM FAN	Sets the camera's cooling fan operation.
HDR SW	Sets the HDR mode to ON/OFF.

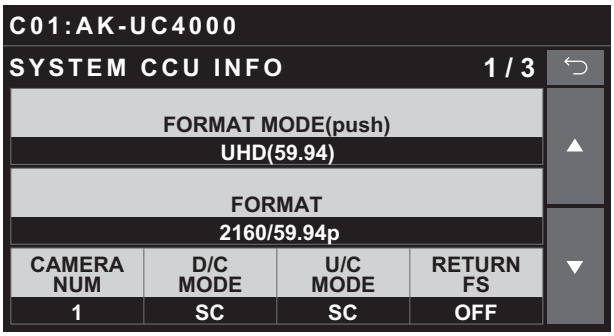
Item	Setting details
TALLY GUARD	When set to ON, this function disables automatic ASU, AWB, ABB operation while the tally is ON.
ASU FILTER	Sets the operation of the ND/CC filter when auto setup is started. **REF** The filter stored in the reference file is used when operation starts. **CURRENT** Auto setup starts at the filter position made prior to startup.
ASU MODE	Selects the auto setup mode setting.
ASU M. PED	Sets the position where the master pedestal is to be converged when auto setup is started.
ASU REF.FILE	Specifies the reference file used during auto setup.
ASU RECALL	Sets the reference file that is recalled when the [REF. RECALL] button is pressed.
CABLE CONNECT	Displays the CCU connection cable setting (display only). You can change the setting via menu operations on the camera itself. **HYBRID** Indicates that the CCU is connected via an optical fiber multi cable. **FIBER** Indicates that the CCU is connected via an optical fiber cable.
CTRL ROTATION	A mode that operates based on the numerical value and a mode that operates based on the effect are available. For details, refer to the operating instructions of the camera.
TALLY CONTROL	Sets whether or not to notify the camera when there is a tally input from the <PREVIEW> connector. When this is set to “ON”, notification is sent if there is tally input when the camera set in [TALLY INPUT] is selected (this function is disabled when connected with a studio camera). • This is enabled when other than “Serial” and “LAN” is set in [CONNECT SETTING].
TALLY INPUT	Sets the camera to be notified of tally input when [TALLY CONTROL] is set to “ON” (this function is disabled when connected with a studio camera). • This is enabled when other than “Serial” and “LAN” is set in [CONNECT SETTING].
TALLY SIGNAL	Displays the status of tally input to the unit. “ON” is displayed when there is input, and “OFF” when there is not.
TALLY CONT MD	Specifies the control method for the tally instruction when there is contact input. **SELECT** Sends notification when the camera set in TALLY INPUT is selected. **DIRECT** Ignores input and controls the camera that is connected (or to be connected). Operation will be in the new mode at the point in time when the DIRECT/SELECT setting is changed. If a camera is selected while TALLY of the contact is ON when in DIRECT mode, be careful because TALLY will remain ON for the camera before the change.

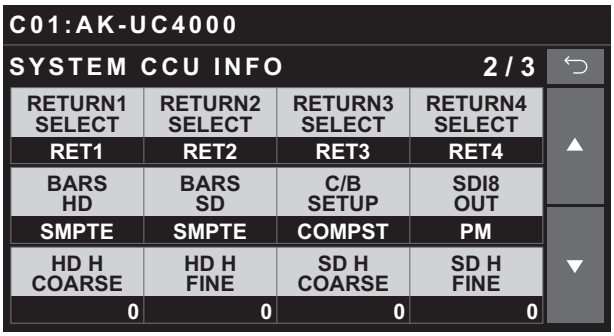
SYSTEM CCU INFO

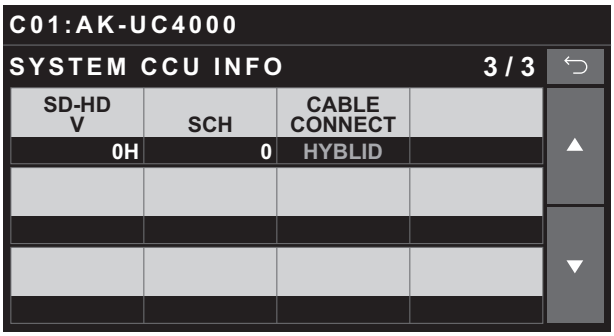
The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.







Item	Setting details
FORMAT MODE(push)	Selects the CCU format mode.
FORMAT	Selects the format that is output from the CCU. The CCU specifies the format to the camera based on the format selected here.
CAMERA NUM	Changes the camera number controlled by the CCU.
D/C MODE	Selects the down-conversion system for video output from SD SDI and VBS.
U/C MODE	Selects the video up-conversion system used for SD SDI and VBS return videos.
RETURN FS	Set the delay mode for the HD return signals.
RETURN1 SELECT	Sets the input allocations of return signal 1.
RETURN2 SELECT	Sets the input allocations of return signal 2.
RETURN3 SELECT	Sets the input allocations of return signal 3.
RETURN4 SELECT	Sets the input allocations of return signal 4.
BARS HD	Specifies the HD color bar output by the CCU.
BARS SD	Specifies the SD color bar output by the CCU.
C/B SETUP	Set the SD signal output for use with color bar output. • The "SETUP7.5%" setting is not valid when "SD_SDI" is selected.
SDI8 OUT	Performs PM/NORMAL switching for SDI8 OUT.
HD H COARSE	Make the coarse setting of the H_FINE phase used with GL HD REF.

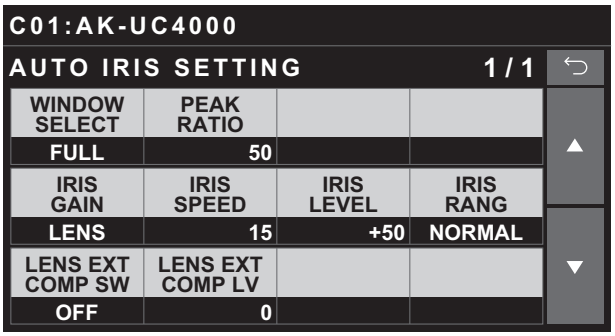
Item	Setting details
HD H FINE	Make the fine setting of the H_FINE phase used with GL HD REF.
SD H COARSE	Make the coarse setting of the H_FINE phase used with GL SD REF.
SD H FINE	Make the fine setting of the H_FINE phase used with GL SD REF.
SD-HD V	Set the vertical phase used with down-convert SD REF.
SCH	Adjust the SCH phase of VBS output.
CABLE CONNECT	Displays the camera connection cable setting. You can change the setting via menu operations on the CCU itself. **HYBRID** Indicates that the camera is connected via an optical fiber multi cable. **FIBER** Indicates that the camera is connected via an optical fiber cable.

AUTO IRIS SETTING

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

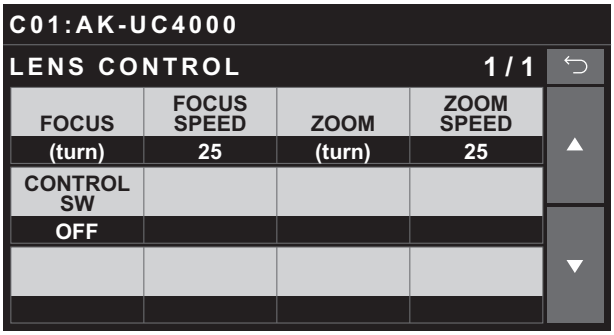
For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



Item	Setting details
WINDOW SELECT	Set the photometry range.
PEAK RATIO	Set the ratio between the peak value and average value for auto iris photometry.
IRIS GAIN	Switch between adjusting the auto iris photometry speed via the iris gain volume or via menu operations. Set this to "LENS" under normal circumstances, and adjust using the lens iris volume.
IRIS SPEED	Set the auto iris speed.
IRIS LEVEL	Adjusts the target value (brightness) of the auto iris.
IRIS RANG	Set the auto iris level fine adjustment range for the [IRIS] lever.
LENS EXT COMP SW	Enable ALC correction when the lens extender is enabled.
LENS EXT COMP LV	Set the ALC correction level when the lens extender is enabled.

LENS CONTROL

This is enabled for a camera or other device that supports lens operation from a remote control.



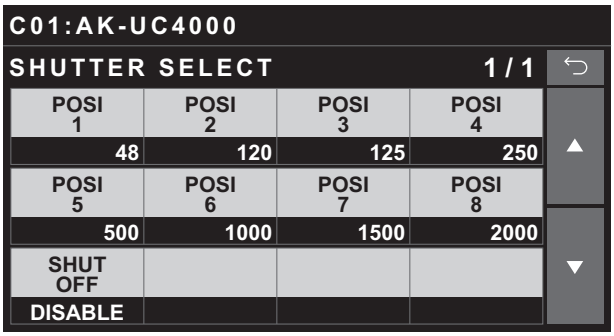
Item	Setting details
FOCUS	Adjusts the lens focus manually.
FOCUS SPEED	Adjusts the focus operation speed.
ZOOM	Adjusts the lens zoom manually.
ZOOM SPEED	Adjusts the zoom operation speed.
CONTROL SW	Enables or disables control of the lens from the unit. ● When this is set to “OFF”, control the lens from the camera.

SHUTTER SELECT

The setting values will vary also depending on the connected camera.

Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



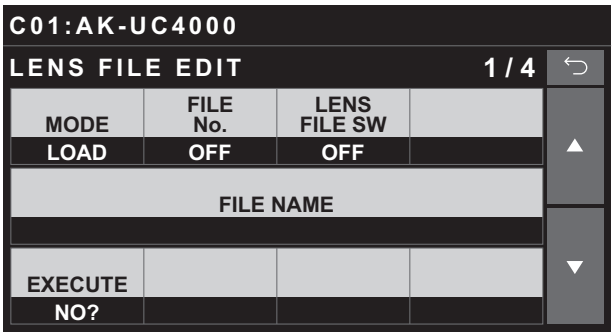
Item	Setting details
POSI1	Sets the shutter speed for [POSI 1] to [POSI 8].
POSI2	
POSI3	
POSI4	
POSI5	
POSI6	
POSI7	
POSI8	
SHUT OFF	Selects whether to include shutter OFF when switching the shutter position.

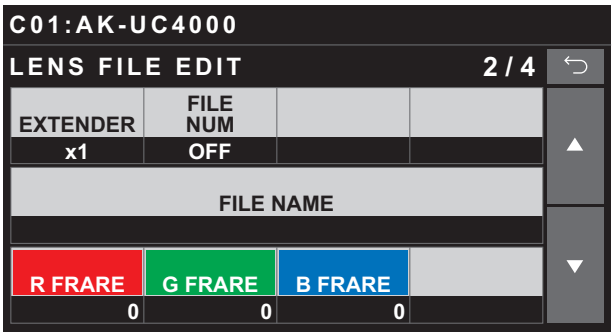
LENS FILE EDIT

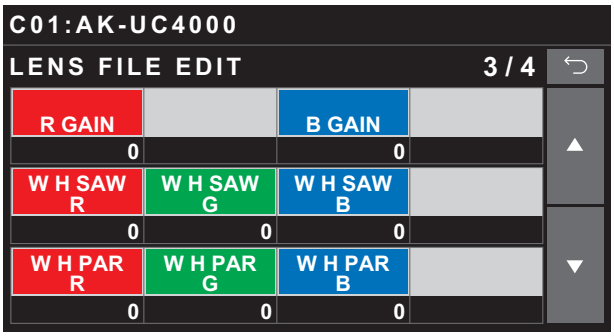
The setting values will vary also depending on the connected camera.

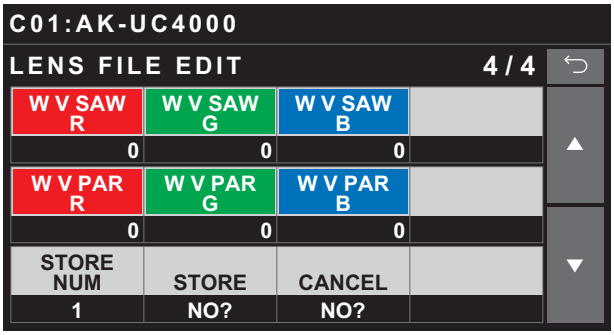
Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.

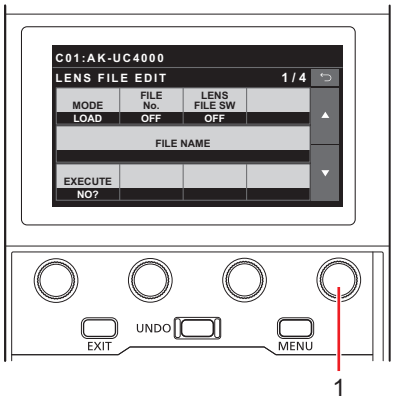








Item	Setting details
MODE	Saves the current lens file in the camera (STORE) or loads a lens file stored in the camera (LOAD).
FILE No.	Selects the file.
LENS FILE SW	Enables or disables the LENS file.

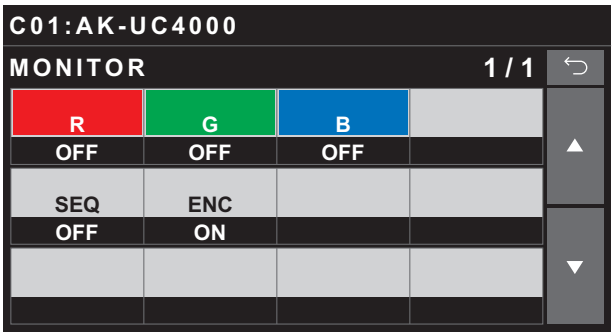
Item	Setting details
FILE NAME	Displays the file name of the file number specified in [FILE No.]. The file name can be changed when [MODE] is set to “STORE”. If you press one of the [MENU] dials, the screen transitions to the keyboard input screen to perform the operation to change the file name. Set the file name according to the input conditions for the connection destination camera. For the input conditions, see the operating instructions of the camera to be connected. 
EXECUTE	**When [MODE] is set to “LOAD”** Load the file. **When [MODE] is set to “STORE”** Save the file.
EXTENDER	Sets the current magnification of the lens extender.
FILE NUM	Displays the number of the lens file currently loaded.
FILE NAME	Displays the name of the lens file currently loaded.
R FLARE	Adjusts the R flare of the display data.
G FLARE	Adjusts the G flare of the display data.
B FLARE	Adjusts the B flare of the display data.
R GAIN	Adjusts the R gain of the display data.
B GAIN	Adjusts the B gain of the display data.
W H SAW R	Adjusts the R, G, and Bch white shading of the display data in the horizontal direction using a sawtooth waveform.
W H SAW G	
W H SAW B	
W H PAR R	Adjusts the R, G, and Bch white shading of the display data in the horizontal direction using a parabolic waveform.
W H PAR G	
W H PAR B	
W V SAW R	Adjusts the R, G, and Bch white shading of the display data in the vertical direction using a sawtooth waveform.
W V SAW G	
W V SAW B	
W V PAR R	Adjusts the R, G, and Bch white shading of the display data in the vertical direction using a parabolic waveform.
W V PAR G	
W V PAR B	
STORE NUM	Specifies the number of the LENS file to be registered.
STORE	Saves the [R/G/B FLARE], [R/B GAIN], [W H SAW R/G/B], [W H PAR R/G/B], [W V SAW R/G/B], and [W V PAR R/G/B] settings to the lens file specified in [FILE NUM].
CANCEL	Discards changes to the [R/G/B FLARE], [R/B GAIN], [W H SAW R/G/B], [W H PAR R/G/B], [W V SAW R/G/B], and [W V PAR R/G/B] settings, and returns them to their previous states.

MONITOR

The setting values will vary also depending on the connected camera.

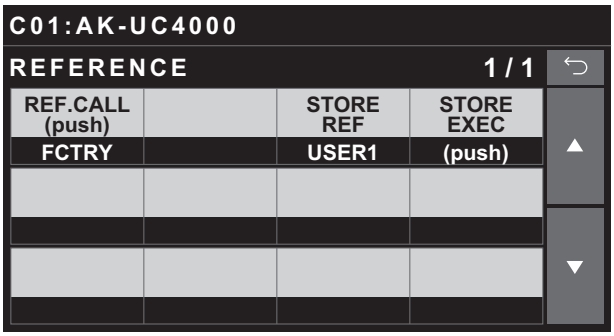
Items with the function disabled are indicated by "-".

For details on each setting item, check also the operating instructions of the camera and CCU to be connected.



Item	Setting details
R	Turns the R monitor on or off.
G	Turns the G monitor on or off.
B	Turns the B monitor on or off.
SEQ	Turns the SEQ monitor on or off.
ENC	Turns the ENC monitor on or off.

REFERENCE

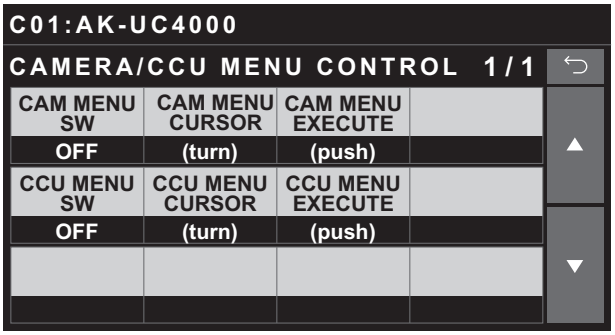


Item	Setting value	Setting details
REF.CALL(push)	FCTRY USER1 to USER3 REF1 to REF3	Recalls the reference setting information (factory file, user file, and reference file).
STORE REF	USER1 to USER3 REF1 to REF3	Overwrite the current setting values to the selected file.
STORE EXEC	-	Execute saving of the reference file.

MAINTENANCE

CAMERA/CCU MENU CONTROL

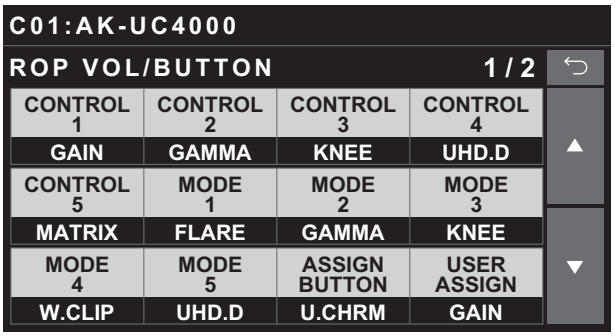
This menu can be operated when the setting value for the CCU picture monitor (PM) is 720p.

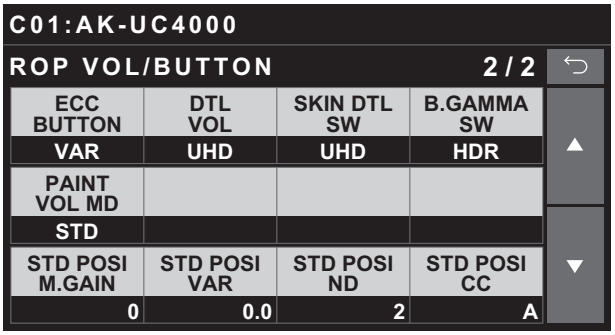


___ indicates factory default settings.

Item	Setting value	Setting details
CAM MENU SW	OFF ON	Turns the menu on or off.
CAM MENU CURSOR	-	Moves the menu cursor or changes setting values.
CAM MENU EXECUTE	-	Executes the selected process.
CCU MENU SW	OFF ON	Turns the menu on or off.
CCU MENU CURSOR	-	Moves the menu cursor or changes setting values.
CCU MENU EXECUTE	-	Executes the selected process.

ROP VOL/BUTTON





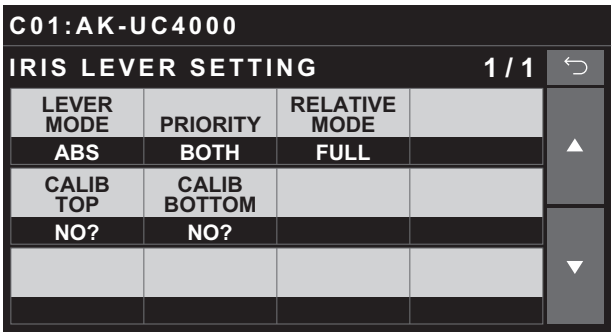
___ indicates factory default settings.

Item	Setting value	Setting details
CONTROL1	PNT. S SHUT B.SHD PED H.CHRM U.CHRM GAIN TEMP ECC TEMP U W.SHD FLARE GAMMA B.GAM KNEE W.CLIP DRS HD.D UHD.D SD.D H.S.DTL U.S.DTL MATRIX C.CORR S.CORR DNR HDR.P N.MTRX CLR.A A.IRIS S.SEL REF CAM_MN	Sets the functions to assign to buttons [1] to [5] (CONTROL/MODE). The setting values represent the following menu names. PNT.S: PAINT SWITCH SHUT: SHUTTER SPEED B.SHD: BLACK SHADING PED: PEDESTAL H.CHRM: HD CHROMA U.CHRM: UHD CHROMA GAIN: RB GAIN TEMP: COLOR TEMP ECC: ECC TEMP U: CAM USER SW TEMP W.SHD: WHITE SHADING FLARE: FLARE GAMMA: GAMMA B.GAM: BLACK GAMMA KNEE: KNEE W.CLIP: WHITE CLIP DRS: DRS HD.D: HD DETAIL UHD.D: UHD DETAIL SD.D: SD DETAIL H.S.DTL: HD SKIN TONE DTL U.S.DTL: UHD SKIN TONE DTL MATRIX: LINEAR MATRIX C.CORR: COLOR CORRECTION S.CORR: SKIN CORRECTION DNR: DNR HDR.P: HDR-PAINT N.MTRX: NON LINIAR MATRIX CLR.A: COLOR ADJUSTMENT A.IRIS: AUTO IRIS SETTING S.SEL: SHUTTER SELECT REF: REFERENCE CAM_MN: CAMERA MENU • **Factory settings** CONTROL1: GAIN CONTROL2: GAMMA CONTROL3: KNEE CONTROL4: UHD.D CONTROL5: MATRIX
CONTROL2		
CONTROL3		
CONTROL4		
CONTROL5		

Item	Setting value	Setting details
MODE1 **MODE2** **MODE3** **MODE4** **MODE5**	GAMMA FLARE KNEE W.CLIP U.CHRM H.CHRM H.COL UHD.D HD.D D.EXT S.CORR SHOOT 5600K ECC A to E SD.D HDR.K D.EXT2	Sets the functions to assign to buttons [1] to [5] (CONTROL/MODE). The setting values represent the following functions. GAMMA: GAMMA FLARE: FLARE KNEE: KNEE W.CLIP: WHITE CLIP U.CHRM: UHD CHROMA H.CHRM: HD CHROMA H.COL : HIGH COLOR UHD.D: UHD DETAIL HD.D: HD DETAIL D.EXT : D.EXT S.CORR: SKIN CORRECTION SHOOT : SHOOTING 5600K: Turns ECC on, and sets the color temperature to 5600K. ECC A to E: Sets the color temperature stored to memory in the ECC menu. SD.D: SD DTL HDR.K: HLG KNEE D.EXT2 • **Factory settings** MODE1: FLARE MODE2: GAMMA MODE3: KNEE MODE4: W.CLIP MODE5: UHD.D
ASSIGN BUTTON	GAMMA FLARE KNEE W.CLIP U.CHRM H.CHRM H.COL UHD.D HD.D D.EXT S.CORR SHOOT 5600K ECC A to E SD.D HDR.K D.EXT2	Sets the function to assign to the [ASSIGN] button. The setting values represent the following functions. GAMMA: GAMMA FLARE: FLARE KNEE: KNEE W.CLIP: WHITE CLIP U.CHRM: UHD CHROMA H.CHRM: HD CHROMA H.COL : HIGH COLOR UHD.D: UHD DETAIL HD.D: HD DETAIL D.EXT : D.EXT S.CORR: SKIN CORRECTION SHOOT : SHOOTING 5600K: Turns ECC on, and sets the color temperature to 5600K. ECC A to E: Sets the color temperature stored to memory in the ECC menu. SD.D: SD DTL HDR.K: HLG KNEE D.EXT2
USER ASSIGN	GAIN M.GAMM U.CHRM H.CHRM DRS KNEE.S U.S.DTL H.S.DTL S.HUE S.TONE	Sets the function to assign to [USER] of the [SELECT] dial. The setting values represent the following functions. GAIN: GAIN (Operates the R, G, and B gain values simultaneously. This value will be “0” when auto white balance adjustment is performed. The value will also be “0” when the function assigned to USER ASSIGN has been changed to something besides “GAIN”, or when switching to another camera.) M.GAMM: MASTER GAMMA U.CHRM : UHD CHROMA GAIN H.CHRM : HD CHROMA GAIN DRS: DRS KNEE.S : KNEE SLOPE U.S.DTL: UHD SKIN TONE DTL H.S.DTL: HD SKIN TONE DTL S.HUE : SKIN CORRECTION(HUE) S.TONE : SKIN CORRECTION(TONE)
ECC BUTTON	VAR MEM	Sets the control method of the up and down buttons when the [ECC] button on the panel is ON. VAR: Performs INC/DEC controls for COLOR TEMP values. MEM: Recalls the A to E values stored to memory in the ECC menu. In this case, the values of A to E are displayed on the 7-segment display. When this is ON, the memory selected last time is displayed. The default value is A.
DTL VOL	UHD HD SD	Selects the target of detail control operations on the panel. UHD: Control UHD detail. HD: Control HD detail. SD: Control SD detail.

Item	Setting value	Setting details
SKIN DTL SW	UHD HD	Selects the target of skin tone detail control operations on the panel. UHD: Control UHD skin tone detail. HD: Control HD skin tone detail.
B. GAMMA SW	SDR HDR	SDR: This is the switch of the BLACK GAMMA menu. HDR: Controls ON/OFF of B.GAMMA in HDR-PAINT.
PAINT VOL MD	STD MODE1 MODE2	Controls the range controllable by the ROP using menus. <Current state> R/G/B Gain: Range of CAM ±1000 (control range of ROP is ±256) BLACK: Range of CAM ±800 (control range of ROP is ±128) FLARE: Range of CAM ±200 (control range of ROP is ±64) The setting parameters are as follows. STD R/G/B Gain: ±256 BLACK: ±128 FLARE: ±64 MODE1: About half the control range of STD. MODE2: About one-third the control range of STD.
STD POSI M. GAIN	-6 to 0 to +36	Sets the standard position of the master gain (M.GAIN).
STD POSI VAR	-2.9 to 0.0 to +2.9	Sets the standard position of the master gain (M.GAIN) step value.
STD POSI ND	1 to 2 to 5	Sets the standard position of the ND filter.
STD POSI CC	A to E	Sets the standard position of the CC filter.

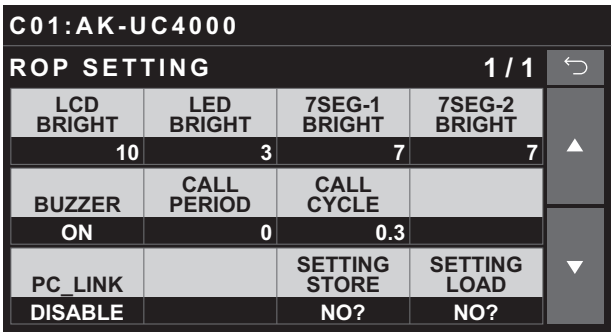
IRIS LEVER SETTING



___ indicates factory default settings.

Item	Setting value	Setting details
LEVER MODE	ABS RLTV	**ABS** Controls absolute values. **RLTV** Controls relative values.
PRIORITY	NON Serial LAN BOTH	**NON** Does not prioritize iris control. If the camera's iris position does not match the ROP's [IRIS] lever position, match the ROP's [IRIS] lever position to the camera's iris position. **Serial** If the camera's iris position does not match the ROP's [IRIS] lever position, the ROP's [IRIS] lever position during serial connection will be the basis of operation. **LAN** If the camera's iris position does not match the ROP's [IRIS] lever position, the ROP's [IRIS] lever position during IP connection will be the basis of operation. **BOTH** When there is either a serial or LAN connection, operation from the [IRIS] lever has priority.
RELATIVE MODE	NORMAL FULL	**NORMAL** Keeps the current range of the SENSE dial. **FULL** Enables adjusting the SENSE dial within the range of CLOSE to OPEN.
CALIB TOP	-	Adjusts the operating range of the [IRIS] lever. [CALIB TOP] is executed when the [IRIS] lever is moved to the OPEN end, and [CALIB BOTTOM] is executed when it is moved to the CLOSE end.
CALIB BOTTOM	-	

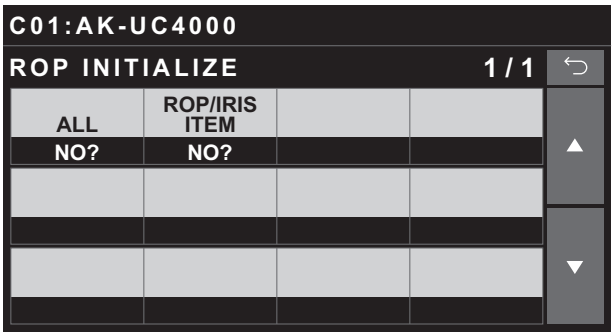
ROP SETTING



___ indicates factory default settings.

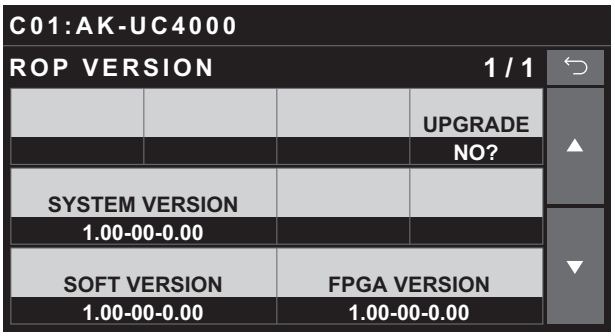
Item	Setting value	Setting details
LCD BRIGHT	1 to 20	Sets the brightness of the LCD panel.
LED BRIGHT	1 to 5	Set the brightness of the panel buttons.
7SEG-1 BRIGHT	0 to 15	Sets the brightness of the panel's 7-segment display (group 1). This applies to the ND filter display, CC filter display, master gain display, and shutter display.
7SEG-2 BRIGHT	0 to 15	Sets the brightness of the panel's 7-segment display (group 2). This applies to the iris display and camera selection number / master pedestal display.
BUZZER	ON OFF	Enable or disable the buzzer (beep/call tone).
CALL PERIOD	0 to 5	[CALL PERIOD] and [CALL CYCLE] will be the time from which [CALL] was released for [CAMERA CCU]. PERIOD: Flashing duration (sec). CYCLE: Flashing cycle (For 1.0: 500 msec off → 500 msec lit (repeatedly)).
CALL CYCLE	0.3 to 1.0	
PC_LINK	ENABLE DISABLE	Sets whether to allow communication with ROP Setup Software. ENABLE: Allows communication. This cannot be selected when an account is not registered in ROP AUTH SETTING. DISABLE: Does not allow communication. ***NOTE*** • Set this to "DISABLE" when there will be no communication with ROP Setup Software.
SETTING STORE	NO? SET.1? SET.2? SET.3? SET.4? SET.5?	Stores up to five setting values (SET.1–5) related to the following operations of the unit. Select the storage destination and then press the dial. If you do not press the dial, the data will not be stored. You can use this according to purpose of operation. • [MAINTENANCE] > [ROP VOL/BUTTON] • [IRIS LEVER SETTING] > [LEVER MODE] • [IRIS LEVER SETTING] > [PRIORITY] • [IRIS LEVER SETTING] > [RELATIVE MODE]
SETTING LOAD	NO? SET.1? SET.2? SET.3? SET.4? SET.5?	Select the data stored with U.SETUP STORE in SET.1–5, and reflect the settings in the following menus by loading the data (pressing the [MENU] dial). You can recall setting values according to purpose of operation. • [MAINTENANCE] > [ROP VOL/BUTTON] • [IRIS LEVER SETTING] > [LEVER MODE] • [IRIS LEVER SETTING] > [PRIORITY] • [IRIS LEVER SETTING] > [RELATIVE MODE]

ROP INITIALIZE



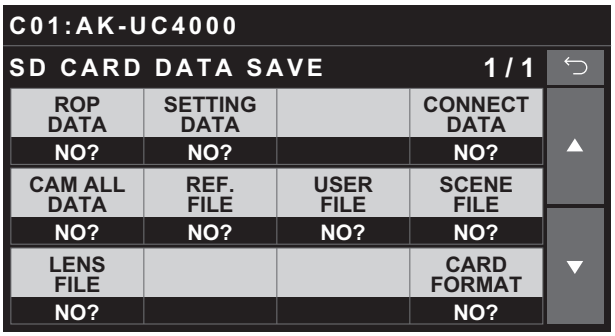
Item	Setting details
ALL	This is all setting items including network connection settings controlled by the ROP. However, it does not apply to IRIS calibration information. The applicable menus are as follows. <MAINTENANCE> ROP VOL/BUTTON IRIS LEVER SETTING (excluding calibration settings) ROP SETTING <SYSTEM> ROP IP SETTING MANUAL IP SETTING CONNECT SETTING CAMERA AUTH SETTING ROP AUTH SETTING SWITCHER LINK AW CONTROLLER LINK
ROP/IRIS ITEM	This is setting items excluding network connection settings controlled by the ROP. However, it does not apply to IRIS calibration information. The applicable menus are as follows. <MAINTENANCE> ROP VOL/BUTTON IRIS LEVER SETTING (excluding calibration settings) ROP SETTING (excluding PC_TOOL LINK and SETTING STORE)

ROP VERSION



Item	Setting value	Setting details
UPGRADE	NO? YES?	Updates the software of the unit. ● After starting this process, do not turn off the unit or remove SD cards until the process is complete.
SYSTEM VERSION	(Version display)	Displays the system version.
SOFT VERSION	(Version display)	Displays the software version.
FPGA VERSION	(Version display)	Displays the FPGA version.

SD CARD DATA SAVE

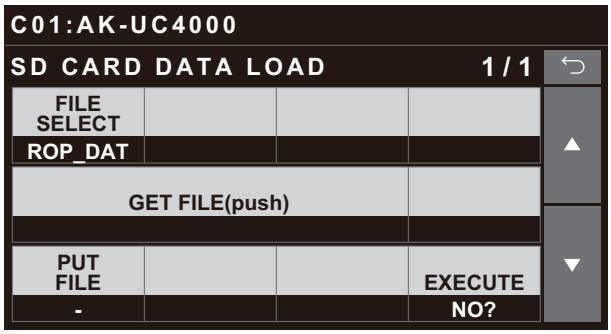


Item	Setting value	Setting details
ROP DATA	NO? YES?	Stores the ROP setting data of settings controlled on the ROP (excluding [MAINTENANCE] > [ROP VOL/BUTTON], [MAINTENANCE] > [IRIS LEVER SETTING] (excluding the calibration setting information), and [MAINTENANCE] > [ROP SETTING SYSTEM] > [ROP IP SETTING]). Select “YES?” to save to the SD card.
SETTING DATA	NO? ALL? SET.1? to SET.5?	Stores the values of 1 to 5 of operation setting data saved on the unit to a file. Select “ALL?” or “SET.1?” to “SET.5?” to save to the SD card.
CONNECT DATA	NO? YES?	If this is set to the ROP, stores the setting data for connecting with cameras ([SYSTEM] > [MANUAL IP SETTING], [SYSTEM] > [CONNECT SETTING], and [SYSTEM] > [CAMERA AUTH SETTING]). Select “YES?” to save to the SD card.
CAM ALL DATA	NO? YES?	Stores the setting data of the connection destination cameras and CCU (FACTORY, REF., USER, Scene, and LENS FILE).
REF.FILE	NO? ALL? REF.1? to REF.3?	Stores a reference file of the connection destination cameras and CCU. Select “ALL?” or “REF.1?” to “REF.3?” to save to the SD card.
USER FILE	NO? ALL? USER1? to USER3?	Stores a user file of the connection destination cameras and CCU. Select “ALL?” or “USER1?” to “USER3?” to save to the SD card.
SCENE FILE	NO? ALL? SCENE1? to SCENE8?	Stores a scene file of the connection destination cameras and CCU. Select “ALL?” or “SCENE1?” to “SCENE8?” to save to the SD card.
LENS FILE	NO? ALL? LENS1? to LENS32?	Stores a lens file of the connection destination cameras. Select “ALL?” or “LENS1?” to “LENS32?” to save to the SD card.
CARD FORMAT	NO? YES?	Formats the SD card.

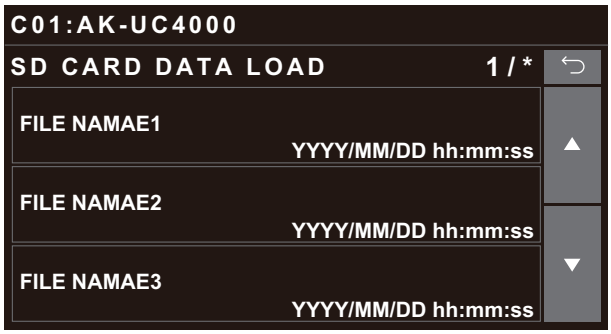
NOTE

- Since the unit is not equipped with a clock function, the date and time specified from the camera will be set for the date of files for setting data acquired from the cameras and CCU. For the date of a file for unit specific setting data, a constant date and time will be set.

SD CARD DATA LOAD



If you operate GET FILE, a list of corresponding data saved in the SD card is displayed.
Selecting a file returns you to the original screen.



Item	Setting value	Setting details
FILE SELECT	ROP_DAT SET_ALL SETTING CNNCT CAM ALL ALL SCN SCENE ALL USER USER ALL REF REF ALL LENS LENS	Selects the type of files to be loaded. **ROP_DAT** Loads the data saved with “ROP_DAT” when saving. **SET_ALL** Loads the data saved with “SETTING DATA: ALL” when saving. **SETTING** Loads the data saved with one “SETTING DATA” when saving. **CNNCT** Loads the data saved with “CONNECT DATA” when saving. **CAM ALL** Loads the data saved with “CAM ALL DATA” when saving. **ALL SCN** Loads the data saved with “SCENE FILE: ALL” when saving. **SCENE** Loads the data saved with one “SCENE FILE” when saving. **ALL USER** Loads the data saved with “USER FILE: ALL” when saving. **USER** Loads the data saved with one “USER FILE” when saving. **ALL REF** Loads the data saved with “REF FILE: ALL” when saving. **REF** Loads the data saved with one “REF FILE” when saving. **ALL LENS** Loads the data saved with “LENS FILE: ALL” when saving. **LENS** Loads the data saved with one “LENS FILE” when saving.
GET FILE(push)	-	When you press the [MENU] dial, data of the type selected in [FILE SELECT] is loaded from the memory card, and a list of file names appears. When you select a file from the file list and press the [MENU] dial, the previous screen appears again, and the file name of the selected data appears in [GET FILE(push)].

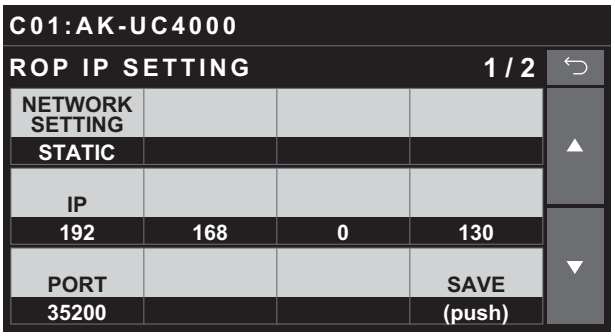
Item	Setting value	Setting details
PUT FILE	SET.1? to SET.5? REF.1 to REF.3 USER1 to USER3 SCENE1 to SCENE8 LENS1 to LENS32	Specify the LOAD destination type. • This cannot be selected when FILE SELECT is set to “ROP_DATA”, “SET ALL”, “SNNCT”, “CAM ALL”, “ALL SCN”, “ALL USER”, “ALL REF”, or “ALL LENS”. It is displayed as “-”. • SET.1 to SET.5 can be selected as the load destination on the unit when FILE SELECT is set to “SETTING”. • CURRENT and SCENE1 to SCENE8 can be selected as the load destination on the camera and CCU when FILE SELECT is set to “SCENE”. • USER1 to USER3 can be selected as the load destination on the camera and CCU when FILE SELECT is set to “USER”. • REF1 to USER3 can be selected as the load destination on the camera and CCU when FILE SELECT is set to “REF”. • LENS1 to LENS32 can be selected as the load destination on the camera when FILE SELECT is set to “LENS”.
EXECUTE	NO? YES?	Select “YES?” to load the selected data. • After starting this process, do not turn off the unit or remove SD cards until the process is complete.

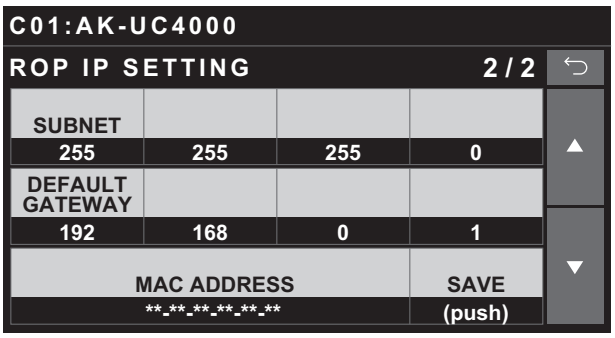
NOTE

- As the unit is not equipped with a clock function, the date and time at which the file was saved on the camera will be used for the creation dates of saved files.

SYSTEM

ROP IP SETTING





Item	Setting details
NETWORK SETTING	Selects whether to configure the settings individually (STATIC) like with a remote camera or to acquire them from a server (DHCP). The IP address for DHCP is acquired from a DHCP server. When the settings cannot be acquired from the server, 192.168.0.130 is set for the IP address by default. When this is changed from "DHCP" to "STATIC", set the IP address, subnet mask, and default gateway again.
IP	Sets the IP address of the unit. This can be set as follows. XXX.XXX.XXX.XXX (XXX is a value from 0 to 255) Each octet can be set within the following range by input in the LCD menu. • 1st octet: 1 to 223 • 2nd octet: 0 to 255 • 3rd octet: 0 to 255 • 4th octet: 1 to 254 In addition, the setting values will be checked when confirmed (written to flash memory), and an error message will appear and setting will not be possible when the address is as follows. • 0.*.*.*, *.*.*.0, *.*.*.255, 127.0.0.1 • Class D address (224.0.0.0 to 239.255.255.255) • Class E address (240.0.0.0 to 255.255.255.255)
PORT	Sets the port number of the unit. A value from 1 to 65535 can be set. However, any of the following ports can be selected, but an error message will be displayed and setting will not be possible when confirmed (written to flash memory). 20/21 (FTP) 25 (SMTP) 42/53 (DNS) 69 (tFTP) 23 (telnet) 110/995 (POP3) 123 (NTP) 67/68 (BOOTP/DHCP) 10669/10670 (BOOTP) 161/162 (SNMP)

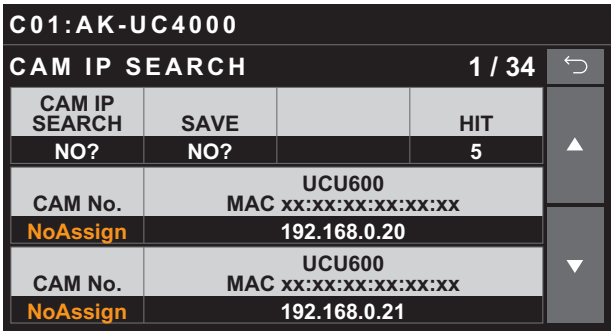
Item	Setting details
SUBNET	Sets the subnet mask of the unit. The values that can be set for each octet are as follows. • 1st octet: 0 to 255 • 2nd octet: 0 to 255 • 3rd octet: 0 to 255 • 4th octet: 0 to 255 In addition, the setting values will be checked when confirmed (written to flash memory), and an error message will appear and setting will not be possible when the subnet mask is as follows. • 0.0.0.0 and 127.0.0.1 cannot be set.
DEFAULT GATEWAY	Sets the default gateway of the unit. The setting ranges are as follows. (Factory default: 192.168.0.1) • 1st octet: 1 to 223 • 2nd octet: 0 to 255 • 3rd octet: 0 to 255 • 4th octet: 1 to 254 However, the following addresses cannot be set. Check the setting values during configuration. • Class D address (224.0.0.0 to 239.255.255.255) • Class E address (240.0.0.0 to 255.255.255.255)
MAC ADDRESS	Display the unit's MAC address. (Display only)
SAVE	Press the [MENU] dial to set the following items. • NETWORK SETTING • IP • PORT • SUBNET • DEFAULT GATEWAY When settings are changed, they will not be applied if you do not perform a save. Furthermore, the unit will operate according to the set information once restarted.

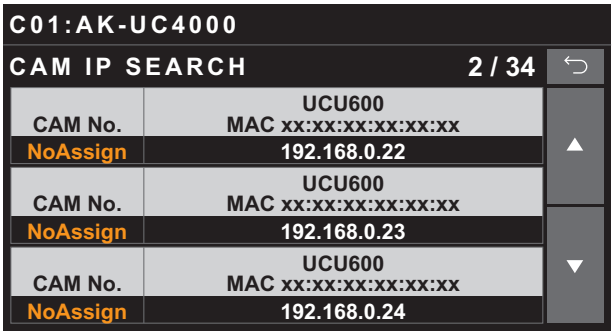
NOTE

- Performing [SAVE] after changing the settings will store the setting value changes to the internal memory. Perform [SAVE] on each screen. The setting values stored to memory will be applied after the unit is restarted.

CAM IP SEARCH

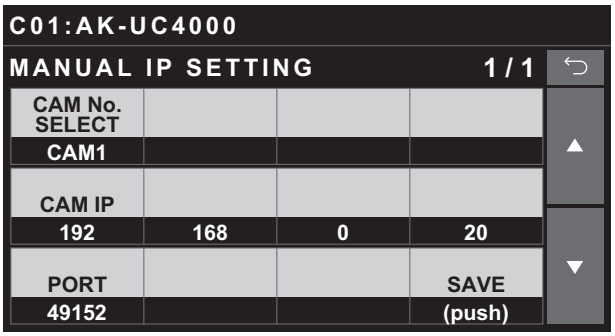
The setting values will vary depending on the connected camera.





Item	Setting details
CAM IP SEARCH	Execute this to search for cameras connected to the same network and display them from the second line.
SAVE	Select YES to reflect the setting values. If you exit the menu without selecting YES, the acquired information will be cleared. The connection settings will remain in their original state.
HIT	Displays the number of hits displayed in the list as search results.
CAM No.	“NoAssign” is displayed as the search result for an unassigned camera. The current camera control number is displayed for an assigned camera. When assigning a camera control number to an unassigned camera, set the camera control number. You can set a number within the range of 1 to 99. After setting is complete, perform a save.

MANUAL IP SETTING

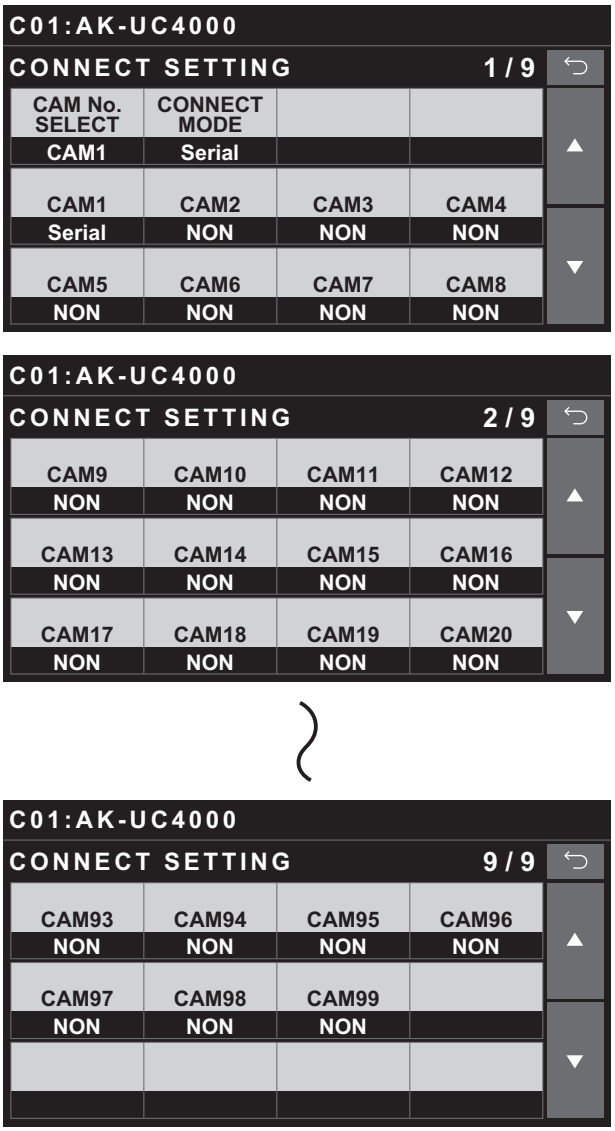


Item	Setting details
CAM No. SELECT	Select the camera control number to register with the [MENU] dial.
CAM IP	Sets the IP address of the camera to be connected. The setting ranges are as follows. (IP addresses are assigned in order starting with 192.168.0.20 for CAM1 under factory default conditions.) ● 1st octet: 1 to 223 ● 2nd octet: 0 to 255 ● 3rd octet: 0 to 255 ● 4th octet: 1 to 254
PORT	Sets the port of the camera to be connected. Values from 1 to 65535 can be set. (Factory default: 49152)
SAVE	Press the [MENU] dial and then set the following items for the camera number selected in [CAM No. SELECT]. ● IP ● PORT When settings are changed, they will not be applied if you do not perform a save.

NOTE

- Performing [SAVE] after changing the settings will apply the setting value changes. The changes will not be applied on the unit unless [SAVE] is performed.

CONNECT SETTING



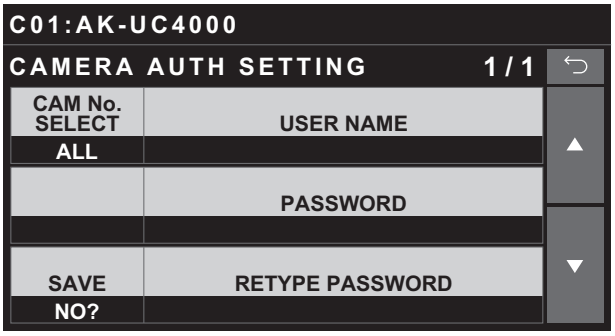
___ indicates factory default settings.

Item	Setting value	Setting details
CAM No. SELECT	CAM1 to CAM99	Selects the camera control number for which to change the settings. Press the [MENU] dial to apply the change.
CONNECT MODE	Serial LAN	Selects the connection method for the camera. Press the [MENU] dial to apply the change. • "Serial" cannot be set for multiple cameras.
CAM1	NON Serial LAN	
CAM2 to CAM99	NON Serial LAN	

CAMERA AUTH SETTING

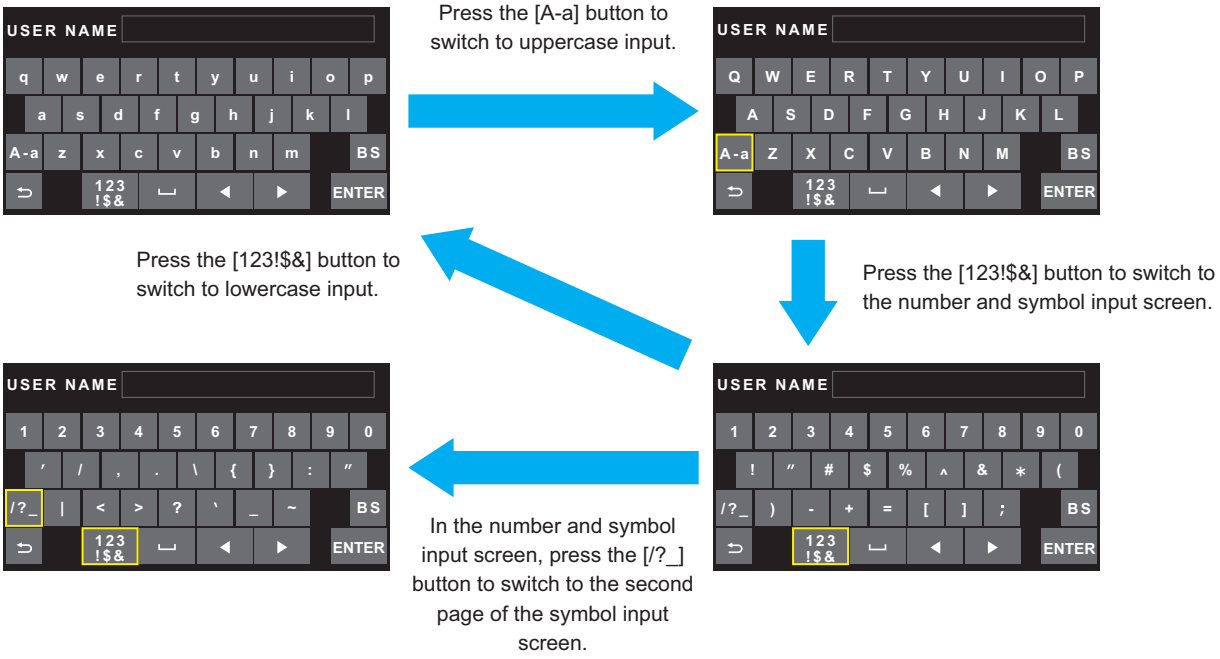
Set the user name and password for authenticating connections to the camera with the specified camera control number.

Set the user name and password that are set on the camera.



Item	Setting details
CAM No. SELECT	Specifies the camera control number. When this is set to ALL, the entered information is reflected for the accounts for all of cameras CAM1 to CAM99.
USER NAME	If you press the [MENU] dial, the screen transitions to the keyboard input screen. Set the user name in the keyboard input screen.
PASSWORD	If you press the [MENU] dial, the screen transitions to the keyboard input screen. Set the password in the keyboard input screen.
SAVE	Saves the settings for each selected camera control number. When you select SAVE, an input check is executed. An error message will be displayed for the input check at the point when the first error occurs.
RETYPE PASSWORD	Reenter the password you entered in PASSWORD for confirmation when setting the password.

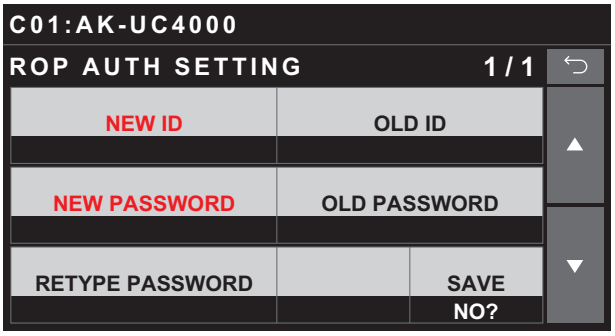
If you press the [MENU] dial, the screen transitions to the keyboard input screen.



ROP AUTH SETTING

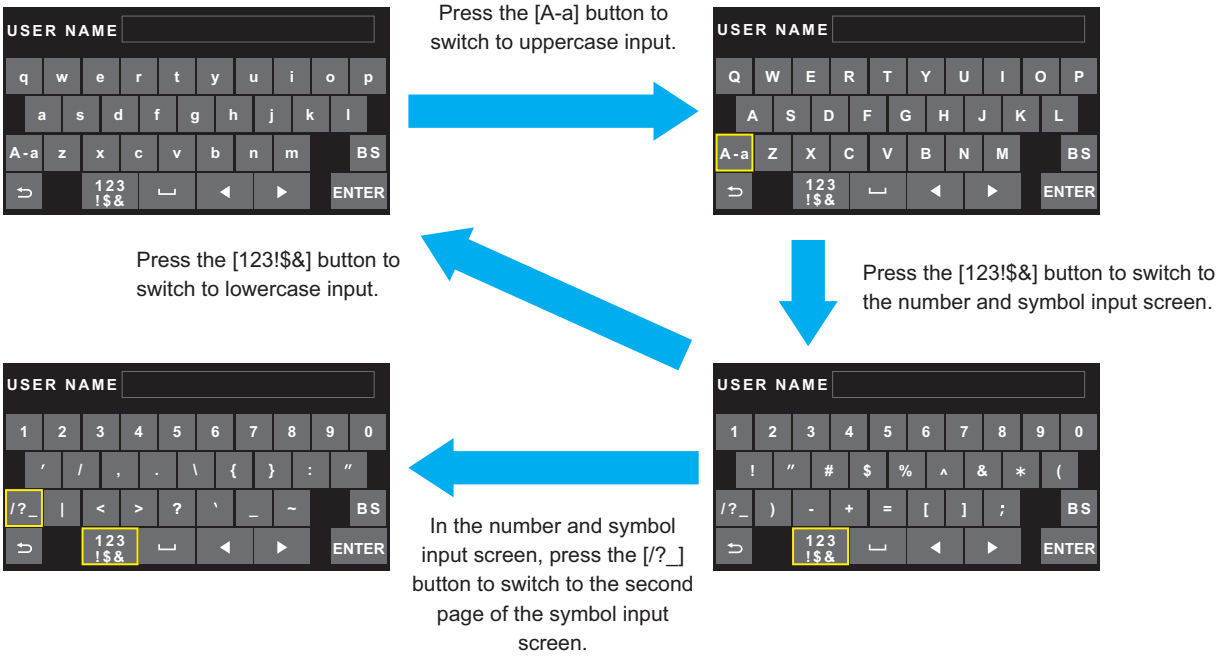
Register the account for access to the ROP. This is not set in the initial state. It will be cleared by ALL of INITIALIZE.

When it is not set, [NEW ID] and [NEW PASSWORD] will be displayed in red.



Item	Setting details
NEW ID	Set 8 single-byte alphanumeric characters or more (maximum 16 characters). When an ID is not registered, the item name is displayed in red. If you execute [MAINTENANCE] > [ROP INITIALIZE] > [ALL], the unit will be initialized and this will be returned to the unregistered state.
OLD ID	When changing a registered ID, enter the currently set ID.
NEW PASSWORD	Set 8 characters or more (maximum 16 characters). The following characters can be used. Set a combination of three types of characters, alphabet letters, numbers, and symbols, for the password. The same character string as the ID cannot be used. ● A to Z, a to z, and 0 to 9 ● ~ ! @ # $ % ^ & * ( ) _ + \ | { } [ ] < > . , / ? ' When a password is not registered, the item name is displayed in red. If you execute [MAINTENANCE] > [ROP INITIALIZE] > [ALL], the unit will be initialized and this will be returned to the unregistered state.
OLD PASSWORD	When changing a registered password, enter the currently set password.
RETYPE PASSWORD	Reenter the password you entered in NEW PASSWORD for confirmation when setting the new password.
SAVE	When you select SAVE, an input check is executed. An error message will be displayed for the input check at the point when the first error occurs. If there is no problem with the entered ID and password, the settings is saved.

If you press the [MENU] dial, the screen transitions to the keyboard input screen.



Software

IP connection

Setup Software is software to configure the settings for connecting the unit and a studio camera from a personal computer.

It allows you to configure the settings while checking each item in a list.

When configuring settings from a personal computer using ROP Setup Software, please pay attention to the following points.

NOTE

- Do not perform an operation on the unit.
- Do not start up ROP Setup Software on another personal computer on the same network.
- Do not use Easy IP Setup Software at the same time.

IP connection procedure

This section describes how to configure the unit and CCU using the software.

For the system configuration when using IP connections, see the following page.

➡ "System Connection Configuration" (see page 17)

Connection flow

1. **Installing the software**
   Install ROP Setup Software on a personal computer.
   ➡ "Installing the software" (see page 131)
2. **Equipment connections**
   Connect the unit to the CCU via a switching hub (100base-TX) with LAN cables.
   - Be sure to connect the devices via a switching hub because the personal computer for configuring the IP settings needs to be connected. Use a switching hub with PoE support because the unit can be powered by PoE.
     ➡ "IP connection" (see page 18)
3. **Connecting and setting the personal computer**
   Use a LAN cable to connect the computer to a switching hub (100base-TX), and configure the computer's network settings.
   - Configure the network settings of the personal computer so that it is in the same segment as the unit and CCUs.
     ➡ "Connecting and setting the personal computer" (see page 132)
4. **Device IP address configuration**
   Operate the menus of the device to be connected to set the IP address.
   - For details on the menu operation, refer to the operating instructions of the corresponding devices.
     ➡ "Setting the IP addresses of the devices" (see page 132)
5. **Configuring various settings of the ROP**
   Use ROP Setup Software to configure the connection settings.
6. **Start operation**

Installing the software

This section describes how to install ROP Setup Software.

You can obtain the software from the support desk on the following website.

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

1. **Download the zip file for ROP Setup Software from the support desk on the website.**
2. **Double-click the downloaded zip file and extract the software.**
   Be sure to read "Readme.txt" before installing the software.
3. **Double-click "HRP1010Tool.exe" in the "Setup Software" folder to start ROP Setup Software.**

Connecting and setting the personal computer

Establish an IP connection for the personal computer on which ROP Setup Software is installed.

Configure the network settings of the personal computer.

Configure the network settings of the personal computer so that the same segment of the devices being connected is used.

The recommended settings are shown below.

IP address	192.168.0.200 ● Change the IP address if it is already used by another device.
Subnet mask	255.255.255.0
Default gateway	192.168.0.1

Setting the IP addresses of the devices

Configuring the settings using the menus

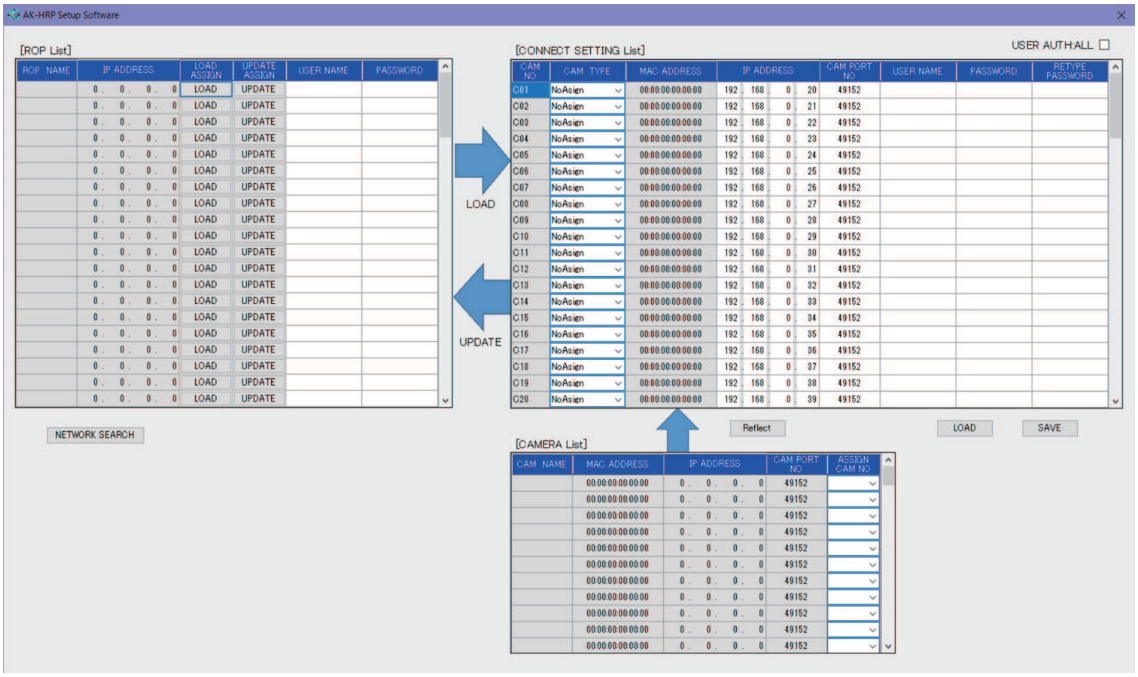
Set the IP address of the unit (ROP) in [ROP IP SETTING] under the ROP menu.

➡ “ROP IP SETTING” (see page 124)

For the IP address of the CCU, refer to the operating instructions for the CCU.

ROP Setup Software

ROP Setup Software is software to configure the settings for connecting the unit and a CCU from a personal computer. It allows you to configure the settings while checking each item in a list.



First, use [NETWORK SEARCH] to search for the ROPs and cameras connected to the same network.

The search results will be displayed in [ROP List] and [CAMERA List].

The model name and IP address of each ROP are displayed in [ROP List].

The model name, MAC address, IP address, and port number of each camera are displayed in [CAMERA List].

ROP List

If you click the [LOAD] button in the corresponding ROP row, the connection setting information for the cameras controlled by the ROP is acquired and displayed in [CONNECT SETTING List].

Connection authentication is required when connecting with an ROP. Enter the information in USER NAME and PASSWORD in advance.

If you click the [UPDATE] button, the information in [CONNECT SETTING List] is reflected on the corresponding ROP.

CONNECT SETTING List

This displays the setting information for connecting with cameras acquired from the ROP.

To newly set a camera to be connected, directly enter the settings in the list. Alternately, specify and set the camera from CAMERA List.

[CAMERA TYPE] column	Click "▼" and select the connection type. The connection types are identical to those of [CONNECT SETTING] in the unit's ROP menu. **"Serial", "NetWork"** Select when connecting with the AK-HC5000 series, AK-UC3300 series, or AK-UC4000 series. **"Serial"** Select when serial connection. **"NetWork"** Select when IP connection.
[MAC ADDRESS] column	Displays the MAC addresses of cameras linked with cameras of the unit. The MAC addresses of devices acquired in [CAMERA List] are displayed.
[IP ADDRESS] column	Set the IP addresses of the CCUs to be connected.
[CAMERA PORT NO] column	Set the port numbers of CCUs to be connected. CCU IP: 49152
[USER NAME] column	Set the user names to be set on the cameras to be connected.
[PASSWORD] and [ReTYPE PASSWORD] column	Set the passwords to be set on the cameras to be connected. When USER NAME and PASSWORD are all to be set to the same settings, add a check to the [USER AUTH: ALL] check box. When a check is added, the setting information set for camera control number 1 is reflected on the ROP when the information is updated.

[SAVE] button	Stores the information set in CONNECT SETTING List on external media. Follow the instructions on the save screen to store the information.
[LOAD] button	Loads saved data and displays it in CONNECT SETTING List. When you click the [LOAD] button, the load screen appears. Follow the instructions on the screen to load saved data.

CAMERA List

Clicking [NETWORK SEARCH] will display the information of the cameras connected to the same network in this list.

The model name, MAC address, IP address, and port number of each camera are displayed in [CAMERA List].

The information reflected for the camera control numbers specified in CONNECT SETTING List as a result of clicking the [Reflect] button will be only that of cameras with a camera control number set in [ASSIGN CAMERA NO].

Notice about using ROP Setup Software

When configuring settings from a personal computer using ROP Setup Software, please pay attention to the following points.

- Do not start up ROP Setup Software while the unit is in the setup mode.
- Do not start up ROP Setup Software on another personal computer on the same network.
- After using the setup software to configure connection settings, we recommend backing up the setting data.
  “ROP SETTING” (see page 118)

Firewall

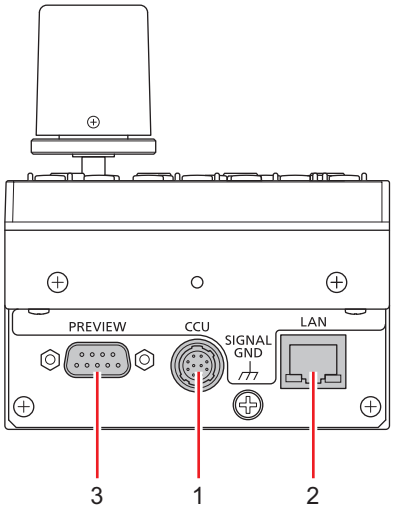
If a firewall (including software) exists, allow access to UDP for all ports.

If a firewall is activated, enable the “Allow a program through Windows Firewall” setting.

1. **Open the control panel, and click [System and Security].**
2. **Click [Allow a program through Windows Firewall] of [Windows Firewall].**
3. **Select the [Internet Explorer] or [HRP_Tool] line, click the [Change settings] button, and add a check to [Internet Explorer] or [HRP_Tool].**
4. **Click [OK].**

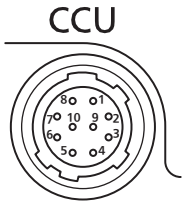
Reference

Connector pin assignment table



1 <CCU> connector

(Hirose Electric: HR10A-10R-10P (71))



Pin No.	Function	Polarity	Flow of signal
1	CAM DATA (H)	+	CAM→ROP
2	CAM DATA (L)	-	CAM→ROP
3	CAM CONT (H)	+	ROP→CAM
4	CAM CONT (L)	-	ROP→CAM
5	NC		
6	NC		
7	NC		
8	NC		
9	12 V		
10	GND		

2 <LAN> connector

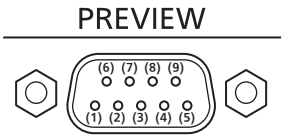
Complies with 100base-TX.

Allowing connection to a network device that supports the PoE standard (IEEE802.3af compliant).

3 <PREVIEW> connector

(JST: JEY-9S-1A3F(LF))

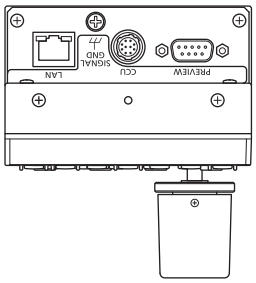
Pins 1 and 2 are connectors for outputting the preview signal. Contact output is provided while the [IRIS] lever or [PREVIEW] button is pressed. This is a dry contact.

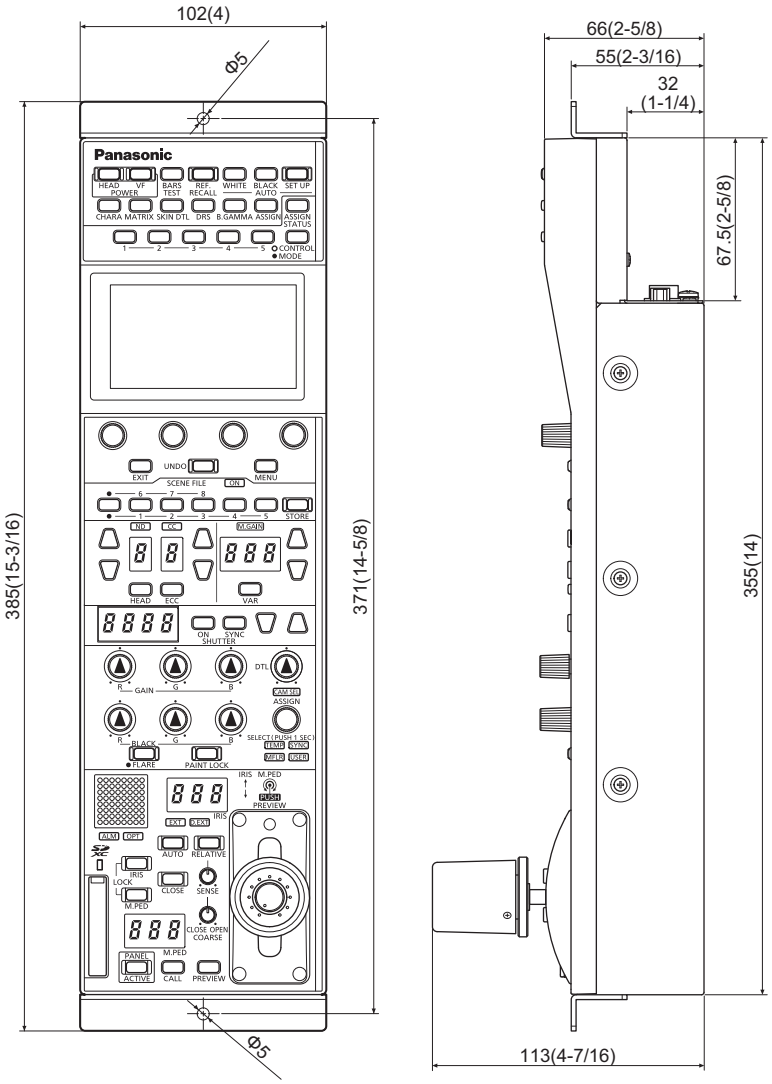


Pin No.	Function	Flow of signal	Remarks
1	P.VIEW COM	ROP→external control	Dry contact
2	P.VIEW1	ROP→external control	Dry contact
3	NC		
4	NC		
5	NC		
6	NC		
7	NC		
8	TALLY IN	TALLY→ROP	Dry contact
9	GND	TALLY→ROP	Dry contact

Appearance

Unit: mm (inch)





Specifications

General

Power supply	12 V DC (⎓) (Power supply from camera/CCU: 10 V - 16 V DC) 42 V - 57 V DC (⎓) (PoE power supply)
Current consumption	0.9 A (Power supply from camera/CCU: 10 V - 16 V DC) 0.3 A (PoE power supply)

▭ indicates safety information.

Camera/CCU control	Control signals (camera, CCU control) Power supply 16 V DC (when CCU connected) *1, 12 V DC (when camera connected) *1
Maximum cable length	When camera connected: 20 m (65.7 ft) When CCU connected: 50 m (164 ft)
Operating temperature	0 °C to 40 °C (32 °F to 104 °F)
Storage temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Humidity	90% or less
Dimensions (Width×Height×Depth):	102 mm × 385 mm × 113 mm (4 inches × 15-3/16 inches × 4-7/16 inches)
Weight	Approx. 1.7 kg (3.75 lb)

*1: Can be provided from CCU

Monitor

LCD monitor	LCD color monitor, touch panel support

Input/output section

<CCU> connector	10-pin, male x 1
<PREVIEW> connector	9-pin, female x 1
<LAN> connector	RJ-45 x1

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