

HXC-100 HXC-100 RCP-750 RCP-920

Operating Instructions

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

HXC-100

Power HAD FX



WARNING

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

For the customers in the U.S.A.

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.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

All interface cables used to connect peripherals must be shielded in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

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.

For the customers in Canada

This Class A digital apparatus complies with Canadian ICES-003.

For the customers in Europe

This product with the CE marking complies with both the EMC Directive and the Low Voltage Directive issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European standards:

- EN60950-1: Product Safety
- EN55103-1: Electromagnetic Interference (Emission)
- EN55103-2: Electromagnetic Susceptibility (Immunity)

This product is intended for use in the following Electromagnetic Environments:

E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors), E4 (controlled EMC environment, ex. TV studio).

The manufacturer of this product is Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.

The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

For the State of California, USA only

Perchlorate Material - special handling may apply, See

www.dtsc.ca.gov/hazardouswaste/perchlorate

Perchlorate Material : Lithium battery contains perchlorate.

For the customers in Taiwan only



廢電池請回收

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Overview

The HXC-100 is a 2/3-type high-definition portable video camera equipped with CCD units for 2,200,000 pixels, which can be used as a standalone camera as well as in a studio in combination with the HXCU-100 or HSCU-300¹⁾ Camera Control Unit.

The camera incorporates the latest image capturing device and digital signal-processing LSI, and it performs newly developed digital transmission with the camera control unit (CCU), thus yielding high picture quality and high stability in image creation in addition to superior camera functions and operability.

1) An HXC-100 and HSCU-300 can be connected if both units are of version 1.10 or later.

Features

High picture quality and high performance

The latest 2/3-type Progressive IT CCD units for 2,200,000 pixel achieve high sensitivity and low smear. In addition, the 14-bit A/D converter and an original developed signal-processing LSI provide high picture quality of optimal grade.

Multiple formats

The camera covers 1080/59.94i, 720/59.94P, 1080/50i, and 720/50P.

With its wide-range down-converter, the camera also enables output of high-quality SD signals (525i/625i) from the camera and the connected CCU, establishing an optimum camera system for SD-system operations.

Newly designed integrated unit with low center of gravity

The camera has stylish appearance with low-slung design. Even when used in combination with a studio-use viewfinder, stable operation is achieved, thanks to its low center of gravity.

Optimized handle shape and VF slide mechanism for stable shooting

A new handle design has been adopted. A slight protrusion of the upper front part of the handle enables stable holding of the camera while you are shooting, by holding the front part of the handle. Furthermore, a slide mechanism is located at the viewfinder attachment position. Any difference in weight balance caused by having a different lens attached can be counteracted by adjusting the viewfinder attachment position, in combination with the movable shoulder pad position. This provides the best balance for shooting with the camera on your shoulder.

Position-adjustable shoulder pad

The position of the shoulder pad can be adjusted for stable shooting according to the build of the camera operator, the type of lens in use, or the shooting style.

A low-repulsion shoulder pad (position fixed) is available as an

option. (Part No.: A-8286-346-A)

Function-assignable switches

The camera has buttons to which various functions can be assigned on the side panel and the rear. You can activate your desired function, such as electronic color-temperature conversion, instantly when shooting by assigning it to one of these buttons in advance.

Buttons on the handle are also available as function assignable switches.

Auto Lens Aberration Compensation function

The Auto Lens Aberration Compensation function (ALAC) is provided with this camera. This automatically reduces chromatic aberration of magnification when a lens that supports auto aberration compensation is attached.

For details on lenses supporting auto aberration compensation, contact a Sony sales representative or Sony service representative.

Focus assist functions

The VF detail function and focus assist indicator function facilitate focusing.

VF detail

Various functions are provided for the VF detail signal, which can be added only on images on the viewfinder screen in order to facilitate focusing in various situations: Functions for coloring the VF detail signal, flickering the VF detail signal by adding modulation, thickening the VF detail signal, and automatically compensating the VF detail level according to the zoom position.

Focus Assist Indicator

The focusing level indicator on the viewfinder screen provides a guide for focusing. The best focus setting can be easily determined by observing fluctuation of the level indicator as a guide.

“Memory Stick”¹⁾ operation

The camera is equipped with a “Memory Stick” port, which enables setup data storage and software upgrading using a “Memory Stick.”

1) “Memory Stick” and  MEMORY STICK[™] are trademarks of Sony Corporation.

Various color-reproduction functions

Selection of multiple gamma tables

Seven types of standard and 4 types of hyper gamma tables are provided with this camera. The hyper gamma values enable cinematic image creations with wide dynamic range, which are different from those achieved with conventional video gamma.

Multimatrix color correction

In addition to the standard 6-axis matrix function, the camera has a multimatrix function that permits you to adjust the hue and chroma for color components in 16-axis directions independently. This is quite useful in color matching among multiple cameras.

Knee saturation

Change of hue and decrease in chroma that occur in highlighted areas can be compensated. This enables reproduction of natural skin tones under strong lighting.

Low key saturation

Hue and chroma in low-key zones can be compensated. Thus, compensation for color reproduction in all zones is enabled in combination with matrix color compensation and knee saturation functions.

Versatile detail control functions

Skin-tone detail function

This function allows control (emphasis or suppression) of the detail level for just a certain hue or chroma area in the image, by creating a detail gate signal from color components of your specified hue, such as skin tones.

Detail boost-frequency control

The boost frequency can be adjusted from 20 to 30 MHz. This allows the detail thickness to be set appropriately for the subject, thus enabling more subtle image expression.

H/V ratio control

The ratio between horizontal and vertical detail can be adjusted.

White/black limiter

The white and black details can be limited independently.

Easy menu-based setting

Selections and settings for viewfinder display items, safety-zone marker¹⁾ or center marker,²⁾ screen size marker, etc. can be made quickly and easily, using setup menus displayed on the viewfinder screen or an external monitor.

- 1) Safety zone marker: A box-shaped marker displayed on the viewfinder screen which indicates 80%, 90%, 92.5%, or 95% of the total screen area
- 2) Center marker: A cross-shaped marker which indicates the center of the viewfinder screen

Wide variety of viewfinder display options

Along with items such as operation messages, a zebra pattern,¹⁾ a safety-zone marker, and a center marker, camera settings may also be displayed on the viewfinder screen. Furthermore, there are various cautionary and warning indications to be occasionally displayed, making it simple to check the status of the camera.

- 1) Zebra pattern: A stripe pattern displayed on the viewfinder screen which indicates the portions where the video level is above about 70% or 100%. Used to check the video level of the subject.

Digital triax transmission

The camera uses an industry standard dual-shield coaxial (triax) camera cable for connection between the camera and a CCU. Newly developed original digital transmission technology is built into the camera, and high-quality pictures can be transmitted between the camera and CCU, regardless of the cable length.

Versatile choices of viewfinders

Multiformat monochrome CRT viewfinders, HDVF-200 (2-type) and HDVF-550 (5-type) can be selected for use in studio and portable systems.

Color LCD viewfinders, HDVF-C35W (3.5-type), HDVF-C550W (5-type), and HDVF-C730W (6.5-type), are also selectable to cover various applications.

Prevention of electrical shock

When the power connection is unsafe, the power supply from the connected Camera Control Unit will be shut off.

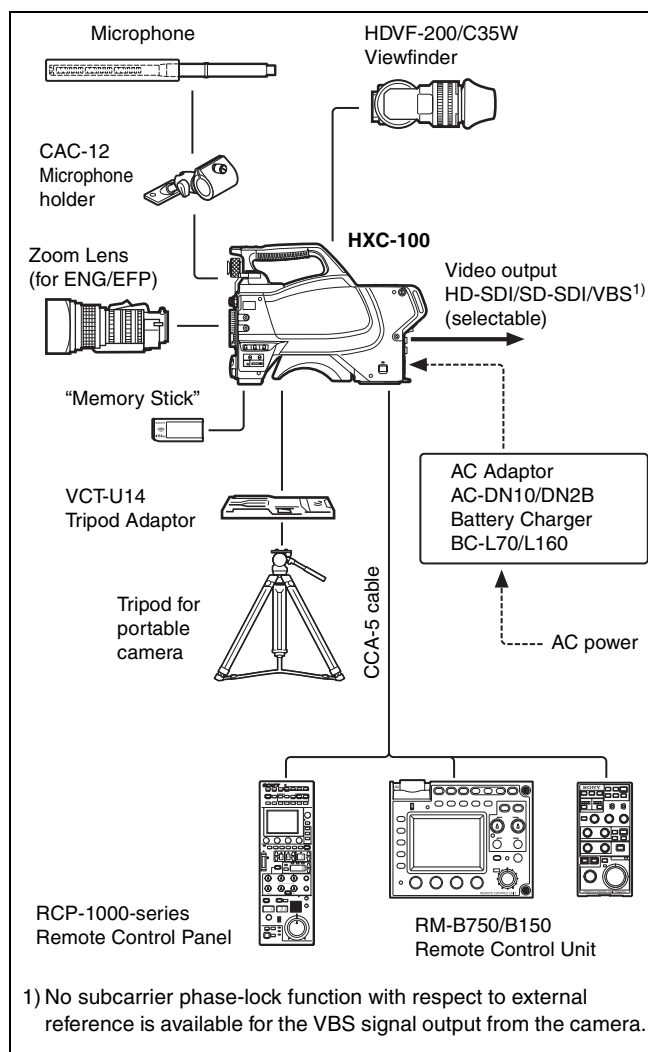
System Configuration

Peripherals and related devices for the camera are shown in figures.

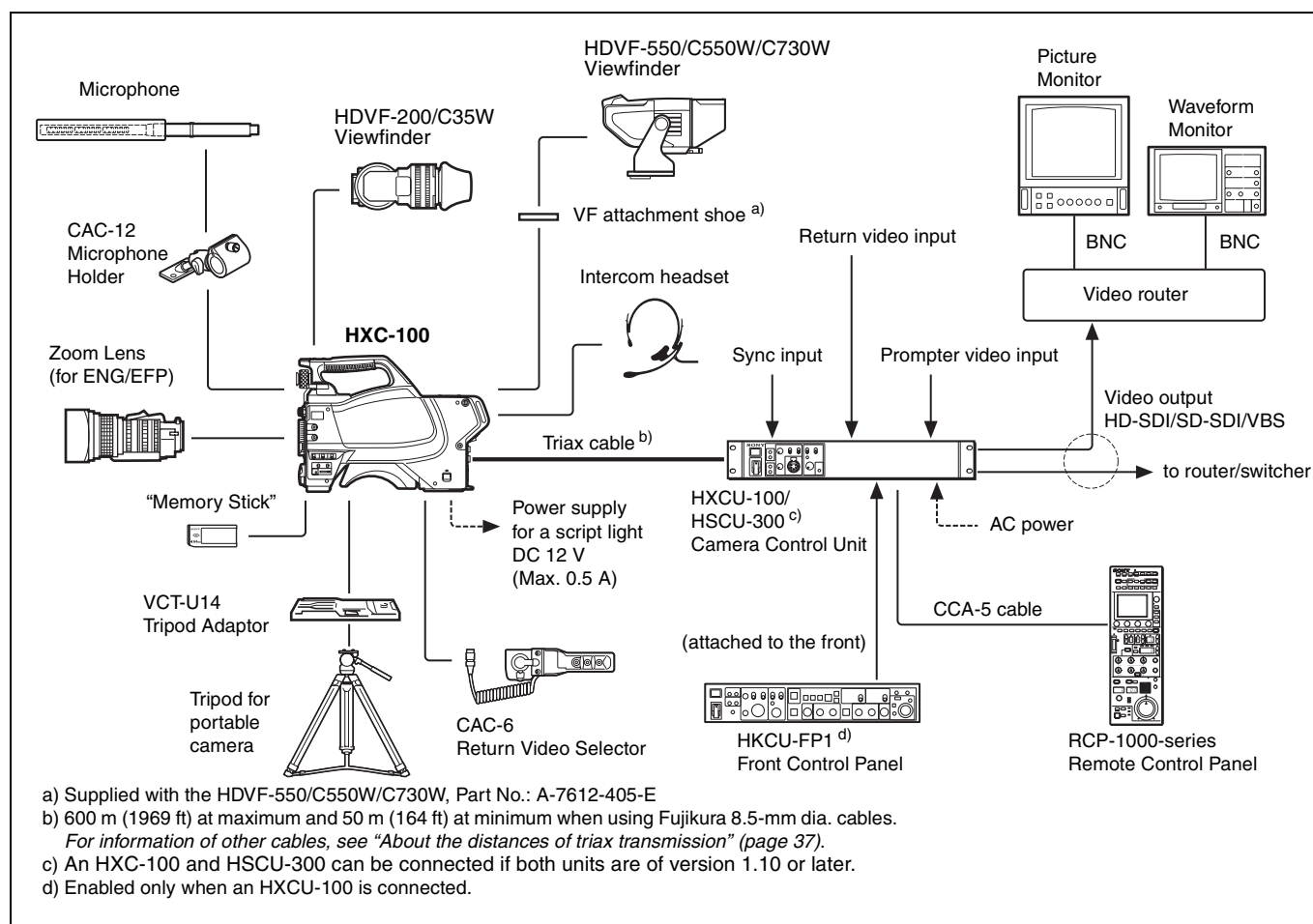
Note

Production of some of the peripherals and related devices shown in the figures has been discontinued. For advice on choosing devices, please contact your Sony dealer or a Sony sales representative.

Standalone operation example

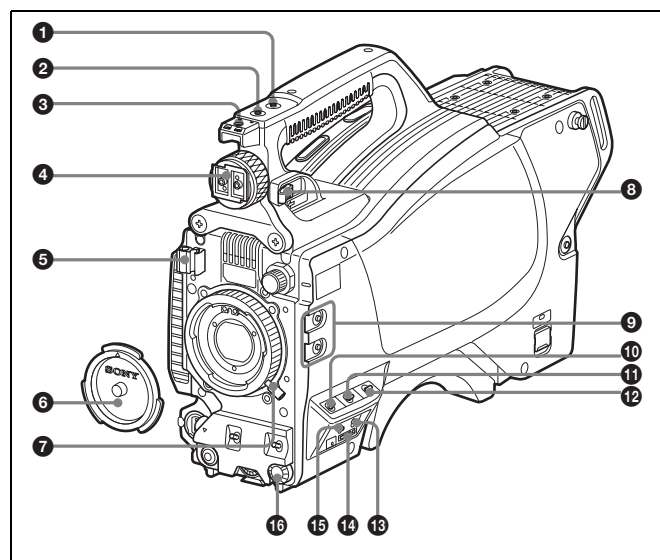


System operation example (with a Camera Control Unit)



Parts Identification

Front right



1 INCOM (intercom) button (UC model)/ENG (engineer line) button (CE model)

UC model: The intercom microphone is on while this button is held pressed.

CE model: The intercom microphone is on and the engineer line is selected while this button is held pressed.

You can also assign other functions with a menu operation.

2 RET 1 (return video 1) button

The return video 1 signal from the CCU is monitored on the viewfinder screen while this button is held pressed. It functions the same as the RET 1 button on the operation panel (page 8) on the rear of the camera.

You can also assign other functions with a menu operation.

3 Accessory shoe

To attach an accessory using a 1/4-inch screw.

Note

When you wish to replace it with a slide-type shoe, consult Sony service personnel.

4 Viewfinder shoe

Mount a viewfinder.

For details, see "Attaching a Viewfinder" (page 11).

5 Lens cable clamp

To secure the cable of the lens (optional).

⑥ Lens mount cap

The cap can be removed by moving the lens fixing lever upward. Always keep the lens mount covered with this cap when a lens is not attached.

⑦ Lens fixing lever

Move the lever down to secure the lens in the lens mount.
For details, see “Attaching a Lens” (page 11).

⑧ Viewfinder front-rear position lock lever

The viewfinder position can be adjusted forward or backward when the lock is released by the lever.

For details on the adjustment, see “To adjust the viewfinder’s front-rear position” (page 11).

⑨ Assignable buttons

You can assign a function to the upper button by using ASSIGNABLE 1 and the lower button with ASSIGNABLE 2 on the <SWITCH ASSIGN1> page of the OPERATION menu.

⑩ GAIN switch

To select the gain of the video amplifier based on lighting conditions when the camera is used in standalone status without connecting a CCU.

When shipped from the factory, the values set are L = 0 dB, M = 6 dB, and H = 12 dB.

⑪ AUTO KNEE and output signal selection switch

To select the signal (color-bar signal or camera’s video signal) to be used as output to a VTR, the viewfinder, or a video monitor when the camera is used in standalone status without connecting a CCU.

When the camera’s video signal is being used as output, the auto knee function can be selected.

BARS/OFF: Output is a color-bar signal.

CAM/OFF: Output is the camera’s video signal. The auto knee circuit is disabled.

CAM/ON: Output is the camera’s video signal. The auto knee circuit is enabled.

⑫ WHITE BAL (white balance memory selection) switch

To select the white balance adjustment method or the memory used to store the adjusted value when the camera is used in standalone status without connecting a CCU.

PRST (preset): White balance is adjusted to a preset value corresponding to a color temperature of 3200K.

A: To select memory A.

B: To select memory B.

Note

When a CCU or an external control device, such as an RCP/RM, is connected, the functions of ⑩ to ⑫ are controlled from the external device or the HKCU-FP1 attached to the CCU, and the controls on the camera are disabled.

⑬ DISPLAY/MENU switch

Select the display on the viewfinder screen.

DISPLAY: To display various textual information and markers, such as messages showing the camera settings and operating status, the center marker, and the safety zone marker, in addition to camera images.

OFF: To not display textual information and markers.

MENU: To display menus for camera settings, in addition to camera images.

The switch functions the same as the DISPLAY/MENU switch on the rear operation panel.

⑭ “Memory Stick” slot and access lamp

When you insert a “Memory Stick” into the slot, the access lamp lights in green.

The lamp is lit in red while writing/reading data to/from the “Memory Stick.”

Note

When the access lamp is lit in red, do not insert/remove the “Memory Stick” or turn off the camera.

⑮ STATUS/CANCEL switch

STATUS: To display status information of this camera in the viewfinder when no menu is displayed with the DISPLAY/MENU switch set to DISPLAY.

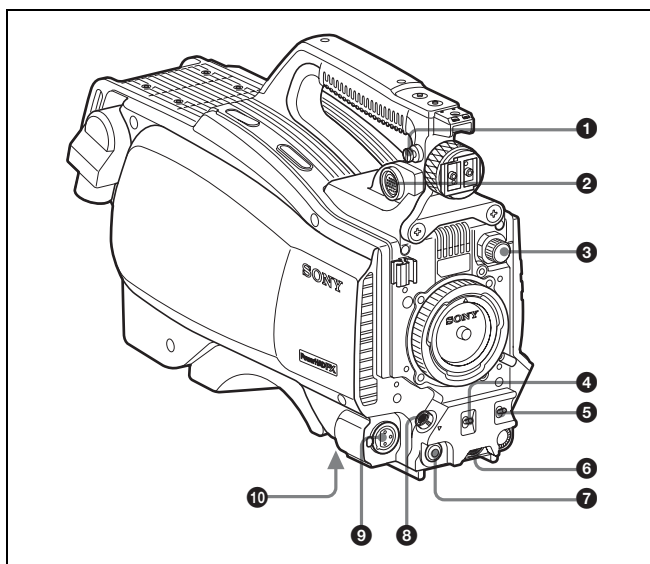
CANCEL: To cancel changed settings or return the display to the previous menu when a menu is displayed in the viewfinder.

⑯ Menu control knob (rotary encoder)

Used to select settings from menus displayed on the viewfinder screen (by rotating it) and to confirm settings (by pushing it).

This knob functions the same as that on the rear operation panel.

Front left



① Shoulder strap fitting post

Attach one end of a shoulder strap (optional, part No. A-6772-374-C) to this fitting post and the other end to the fitting post on the other side of the camera.

② VF (viewfinder) connector (20-pin)

Connect the cable of the viewfinder (optional).

③ Filter select knob

Used to select the built-in ND filters (1: clear, 2: 1/4 ND, 3: 1/16 ND, 4: 1/64 ND).

④ SHUTTER switch

When the camera is used in standalone status without connecting a CCU, use this switch to turn ON or OFF the electronic shutter and change (SEL) the shutter speed and shutter mode.

For details, see “Setting the Electronic Shutter” (page 15).

5 AUTO W/B BAL (white and black balance automatic adjustment) switch

To automatically adjust white and black balance when the camera is used in stand-alone status without connecting to a CCU.

WHT: To automatically adjust white balance.

BLK: To automatically adjust black balance.

For details, see “Adjusting the Black Balance and White Balance” (page 14).

6 INTERCOM LEVEL control

To adjust the intercom/earphone volume level.

The intercom level adjustment is enabled when the LEVEL/MIC switch on the UC-type operation panel (page 9) or the LEVEL switch on the CE-type operation panel (page 9) on the rear is set to “FRONT.”

7 RET (return video) button

When this button is pressed, the picture on the viewfinder changes to the return video signal selected with the RET 2/3/4 select switch (page 9) on the operation panel on the rear of the camera.

You can also assign other functions with a menu operation.

8 LENS connector (12-pin)

Connect the lens cable. The camera can control the lens functions through this cable.

9 MIC 1 IN (microphone 1 input) connector (XLR 3-pin)

Connect a microphone.

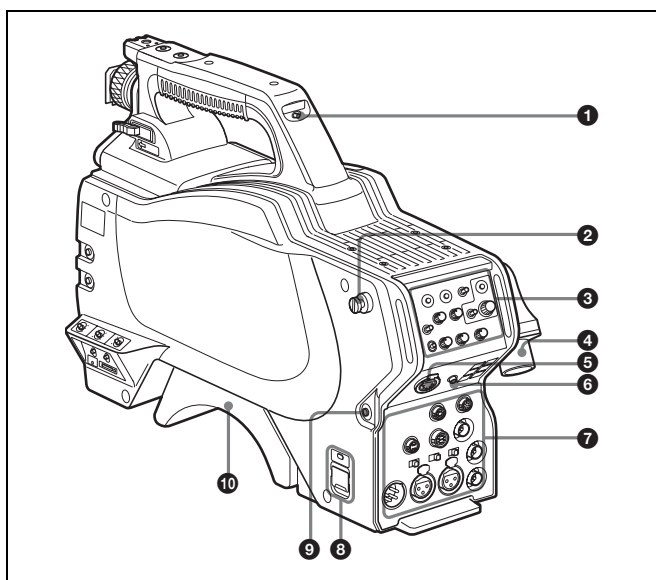
This connector and the AUDIO IN CH1 connector are alternately activated with the MIC 1 select switch on the rear connector panel.

10 Tripod mount (bottom)

Attach the VCT-U14 Tripod Adaptor when mounting the camera on a tripod.

For details, see “Mounting the Camera to a Tripod” (page 13).

Rear



1 Tally lamp and switch

ON: The tally lamp lights when a tally signal is input to the connected CCU or a call signal is generated in response to pressing of a CALL button.

OFF: The tally lamp is prevented from lighting.

2 Shoulder strap fitting post

3 Operation panel (See “Operation panel”).

4 Camera Control Unit (CCU) connector (triax connector)

Connect an HXCU-100 or HSCU-300 Camera Control Unit using a triax cable.

5 INTERCOM connector (XLR 5-pin)

Connect an XLR 5-pin headset for input and output of intercom audio signals.

The connector can be used for communication over the engineer line when the camera is in standby status.

6 EARPHONE jack (stereo minijack)

For connecting an earphone for output of the intercom audio.

7 Connector panel (See “Connector panel” on page 9.)

8 CAMERA POWER switch and indicator

CCU: To operate on power supply via the connected CCU.

EXT: To operate on power supply through the DC IN connector.

The indicator is lit in green during operation. It is lit in red while standby power is being supplied from the CCU, even if the switch is set to OFF.

Note

When a CCU is connected, external power supply (EXT) cannot be used.

9 CALL button

When you press this button, the red tally lamp of the connected external control device (RCP/RM, HKCU-FP1, etc.) will light. Use to call the operator of the external control device.

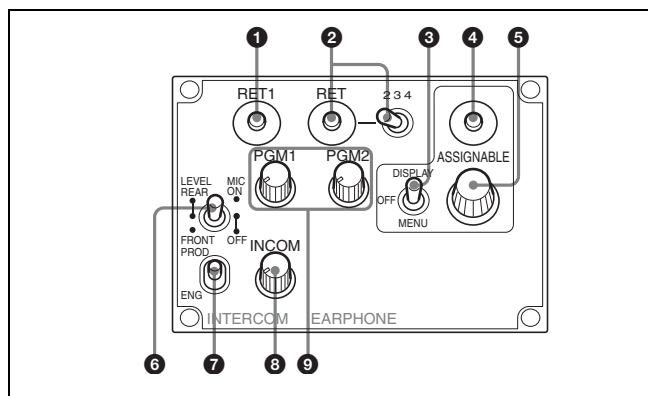
10 Shoulder pad

You can adjust the position on your shoulder.

For details, see “Adjusting the Shoulder Pad Position” (page 14).

Operation panel

UC type: Model for NTSC areas



❶ RET 1 (return video 1) button

The return video signal is displayed on the viewfinder screen while the button is held pressed.

❷ RET (return video) button and 2/3/4 (return video 2/3/4) select switch

When other return video systems are used in addition to return video 1, the signal selected with the 2/3/4 switch is displayed on the viewfinder screen while holding the RET button pressed.

Note

The RET 1 button has priority over the RET (2/3/4) button if both buttons are pressed.

❸ DISPLAY/MENU switch

This switch functions the same as the DISPLAY/MENU switch on the front (page 7).

❹ ASSIGNABLE button

You can assign a function with ASSIGNABLE REAR on the <SWITCH ASSIGN1> page of the OPERATION menu.

❺ Menu control knob (rotary encoder)

This knob functions the same as the menu control knob on the front (page 7).

❻ LEVEL/MIC (intercom level control/microphone) switch

To determine whether to use the INTERCOM LEVEL control (page 8) on the front and to turn the intercom headset microphone ON/OFF.

Switch position	INTERCOM LEVEL control on the front	Headset microphone
REAR/ON	Inactive	ON
REAR/OFF		OFF
FRONT/OFF	Active	

❼ Line select switch

To select the intercom line:

PROD: Producer line

ENG: Engineer line

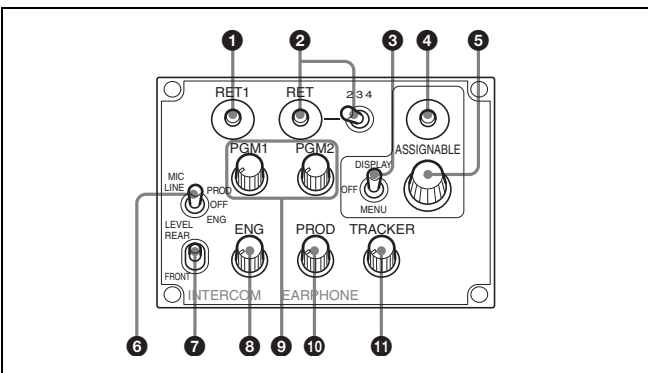
❽ INCOM (intercom) level control

To adjust the intercom audio listening level.

❾ PGM1 (program 1) and PGM2 (program 2) controls

To adjust the audio listening level of program 1 or program 2, respectively.

CE type: Models for PAL areas



❶ to ❺ are the same as those of the UC type.

❻ MIC LINE (intercom microphone line) switch

To select the talk line for intercom:

PROD: To talk over the producer line

OFF: To turn off the headset microphone for the intercom line

ENG: To talk over the engineer line

❼ LEVEL switch

REAR: The intercom audio listening level is adjusted with the ENG or PROD control on this panel.

FRONT: The levels adjusted on the rear panel can be totally adjusted with the INTERCOM LEVEL control on the front.

❽ ENG (engineer line) control

To adjust the intercom audio listening level of the engineer line.

❾ PGM1 (program 1) and PGM2 (program 2) controls

To adjust the audio listening level of program 1 or program 2, respectively.

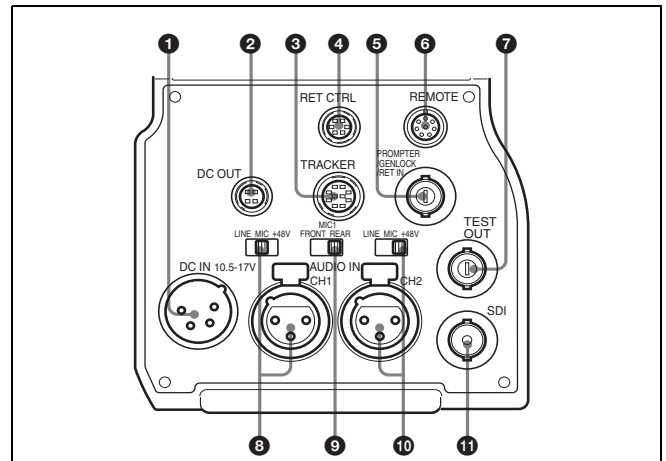
❿ PROD (producer line) control

To adjust the intercom audio listening level of the producer line.

⓫ TRACKER control

To adjust the intercom audio listening level at the TRACKER connector on the connector panel.

Connector panel



❶ DC IN (DC power supply input) connector (XLR 4-pin)

For connection to an AC-DN10 AC Adaptor, etc. to supply power to the camera. (When a CCU is connected, this connector cannot be used.)

❷ DC OUT (DC power supply output) connector (4-pin)

To supply power to a script light or equivalent (12 V DC, max. 0.5 A).

❸ TRACKER connector (10-pin)

For external interfaces, such as intercom and tally.

❹ RET CTRL (return control) connector (6-pin)

For connection to a CAC-6 Return Video Selector.

❺ PROMPTER/GENLOCK/RET IN (prompter signal output/external sync signal input/VBS return input) connector (BNC type)

- When a CCU is connected, this connector outputs a VBS prompter signal.

- When the camera is used in standalone status without connecting a CCU, use this connector for input of an external sync signal (BB or 3-level sync). If a VBS signal is input, you can check the input image by pressing the RET button.

Notes

- Even when a BB signal is used for the external sync signal, no subcarrier phase-lock function is available for the VBS output signal.
- As PROMPTER is set to PWR SAVE at the factory, a prompter signal is not output. Set it to ACTIVE on the POWER SAVE page of the MAINTENANCE menu.

⑥ REMOTE connector (8-pin)

For connection to an RM-B150/B750 Remote Control Unit or RCP-1000-series Remote Control Panel.

Note

When a CCU is used in combination, this connector functions as the trunk signal input/output. Do not connect any remote control device to this connector.

⑦ TEST OUT connector (BNC type)

To output an analog signal.

This supplies a VBS signal, an HD-Y signal equal to the signal output from the VF connector, an HD-SYNC signal, or an SD-SYNC signal, depending on which of these you have selected on the menu.

Note

The VBS output signal has no subcarrier phase-lock function with respect to external sync signals.

⑧ AUDIO IN CH1 connector (XLR 3-pin) and input select switch

Connect a channel 1 audio signal and set the switch according to the connected source device.

LINE: When a line-level (0 dBu) signal source is connected

MIC: When an external microphone is connected

+48V: To supply power of +48 V to the connected external microphone

⑨ MIC 1 (microphone 1) select switch

Select the microphone for channel 1.

FRONT: To use the microphone connected to the MIC 1 IN connector

REAR: To use the microphone connected to the AUDIO IN CH1 connector

⑩ AUDIO IN CH2 connector (XLR 3-pin) and input select switch

Connect a channel-2 audio signal and set the switch according to the connected source device in the same manner as with channel 1.

⑪ SDI (serial digital interface) connector (BNC type)

For HD-SDI or SD-SDI signal output.

You can select from among camera line signal, return signal, and VF signal for the output with a menu operation.

Installation

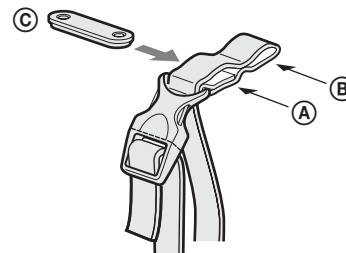
Connecting a Camera Control Unit (CCU)

When operating the camera in a system with a CCU, connect between the CCU connector of the camera and the CAMERA connector of the CCU, using a triax cable.

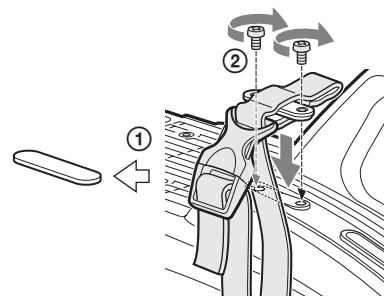
When required, secure the cable, using the supplied cable clamp belt.

To use the cable clamp belt

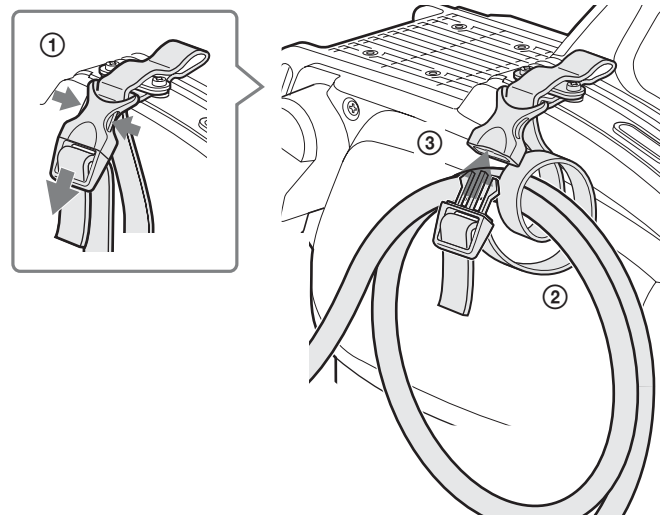
- 1 Insert the belt bracket ③ into hole ① or ② of the cable clamp belt.



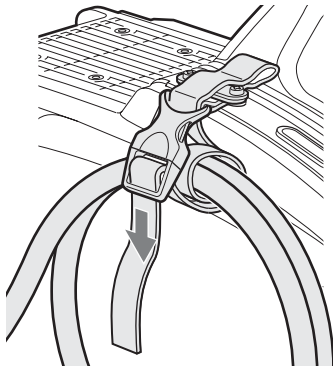
- 2 ① Remove the back screw-hole cover on the top of the camera and ② secure the cable clamp belt to the camera, using the two supplied screws (+B3×10).



- 3 ① Release the buckle, ② bundle the cable with the belt, ③ then lock the buckle again.

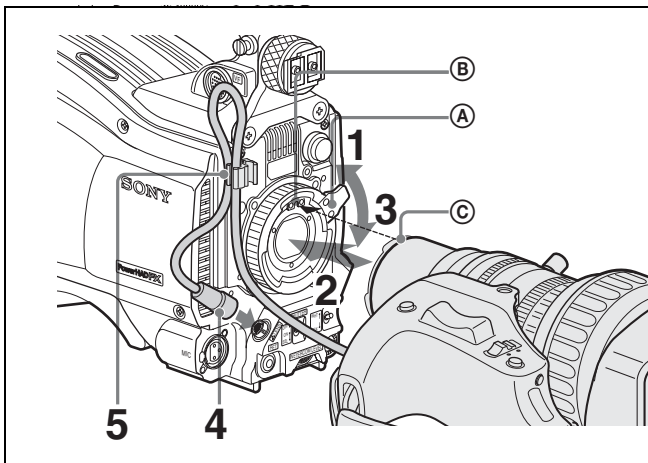


- 4** Adjust the length by pulling down the end of the belt.



Attaching a Lens

For information on handling lenses, refer to the operation manual for the particular lens



- 1** Push the lens fixing lever **A** upward and remove the lens mount cap from the lens mount.
- 2** Align the lens' alignment pin **C** with the notch **B** in the upper part of the lens mount and insert the lens into the mount.
- 3** While supporting the lens, push the lens fixing lever **A** downward to secure the lens.
- 4** Connect the lens cable to the LENS connector.
- 5** Secure the lens cable with the cable clamp.

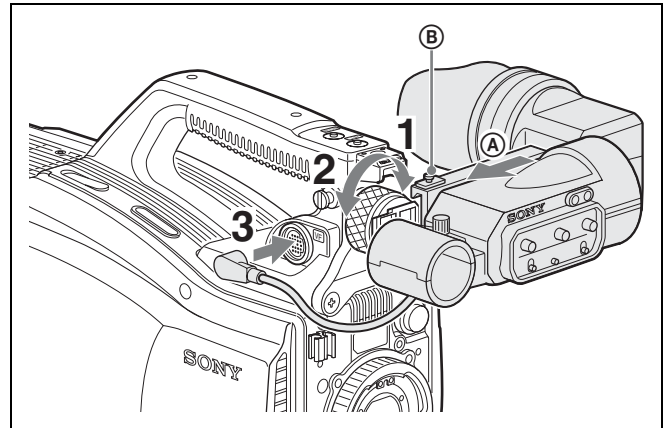
Attaching a Viewfinder

Caution

When the viewfinder is attached, do not leave the camera with the eyepiece facing the sun. Direct sunlight can enter through the eyepiece, be focused in the viewfinder and cause fire.

Example: Attaching an HDVF-200 Viewfinder

For details on the viewfinder, refer to the operation manual for the viewfinder.

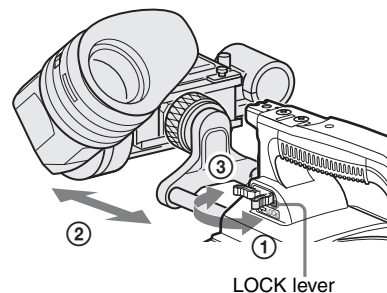


- 1** Loosen the viewfinder left-right positioning ring and slide the viewfinder in the direction of arrow **A**. The viewfinder stopper **B** automatically pops down.
- 2** Tighten the viewfinder left-right positioning ring to secure the viewfinder at the most convenient position.
- 3** Connect the viewfinder cable to the VF connector.

To adjust the viewfinder's front-rear position

The viewfinder can slide in the range of 53 mm (2 1/8 inches). Adjust the front-rear position so that you can easily operate it on your shoulder.

① Pulling the LOCK lever backward permits you to slide the viewfinder backward or forward. ② Adjust the viewfinder front-rear position and ③ lock it by returning the lever forward to the original position.



To detach the viewfinder

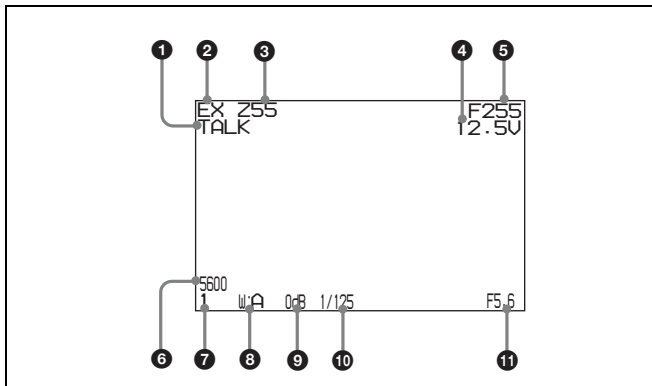
Loosen the viewfinder left-right positioning ring, pull the viewfinder stopper, then pull out the viewfinder by sliding it in the direction opposite to that when attached.

Status displays in the viewfinder

Besides the video image, the viewfinder can display characters and messages showing the camera settings and operation status, as well as items such as a center marker or safety-zone marker.

When the DISPLAY/MENU switch is set to DISPLAY

Items set to ON using the menu or related switches will be displayed.



1 TALK indication

Displayed when the intercom microphone is set to ON.

2 EX (lens extender) indication

Displayed when a lens extender is in use.

3 Zoom position indication

Indicates the approximate position of the zoom lens variator between wide angle (0) and telephoto (99).

4 Battery voltage indication

When the CAMERA POWER switch is set to EXT, the DC IN voltage is displayed.

When the switch is set to CCU, the internal voltage of the camera is displayed.

5 Focus position indication

Shows the focus position of a zoom lens as a numeric value (0 to 255 [infinity]).

6 5600K mode indication

Displayed when the internal electrical filter (5600K) is set to ON.

7 Filter indication

Displays the type of ND filter currently selected with a number (1, 2, 3, or 4).

8 White balance memory indication

Shows the currently selected white balance automatic adjustment memory. This is not displayed when a CCU is connected.

W:A: The WHITE BAL switch is set to A.

W:B: The WHITE BAL switch is set to B.

W:P: The WHITE BAL switch is set to PRST.

9 Gain value indication

Shows the video gain value (dB) set with the GAIN switch.

10 Shutter/ECS indication

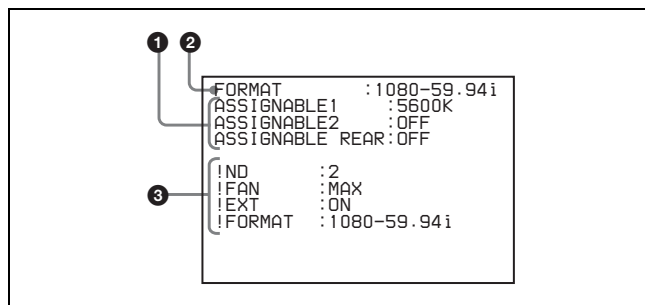
Displays the shutter/ECS status. Nothing is displayed if the electronic shutter is set to OFF.

11 F-value indication

Indicates the lens F (iris opening) value.

When the STATUS/CANCEL switch is set to STATUS

The status display is changed to show the following items:



1 Assignable button indication

The functions assigned to the assignable buttons are indicated.

For the functions that can be assigned, see OPERATION menu <SWITCH ASSIGN1> (page 28).

2 Format indication

The current video format is displayed.

3 '!' indication area

This area is used to display abnormal statuses, using the '!' IND function. Display options can be set, using the menu.

For details, see OPERATION menu <'! IND> (page 26).

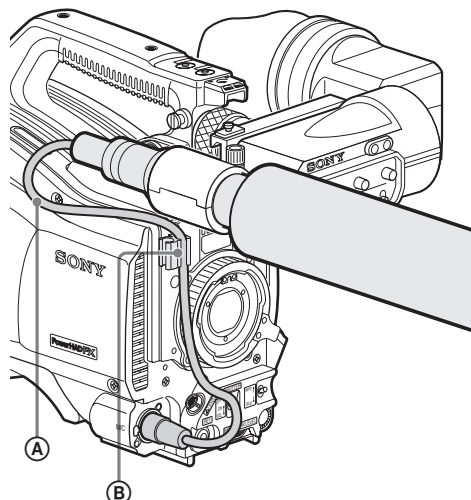
Attaching a Microphone

A microphone can be attached to the camera, using the microphone holder of the viewfinder or an optional CAC-12 Microphone Holder.

For attaching to the microphone holder of the viewfinder, refer to the instruction manual for the viewfinder.

When the microphone is attached to the microphone holder of the viewfinder

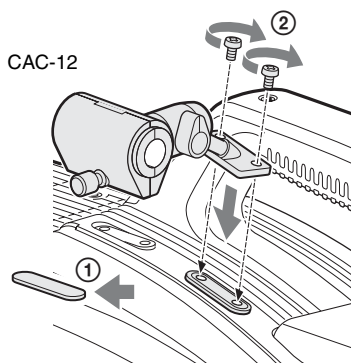
Secure the microphone cable (A) to the cable clamp (B) of the camera.



To attach a microphone, using a CAC-12

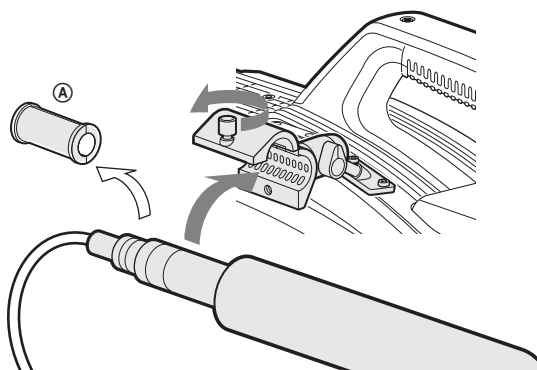
When attaching a long-type microphone, such as an ECM-674/678, use an optional CAC-12 Microphone Holder.

- 1 ① Remove the front screw-hole cover on the top then
② fix the CAC-12 in place with the two screws (+B4×8) supplied with the CAC-12.



- 2 Loosen the screw to open the CAC-12 and attach the microphone.

If the microphone diameter is small, attach the adaptor ① (supplied with the CAC-12 or the microphone) to the microphone.

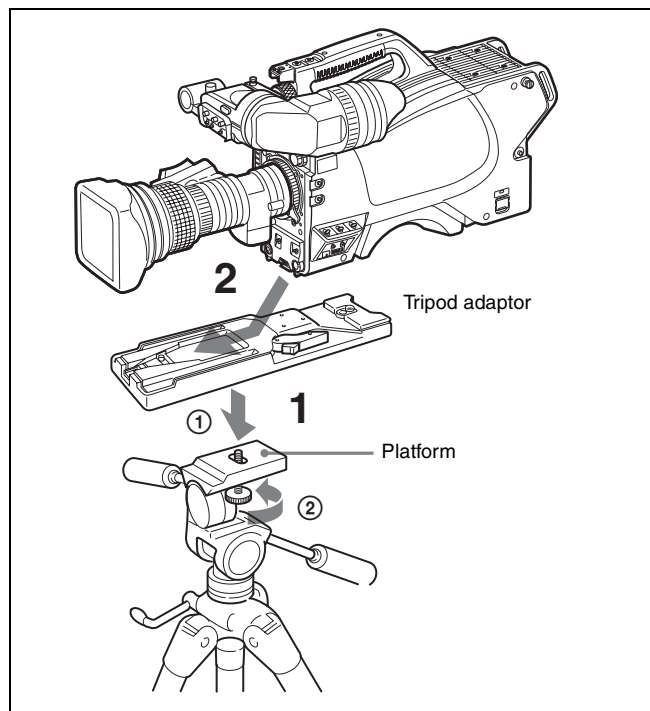


Mounting the Camera to a Tripod

Mount the camera to a tripod, using an optional VCT-U14 Tripod Adaptor.

Caution

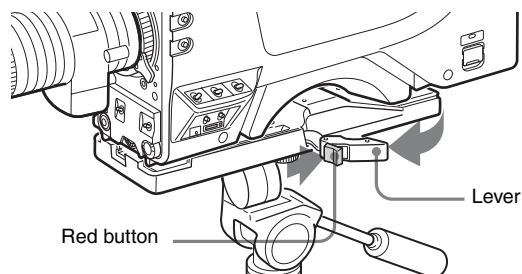
- Select an appropriate hole from among those at the bottom of the tripod adaptor considering the balance of the weight of the camera and the tripod adaptor. If an inappropriate hole is selected, the camera may fall over.
- Check that the size of the selected hole matches that of the screw of the tripod. If they do not match, the tripod adaptor cannot be attached to the tripod securely.



- 1 ① Attach the tripod adaptor to the tripod and ② secure it with the screw.
- 2 Place the camera on the tripod adaptor and slide forward it along the groove of the tripod adaptor until it clicks.

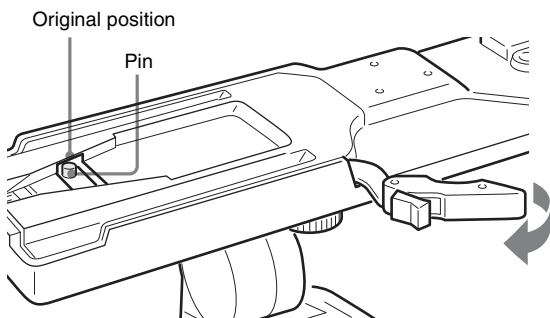
To remove the camera from the tripod adaptor

Hold down the red button and pull the lever in the direction of the arrow.



If the pin of the tripod adaptor does not return to its original position

After removing the camera, if the pin of the tripod adaptor does not return to its original position, hold down the red button and move the lever in the direction of the arrow to return the pin to its original position. It is not possible to mount a camera with the pin not seated.

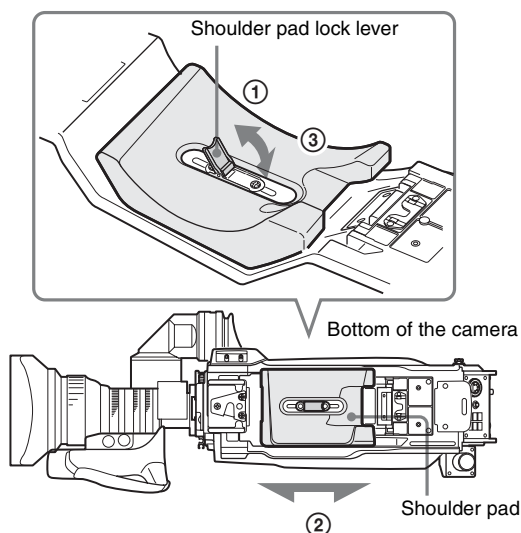


Adjusting the Shoulder Pad Position

You can shift the shoulder pad in the range of 28 mm (1 ¹/₈ inches). This adjustment helps you get the best balance for shooting with the camera on your shoulder.

To adjust

① Raise the lever in the center of the shoulder pad to unlock the shoulder pad, ② slide the shoulder pad backward or forward until it is in the most convenient position, and ③ move the lever down to lock the shoulder pad in the selected position.



Preparatory Settings

Adjusting the Black Balance and White Balance

In order to maintain high picture quality when using the camera, it is necessary to set the black balance and white balance appropriately for the conditions.

Note

When a CCU or an external control device, such as an RCP/RM, is connected, the black balance and white balance are controlled from the external device or the HKCU-FP1 attached to the CCU, and adjustment on the camera is disabled.

Black balance adjustment

The black balance needs adjustment in situations like the following:

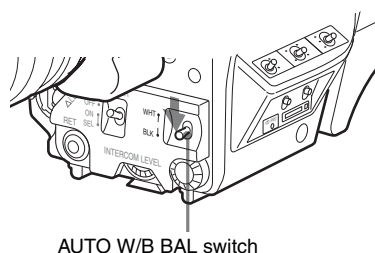
- The first time the camera is used
 - When the camera is used after a long period of disuse
 - When the surrounding temperature changes greatly
 - When the gain value is changed using the setup menus
- Normally, there is no need to adjust the black balance every time the camera is turned on.

White balance adjustment

Always adjust the white balance when lighting conditions change.

To adjust the black balance

Push the AUTO W/B BAL switch to BLK.



Automatic black balance adjustment begins.

In automatic adjustment of black balance, both the black set and black balance are adjusted.

During adjustment, the message "ABB: EXECUTING" will be displayed on the viewfinder screen.

When the adjustment process is completed, the message "ABB: OK" will be displayed.

The adjusted value is automatically stored in memory.

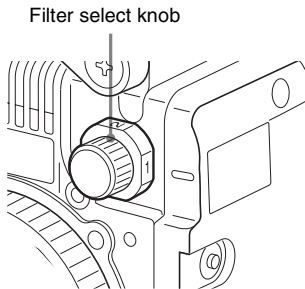
The black balance values stored in memory will be preserved even when the camera power is turned off.

Notes

- During black balance adjustment, the iris will be automatically closed.
- During black balance adjustment, the gain switching circuit will work automatically, and the viewfinder screen will flicker several times. This is not a malfunction.

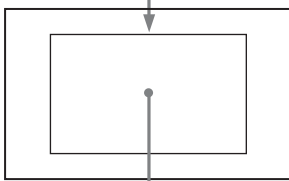
To adjust the white balance

- 1** Select the built-in filter according to the lighting conditions with the filter select knob (1: Clear, 2: 1/4 ND, 3: 1/16 ND, 4: 1/64 ND).



- 2** Place a white pattern, as shown below, with the same lighting conditions as the subject, and zoom in on it. A white object (white cloth, a white wall, etc.) near the subject may be used in place of a white pattern.

A rectangle centered in the screen:
The length of the sides must be at least 70% of the height and width of the screen.

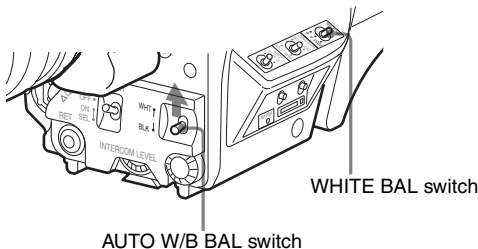


Within this rectangle, there must be an area of white greater than 10% of the entire screen.

Note

Be careful not to have any spots of high illumination in the rectangle.

- 3** Adjust the lens iris opening.
With a manually adjusted lens: Set the opening to an appropriate value.
With a lens which has automatic iris control: Set the lens' automatic/manual iris control switch to automatic.
- 4** Select white balance memory A or B with the WHITE BAL switch and push the AUTO W/B BAL switch toward WHT.



Automatic white balance adjustment begins. During adjustment, the message "AWB: EXECUTING" will be displayed on the viewfinder screen.

After about one second, the message "AWB: OK" will be displayed, and the adjustment process will complete. The adjusted value will be automatically stored in the selected memory (A or B).

Note

When using a zoom lens with automatic iris control capability, hunting¹⁾ may occur. Adjust the lens' iris gain control (labeled IG, IS, S, etc.).

1) Hunting: The automatic iris responds over and over, and the image repeatedly darkens and lightens.

For more information, refer to the operation manual for the lens.

About white balance memory

There are two white balance memories: A and B.

When you execute automatic white balance adjustment, the adjusted white balance value and the setting of the filter select knob will be stored in either memory A or B, selected with the WHITE BAL switch.

The white balance values stored in memory will be preserved even when power is turned off. When power is turned on again, the white balance in memory corresponding to the current WHITE BAL switch setting is retrieved.

If automatic black balance or white balance adjustment fails

If the adjustment process does not end successfully, the error message "ABB: NG" or "AWB: NG" will be displayed on the viewfinder screen for approximately three seconds.

If this error message is displayed, try the adjustment again. If the error message continues to be displayed after several attempts, the camera requires internal inspection.

Setting the Electronic Shutter

This section explains the different modes which can be used for the electronic shutter and gives the procedures for setting the shutter mode and shutter speed.

Note

When a CCU or an external control device, such as an RCP/RM, is connected, the electronic shutter is controlled from the external control device or the HKCU-FP1 mounted on the CCU, and the switch on the camera is disabled.

About the shutter modes

The shutter modes that can be used with the electronic shutter of the camera and the shutter speeds that may be selected are as follows:

Shutter mode	Shutter speed ¹⁾	Usage
Standard	1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 seconds	Use to obtain clear images of quickly moving subjects
ECS (Extended Clear Scan)	Continuously variable in the range of 60.0 Hz to 4300 Hz	Use to obtain images of video monitors without horizontal striping

1) The values in the table are those with 59.94i. With other formats, the available values may be different.

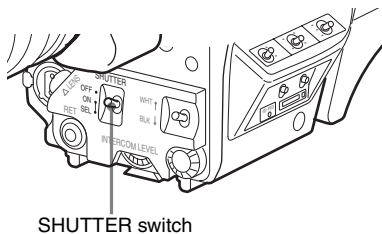
Note

With artificial lighting, particularly fluorescent lights and mercury vapor lamps, the brightness appears to be constant, but in fact the strength of the red, green, and blue components varies with the power supply frequency. This phenomenon is known as “flicker.” When using the electronic shutter under these lighting conditions, there are certain cases in which the flicker is more noticeable. In particular, color flicker is evident when the power frequency is 60 Hz. In areas where the power frequency is 50 Hz, setting the shutter speed to 1/100 second will reduce the flicker.

Selecting the mode and speed of the shutter

The mode and the shutter speed in Standard mode are set using the SHUTTER switch.

- 1 Push the SHUTTER switch from the ON position to the SEL position.

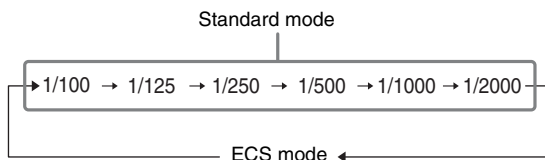


The current shutter setting will be displayed in the viewfinder for about three seconds.

Example: “Shutter: 1/250”

- 2 Push the SHUTTER switch to the SEL position again before the display disappears. Repeat this action until the desired mode or speed is displayed.

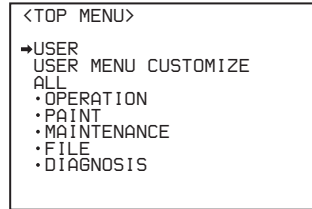
Example: with 59.94i



Setting the Local Time

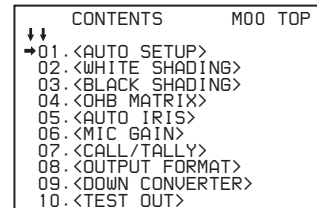
When using the camera for the first time, set the built-in clock to the local time, using the <DATE> page of the MAINTENANCE menu displayed on the viewfinder screen. For details on menu operations, see “Menus” (page 21).

- 1 Turn on the camera.
- 2 While holding the menu control knob pressed, set the DISPLAY/MENU switch to MENU. The camera enters Menu mode, and “TOP” is displayed at the upper-right corner of the screen.
- 3 Rotate the menu control knob to set the cursor to “TOP” and push on the menu control knob. The TOP MENU screen is displayed.



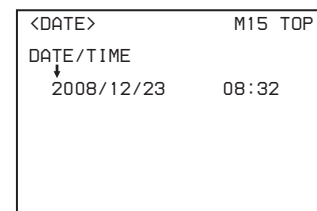
- 4 Rotate the menu control knob to position the cursor to MAINTENANCE and push on the menu control knob.

The CONTENTS page of the MAINTENANCE menu is displayed.



- 5 Turn the menu control knob to scroll the page and position the pointer to <DATE> then push on the menu control knob.

The <DATE> page is displayed.



- 6 Turn the menu control knob and set the date and time. Push on the menu control knob to shift to the next digit.

- 7 When the date/time setting is completed, set the DISPLAY/MENU switch to OFF to exit Menu mode.

Adjusting the Flange Focal Length

Adjustment of the flange focal length (the distance between the lens mount attachment plane and the imaging plane) is necessary in the following situations:

- The first time a lens is attached
- When changing lenses
- If the focus is not sharp at both telephoto and wide angle when zooming

The flange focal length can be more precisely adjusted by using the focus assist indicators.

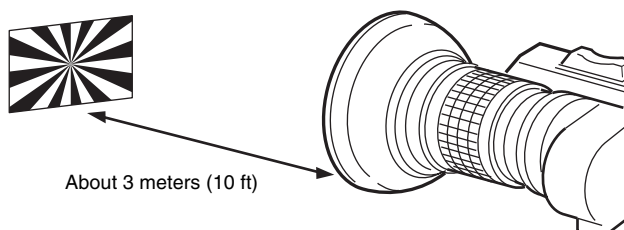
See “Displaying the focus assist indicators” (page 18) for the focus assist indicators.

Note

The various parts of the lens used in adjusting the flange focal length are in different positions on different lenses. Refer to the operation manual for the lens.

- 1 Set the iris control to manual and open the iris fully.

- 2 Place the supplied flange focal length adjustment chart approximately 3 meters from the camera and adjust the lighting to get an appropriate video output level.



- 3 Loosen the Ff (flange focal length) ring lock screw.
- 4 With either manual or power zoom, set the zoom ring to telephoto.
- 5 Aim at the flange focal length adjustment chart and turn the focus ring to focus the image.
- 6 Set the zoom ring to wide angle.
- 7 Turn the Ff ring to bring the chart into focus.
Take care not to move the distance ring.
- 8 Repeat steps 4 through 7 until the image is in focus at both telephoto and wide angle.
- 9 Tighten the Ff ring lock screw.

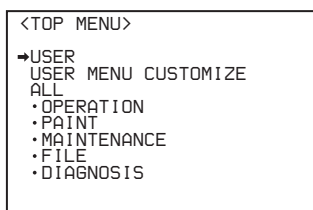
Setting the Focus Assist Function

Using the OPERATION menu, the assist functions for easier focusing on the viewfinder screen can be activated.

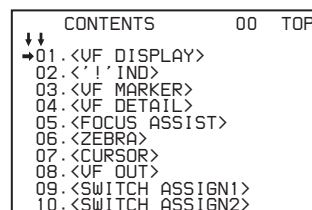
Adding a VF detail signal

Adding a VF detail signal to sharp edges in the image on the viewfinder screen makes it easier to check the focusing condition by observing changes in the detail signal or in the color converted from the detail signal (color detail). The focus setting where the detail signal becomes strongest is the best focus setting.

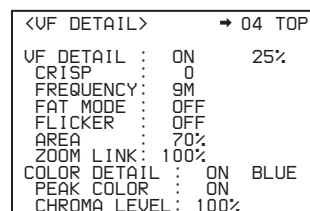
- 1 Turn on the camera.
- 2 Set the the DISPLAY/MENU switch to MENU while holding the menu control knob pressed.
The camera enters Menu mode, and "TOP" is displayed at the upper right corner of the screen.
- 3 Rotate the menu control knob to align the pointer to "TOP" and push on the knob.
The TOP MENU screen is displayed.



- 4 Rotate the menu control knob to align the pointer to OPERATION and push on the knob.
The CONTENTS page of the OPERATION menu is displayed.



- 5 Rotate the menu control knob to align the pointer to <VF DETAIL> and push on the knob.
The <VF DETAIL> page is displayed.



- 6 Rotate the menu control knob to align the pointer to the item to be set and push on the knob.

To use the VF detail signal

Set VF DETAIL to ON to activate the VF detail function to add the detail signal to sharp edges in the image. You can adjust the signal level (strength) in the range of 0 to 100% (default 25%).

You can adjust the characteristics of the detail signal with the menu items below:

CRISP: Adjust to eliminate fine portions of the detail signal.

FREQUENCY: Change the detection band of sharp edges.

FAT MODE: Turn the function ON/OFF to thicken the detail signal.

FLICKER: Turn the function ON/OFF to flicker the detail signal, which makes it easier to check the signal on a CRT screen.

AREA: To limit the area where to display the detail signal.

ZOOM LINK: Set the VF detail level at the full WIDE position. (The VF detail level changes according to the zoom position.)

To use the color detail

Set COLOR DETAIL to ON to convert the VF detail signal to a specified color. This makes it easier to check the signal on an LCD screen, including the viewfinder screen. The display color can be selected at the column next to ON.

You can adjust the coloring with the menu items below:

PEAK COLOR: Turn the function ON/OFF to change the color where the detail signal is strongest.

CHROMA LEVEL: To reduce the chroma components of the video signal (only for video signals on the viewfinder).

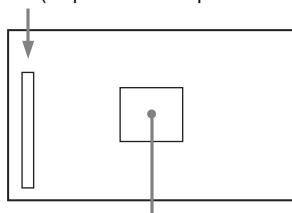
- 7 Rotate the menu control knob to display the desired setting and push on the knob.

8 To finish the adjustments, set the DISPLAY/MENU switch to OFF to exit Menu mode.

Displaying the focus assist indicators

The focus assist indicator function extracts the irregularities of a subject and converts the integrated values to a level indicator, which shows the focus condition.

Level indicator (Its position and operations can be adjusted.)



Area marker to display the detection area of the focus (Its size and position can be adjusted.)

The focus setting where the indicator shows the maximum level is the best focus setting. (The range of the indicator substantially changes depending on picture elements or shooting environments. Adjust it with GAIN and OFFSET as required.)

1 Display the CONTENTS page of the OPERATION menu (referring to step 1 to 4 in “Adding a VF detail signal”).

2 Rotate the menu control knob to align the pointer to <FOCUS ASSIST> and push on the menu control knob.

The <FOCUS ASSIST> page is displayed.

<FOCUS ASSIST>		→ 05 TOP
INDICATOR	:	OFF
MODE	:	BOX
LEVEL	:	3
GAIN	:	50
OFFSET	:	50
AREA MARKER	:	ON
SIZE	:	MIDDLE
POSITION	:	CENTER
POSITION H	:	50
POSITION V	:	50

3 Rotate the menu control knob to align the pointer to the item to be set and push on the knob.

To use the level indicator

Setting INDICATOR to ON displays the level indicator on the viewfinder.

You can set the display format with the menu items below.

MODE: Set the type and position of the indicator.

LEVEL: Set the density and the response speed of the indicator.

GAIN: Set the sensitivity of the indicator.¹⁾

OFFSET: Set the offset of the focus detection value.²⁾

1) Normally, the sensitivity of the indicator is automatically set to the optimum value in conjunction with the AREA MARKER SIZE set value. Use this setting when an optimum sensitivity value cannot be obtained, depending on the shooting environment.

2) Normally, the optimum offset is automatically set in conjunction with the AREA MARKER SIZE and MASTER GAIN set values. Use this setting when the optimum offset cannot be obtained, depending on the shooting environment.

To use the area marker

Setting AREA MARKER to ON displays the detection area of the focus as a marker on the viewfinder screen.

You can set the size and position of the detection area with the menu items below.

SIZE: The size of the detection area can be changed. (If the area size is too large, both the subject and the background are included in the area, making the indicator display easily deviate from the subject.)

POSITION: Roughly set the position of the detection area.

POSITION H: Finely adjust the position of the detection area in the horizontal directions.

POSITION V: Finely adjust the position of the detection area in the vertical directions.

4 Rotate the menu control knob to display the desired setting and push on the knob.

5 To finish the adjustments, set the DISPLAY/MENU switch to OFF to exit Menu mode.

Notes

- The level indicator and the effect area marker cannot be displayed simultaneously, whichever you set to ON later is preferentially displayed.
- The area marker and the aspect safety marker cannot be displayed simultaneously, whichever you set to ON later is preferentially displayed.
- When displaying the focus assist indicators, check that the flange focal length has been precisely adjusted.

See “Adjusting the Flange Focal Length” (page 16) for the flange focal length.

Setting the Camera Outputs

You can specify video signals directly output from the camera, with menu operations.

Note

The MAIN (camera picture), RET (return video), or VF (the same picture as that displayed on the viewfinder screen) setting is common to SD-SDI and VBS. Different signals cannot be output.

The menu pages used for the output settings have been registered to the USER menu at the factory.

- <POWER SAVE> (U11)
- <OUTPUT FORMAT> (U16)
- <TEST OUT> (U17)
- <SDI OUT> (U18)
- <DOWN CONVERTER> (U19)

Set the menu items on the above menu pages to the settings shown in the following tables.

For details on menu operations and the USER menu, see “Menus” on page 21.

Outputting the signal being shot (camera picture)

The same textual information as that displayed on the viewfinder screen can be added to the output signal by setting CHARACTER to ON on the <SDI OUT> or <TEST OUT> page.

To output as HD-SDI

Menu page	Item	Setting
<POWER SAVE>	SDI OUT	ACTIVE
<SDI OUT>	OUTPUT	MAIN

To output as SD-SDI

Menu page	Item	Setting
<POWER SAVE>	SDI OUT	ACTIVE
	DOWN CONVERTER	ACTIVE
<DOWN CONVERTER>	OUTPUT SIGNAL	MAIN
<SDI OUT>	OUTPUT	SD-SDI

To output as VBS

Menu page	Item	Setting
<POWER SAVE>	DOWN CONVERTER	ACTIVE
<DOWN CONVERTER>	OUTPUT SIGNAL	MAIN
<TEST OUT>	OUTPUT	VBS

Constantly outputting a return video

- When a CCU is connected, one of the signals being supplied to the CCU can be output from the camera.
- The last selected return signal is output.
- The same character information as that displayed on the viewfinder screen can be added to the output signal by setting CHARACTER to ON on the <SDI OUT> or <TEST OUT> page.

To output as HD-SDI

Menu page	Item	Setting
<POWER SAVE>	SDI OUT	ACTIVE
<SDI OUT>	OUTPUT	RET

To output as SD-SDI

Menu page	Item	Setting
<POWER SAVE>	SDI OUT	ACTIVE
	DOWN CONVERTER	ACTIVE
<DOWN CONVERTER>	OUTPUT SIGNAL	RET
<SDI OUT>	OUTPUT	SD-SDI

To output as VBS

Menu page	Item	Setting
<POWER SAVE>	DOWN CONVERTER	ACTIVE
<DOWN CONVERTER>	OUTPUT SIGNAL	RET
<TEST OUT>	OUTPUT	VBS

Outputting the same image as that on the viewfinder screen

- With HD-SDI, you can obtain a signal that includes the same information as that being displayed on the viewfinder according to the settings for VF MARKER, CHARACTER, VF DETAIL, ZEBRA, etc. The ON/OFF or other settings for adding information are common to those for the viewfinder.

The output is synchronized with switching among Y, R, G, and B or switching to a return signal.

- With SD-SDI or VBS, the output is synchronized only with switching between a return signal and the camera image. It does not correspond to switching among Y, R, G, and B. Information other than CHARACTER (such as VF MARKER, VF DETAIL, and ZEBRA) cannot be added to the output.

Note

With the settings for outputting the same image as that on the viewfinder, the output will be obtained in 1080i, even if the format setting is 720P.

To output as HD-SDI

Menu page	Item	Setting
<POWER SAVE>	SDI OUT	ACTIVE
<SDI OUT>	OUTPUT	VF

To output as SD-SDI

Menu page	Item	Setting
<POWER SAVE>	SDI OUT	ACTIVE
	DOWN CONVERTER	ACTIVE
<DOWN CONVERTER>	OUTPUT SIGNAL	VF
<SDI OUT>	OUTPUT	SD-SDI

To output as VBS

Menu page	Item	Setting
<POWER SAVE>	DOWN CONVERTER	ACTIVE
<DOWN CONVERTER>	OUTPUT SIGNAL	VF
<TEST OUT>	OUTPUT	VBS

Outputting a prompter signal (when an HXCU-100 is connected)

The VBS signal supplied to the PROMPTER connector of the CCU is output from the PROMPTER/GENLOCK/RET IN connector of the camera.

Outputting a prompter signal (when an HSCU-300 is connected)

The VBS signal supplied to the PROMPTER 1 connector of the CCU is output from the PROMPTER/GENLOCK/RET IN connector of the camera.

The VBS signal supplied to the PROMPTER 2 connector or the SDI prompter signal supplied to the RETURN INPUT connector of the CCU is not output from the camera.

Outputting a Trunk Signal

The trunk signal can be used for communication between an external device connected to the REMOTE connector of the camera and an external device connected to the TRUNK connector of the CCU.

To output the trunk signal from the REMOTE connector

Menu page	Item	Setting
<TRUNK>	TRUNK	ON

Basic Procedure for Shooting

Note

When an HXCU-100 Camera Control Unit or an external control device, such as an RCP-series Remote Control Panel, is connected, the white balance, black balance and shutter adjustments are controlled from the external device, and the controls on the camera are disabled.

For operations on the external control device, refer to the operation manual for the device.

1 Turn the camera on.

To operate the camera on power supplied through the DC IN connector of the camera via an AC power adaptor, set the CAMERA POWER switch to EXT.

To operate the camera on power via the connected HXCU-100, set the CAMERA POWER switch to CCU.

2 Set the filter select knob and 5600K appropriately for the lighting conditions.

Filter select knob setting

Filter select knob	Lighting conditions
1 (CLEAR)	Indoor shooting
2 (1/4 ND)	Outdoor (cloudy or rainy) or indoor shooting when you wish to reduce the depth of field ¹⁾
3 (1/16 ND)	Outdoor shooting in daytime
4 (1/64ND)	Outdoor shooting when you wish to reduce the depth of field, or especially under bright outdoor ambient light

¹⁾ Depth of field: This is the range over which the subject is sharply in focus.

From the viewpoint of the characteristics of lenses, shooting with the iris set in the range of F4 to F8 is generally recommended for good quality pictures. Set the filter select knob to bring the iris setting into that range. However, this may not apply when special composition is desired.

5600K setting

The 5600K ON/OFF function has been assigned to assignable button 1 (front right, upper) at the factory.

5600K	Example of lighting conditions
OFF	Indoor shooting under lighting with lower color temperature, such as a halogen or tungsten lamp
ON	Outdoor shooting in daytime, or indoor shooting under lighting with higher color temperature

3 Check the settings of the camera.

- Settings of switches/control knobs
- Settings on the OPERATION menu (page 26) and the PAINT menu (page 29)
- Electronic shutter setting (page 15)

- Settings for the output signals from the camera (*page 18*)
- Flange focal length setting (*page 16*)

4 Adjust the eyepiece focus as well as the contrast and brightness of the viewfinder image.

For viewfinder settings, refer to the operation manual for the viewfinder.

5 If required, switch on the center marker and/or safety zone and zebra pattern in the viewfinder image, using the OPERATION menu.

6 Check the sound system settings.

- Microphone connections
- Settings of the AUDIO IN switches
- Settings on the VTR (*Refer to the operation manual for the VTR.*)

7 Adjust the white balance and black balance (*page 14*).

8 Turn the focusing ring so that the subject is sharply in focus.

9 Set up the VTR according to your shooting objectives then start recording, using the button on the VTR.

For details on VTR setup and operations, refer to the operation manual for your VTR.

10 When shooting is finished, stop recording, using the button on the VTR.

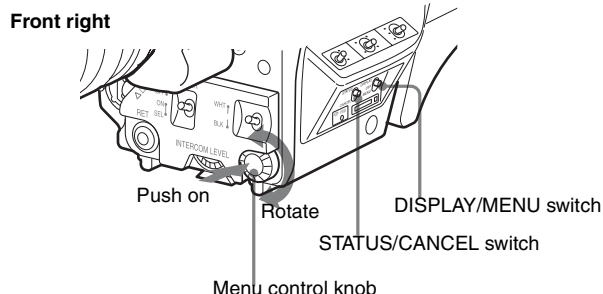
Menus

The menus displayed on the viewfinder screen enable various settings of the camera.

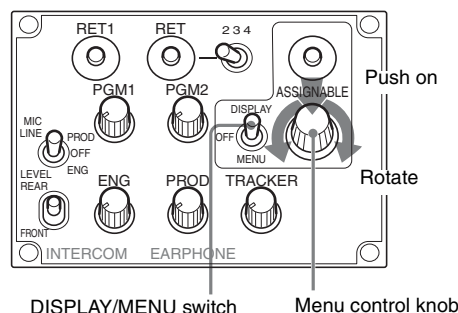
The following controls are used to operate the menus.

To enter Menu mode, you can use the DISPLAY/MENU switch either on the side or on the rear operation panel.

The menu control knob at the low on the front panel and that on the rear operation panel function the same. Rotate the knob to select menu items or values and push on it to register (enter) the selection.



Rear operation panel



Displaying Menu Pages

To display a menu page

Set the DISPLAY/MENU switch to MENU.

The menu page last accessed will be displayed. If it is the first time, the CONTENTS page of the USER menu will be displayed.

To display the TOP MENU screen

If you set the DISPLAY/MENU switch to MENU while holding the menu control knob pressed, "TOP" is displayed at the upper right corner of the screen.

Turn the menu control knob to move the pointer (➡) on the display to "TOP" and push on the knob. The TOP MENU screen is displayed, listing the available menus.

<TOP MENU>
→USER
USER MENU CUSTOMIZE
ALL
•OPERATION
•PAINT
•MAINTENANCE
•FILE
•DIAGNOSIS

Menu	Purpose
USER	This menu can include menu pages selected from among the OPERATION, PAINT, MAINTENANCE, FILE, and DIAGNOSIS menus, for convenience. Changing, adding, and deleting pages can be performed with the USER MENU CUSTOMIZE menu.
USER MENU CUSTOMIZE	This menu allows you to edit the USER menu. <i>For details on the USER menu, see “Editing the USER Menu” (page 23).</i>
ALL	This menu permits you to control all items of the OPERATION menu, PAINT menu, MAINTENANCE menu, FILE menu, and DIAGNOSIS menu as a single menu.
OPERATION	This menu contains items for camera operators to operate the camera. It mainly permits viewfinder, intercom, and switch settings.
PAINT	This menu contains items for making detailed image adjustments while using a waveform monitor to monitor the waveforms output from the camera. Support of a video engineer is usually required to use this menu. Although you can also use an external control device to set the items on this menu, the menu is effective when using the camera by itself outdoors.
MAINTENANCE	This menu contains items for performing camera maintenance operations, such as changing the system or setting infrequently used “paint” items.
FILE	This menu is for performing file operations, such as writing or clearing the reference file.
DIAGNOSIS	This menu enables you to confirm the self-diagnostic information.

To disable the “TOP” indication

Turn the power off then on again, or set the DISPLAY/MENU switch to MENU while holding the STATUS/ CANCEL switch pressed toward CANCEL. This disables the TOP selection.

Setting the Menu

To select a menu on the TOP MENU screen

Rotate the menu control knob to align the pointer with the desired menu indication then push on the knob. The CONTENTS page (page No. 00) or the last accessed page of the selected menu is displayed.

To select a page from a CONTENTS page

Rotate the menu control knob to align the pointer with the desired page indication then push on the menu control knob.

If the screen can be scrolled, arrows will indicate the direction for scrolling.

↓↑	CONTENTS	00	TOP
01.	<VF DISPLAY>		
02.	<'I' IND>		
03.	<VF MARKER>		
04.	<VF DETAIL>		
05.	<FOCUS ASSIST>		
06.	<ZEBRA>		
07.	<CURSOR>		
08.	<VF OUT>		
09.	<SWITCH ASSIGN1>		
10.	<SWITCH ASSIGN2>		

The selected page is displayed.

		Page number
<VF DETAIL>	→	04 TOP
VF DETAIL :	ON	25%
CRISP :	0	
FREQUENCY :	9M	
FAT MODE :	OFF	

To change the displayed page

- 1 Check that the pointer is located at the left of the page number then push on the menu control knob. The pointer changes to a flashing question mark.

	flash
<VF DETAIL>	? 04 TOP
VF DETAIL :	ON 25%
CRISP :	0
FREQUENCY :	9M
FAT MODE :	OFF

- 2 Rotate the menu control knob to flip through the pages, and push on the knob when the desired page is displayed.

The question mark will change back to the pointer, and operations with the displayed page are enabled.

To return to the TOP MENU screen

Align the pointer with “TOP” at the top right of the menu page then push on the menu control knob.

<VF DETAIL>	04→TOP
VF DETAIL :	ON 25%
CRISP :	0
FREQUENCY :	9M
FAT MODE :	OFF

To set the Menu Items

If a question mark is flashing at the left of the page number, push on the menu control knob to change it to the pointer. Operation on the displayed page is enabled.

- 1 Align the pointer with the desired item, then push on the menu control knob. The pointer will change to a flashing question mark.
- 2 Rotate the menu control knob to change the setting value. When the knob is rotated quickly, the values will change quickly; when rotated slowly, the values will change slowly.

To reset a changed value

If you press the STATUS/ CANCEL switch toward CANCEL before pushing on the menu control knob, the setting will be returned to its previous value.

To interrupt settings

Set the DISPLAY/MENU switch to OFF to turn off the menu screen display.

The setting operation can be restarted by setting the DISPLAY/MENU switch back to MENU.

3 Push on the menu control knob.

The question mark will change back to the pointer, and the new setting will be registered.

4 To change other setting items on the same menu page, repeat steps 1 through 3.

To specify a character string

When you press the menu control knob with the pointer pointing to an item for which a character string, such as a file ID, is to be specified, a cursor and the list of selectable characters are displayed.

The displayed cursor can be moved by rotating the menu control knob.

1 Set the cursor to the position where you wish enter a character, then push on the menu control knob.

Another cursor appears on the character list.

2 Set the cursor to the character to be entered and push on the menu control knob.

Repeat steps 1 and 2.

- By selecting INS on the line below the character list, you can enter a space at the cursor position.
- Selecting DEL deletes the character at the cursor position.
- You can return to step 1 without changing the character by selecting RET.
- If you enter the permitted maximum number of characters (up to the stop mark at the right end of the line), the cursor moves to ESC on the line below the character list.

3 Select END and push on the menu control knob.

The new string you have set is registered.

To restore the previous string, select ESC and push on the menu control knob.

To return a menu item to its standard value

Select the menu item to be returned to its standard value then hold the menu control knob pressed for 3 seconds while the arrow marker (➡) is displayed.

If "10 SEC CLEAR" has been set to ON on the <FILE CLEAR> page of the FILE menu, you can return the setting in the reference file for the item being selected to the factory-set value by holding the menu control knob pressed for another 10 seconds.

To end menu operations

Set the DISPLAY/MENU switch to OFF.

Editing the USER Menu

You can select desired pages and items from the OPERATION, PAINT, MAINTENANCE, FILE, and DIAGNOSIS menus and register them to the USER menu. If you specify pages or items frequently used for the USER menu, you can easily call and use them.

The following pages are included on the factory-set USER menu:

Menu page title	USER menu No.	Source menu / page No.
<VF OUT>	U01	OPERATION 08
<VF DETAIL>	U02	OPERATION 04
<FOCUS ASSIST>	U03	OPERATION 05
<VF DISPLAY>	U04	OPERATION 01
<'I' IND>	U05	OPERATION 02
<VF MARKER>	U06	OPERATION 03
<CURSOR>	U07	OPERATION 07
<ZEBRA>	U08	OPERATION 06
<SWITCH ASSIGN1>	U09	OPERATION 09
<SWITCH ASSIGN2>	U10	OPERATION 10
<POWER SAVE>	U11	MAINTENANCE M12
<LENS FILE>	U12	OPERATION 17
<HEAD SET>	U13	OPERATION 11
<INTERCOM LEVEL>	U14	OPERATION 12
<MIC GAIN>	U15	MAINTENANCE M06
<OUTPUT FORMAT>	U16	MAINTENANCE M08
<TEST OUT>	U17	MAINTENANCE M10
<SDI OUT>	U18	MAINTENANCE M11
<DOWN CONVERTER>	U19	MAINTENANCE M09
<TRUNK>	U20	MAINTENANCE M13
<ROM VERSION>	U21	DIAGNOSIS D03

For the items on each page, see "OPERATION Menu" (page 26), "MAINTENANCE Menu" (page 32), or "DIAGNOSIS Menu" (page 36).

The USER MENU CUSTOMIZE menu allows you to configure the USER menu as follows:

- Creating a new page with items selected from multiple menu pages
- Adding (registering) a menu page (new page you create or existing menu page) to the USER menu
- Deleting (unregistering) a page from the USER menu
- Changing the order of pages of the USER menu

Editing by items

While the EDIT page contains factory-preset items, the USER 1 EDIT to USER 19 EDIT pages are all blank in their initial state. You can register up to 10 items, including blank lines, on each of these pages.

To add items to a page

1 Select USER MENU CUSTOMIZE on the TOP MENU screen (page 21).

If this is the first time the USER MENU CUSTOMIZE menu has been displayed, the CONTENTS page of the menu appears.

	CONTENTS	E00 TOP
↓↑	01.EDIT PAGE	
	02.USER 1 EDIT	
→	03.USER 2 EDIT	
	04.USER 3 EDIT	
	05.USER 4 EDIT	
	06.USER 5 EDIT	
	07.USER 6 EDIT	
	08.USER 7 EDIT	
	09.USER 8 EDIT	
	10.USER 9 EDIT	

If the USER MENU CUSTOMIZE menu has been used before, the page last accessed appears.

2 If the CONTENTS page is displayed, turn the menu control knob to move the pointer to any of USER 1 EDIT to USER 19 EDIT then push on the menu control knob to display the page.

If a different page is displayed, turn the menu control knob until the desired page appears then push on the menu control knob to select the page.

Example: When you select the USER 2 EDIT page

	USER 2 EDIT	E03 TOP
→		

3 Move the pointer to the item to be added (this operation is unnecessary if no item exists on the page, as shown in the figure for the previous step) then push on the menu control knob.

The EDIT FUNCTION screen appears.

	EDIT FUNCTION	ESC
→	INSERT	
	MOVE	
	DELETE	
	BLANK	

4 Move the pointer to INSERT and push on the menu control knob.

The page with the last item added appears.

	<SW STATUS>	P01 ESC
	FLARE : → ON	
	GAMMA : ON	
	BLK GAM : OFF	
	KNEE : ON	
	WHT CLIP : ON	
	DETAIL : ON	
	LVL DEP : ON	
	SKIN DTL : OFF	
	MATRIX : OFF	

5 Add the items.

- Turn the menu control knob until the page that has the desired items appears, then push on the menu control knob.
- Turn the menu control knob to move the pointer to the desired item, then push on the menu control knob

The USER 2 EDIT page appears again, displaying the newly added item.

6 Add the remaining items by repeating steps 3 to 5.

You can add up to 10 items on one page.

To change the order of items on a page

1 Move the pointer to the item to be moved then push on the menu control knob.

The EDIT FUNCTION screen appears.

2 Select MOVE then push on the menu control knob.

The previously displayed page appears again.

3 Move the pointer to the position where you wish to move the item then push on the menu control knob.

	ITEM MOVE	ESC
↓↑	VF OUT : COLOR	
→	VF DETAIL : OFF	
	MARKER : ON	
	CURSOR : OFF	
	ZEBRA SW : OFF	
	●ASSIGNABLE1 : 1	
		OFF

The item selected in step 1 moves to the position that you selected in step 3.

In the above example, ASSIGNABLE1 is moved to the top, and the other items are moved down one line.

To delete items from a page

1 Move the pointer to the item to be deleted then push on the menu control knob.

The EDIT FUNCTION screen appears.

2 Select DELETE and push on the menu control knob.

The previously displayed page appears again, and the message "DELETE OK? YES→NO" appears.

3 To delete, turn the menu control knob to move the pointer to YES and push on the menu control knob.

To insert a blank line

1 Move the pointer to the item above which you wish to insert a blank line.

The EDIT FUNCTION screen appears.

2 Select BLANK then push on the menu control knob.

The previously displayed page appears again, and a blank line is inserted above the specified item.

Note

You cannot insert a blank line on a page where 10 items have already been registered.

Editing by pages

You can add a page to the USER menu, delete a page from the USER menu, or replace pages, using the EDIT PAGE of the USER MENU CUSTOMIZE menu.

To add a page

1 Select USER MENU CUSTOMIZE on the TOP MENU screen.

If this is the first time the USER MENU CUSTOMIZE menu has been displayed, the CONTENTS page of the menu appears. If the menu has been used before, the page last accessed appears.

2 If the CONTENTS page is displayed, turn the menu control knob to move the pointer to EDIT PAGE then push on the menu control knob to display the EDIT PAGE screen.

If a different page is displayed, turn the menu control knob until the EDIT PAGE screen appears then push on the menu control knob to select the page.

```
EDIT PAGE      E01 TOP
↑↓
01.<VF OUT>
→02.<VF DETAIL>
03.<FOCUS ASSIST>
04.<VF DISPLAY>
05.<'I' IND>
06.<VF MARKER>
07.<CURSOR>
08.<ZEBRA>
09.<SWITCH ASSIGN1>
10.<SWITCH ASSIGN2>
```

3 Move the pointer to the position where you wish to add the page then push on the menu control knob.

The EDIT FUNCTION screen appears.

4 Select INSERT then push on the menu control knob.

The selection screen appears.

```
CONTENTS      ESC
↑↓
→01.USER 1
02.USER 2
03.USER 3
04.USER 4
05.USER 5
06.USER 6
07.USER 7
08.USER 8
09.USER 9
10.USER 10
```

5 Move the pointer to the desired page then push on the menu control knob.

This adds the number and name of the selected page above the item selected in step 3.

To cancel addition of a page

Before pushing the menu control knob in step 5, turn the menu control knob to move the pointer to ESC at the top right of the screen then push on the menu control knob. The EDIT PAGE screen appears again.

To delete a page

1 On the EDIT PAGE screen of the USER MENU CUSTOMIZE menu, move the pointer to the page to be deleted and push on the menu control knob.

The EDIT FUNCTION screen appears.

2 Select DELETE then push on the menu control knob.

The previously displayed page appears again, and the message "DELETE OK? YES→NO" appears.

```
ITEM DELETE      ESC
DELETE OK? YES→NO
01.<VF OUT>
02.<VF DETAIL>
03.<FOCUS ASSIST>
●04.<VF DISPLAY>
05.<'I' IND>
06.<VF MARKER>
07.<CURSOR>
08.<ZEBRA>
09.<SWITCH ASSIGN1>
10.<SWITCH ASSIGN2>
```

3 To delete, turn the menu control knob to move the pointer to YES then push on the menu control knob.

To change the order of pages

1 Display the EDIT PAGE screen of the USER MENU CUSTOMIZE menu. Turn the menu control knob to move the pointer to the page that you wish to move.

The EDIT FUNCTION screen appears.

2 Select MOVE then push on the menu control knob.

The EDIT PAGE screen appears again.

3 Move the pointer to the position where you wish to move the page then push on the menu control knob.

```
ITEM MOVE      ESC
↑↓
01.<VF OUT>
02.<VF DETAIL>
03.<FOCUS ASSIST>
→04.<VF DISPLAY>
05.<'I' IND>
06.<VF MARKER>
07.<CURSOR>
08.<ZEBRA>
●09.<SWITCH ASSIGN1>
10.<SWITCH ASSIGN2>
```

The page selected in step 1 is moved to the position selected in step 3.

In the above example, <SWITCH ASSIGN1> moves to the "04" position, and the <VF DISPLAY> and following pages move down one line.

OPERATION Menu

Note

These remarks are common for all the following menu tables.

ON, OFF, 0, ... , in the Settings columns: Default settings

Page No. nn (Unn): For the pages that have been registered on the USER menu at the factory, the USER menu page numbers are indicated in parenthesis.

Execute by ENTER: Execute by pushing on the menu control knob.

Page title Page No.	Item	Settings
<VF DISPLAY> 01(U04)	EX	ON , OFF
	ZOOM	ON, OFF
	DISP	LEFT , RIGHT
	FOCUS Valid only when a serial lens is used	ON, OFF
	ND	ON , OFF
	5600K	ON , OFF
	IRIS	ON , OFF
	WHITE	ON, OFF
	GAIN	ON , OFF
	SHUTT	ON , OFF
	BATT	ON, OFF
	RETURN	ON , OFF
	TALK	ON , OFF
	MESSAG	ALL , AT, WRN, OFF ALL: To display all messages AT: To display Auto Setup information and higher WRN: To display warning messages and higher

Page title Page No.	Item	Settings
<'I' IND> 02 (U05)		[IND]: Activate/deactivate the 'I' indication (<i>page 12</i>). [NORMAL]: Specify the conditions under which the 'I' indication is not to be displayed even if [IND] is ON. (By specifying the standard or normal conditions here, non-standard or abnormal conditions can be found with the 'I' indication on the viewfinder.)
	ND	[IND] ON , OFF [NORMAL] 1 , 2, 3, 4 (combination allowed)
	WHITE	[IND] ON , OFF, - - - - - - : with CCU connected [NORMAL] P, A , B (combination allowed)
	5600K	[IND] ON , OFF, - - - - - - : with CCU connected [NORMAL] ON, OFF
	GAIN	[IND] ON , OFF, - - - - - - : with CCU connected [NORMAL] H, M, L (combination allowed)
	SHUTT	[IND] ON , OFF, - - - - - - : with CCU connected [NORMAL] ON, OFF
	FAN	[IND] ON , OFF [NORMAL] AUTO1 , AUTO2, MIN, MAX
	EXT	[IND] ON , OFF
	FORMAT	[IND] ON , OFF [NORMAL] UC model: 59.94i , 50i, 59.94P, 50P CE model: 59.94i, 50i , 59.94P, 50P

Page title Page No.	Item	Settings
<VF MARKER> 03 (U06)	MARKER	ON , OFF WHITE , BLACK, DOT
	CENTER	ON , OFF 1 , 2, 3, 4 1: Entire cross 2: Entire cross with a hole 3: Center 4: Center with a hole
	SAFETY ZONE	ON , OFF 80.0, 90.0 , 92.5, 95.0%
	EFFECT	ON , OFF , (FOCUS) (FOCUS): Displayed when INDICATOR of <FOCUS ASSIST> is ON.
	ASPECT	ON , OFF 16:9, 15:9, 14:9, 13:9, 4:3
	MASK	ON , OFF 0 to 15 12 Set the level to darken outside the aspect area.
	SAFETY For the safety marker in Aspect mode	ON , OFF , (AREA) (AREA): Displayed when AREA MARKER of <FOCUS ASSIST> is ON. 80.0, 90.0 , 92.5, 95.0%
	VF DETAIL	ON , OFF 0 to 100% 25%
	CRISP	-99 to 99 0
	FREQUENCY	9M , 14M, 18M
<VF DETAIL> 04 (U02)	FAT MODE	ON , OFF
	FLICKER	ON , OFF
	AREA	100% , 70%, 60%, 50%, 40%
	ZOOM LINK	0%, 25%, 50%, 75%, 100%
	COLOR DETAIL	ON , OFF BLUE , RED, YELLOW
	PEAK COLOR	ON , OFF
	CHROMA LEVEL	100%, 50%, 25% , 0%

Page title Page No.	Item	Settings
<FOCUS ASSIST> 05 (U03)	INDICATOR	ON , OFF , (EFFECT) (EFFECT): Displayed when EFFECT of <VF MARKER> is ON.
	MODE	BOX , B&W, COL BOTTOM , LEFT, TOP, RIGHT
	LEVEL	1 to 5 3 QUICK , SMOOTH
	GAIN	0 to 99 50
	OFFSET	0 to 99 50
	AREA MARKER	ON , OFF , (ASPECT) (ASPECT): Displayed when ASPECT SAFETY of <VF MARKER> is ON.
	SIZE	SMALL, MIDDLE , LARGE
	POSITION	LEFT, CENTER , RIGHT
	POSITION H	0 to 99 50
	POSITION V	0 to 99 50
<ZEBRA> 06 (U08)	ZEBRA	ON , OFF 1 , 2, 1&2
	ZEBRA1 LEVEL	50 to 109% 70
	WIDTH	0 to 30% 10
	ZEBRA2	50 to 109% 100
<CURSOR> 07 (U07)	CURSOR	ON , OFF WHITE , BLACK, DOT
	BOX/CROSS	BOX , CROSS
	H POSITION	0 to 99 50
	V POSITION	0 to 99 50
	WIDTH	0 to 99 50
	HEIGHT	0 to 99 50
<VF OUT> 08 (U01)	VF OUT	COLOR , Y, R, G, B
	RET MIX VF	ON , OFF
	MIX DIRECTION	MAIN, RET
	MIX VF MODE	Y-MIX , WIRE(W), WIRE(B)
	MIX VF LEVEL	0 to 80%
	VF SCAN	16:9 , 4:3

Page title Page No.	Item	Settings
<SWITCH ASSIGN1> 09 (U09)	GAIN	[L]: -3, 0 , 3, 6, 9, 12 dB [M]: -3, 0, 3, 6 , 9, 12 dB [H]: -3, 0, 3, 6, 9, 12 dB
	ASSIGNABLE 1	UC model: OFF, RETURN1 SW, RETURN2 SW, INCOM, VF DETAIL, MIX VF, 5600K , FAN MAX CE model: OFF, RETURN1 SW, RETURN2 SW, ENG, PROD, VF DETAIL, MIX VF, 5600K , FAN MAX
	ASSIGNABLE 2	UC model: OFF , RETURN1 SW, RETURN2 SW, INCOM, VF DETAIL, MIX VF, 5600K, FAN MAX CE model: OFF , RETURN1 SW, RETURN2 SW, ENG, PROD, VF DETAIL, MIX VF, 5600K, FAN MAX
	ASSIGNABLE REAR	UC model: OFF , RETURN1 SW, RETURN2 SW, INCOM, VF DETAIL, MIX VF, 5600K, FAN MAX, VF SCAN, CURSOR, MARKER CE model: OFF , RETURN1 SW, RETURN2 SW, ENG, PROD, VF DETAIL, MIX VF, 5600K, FAN MAX, VF SCAN, CURSOR, MARKER
	RE.ROTATION Specify operation mode of the menu control knob on the front.	STD , RVS STD: Clockwise rotation moves the pointer down or increases values on the menu screen. RVS: Counterclockwise rotation moves the pointer down or increases values on the menu screen.

Page title Page No.	Item	Settings
<SWITCH ASSIGN2> 10 (U10)	LENS VTR S/S Assign a function to the VTR START/STOP switch on the mounted lens.	UC model: OFF, RETURN1 SW, RETURN2 SW , INCOM CE model: OFF, RETURN1 SW, RETURN2 SW , ENG, PROD
	FRONT RET2	
	HANDLE SW1	UC model: OFF, RETURN1 SW , RETURN2 SW, INCOM, ZOOM(T) CE model: OFF, RETURN1 SW , RETURN2 SW, ENG, PROD, ZOOM(T)
	HANDLE SW2	UC model: OFF, RETURN1 SW, RETURN2 SW, INCOM , ZOOM(W) CE model: OFF, RETURN1 SW, RETURN2 SW, ENG , PROD, ZOOM(W)
	ZOOM SPEED	0 to 99 20
<HEAD SET> 11 (U13)	INTERCOM MIC	DYNAMIC , CARBON, MANUAL
	LEVEL	-60,-40,-20 dB, (-60 dB) Settings in (): With DYNAMIC or CARBON (cannot be changed) -6, 0 , 6 dB Input gain
	POWER	ON, OFF, (ON), (OFF) Settings in (): With DYNAMIC or CARBON (cannot be changed)
	UNBAL	ON , OFF, (ON), (OFF) Settings in (): With CARBON (cannot be changed)
<INTERCOM LEVEL> 12 (U14)	SIDE TONE	MU, 1 to 99, 50
<RECEIVE SEL1> 13	INTERCOM RECEIVE SELECT	SEPARATE, MIX
	INTERCOM UC model only	- - -, LEFT , RIGHT, BOTH
	ENG CE model only	- - -, LEFT , RIGHT, BOTH
	PROD CE model only	- - -, LEFT , RIGHT, BOTH
	PGM1	- - -, LEFT, RIGHT , BOTH
	PGM2	- - -, LEFT, RIGHT , BOTH
	TRACKER	- - -, LEFT , RIGHT, BOTH

Page title Page No.	Item	Settings
<RECEIVE SEL2> 14	TRACKER RECEIVE SELECT	SEPARATE, MIX
	INTERCOM UC model only	- - -, LEFT , RIGHT, BOTH
	TALK CE model only	- - -, LEFT , RIGHT, BOTH
	ENG CE model only	- - -, LEFT , RIGHT, BOTH
	PROD CE model only	- - -, LEFT , RIGHT, BOTH
	PGM1	- - -, LEFT, RIGHT , BOTH
	PGM2	- - -, LEFT, RIGHT , BOTH
<RECEIVE SEL3> 15	EARPHONE RECEIVE SELECT	SEPARATE, MIX
	INTERCOM UC model only	- - -, LEFT , RIGHT, BOTH
	ENG CE model only	- - -, LEFT , RIGHT, BOTH
	PROD CE model only	- - -, LEFT , RIGHT, BOTH
	PGM1	- - -, LEFT, RIGHT , BOTH
	PGM2	- - -, LEFT, RIGHT , BOTH
	TRACKER	- - -, LEFT , RIGHT, BOTH
<OPERATOR FILE> 16 <i>See FILE menu F01.</i>	READ (MS→CAM)	Execute by ENTER.
	WRITE (CAM→MS)	Execute by ENTER.
	PRESET	Execute by ENTER.
	FILE ID	Max.16 characters
	CAM CODE	Display only
	DATE	Display only
	FILE	1 to 17: 1 to 16: When using a non-serial lens 17: When using a serial lens Lens file name Changeable only when using a non-serial lens F number (iris open) of the lens Changeable only when using a non-serial lens
<LENS FILE> 17 (U12)	CENTER MARKER To set and store the center marker position.	
	H POS	-20 to 20 0 Increasing the value moves it to the right.
	V POS	-20 to 20 0 Increasing the value moves it downwards.
	STORE	Execute by ENTER.

PAINT Menu

Page title Page No.	Item	Settings
<SW STATUS> P01	FLARE	ON , OFF
	GAMMA	ON , OFF
	BLK GAM	ON, OFF
	KNEE	ON , OFF
	WHT CLIP	ON , OFF
	DETAIL	ON , OFF
	LVL DEP	ON , OFF
	SKIN DTL	ON, OFF
<VIDEO LEVEL> P02	MATRIX	ON, OFF
	WHITE	R/G/B: -99 to 99 0
	BLACK	R/G/B/M: -99 to 99 0
	FLARE	R/G/B: -99 to 99 0
	GAMMA	R/G/B/M: -99 to 99 0
	V MOD	R/G/B/M: -99 to 99 0
	FLARE	ON , OFF
	V MOD	ON , OFF
	D. SHAD	ON, OFF Selectable only when a lens supporting dynamic shading is used.
	TEST	OFF , SAW, 3STEP, 10STEP
<COLOR TEMP> P03	WHITE	R/G/B: -99 to 99 0
	AUTO WHITE BALANCE	Execute by ENTER.
	COLOR TEMP	0K to 65535K 3200K
	BALANCE	-99 to 99 0
	ATW	ON, OFF
	SPEED	1 to 5 4
	MASTER	-3.0dB to 12.0dB, 0.0dB

Page title Page No.	Item	Settings
<GAMMA> P04	LEVEL	R/G/B/M: -99 to 99 <u>0</u>
	COARSE	0.35 to <u>0.45</u> to 0.90 (0.05 steps)
	TABLE	STANDARD , HYPER With STANDARD selected: UC model: 1, 2, <u>3</u> , 4, 5, 6, 7 CE model: 1, <u>2</u> , 3, 4, 5, 6, 7 1: equivalent to a camcorder 2: 4.5-times gain 3: 3.5-times gain 4: equivalent to SMPTE-240M 5: equivalent to ITU-R709 6: 5.0-times gain 7: 5.0-times gain - 709 With HYPER selected: 1, 2, 3, <u>4</u> 1: 325% to 100% 2: 460% to 100% 3: 325% to 109% 4: 460% to 109% (When you change the TABLE setting, noise may be generated. This is not malfunction.)
	GAMMA	ON , OFF
<BLACK GAMMA> P05	TEST	OFF , SAW, 3 STEP, 10 STEP
	LEVEL	-99 to 99 <u>0</u> Master level only
	RANGE	LOW, L.MID, H.MID, HIGH ON , OFF
<SATURATION> P06	TEST	OFF , SAW, 3 STEP, 10 STEP
	SATURATION	-99 to 99 <u>0</u> ON , OFF
	LOW KEY SAT	-99 to 99 <u>0</u> ON , OFF
	TEST	OFF , SAW, 3 STEP, 10 STEP

Page title Page No.	Item	Settings
<KNEE> P07	K POINT	R/G/B/M: -99 to 99 <u>0</u>
	K SLOPE	R/G/B/M: -99 to 99 <u>0</u>
	KNEE	ON , OFF
	KNEE MAX	ON, OFF
	KNEE SAT	-99 to 99 <u>0</u> ON , OFF
	AUTO KNEE	OFF , AUTO
	POINT LIMIT	-99 to 99 <u>0</u>
<WHITE CLIP> P08	SLOPE	-99 to 99 <u>0</u>
	ABS	When highlighted (ABS mode): K POINT R/G/B, K SLOPE R/G/B, and POINT LIMIT are displayed in absolute values.
	W CLIP M	-99 to 99 <u>0</u> ON , OFF
	ABS	When highlighted (ABS mode): W CLIP M displayed in absolute values.
	DETAIL	ON , OFF
	LEVEL	-99 to 99 <u>0</u>
	LIMITER [M]	-99 to 99 <u>0</u>
<DETAIL 1> P09	LIMITER [WHT]	-99 to 99 <u>0</u>
	LIMITER [BLK]	-99 to 99 <u>0</u>
	CRISP	-99 to 99 <u>0</u>
	LVL DEP	-99 to 99 <u>0</u> ON , OFF
	ABS	When highlighted (ABS mode): LEVEL, LIMITER WHT, LIMITER BLK, CRISP, and LVL DEP are displayed in absolute values.
	H/V RATIO	-99 to 99 <u>0</u>
	FREQ	-99 to 99 <u>0</u>
<DETAIL 2> P10	MIX RATIO	-99 to 99 <u>0</u>
	KNEE APT	-99 to 99 <u>0</u> ON , OFF
	ABS	When highlighted (ABS mode): H/V RATIO, FREQ, MIX RATIO, and KNEE APT are displayed in absolute values.

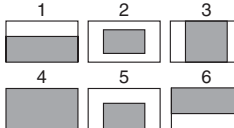
Page title Page No.	Item	Settings
<SKIN DETAIL> P11	SKIN DTL	ON, OFF
	SKIN GATE	ON, OFF , (MAT) (MAT): Displayed when GATE of <MULTI MATRIX> is ON.
	AUTO HUE	Execute by ENTER.
	PHASE	0 to 359
	WIDTH	0 to 90 29
	SAT	-99 to 99 -89
	LEVEL	-99 to 99 0
<USER MATRIX> P12	ABS	When highlighted (ABS mode): LEVEL is displayed in an absolute value.
	R-G	-99 to 99 0
	R-B	-99 to 99 0
	G-R	-99 to 99 0
	G-B	-99 to 99 0
	B-R	-99 to 99 0
	B-G	-99 to 99 0
	MATRIX	ON, OFF
	PRESET	ON , OFF, - - - - : When MATRIX is set to OFF (cannot be changed)
		SMPTE-240M, ITU-709 , SMPTE-WIDE, NTSC, EBU, ITU-601, - - - - : When MATRIX is set to OFF (cannot be changed)
	USER	ON, OFF , - - - - : When MATRIX is set to OFF (cannot be changed)
	MULTI	ON, OFF , - - - - : When MATRIX is set to OFF (cannot be changed)

Page title Page No.	Item	Settings
<MULTI MATRIX> P13	PHASE	0 , 23, 45, 68, 90, 113, 135, 158, 180, 203, 225, 248, 270, 293, 315, 338
	HUE	-99 to 99 0 Independently set for 16 axes.
	SAT	-99 to 99 0 Independently set for 16 axes.
	ALL CLEAR	Execute by ENTER. The HUE and SAT values for all PHASE settings are cleared.
	GATE	ON, OFF , (SKN) (SKN): Displayed when SKIN GATE of <SKIN DETAIL> is ON.
	MATRIX	ON, OFF
	PRESET	ON , OFF, - - - - : When MATRIX is set to OFF (cannot be changed)
		SMPTE-240M, ITU-709 , SMPTE-WIDE, NTSC, EBU, ITU-601, - - - - : When MATRIX is set to OFF (cannot be changed)
	USER	ON, OFF , - - - - : When MATRIX is set to OFF (cannot be changed)
	MULTI	ON, OFF , - - - - : When MATRIX is set to OFF (cannot be changed)
<SHUTTER> P14	SHUTTER	ON, OFF 59.94i: 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 (sec) 1/100 sec (UC model) 50i: 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 (sec) 1/60 sec (CE model) 59.94P: 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 (sec) 50P: 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 (sec)
	ECS FREQ	59.94i: 60.00 to 4300 Hz 60.00 Hz (UC model) 50i: 50.00 to 4700 Hz 50.00 Hz (CE model) 59.94P: 59.96 to 4600 Hz 50P: 50.03 to 4600 Hz

Page title Page No.	Item	Settings
<SCENE FILE> P15 <i>See "FILE menu" F02.</i>	1	To store and read scene files (paint data).
	2	
	3	
	4	
	5	
	STORE	
	STANDARD	Execute by ENTER.
	READ (MS→CAM)	Execute by ENTER.
	WRITE (CAM→MS)	Execute by ENTER.
	FILE ID	Max.16 characters
	CAM CODE	Display only
	DATE	Display only

MAINTENANCE Menu

Page title Page No.	Item	Settings
<AUTO SETUP> M01	AUTO BLACK	Execute by ENTER.
	AUTO WHITE	Execute by ENTER.
	AUTO LEVEL	Execute by ENTER.
	AUTO WHITE SHADING	Execute by ENTER.
	AUTO BLACK SHADING	Execute by ENTER.
	TEST	OFF , SAW, 3STEP, 10STEP
<WHITE SHADING> M02	V SAW	R/G/B: -99 to 99 0
	V PARA	R/G/B: -99 to 99 0
	H SAW	R/G/B: -99 to 99 0
	H PARA	R/G/B: -99 to 99 0
	WHITE	R/G/B: -99 to 99 0
	AUTO WHITE SHADING	Execute by ENTER.
	WHITE SHAD MODE	RGB, RB
<BLACK SHADING> M03	V SAW	R/G/B: -99 to 99 0
	V PARA	R/G/B: -99 to 99 0
	H SAW	R/G/B: -99 to 99 0
	H PARA	R/G/B: -99 to 99 0
	BLK SET	R/G/B: -99 to 99 0
	BLACK	R/G/B/M: -99 to 99 0
	MASTER GAIN	-3, 0 , 3, 6, 9, 12 dB
	AUTO BLACK SHADING	Execute by ENTER.

Page title Page No.	Item	Settings
<OHB MATRIX> M04	PHASE	0 , 23, 45, 68, 90, 113, 135, 158, 180, 203, 225, 248, 270, 293, 315, 338
	HUE	-99 to 99 0 Independently set for 16 axes.
	SAT	-99 to 99 0 Independently set for 16 axes.
	ALL CLEAR	Execute by ENTER. The HUE and SAT values for all PHASE settings are cleared.
	OHB MATRIX	ON, OFF
	MATRIX	ON, OFF
<AUTO IRIS> M05	AUTO IRIS	ON, OFF
	WINDOW	1, 2, 3, 4, 5, 6 Select the auto iris windows:  <p>The shaded parts indicate the area where light detection occurs.</p>
	OVERRIDE	-99 to 99, -- Set the override to temporarily change the reference value for brightness of the automatic iris level in the range of ±2 steps. -99: Two steps to fully closed iris 99: Two steps to fully open iris -- : OFF The setting returns to "--" when the power is turned off.
	IRIS LEVEL	-99 to 99 0 ±4 steps
	APL RATIO	-99 to 99 65
	IRIS GAIN	-99 to 99 0
	IRIS CLOSE	ON, OFF
<MIC GAIN> M06 (U15) Settings in (): When a CCU is connected (cannot be changed)	MIC1	20 dB, 30 dB, 40 dB, 50 dB, 60 dB , (20 dB), (30 dB), (40 dB), (50 dB), (60 dB)
	MIC2	20 dB, 30 dB, 40 dB, 50 dB, 60 dB , (20 dB), (30 dB), (40 dB), (50 dB), (60 dB)
	FRONT MIC +48V	ON , OFF

Page title Page No.	Item	Settings
<CALL/TALLY> M07 Invalid when no CCU connected	CCU CALL	- - -, ON , OFF
	CAM CALL	- - -, ON, OFF
<OUTPUT FORMAT> M08 (U16)	CURRENT	Displays the current format.
	ACTIVE LINE Not displayed when a CCU connected	UC model: 1080 59.94i , 1080 50i, 720 59.94P, 720 50P CE model: 1080 59.94i, 1080 50i , 720 59.94P, 720 50P (When you change the ACTIVE LINE setting, once turn the camera off. The camera will operate in the selected mode when next turned on.)
<DOWN CONVERTER> M09 (U19)	OUTPUT SIGNAL	MAIN , VF, RET
	SETTING	CAM, CCU When a CCU is connected: Either CAM (settings made with the camera) or CCU (settings taken from the linked CCU) can be selected. When CCU is selected, the values for the items shown below are displayed in parenthesis and cannot be changed with the camera. When a CCU is not connected: CCU cannot be selected.
	SD MATRIX	ON, OFF, (ON) , (OFF)
	DETAIL	ON, OFF, (ON) , (OFF)
	DTL LEVEL	-99 to 99 (-20)
	H DTL FREQ	-99 to 99 (-20)
	ASPECT	SQ, EC, (SQ) , (EC)
	OUTPUT	SD-SYNC, VF, HD-SYNC, VBS
	(PWR SAVE)	Displayed in POWER SAVE mode only
	VBS-OUT	
	CHARACTER	ON, OFF
	GAIN	-127 to 127 0
	CHROMA	-127 to 127 0
	SETUP UC model only	ON , OFF Displayed when the format is NTSC
	HD SYNC-OUT	
	V-PHASE	-127 to 127 0
	H-PHASE	-127 to 127 0

Page title Page No.	Item	Settings
<SDI OUT> M11 (U18)	OUTPUT	MAIN , VF, RET, SD-SDI
	(PWR SAVE)	Displayed in POWER SAVE mode only
	CHARACTER	ON, OFF Not displayed if OUTPUT is set to VF
	EMB AUDIO	ON, OFF
	(1-MIC1 2-MIC2) (3-AES1 4-AES2)	Displayed when OUTPUT is MAIN
<POWER SAVE> M12 (U11)	(1-PGM1 2-PGM2) (3-ENG 4-PROD)	Displayed when OUTPUT is other than MAIN
	SDI OUT	PWR SAVE , ACTIVE
	DOWN CONVERTER	PWR SAVE, ACTIVE
<TRUNK> M13 (U20)	PROMPTER	PWR SAVE , ACTIVE
	TRUNK	ON , OFF
<GENLOCK> M14 Items other than REFERENCE are displayed only when no CCU connected.	REFERENCE	Condition of synchronisation, display only
	GENLOCK	DISABLE , ENABLE
	STATUS	Display only
	FORMAT	
	PHASE	
	V	-1024 to 1023 0
	HD H	-1700 to 1700 0
<DATE> M15	SD H	-1024 to 1023 0
	DATE/TIME	yyyy/mm/dd hh:mm
<BATTERY ALARM> M16	BEFORE END	11.5 V to 17.0 V
	END	11.0 V to 11.5 V

Page title Page No.	Item	Settings
<OTHERS 1> M17	FAN MODE	OFF, AUTO1 , AUTO2, MIN, MAX AUTO1: Normal rotation AUTO2: Slow rotation (The internal temperature may raise with the OFF setting.)
	CAM BARS	ON, OFF
	V DTL CREATION	NAM, G, R+G, Y
	DTL H/V MODE	H/V , V Only
	TEST2 MODE	3STEP , 10STEP
	WHITE SETUP MODE	AWB, A.LVL
	ALAC	AUTO , OFF With AUTO selected, the status is displayed at the right. (ACTIVE): Compensation in progress (WAIT): Waiting for completion of lens initialization (STOP): Compensation is turned off for a non-applicable lens
<OTHERS 2> M18	DATE TYPE	1 Y/Mn/D, 2 Mn/D, 3 D/M/Y 4 D/M, 5 M/D/Y , 6 M/D Y: Year Mn: Month (numeric) M: Month (character string) D: Day
	F NO. DISP	CONTROL , RETURN Select the iris indication on the panel when AUTO IRIS is off: CONTROL: To display the value from the camera RETURN: To display the value returned from the lens (When AUTO IRIS is on, the value returned from the lens is always displayed.)
<EXT RETURN> M19	SD ASPECT	SQ , EC

FILE Menu

Five types of files can be used for easy adjustments of the camera; Operator, Reference, Scene, OHB, and Lens. You can store the items set with the OPERATION menu and customized USER menu in the Operator file.

For the specific items included in these files, refer to the Maintenance Manual.

Page title Page No.	Item	Settings / Default
<OPERATOR FILE> F01	READ (MS→CAM)	Execute by ENTER. To read the operator file from a "Memory Stick"
	WRITE (CAM→MS)	Execute by ENTER. To write the current settings of the operator file items to a "Memory Stick"
	PRESET	Execute by ENTER. To set the operator file items to the preset values in internal memory
	STORE PRESET FILE	Execute by ENTER. To store the current settings of the operator file items in the operator file in internal memory.
	FILE ID	Max.16 characters Enter a comment for the operator file to be written to a "Memory Stick." <i>See "To specify a character string" on page 23.</i>
	CAM CODE	Camera code (display only)
	DATE	Date (display only)
	1	To store and read scene files (paint data):
	2	When storing a file in
	3	camera memory, specify
<SCENE FILE> F02	4	the number for STORE and
	5	execute by ENTER.
	STORE	When reading, only specify the number.
	STANDARD	Execute by ENTER. To read the standard paint data
	READ (MS→CAM)	Execute by ENTER. To load five scene files from a "Memory Stick" to internal memory
	WRITE (CAM→MS)	Execute by ENTER. To write five scene files in the camera's memory to a "Memory Stick"
	FILE ID	Max.16 characters Enter a comment for the scene files to be written to a "Memory Stick." <i>See "To specify a character string" on page 23.</i>
	CAM CODE	Camera code (display only)
	DATE	Date (display only)

Page title Page No.	Item	Settings / Default
<REFERENCE> F03	STORE FILE	Execute by ENTER. To store the current settings of the reference file items in the reference file in internal memory.
	STANDARD	Execute by ENTER. To read the standard values in the reference file in internal memory.
	ALL PRESET	Execute by ENTER. To resume the factory-preset reference file
	READ (MS→CAM)	Execute by ENTER. To load a reference file from a "Memory Stick"
	WRITE (CAM→MS)	Execute by ENTER. To write the current settings of the reference file items to a "Memory Stick"
	FILE ID	Max.16 characters Enter a comment for the reference file to be written to a "Memory Stick." <i>See "To specify a character string" on page 23.</i>
	CAM CODE	Camera code (display only)
	DATE	Date (display only)
<LENS FILE> F04	STORE FILE	Execute by ENTER.
	No.	<u>1</u> to 17 1 to 16: When using a non-serial lens 17: When using a serial lens
	NAME	Lens file name Changeable only when using a non-serial lens
	F NO	F1.0 to F3.4 F1.7
	CENTER MARKER To set and store the center marker position	
	H POS	-20 to 20 <u>0</u> Increasing the value moves it to the right.
	V POS	-20 to 20 <u>0</u> Increasing the value moves it downwards.
	STORE	Execute by ENTER.
<OHB FILE> F05	STORE FILE	Execute by ENTER. To store the offset values of the items specific to the CCD (No repeated store operation is necessary even if the CCD is reattached.)

Page title Page No.	Item	Settings / Default
<FILE CLEAR> F06	PRESET OPERATOR	Execute by ENTER.
	REFERENCE (ALL)	Execute by ENTER.
	10 SEC CLEAR	ON, OFF To activate/deactivate the function to clear the current menu item. <i>See "To return a menu item to its standard value" on page 23.</i>
	OHB WHITE SHADE (ALL)	Execute by ENTER.
	OHB BLACK SHADE	Execute by ENTER.
	OHB ND OFFSET	Execute by ENTER.
	OHB MATRIX	Execute by ENTER.
	M.S. FORMAT	Execute by ENTER. To initialize a "Memory Stick"

DIAGNOSIS Menu

This menu is only for viewing and no setting is made using this menu.

Page title Page No.	Item	Indication
<BOARD STATUS> D01	OHB	OK, NG
	DPR	OK, NG
	CD	OK, NG
	TX	OK, NG
	SY	OK, NG
	PS	OK, NG
<PLD VERSION> D02	TG	Vx.xxIT
	AT	Vx.xx
	VDAP	Vx.xx
	VSOP	Vx.xx
	ASSIST	Vx.xx
	DEMUX	Vx.xx
<ROM VERSION> D03 (U21)	DEMAP	Vx.xx
	AT	Vx.xx
<SERIAL NO.> D04	MODEL	HXC-100
	NO	Serial No.

Appendices

Precautions

Note on laser beams

Laser beams may damage the CCDs. If you shoot a scene that includes a laser beam, be careful not to let a laser beam become directed into the lens of the camera.

Do not subject to severe shocks

Damage to the case or internal components may result.

When finished using

Set the power switch to OFF.

Operation and storage environment

Store in a level place with air conditioning.

If the unit gets wet, make sure it is completely dry before storage.

Avoid use or storage in the following places:

- Extremely hot or cold places
- Places with high humidity
- Places with strong vibration
- Near strong magnetic fields
- In places where it receives much direct sunlight, or near heating equipment

Condensation

If you move the camera from a very cold place to a warm place, or use it in a damp location, condensation may form on the lens or inside the camera.

The camera has no built-in condensation indicator. If you find condensation on the body or lens, switch the camera off and wait for the condensation to disappear for about one hour.

Phenomena specific to CCD image sensors

The following phenomena that may appear in images are specific to CCD (Charge Coupled Device) image sensors. They do not indicate malfunctions.

White flecks

Although the CCD image sensors are produced with high-precision technologies, fine white flecks may be generated on the screen in rare cases, caused by cosmic rays.

This is related to the principle of CCD image sensors and is not a malfunction.

The white flecks especially tend to be seen

- when operating at a high environmental temperature
 - when you have raised the master gain (sensitivity)
- The problem may be alleviated by automatic black balance adjustment (*see page 14*).

Smear

When an extremely bright object, such as a strong spotlight or flashlight, is being shot, vertical tails may be produced on the screen, or the image may be distorted.

Aliasing

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

About digital triax transmission

A powerful error-correction function is incorporated for the transmission between the camera and CCU. However, if an error occurs on long-distance transmission because of external noise or for some other reason, the compensation by interpolation that partially uses the previous picture may operate.

In digital triax transmission, the following video delay in transmission may occur:

- The video delay in transmission between the camera and the CCU is approx. 9 msec to 12 msec.
- A delay of about 1 frame occurs on the viewfinder display if a camera image is sent back from the CCU to the camera as a return signal.
- The prompter video will delay approx. 5 frames in the standard mode. (For the prompter video, either the standard mode or the low-delay mode using simplified images can be selected on the CCU).
- An appropriate delay is applied to the MIC 1 and 2 audio signals from the CCU according to the video delay.
- It takes a certain time until the video signal transmitted between the camera and the CCU becomes stable after power is applied. This is not a malfunction.

About the distances of triax transmission

The maximum and minimum transmission distances allowed for triax cable connection are shown in the table below. The distances may vary according to the conditions, such as cable degradation.

Allowable transmission range when using triax cables with the following characteristics:

Attenuation: 3.8 dB to 45.6 dB at 100 MHz (including the loss at connectors)

Cable (for example)	Max. distance	Min. distance
Fujikura 8.5-mm dia.	600 m (1969 ft)	50 m (164 ft)
Fujikura 14.5-mm dia.	1200 m (3937 ft)	100 m (328 ft)
Belden 9232 13.2-mm dia	850 m (2789 ft)	75 m (246 ft)

Error Messages

If a problem occurs during operation, a warning message is displayed.

Note

To display a message, set the DISPLAY/MENU switch to DISPLAY or MENU.

Message	Meaning
TEMP WARNING	The internal temperature is extraordinarily high.
FAN STOP	The built-in fan is not rotating properly.
SET SYSTEM CLOCK	The time/date of the internal clock have not been set.
OHB BLOCK NG!	A problem is detected in the optical block.

Message	Meaning
MSU RPN BUSY	RPN compensation was attempted using the camera menu while being operated from an external device. Consult Sony service personnel.
VF RPN BUSY	RPN compensation was attempted from an external device while being operated using the camera menu. Consult Sony service personnel.
NO MEMORY STICK	A "Memory Stick" operation was attempted with no "Memory Stick" in the slot.
MEMORY STICK ERROR	An error occurred during access to a "Memory Stick."
FORMAT ERROR!	A "Memory Stick" operation was attempted with an unformatted "Memory Stick."
MEMORY STICK LOCKED	File writing was attempted with a write-protected "Memory Stick."
FILE ERROR	An error occurred while reading a file from a "Memory Stick."
OTHER MODEL'S FILE	You attempted to read a file of other models having no compatibility.
FILE NOT FOUND	The file you attempted to read does not exist in the "Memory Stick."

Using a "Memory Stick"

When a "Memory Stick" is inserted in the camera, the file data can be stored on the "Memory Stick," which enables you to share data among cameras.

Usable types of "Memory Stick"

You can use a "Memory Stick," a "Memory Stick Duo," a "Memory Stick PRO," a "Memory Stick PRO Duo," and a "MagicGate Memory Stick" with this product. You can use a "Memory Stick Duo" or a "Memory Stick PRO Duo" without any adaptor. However, the MagicGate copyright protection¹⁾ is not valid with this product.

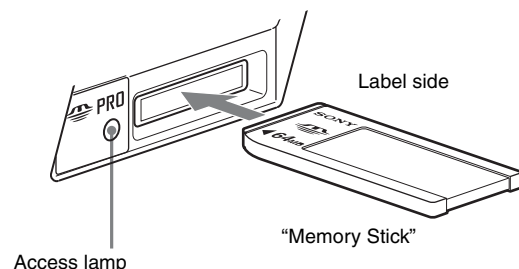
1) MagicGate is copyright protection technology that uses encryption technology.

Note on data read/write speed

Data read/write speed may vary depending on the combination of the "Memory Stick" and "Memory Stick" compliant product you use.

To insert a "Memory Stick"

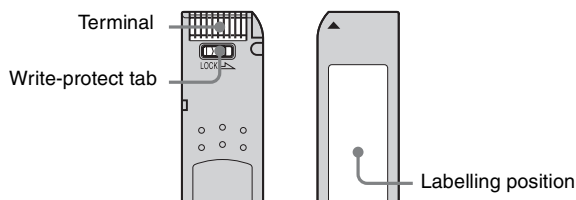
Insert a "Memory Stick" with the label side up into the "Memory Stick" slot until it clicks and the access lamp lights in red.



Access lamp

If the access lamp is lit or is flashing, data is being read from or written to the “Memory Stick.” At this time, do not shake the product or subject it to shock. Do not turn off the power of the product or remove the “Memory Stick.” This may damage the data.

About a “Memory Stick”




- When you set the “Memory Stick” write-protect tab to “LOCK,” data cannot be recorded, edited, or erased.
- Data may be damaged if:
 - You remove the “Memory Stick” or turn off the unit while it is reading or writing data.
 - You use the “Memory Stick” in a location subject to the effects of static electricity or electric noise.

Notes

- Do not attach anything other than the supplied label to the “Memory Stick” labeling position.
- Attach the label so that it does not stick out beyond the labeling position.
- Carry and store the “Memory Stick” in its case.
- Do not touch the terminal of the “Memory Stick” with anything, including your finger or metallic objects.
- Do not strike, bend, or drop the “Memory Stick.”
- Do not disassemble or modify the “Memory Stick.”
- Do not allow the “Memory Stick” to get wet.
- Do not use or store the “Memory Stick” in a location that is:
 - Extremely hot, such as in a car parked in the sun
 - Under direct sunlight
 - Very humid or subject to corrosive substances

Precautions

- To prevent data loss, make backups of data frequently. In no event will Sony be liable for any loss of data.
- Unauthorized recording may be contrary to the provisions of copyright law. When you use a “Memory Stick” that has been pre-recorded, be sure that the material has been recorded in accordance with copyright and other applicable laws.
- The “Memory Stick” application software may be modified or changed by Sony without prior notice.

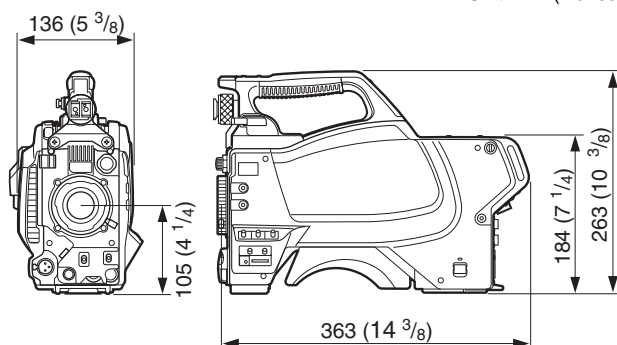
- “Memory Stick” and  are trademarks of Sony Corporation.
- “Memory Stick Duo” is a trademark of Sony Corporation.
- “Memory Stick PRO” and **MEMORY STICK PRO** are trademarks of Sony Corporation.
- “Memory Stick PRO Duo” is a trademark of Sony Corporation.
- “MagicGate” is a trademark of Sony Corporation.

Specifications

General	
Power requirements	180 V DC, 1.0 A (max.) 12 V DC, 7 A (max.)
Operating temperature	–10°C to +45°C (14°F to +113°F)
Storage temperature	–20°C to +60°C (–4°F to +140°F)
Mass	Approx. 4.4 kg (9 lb 11 oz) (camera head only)
Imager	
Imager	2/3-type Progressive Scan CCD
Method	3-CCD, RGB
Effective resolution	1920 (horizontal) × 1080 (vertical)
Electrical characteristics	
Sensitivity	f10.0 with 59.94 Hz/f11.0 with 50.00 Hz (at 2000 lx with 89.9% reflectivity)
Image S/N	HD output: Typical 55 dB SD output: Typical 65 dB (59.94 Hz) Typical 63 dB (50.00 Hz)
Horizontal resolution	HD: 1000 TV lines (at center of screen) 5% or higher modulation
Geometric distortion	Negligible (not including lens distortion)
Optical system specifications	
Spectral system	F1.4 prism
Built-in filters	ND filters 1: Clear 2: 1/4 ND 3: 1/16 ND 4: 1/64 ND
Input/output connectors	
CCU	Triax connector (1)
LENS	12-pin (1)
VF	20-pin (1)
MIC 1 IN	XLR 3-pin, female (1)
AUDIO IN CH1, CH2	XLR 3-pin, female (1 each) For MIC: –60 dBu (variable up to –20 dBu by menu or HXCU-100 operation), balanced For LINE: 0 dBu, balanced
INTERCOM	XLR 5-pin, female (1)
EARPHONE	Stereo minijack (1)
DC IN	XLR 4-pin (1), 10.5 to 17 V DC
DC OUT	4-pin (1), 10.5 to 17 V DC, 0.5 A maximum It may be limited depending on the load and input conditions.
SDI	BNC type (1)
TEST OUT	BNC type (1)
PROMPTER/GENLOCK/RET IN	BNC type (1), 1 Vp-p, 75 ohms
RET CTRL	6-pin (1)
REMOTE	8-pin (1)
TRACKER	10-pin (1)

Supplied accessories
Operating instructions (1)
CD-ROM (1)
Cable clamp belt (1)
Switch label (1)
Flange focal length adjustment sheet (1)
Optional accessories
HD Electronic Viewfinder
HDVF-200 (2-type, monochrome)
HDVF-550 (5-type, monochrome)
HDVF-C35W (3.5-type, color)
HDVF-C550W (5-type, color)
HDVF-C730W (6.5-type, color)
CAC-12 Microphone Holder
CAC-6 Return Video Selector
VCT-U14 Tripod Adaptor
"Memory Stick"
Low-repulsion Shoulder Pad A-8286-346-A
Shoulder Strap A-6772-374-C
Related equipment
Camera Control Unit
HXCUC-100
HSCUC-300
HKCU-FP1 Option Panel
RCP-1000-series Remote Control Panel
RM-B150/B750 Remote Control Unit
Dimensions

Unit: mm (inches)



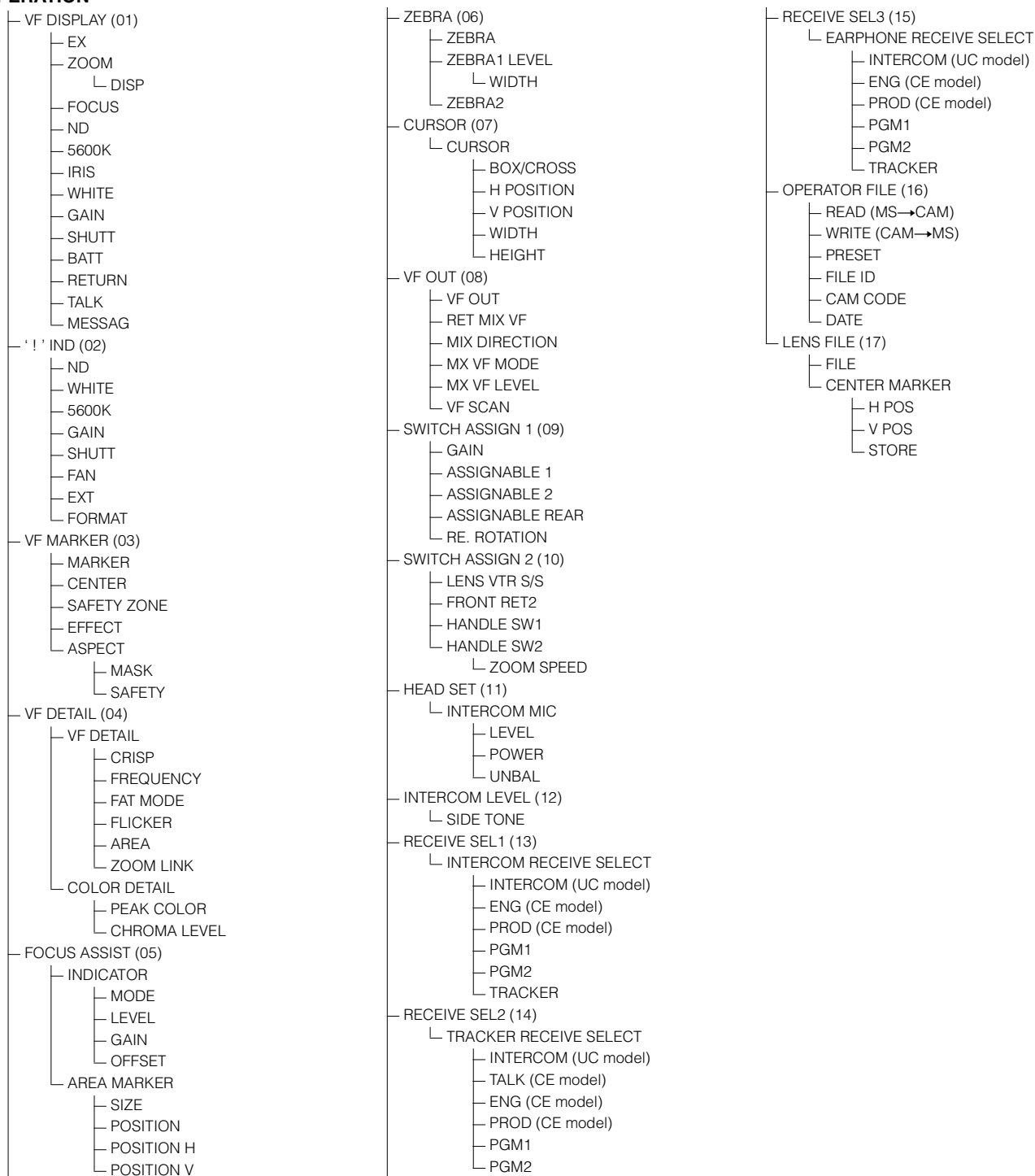
Design and specifications are subject to change without notice.

Note

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

Menu Tree

OPERATION



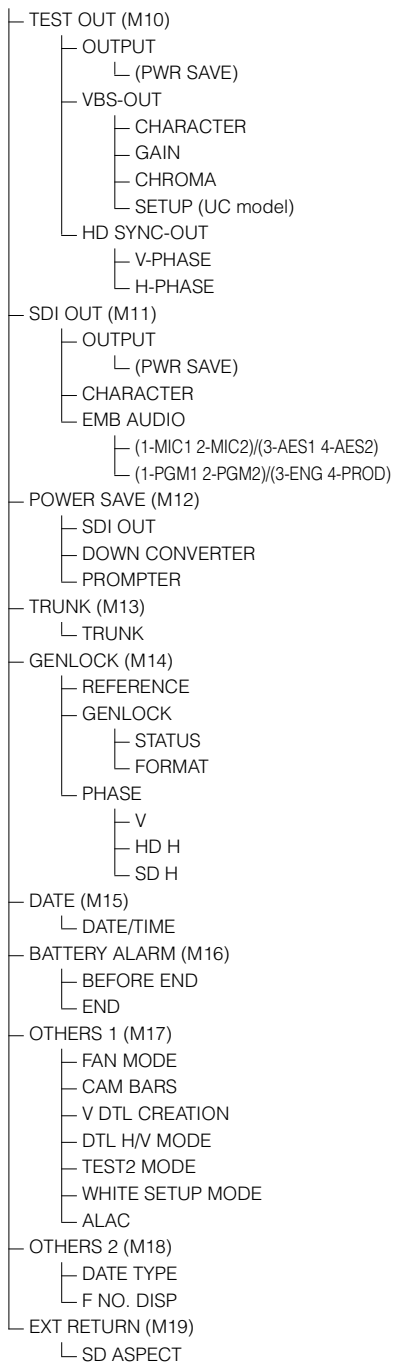
PAINT

- SW STATUS (P01)
 - FLARE
 - GAMMA
 - BLK GAM
 - KNEE
 - WHT CLIP
 - DETAIL
 - LVL DEP
 - SKIN DTL
 - MATRIX
- VIDEO LEVEL (P02)
 - WHITE
 - BLACK
 - FLARE
 - GAMMA
 - V MOD
 - FLARE
 - V MOD
 - D.SHAD
 - TEST
- COLOR TEMP (P03)
 - WHITE
 - AUTO WHITE BALANCE
 - COLOR TEMP
 - BALANCE
 - ATW
 - SPEED
 - MASTER
- GAMMA (P04)
 - LEVEL
 - COARSE
 - TABLE
 - GAMMA
 - TEST
- BLACK GAMMA (P05)
 - LEVEL
 - RANGE
 - TEST
- SATURATION (P06)
 - SATURATION
 - LOW KEY SAT
 - TEST
- KNEE (P07)
 - K POINT
 - K SLOPE
 - KNEE
 - KNEE MAX
 - KNEE SAT
 - AUTO KNEE
 - POINT LIMIT
 - SLOPE
 - ABS
- WHITE CLIP (P08)
 - W CLIP M
 - ABS

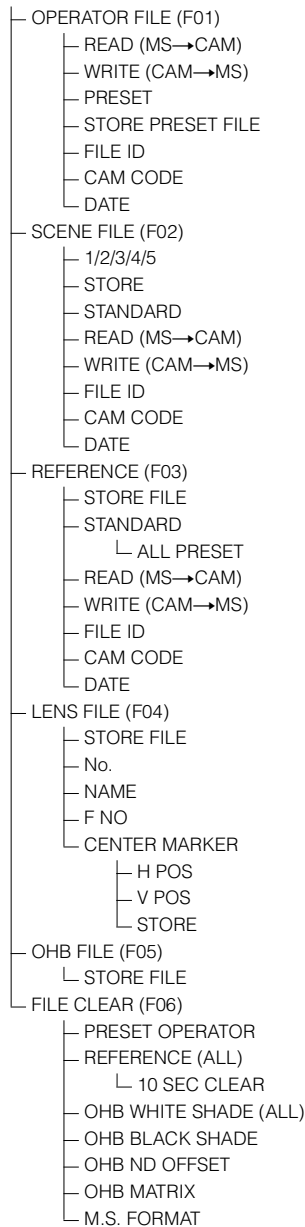
- DETAIL 1 (P09)
 - DETAIL
 - LEVEL
 - LIMITER [M]
 - LIMITER [WHT]
 - LIMITER [BLK]
 - CRISP
 - LVL DEP
 - ABS
- DETAIL 2 (P10)
 - H/V RATIO
 - FREQ
 - MIX RATIO
 - KNEE APT
 - ABS
- SKIN DETAIL (P11)
 - SKIN DTL
 - SKIN GATE
 - AUTO HUE
 - PHASE
 - WIDTH
 - SAT
 - LEVEL
 - ABS
- USER MATRIX (P12)
 - R-G
 - R-B
 - G-R
 - G-B
 - B-R
 - B-G
 - MATRIX
 - PRESET
 - USER
 - MULTI
- MULTI MATRIX (P13)
 - PHASE
 - HUE
 - SAT
 - ALL CLEAR
 - GATE
 - MATRIX
 - PRESET
 - USER
 - MULTI
- SHUTTER (P14)
 - SHUTTER
 - ECS FREQ
- SCENE FILE (P15)
 - 1/2/3/4/5
 - STORE
 - STANDARD
 - READ (MS→CAM)
 - WRITE (CAM→MS)
 - FILE ID
 - CAM CODE
 - DATE

MAINTENANCE

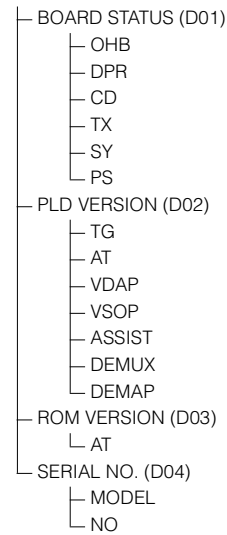
- AUTO SETUP (M01)
 - AUTO BLACK
 - AUTO WHITE
 - AUTO LEVEL
 - AUTO WHITE SHADING
 - AUTO BLACK SHADING
 - TEST
- WHITE SHADING (M02)
 - V SAW
 - V PARA
 - H SAW
 - H PARA
 - WHITE
 - AUTO WHITE SHADING
 - WHITE SHAD MODE
- BLACK SHADING (M03)
 - V SAW
 - V PARA
 - H SAW
 - H PARA
 - BLK SET
 - BLACK
 - MASTER GAIN
 - AUTO BLACK SHADING
- OHB MATRIX (M04)
 - PHASE
 - HUE
 - SAT
 - ALL CLEAR
 - OHB MATRIX
 - MATRIX
- AUTO IRIS (M05)
 - AUTO IRIS
 - WINDOW
 - OVERRIDE
 - IRIS LEVEL
 - APL RATIO
 - IRIS GAIN
 - IRIS CLOSE
- MIC GAIN (M06)
 - MIC1
 - MIC2
 - FRONT MIC +48V
- CALL/TALLY (M07)
 - CCU CALL
 - CAM CALL
- OUTPUT FORMAT (M08)
 - CURRENT
 - ACTIVE LINE
- DOWN CONVERTER (M09)
 - OUTPUT SIGNAL
 - SETTING
 - SD MATRIX
 - DETAIL
 - DTL LEVEL
 - H DTL FREQ
 - ASPECT



FILE



DIAGNOSIS



HD Camera Control Unit

The supplied CD-ROM includes operating instructions for the HXCU-100 HD Camera Control Unit professional disc recorder (English, French, German, Italian and Spanish versions) in PDF format.
For more details, see *"Using the CD-ROM Manual"* on page 7.

Operating Instructions

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

HXCU-100



4140418120

For the HXCU-100

WARNING

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

THIS APPARATUS MUST BE EARTHED.

AVERTISSEMENT

Afin de réduire les risques d'incendie ou d'électrocution, ne pas exposer cet appareil à la pluie ou à l'humidité.

Afin d'écartier tout risque d'électrocution, garder le coffret fermé. Ne confier l'entretien de l'appareil qu'à un personnel qualifié.

CET APPAREIL DOIT ÊTRE RELIÉ À LA TERRE.

WARNUNG

Um die Gefahr von Bränden oder elektrischen Schlägen zu verringern, darf dieses Gerät nicht Regen oder Feuchtigkeit ausgesetzt werden.

Um einen elektrischen Schlag zu vermeiden, darf das Gehäuse nicht geöffnet werden. Überlassen Sie Wartungsarbeiten stets nur qualifiziertem Fachpersonal.

DIESES GERÄT MUSS GEERDET WERDEN.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: THIS WARNING IS APPLICABLE FOR USA ONLY.

If used in USA, use the UL LISTED power cord specified below.

DO NOT USE ANY OTHER POWER CORD.

Plug Cap	Parallel blade with ground pin (NEMA 5-15P Configuration)
Cord	Type SJT, three 16 or 18 AWG wires
Length	Minimum 1.5 m (4 ft. 11 in.), Less than 2.5 m (8 ft. 3 in.)
Rating	Minimum 10A, 125V

Using this unit at a voltage other than 120V may require the use of a different line cord or attachment plug, or both. To reduce the risk of fire or electric shock, refer servicing to qualified service personnel.

WARNING: THIS WARNING IS APPLICABLE FOR OTHER COUNTRIES.

1. Use the approved Power Cord (3-core mains lead)/Appliance Connector/Plug with earthing-contacts that conforms to the safety regulations of each country if applicable.
2. Use the Power Cord (3-core mains lead)/Appliance Connector/Plug conforming to the proper ratings (Voltage, Ampere).

If you have questions on the use of the above Power Cord/ Appliance Connector/Plug, please consult a qualified service personnel.

AVERTISSEMENT

1. Utilisez un cordon d'alimentation (câble secteur à 3 fils)/ fiche femelle/fiche mâle avec des contacts de mise à la terre conformes à la réglementation de sécurité locale applicable.
2. Utilisez un cordon d'alimentation (câble secteur à 3 fils)/ fiche femelle/fiche mâle avec des caractéristiques nominales (tension, ampérage) appropriées.

Pour toute question sur l'utilisation du cordon d'alimentation/ fiche femelle/fiche mâle ci-dessus, consultez un technicien du service après-vente qualifié.

WARNUNG

1. Verwenden Sie ein geprüftes Netzkabel (3-adriges Stromkabel)/einen geprüften Geräteanschluss/einen geprüften Stecker mit Schutzkontakten entsprechend den Sicherheitsvorschriften, die im betreffenden Land gelten.
2. Verwenden Sie ein Netzkabel (3-adriges Stromkabel)/ einen Geräteanschluss/einen Stecker mit den geeigneten Anschlusswerten (Volt, Ampere).

Wenn Sie Fragen zur Verwendung von Netzkabel/ Geräteanschluss/Stecker haben, wenden Sie sich bitte an qualifiziertes Kundendienstpersonal.

For kundene i Norge

Dette utstyret kan kobles til et IT-strømfordelingssystem.

For the customers in the U.S.A.

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.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

All interface cables used to connect peripherals must be shielded in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

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.

For the customers in Canada

This Class A digital apparatus complies with Canadian ICES-003.

Pour les clients au Canada

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

For the customers in Europe

This product with the CE marking complies with both the EMC Directive and the Low Voltage Directive issued by the Commission of the European Community. Compliance with these directives implies conformity to the following European standards:

- EN60950-1: Product Safety
- EN55103-1: Electromagnetic Interference (Emission)
- EN55103-2: Electromagnetic Susceptibility (Immunity)

This product is intended for use in the following Electromagnetic Environment: E4 (controlled EMC environment, ex. TV studio).

Pour les clients en Europe

Ce produit portant la marque CE est conforme à la fois à la Directive sur la compatibilité électromagnétique (EMC) et à la Directive sur les basses tensions émises par la Commission de la Communauté Européenne.

La conformité à ces directives implique la conformité aux normes européennes suivantes :

- EN60950-1 : Sécurité des produits
- EN55103-1 : Interférences électromagnétiques (émission)
- EN55103-2 : Sensibilité électromagnétique (immunité)

Ce produit est prévu pour être utilisé dans l'environnement électromagnétique suivants : E4 (environnement EMC contrôlé, ex. studio de télévision).

Für Kunden in Europa

Dieses Produkt besitzt die CE-Kennzeichnung und erfüllt die EMV-Richtlinie sowie die Niederspannungsrichtlinie der EG-Kommission.

Angewandte Normen:

- EN60950-1: Sicherheitsbestimmungen
- EN55103-1: Elektromagnetische Verträglichkeit (Störaussendung)
- EN55103-2: Elektromagnetische Verträglichkeit (Störfestigkeit)

Für die folgenden elektromagnetischen Umgebungen: E4 (kontrollierter EMV-Bereich, z.B. Fernsehstudio).

For the customers in Europe, Australia and New Zealand

WARNING

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Pour les clients en Europe, Australie et Nouvelle-Zélande

AVERTISSEMENT

Il s'agit d'un produit de Classe A. Dans un environnement domestique, cet appareil peut provoquer des interférences radio, dans ce cas l'utilisateur peut être amené à prendre des mesures appropriées.

Für Kunden in Europa, Australien und Neuseeland

WARNUNG

Dies ist eine Einrichtung, welche die Funk-Entstörung nach Klasse A besitzt. Diese Einrichtung kann im Wohnbereich Funkstörungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen durchzuführen und dafür aufzukommen.

For the customers in Europe

The manufacturer of this product is Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.

The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters

please refer to the addresses given in separate service or guarantee documents.

This apparatus shall not be used in a residential area.

Pour les clients en Europe

Le fabricant de ce produit est Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japon.

Le représentant autorisé pour EMC et la sécurité des produits est Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Allemagne. Pour toute question concernant le service ou la garantie, veuillez consulter les adresses indiquées dans les documents de service ou de garantie séparés.

Ne pas utiliser cet appareil dans une zone résidentielle.

Für Kunden in Europa

Der Hersteller dieses Produkts ist Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.

Der autorisierte Repräsentant für EMV und Produktsicherheit ist Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Deutschland. Bei jeglichen Angelegenheiten in Bezug auf Kundendienst oder Garantie wenden Sie sich bitte an die in den separaten Kundendienst- oder Garantiedokumenten aufgeführten Anschriften.

Dieser Apparat darf nicht im Wohnbereich verwendet werden.

For the State of California, USA only

Perchlorate Material - special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate
Perchlorate Material : Lithium battery contains perchlorate.

For the customers in Taiwan only



廢電池請回收

For the HKCU-FP1

For the customers in Europe

This product with the CE marking complies with the EMC Directive issued by the Commission of the European Community.

Compliance with this directive implies conformity to the following European standards:

- EN55103-1: Electromagnetic Interference (Emission)
- EN55103-2: Electromagnetic Susceptibility (Immunity)

This product is intended for use in the following Electromagnetic Environment: E4 (controlled EMC environment, ex. TV studio).

Pour les clients en Europe

Ce produit portant la marque CE est conforme à la Directive sur la compatibilité électromagnétique (EMC) émise par la Commission de la Communauté européenne.

La conformité à cette directive implique la conformité aux normes européennes suivantes :

- EN55103-1 : Interférences électromagnétiques (émission)
- EN55103-2 : Sensibilité électromagnétique (immunité)

Ce produit est prévu pour être utilisé dans l'environnement électromagnétique suivant : E4 (environnement EMC contrôlé, ex. studio de télévision).

Für Kunden in Europa

Dieses Produkt besitzt die CE-Kennzeichnung und erfüllt die EMV-Richtlinie der EG-Kommission.

Angewandte Normen:

- EN55103-1: Elektromagnetische Verträglichkeit (Störaussendung)
- EN55103-2: Elektromagnetische Verträglichkeit (Störfestigkeit)

Für die folgende elektromagnetische Umgebung: E4 (kontrollierter EMV-Bereich, z.B. Fernsehstudio).

For the customers in Europe, Australia and New Zealand

WARNING

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Pour les clients en Europe, Australie et Nouvelle-Zélande

AVERTISSEMENT

Il s'agit d'un produit de Classe A. Dans un environnement domestique, cet appareil peut provoquer des interférences radio, dans ce cas l'utilisateur peut être amené à prendre des mesures appropriées.

Für Kunden in Europa, Australien und Neuseeland

WARNUNG

Dies ist eine Einrichtung, welche die Funk-Entstörung nach Klasse A besitzt. Diese Einrichtung kann im Wohnbereich Funkstörungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen durchzuführen und dafür aufzukommen.

For the customers in Europe

The manufacturer of this product is Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.

The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany.

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Ne pas utiliser cet appareil dans une zone résidentielle.

Für Kunden in Europa

Der Hersteller dieses Produkts ist Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.

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Dieser Apparat darf nicht im Wohnbereich verwendet werden.

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Using the CD-ROM Manual

The supplied CD-ROM includes versions of the Operation Manuals for the HSCU-300 in English, French, German, Italian, and Spanish in PDF format.

Preparations

The following program must be installed on your computer in order to read the Operation Manuals contained on the CD-ROM.

- Adobe Reader Version 6.0 or higher

If Adobe Reader is not installed, you can download it from the following URL:
<http://www.adobe.com/>

Adobe and Adobe Reader are trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Reading the CD-ROM Manual

To read the Operation Manuals contained on the CD-ROM, do the following.

- 1 Insert the CD-ROM in your CD-ROM drive.**
A cover page appears automatically in your browser.
If it does not appear automatically in the browser, double click on the index.htm file on the CD-ROM.

- 2 Select and click on the Operation Manuals that you want to read.**

This opens the PDF file of the Operation Manuals.

Memo

The files may not be displayed properly, depending on the version of Acrobat Reader. In such a case, install the latest version you can download from the URL mentioned in "Preparations" above.

Note

If you have lost or damaged the CD-ROM, you can purchase a new one to replace it. Contact your Sony service representative.

Overview

The HXCU-100 Camera Control Unit connects to a Sony HXC-100/HSC-300¹⁾ HD color camera. It performs signal processing, provides an interface for external equipment, and supplies power to the camera.

The CCU features a down converter which converts HD signals¹⁾ from a camera to SD signals²⁾, and a simplified return video up converter which converts SD signals to HD signals. It is compatible with both HD camera system and SD camera system formats, making it flexible to use.

- 1) An HSC-300 and HXCU-100 can be connected if both units are of version 1.10 or later.
- 2) HD (High Definition) signal: Name for 1125/750-line HDTV signals
- 3) SD (Standard Definition) signal: Name for NTSC/PAL, 525/625 component, and 525/625 composite signals

The CCU can be combined with an RCP-1000-series Remote Control Panel (optional) to form a camera control system. The CCU also supports an HKCU-FP1 CCU Control Panel (optional) which can be mounted on the front of the CCU to form a simple remote control system.

Features

Multi-system input/output interface

The HXCU-100 is equipped with the following input and output signal connectors as standard equipment.

Video outputs

- SDI (main), 2-system (HD/SD selectable, embedded digital audio)
- SDI (monitor), 2-system (HD/SD selectable, embedded digital audio, superimposed character and marker display)
- Analog composite (VBS 2-system, PIX 1-system, WF 1-system)
- Analog component, 1-system (HD Y/Pb/Pr, HD R/G/B, SD Y/R-Y/B-Y, SD R/G/B 4-format selectable)
- Sync, 1-system (HD/SD selectable)

Video inputs

- Reference input (HD/SD selectable)
- SDI return input, 2-system (HD/SD selectable)
- VBS return input, 2-system
- VBS teleprompter input, 1-system

Audio input/outputs

- Microphone (analog) output, 2-system (XLR-3-pin)
- Intercom input/output, 2-system (D-sub 25-pin)
- PGM (program audio) input, 2-system (D-sub 25-pin)

Other input/outputs

- Tally (R/G)
- Microphone remote (D-sub 15-pin)
- WF (waveform monitor) remote output (D-sub 15-pin)
- WF (waveform monitor) mode output (4-pin)
- Trunk (D-sub 9-pin)

- REMOTE (8-pin)
- LAN (RJ-45, 8-pin)

External sync signals

The CCU can be locked to an external sync signal. Either an HD tri-level sync signal or an SD sync (black burst) signal can be used as the sync signal.

Digital triax transmission

The CCU and camera are connected using the industry-standard double-shielded triaxial camera cable (commonly referred to as triax). The camera and CCU are equipped with the latest Sony-developed digital transmission technology which can transmit high-resolution pictures between the camera and CCU, regardless of the cable length.

Built-in down converter

HD signals from the camera can be converted to high-resolution SD component SDI output signals using the wideband down converter. The output signal aspect ratio can be set to 4:3 edge crop, 16:9 squeeze, or letterbox. The down converted SD signal has independent image enhancement, gamma, and matrix functions that can be controlled externally.

Built-in simplified up converter

SD signal return video is displayed in the HD viewfinder using a simple up converter. The return video aspect ratio can be set to 4:3 edge crop, 16:9 squeeze, or letterbox.

Electric shock prevention

A safety function cuts the high-voltage supply from the CCU if the connection to the camera becomes unsafe.

When power is applied, low-voltage power is first supplied to the camera. After the connected camera is correctly identified using tone signal detection, the regular DC180 V high-voltage power is supplied to the camera. Power is not supplied to cameras not connected via the triax cable.

Alarm indicators are also fitted to indicate cable open-circuit and short-circuit conditions.

Wide range of audio functions

The CCU is fitted with two-channel microphone output, video signals with embedded audio, and PGM (program) audio input/output connectors. It also features an intercom system with two independent channels, and supports four-wire and RTS/Clear-Com intercom systems.

For information on support for RTS/Clear-Com systems, contact a Sony service or sales representative.

Microphone volume control

The camera's microphone volume can be controlled via the MIC REMOTE connector.

Character monitor signal output

The self-diagnosis status screens and setup menu can be output as a text character display on the video output signal. See "Video outputs" on page 7.

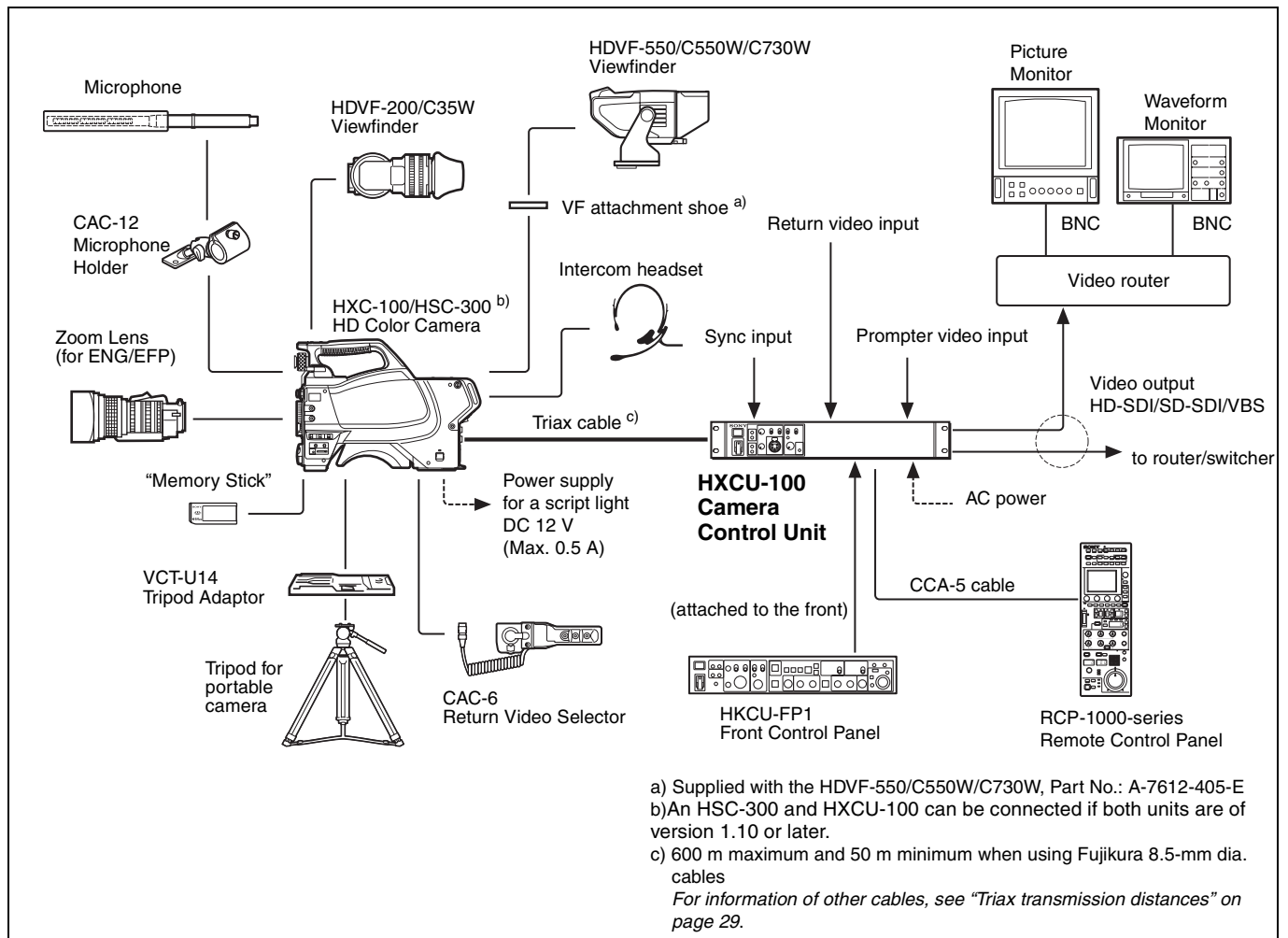
Rack mountable

The CCU can be installed in a standard EIA 19-inch rack. The height of the unit is 1.5U.

HKCU-FP1 CCU Control Panel (optional)

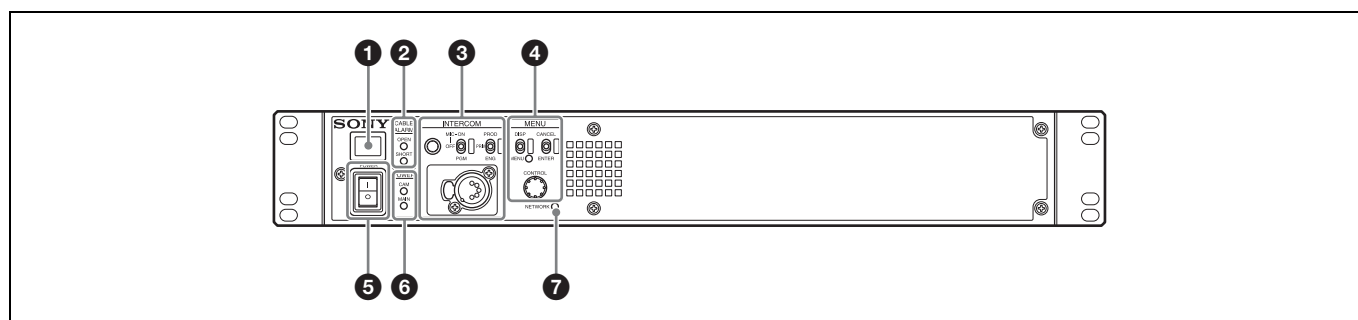
The HKCU-FP1 is a control panel that can be mounted in place of the standard front panel on the CCU. Operating switches and knobs are used to adjust the basic CCU functions. The control panel is connected to the CCU using only 5 screws and an internal wiring harness for easy installation and removal.

System Configuration Example



Locations and Functions of Parts

Front Panel

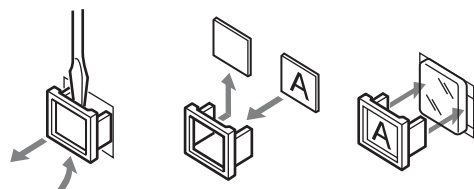


❶ Tally light

Turns on red to indicate a red tally signal is being received (such as when the picture from the camera connected to the CCU is being used). When the CALL button on the camera, the MSU-1000/1500 Master Setup Unit, or the RCP-1000-series Remote Control Panel is pressed, the light turns off if lit or turns on if not lit.

Turns on green to indicate a green tally signal is being received.

A number plate supplied with the CCU can be attached here (see the following figure).



❷ CABLE ALARM indicators

OPEN: Turns on when a camera is not connected (open circuit) to the CAMERA connector on the rear panel via a triax cable. While on, the CCU does not supply any power to the camera.

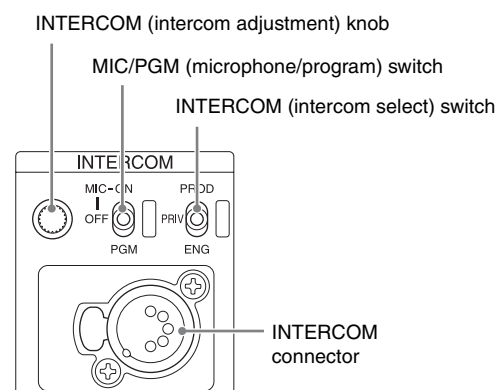
It flashes when there is a problem with the transmission between the camera and the CCU.

Note

It may also turn on when using the camera with an external DC supply.

SHORT: Turns on when there is an overcurrent condition (short circuit) on the triax cable. While on, the CCU does not supply any power to the camera.

❸ INTERCOM audio input/output and control block



• INTERCOM (intercom adjustment) knob

Adjusts the headset audio level.

• MIC/PGM (microphone/program) switch

ON: Turns the headset microphone on.

OFF: Turns the headset microphone off.

PGM: Selects program audio output. In this mode, the INTERCOM knob adjusts the headset program audio level.

• INTERCOM (intercom select) switch

Selects the intercom signal input/output connection source for the INTERCOM connector on the rear panel.

PROD: Connects the producer line.

PRIV: Disconnects both the producer line and engineer line, allowing private communication between CCU and camera only.

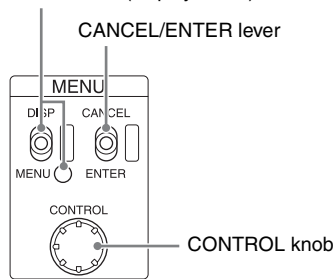
ENG: Connects the engineer line.

• INTERCOM connector (XLR 5-pin)

Intercom headset connection.

4 MENU control block

DISP/MENU (display/menu) lever and indicator



- **DISP/MENU (display/menu) lever and indicator**

Selects the status display or setup menu display. In setup menu mode, the indicator turns on.

- **CANCEL/ENTER lever**

In setup menu mode, used to cancel and enter settings.

- **CONTROL knob (rotary encoder)**

In status screen mode, used to change the displayed page. In setup menu mode, used to move the cursor on a page and to change menu settings. Pressing the CONTROL knob performs the same function as setting the CANCEL/ENTER lever to the ENTER position.

5 POWER switch

Switches the power for the entire system on and off, including the CCU, camera, and the RCP-1000-series Remote Control Panel connected to the REMOTE connector on the rear panel. Pressing the “I” side turns the camera system on, and pressing the “O” side turns it off.

6 POWER indicator

CAM: Turns on when power is supplied to the camera.

MAIN: Turns on when the CCU power supply is turned on. It flashes when there is a problem with the fan.

7 NETWORK indicator

Displays the network system connection status.

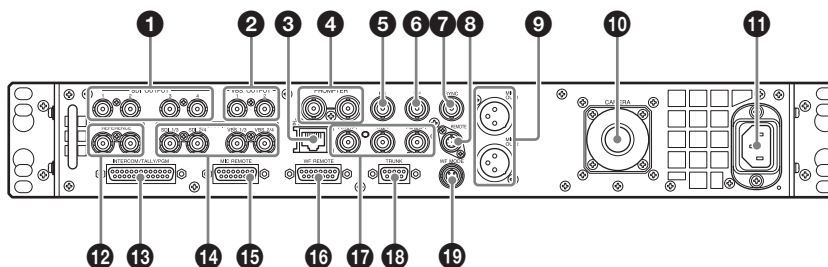
On: Indicates that external control equipment (MSU-1000/1500 Master Setup Unit, RCP-1000-series Remote Control Panel, or other device) is connected.

Flashing: Indicates a connection problem with the external control equipment (MSU-1000/1500 Master Setup Unit, RCP-1000-series Remote Control Panel, or other device).

Off: Indicates that a LAN cable is not connected or that the network system connection parameters have not been set.

See “Network diagnostics” on page 16 and “NETWORK SETTINGS menu” on page 28.

Rear Panel



1 SDI OUTPUT 1 to 4 connectors (BNC type)

Outputs the camera signals in HD SDI or SD SDI signal format.

The SDI OUTPUT 3 and SDI OUTPUT 4 connectors can also output signals with superimposed character or marker display.

2 VBS OUTPUT 1, 2 (composite video signal 1, 2) connectors (BNC type)

Outputs (2-system) the camera signals in composite signal format.

3 LAN jack (RJ-45, 8-pin)

Connects to a LAN hub (10BASE-T/100BASE-TX), when using a network connection, via a LAN cable (shielded type, category 5 or higher).

CAUTION

- For safety, do not connect the connector for peripheral device wiring that might have excessive voltage to this port. Follow the instructions for this port.
- When you connect the LAN cable of the unit to peripheral device, use a shielded-type cable to prevent malfunction due to radiation noise.

ATTENTION

- Par mesure de sécurité, ne raccordez pas le connecteur pour le câblage de périphériques pouvant avoir une tension excessive à ce port. Suivez les instructions pour ce port.

VORSICHT

- Aus Sicherheitsgründen nicht mit einem Peripheriegerät-Anschluss verbinden, der zu starke Spannung für diese Buchse haben könnte. Folgen Sie den Anweisungen für diese Buchse.

4 PROMPTER (teleprompter input) connectors (BNC type)

Inputs the VBS signal for the teleprompter. The input signal is output from the other connector as-is (loop-through output). If the loop-through output is not used, connect it to a 75 Ω terminator.

5 PIX (picture monitor output) connector (BNC type)

Outputs a video signal for a picture monitor. It can also output a signal with superimposed character display.

6 WF (waveform monitor output) connector (BNC type)

Outputs a video signal for a waveform monitor.

7 SYNC (sync signal output) connector

Outputs a sync signal for connection to the sync signal input connector of a waveform monitor or picture monitor.

8 REMOTE connector (8-pin)

Transmits and receives control signals from a MSU-1000/1500 Master Setup Unit or RCP-1000-series Remote Control Panel via a CCA-5 cable (optional). It also supplies power when connected to an RCP-1000-series Remote Control Panel.

9 MIC OUT1, MIC OUT2 (microphone output 1, 2) connectors (XLR 3-pin)

Outputs the camera microphone signals.

10 CAMERA connector (triax connector)

Connects to the camera via a triax cable. The camera sends all video and audio signals to the CCU, and the CCU sends control signals, return video and audio signals, as well as power, to the camera over a single triax cable.

11 AC supply input connector

Connects to the AC supply via the specified power cord (optional). A plug holder (optional) can be used to secure the power cord to the CCU.

12 REFERENCE (reference input) connectors (BNC type)

Inputs an HD tri-level reference sync signal or SD reference sync signal (black burst signal) on either of the two connectors. The input signal is output from the other connector as-is (loop-through output). If the loop-through output is not used, connect it to a 75 Ω terminator.

13 INTERCOM/TALLY/PGM (intercom/tally/program audio) connector (D-sub 25-pin)

Transmits and receives the various intercom, tally, and program audio signals. It connects to the intercom/tally/program audio connector of the intercom system.

14 RETURN INPUT (return video input) connector block

• SDI 1/3, 2/4 (SDI return video 1/3, 2/4 input) connectors (BNC type)

• VBS 1/3, 2/4 (VBS return video 1/3, 2/4 input) connectors (BNC type)

Inputs the HD SDI return video signals and SD SDI return video signals (2-system), and the VBS return video signals (2-system).

For information on the return video signal combinations, see "Return Signal Combinations" on page 29.

15 MIC REMOTE (microphone remote) connector (D-sub 15-pin)

Connects to an external control device, such as an audio mixer, which can select the camera microphone gain to one of five values (20/30/40/50/60 dB) in response to the audio conditions when shooting.

This connector can also output a red tally signal and green tally signal.

16 WF REMOTE (waveform monitor remote) connector (D-sub 15-pin)

Outputs signals for a waveform monitor when controlling the waveform monitor display remotely from the MSU-1000/1500 Master Setup Unit or RCP-1000-series Remote Control Panel. It connects to a recall-type waveform monitor.

For connection details, refer to the waveform monitor manual.

17 Pr/R/R-Y, Y/G/Y, Pb/B/B-Y (component signals) connectors (BNC type)

Outputs the HD component signals, SD component signals, HD RGB signals, or SD RGB signals from the corresponding connectors.

18 TRUNK connector (D-sub 9-pin, RS-422A standard)

Connects to an external device to provide a communication path via the CCU between that device and another external device connected to the REMOTE connector on the camera.

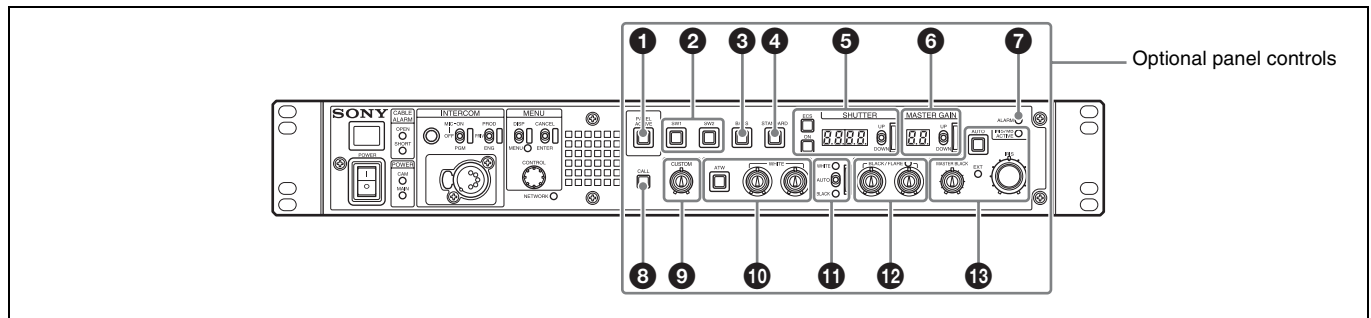
19 WF MODE (waveform monitor mode output) connector (4-pin)

Connects to a waveform monitor and is used when monitoring each of the 3 R/G/B waveforms simultaneously in sequential mode.

When the SEQ button on the MSU-1000/1500 Master Setup Unit or RCP-1000-series Remote Control Panel is pressed, the video signal output from the WF connector changes to a sequence signal.

HKCU-FP1 CCU Control Panel (Optional)

The switches and knobs not described below are identical to those on the front panel. See “Front Panel” on page 10.



1 PANEL ACTIVE button

Activates the optional HKCU-FP1 CCU Control Panel to control the camera connected to the CCU (panel active state). When the button is lit, the IRIS/MB ACTIVE indicator also turns on simultaneously. When the button is not lit, the optional panel is deactivated (lock state) to prevent inadvertent operation.

2 SW1, SW2 (assignable switch 1, 2) buttons

Controls the function assigned to each button on the <FRONT PANEL 1> page in the CCU CONFIGURATION menu. The button light turns on/off as the assigned function is switched on/off.

See “ASSIGNABLE/CUSTOM” on <FRONT PANEL 1> on page 26.

3 BARS (color bars) button

Switches on the color bar signal output to the monitor connected to the CCU (button light turns on). Pressing the button again restores the previous signal output.

4 STANDARD button

Stores the current camera settings as the reference file data values in the camera (button light turns on for a few seconds). While the button is lit, pressing the button again cancels the operation and restores the previous data values.

5 SHUTTER controls

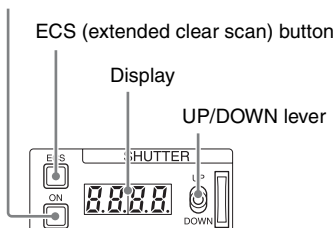
Controls the shutter settings.

ON button

ECS (extended clear scan) button

Display

UP/DOWN lever



• ON button

Switches the normal shutter function on/off (button light turns on/off).

• ECS (extended clear scan) button

Switches the extended clear scan function on/off (button light turns on/off).

• Display

When the ECS button is lit: Displays the clear scan frequency. When the ON button is lit: Displays the shutter speed.

• UP/DOWN lever

When the ECS button is lit: Adjusts the clear scan frequency. UP increases the frequency, and DOWN decreases the frequency.

When the ON button is lit: Adjusts the shutter speed. UP increases the shutter speed, and DOWN decreases the shutter speed.

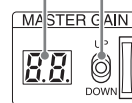
Holding the lever UP or DOWN advances the setting in that direction.

6 MASTER GAIN controls

Controls the video output signal gain in response to the lighting of the subject.

Display

UP/DOWN lever



• Display

Displays the video output signal gain setting (dB units).

• UP/DOWN lever

Adjusts the video output signal gain setting (dB units). UP increases the gain, and DOWN decreases the gain.

Holding the lever UP or DOWN advances the setting in that direction.

7 ALARM indicator

Lights up red to indicate an error in the CCU or camera system.

8 CALL button

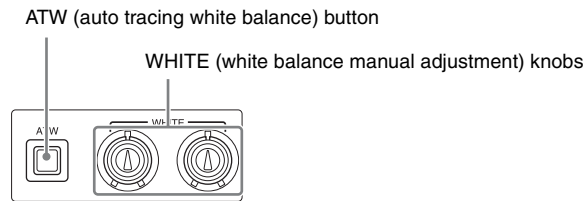
Sends a call signal to the camera connected to the CCU and any external controller (such as the MSU-1000/1500 Master Setup Unit or RCP-1000-series Remote Control Panel). The CALL button is commonly used to raise the camera operator or external control equipment operators on the intercom.

9 CUSTOM (custom volume) knob

Controls the function assigned to the knob on the <FRONT PANEL 1> page in the CCU CONFIGURATION menu. Turning the knob adjusts the assigned function.

See “VOLUME” on <FRONT PANEL 1> on page 27 and “CUSTOM” on <FRONT PANEL 2> on page 27.

10 White balance adjustment controls



• ATW (auto tracing white balance) button

Switches the white balance auto adjustment function on/off (button light turns on/off). The white balance is automatically adjusted in response to the lighting conditions.

• WHITE (white balance manual adjustment) knobs

Adjusts the white balance manually. The left knob adjusts the R coefficient, and the right knob adjusts the B coefficient. The adjustment can be set to relative or absolute value mode on the <FRONT PANEL 1> page in the CCU CONFIGURATION menu. The default value is relative value mode.

See "R/B WHITE" on <FRONT PANEL 1> on page 27 and "R/B WHITE" on <FRONT PANEL 2> on page 27.

Note

When the ATW button is lit, the WHITE knobs are deactivated.

11 AUTO WHITE/BLACK (white balance/black balance auto adjustment) lever

Initiates the white balance or black balance auto adjustment function.

WHITE automatically adjusts the white balance, and BLACK automatically adjusts the black balance.

Notes

- When the WHITE knobs are set to absolute value mode, the white balance cannot be automatically adjusted using the AUTO WHITE/BLACK lever.
- When the BLACK/FLARE indicator is not lit and the BLACK/FLARE knobs are set to absolute value mode, the black balance cannot be automatically adjusted using the AUTO WHITE/BLACK lever.

12 BLACK/FLARE (black balance/flare balance manual adjustment) knobs and indicator

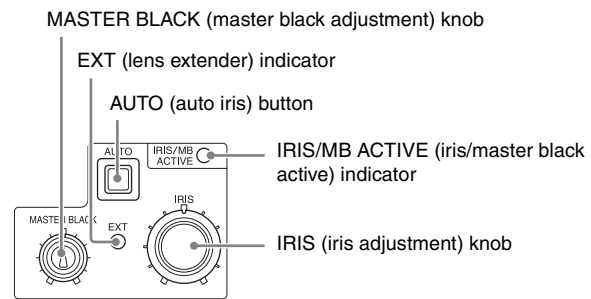
Adjusts the black balance and flare balance manually. When the indicator is not lit, the knobs adjust the black balance. When the indicator is lit, the knobs adjust the flare balance. The left knob adjusts the R coefficient, and the right knob adjusts the B coefficient.

The indicator operating mode (on/off function) can be set on the <FRONT PANEL 1> page in the CCU CONFIGURATION menu.

The adjustment can be set to black balance or flare balance adjustment in relative or absolute value mode on the <FRONT PANEL 1> page in the CCU CONFIGURATION menu. The default value is black balance adjustment in relative value mode.

See "R/B BLACK" on <FRONT PANEL 1> on page 27 and "R/B BLACK" on <FRONT PANEL 2> on page 27.

13 IRIS/MASTER BLACK adjustment controls



• MASTER BLACK (master black adjustment) knob

Adjusts the master black manually.

The adjustment can be set to relative or absolute value mode on the <FRONT PANEL 1> page in the CCU CONFIGURATION menu. The default value is relative value mode.

See "M BLACK" on <FRONT PANEL 1> on page 27 and "M BLACK" on <FRONT PANEL 2> on page 27.

• EXT (lens extender) indicator

Turns on to indicate that the lens extender is in-use on the camera.

• AUTO (auto iris) button

Switches the lens auto iris adjustment function on/off (button light turns on/off). The iris is automatically adjusted in response to the input light level.

When the button is not lit, the iris is adjusted manually.

• IRIS/MB ACTIVE (iris/master black active) indicator

Indicates, when lit, that the iris and master black controls are active (in panel active state set by the PANEL ACTIVE button). When the indicator is lit, the iris and master black can be adjusted from the CCU.

• IRIS (iris adjustment) knob

When the AUTO button is not lit: Adjusts the lens iris manually. When the AUTO button is lit: Finely adjusts the auto adjusted iris value.

The adjustment can be set to relative or absolute value mode on the <FRONT PANEL 1> page in the CCU CONFIGURATION menu. The default value is relative value mode.

See "IRIS" on <FRONT PANEL 1> on page 27 and "IRIS" on <FRONT PANEL 2> on page 27.

Status Display

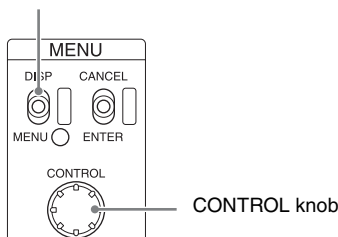
The CCU system status can be monitored using a picture monitor connected to the PIX output.

For information on monitoring and changing settings, see “Setup Menu” on page 18.

Displaying the Status Screen

The status screen is controlled using the knob and levers in the MENU control block on the front panel.

DISP/MENU lever and indicator



To display the status screen

Set the DISP/MENU lever to the DISP position. The most recently viewed status screen page is displayed (when first powered on, the camera settings page is displayed). Turning the CONTROL knob changes the displayed page.

To exit the status screen display

In status screen display mode, set the DISP/MENU lever to the DISP position.

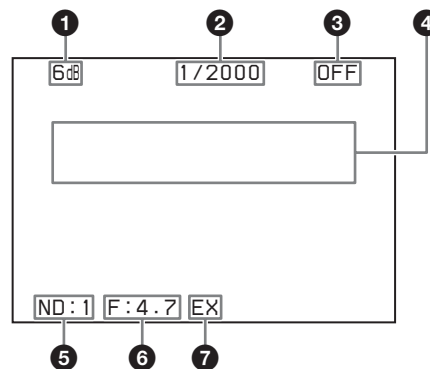
Status Display Screen

The following information is displayed on the status display screen.

- Camera settings
- System status
- CCU hardware diagnostics
- Camera system diagnostics
- Network diagnostics
- CCU SY board diagnostics
- CCU DPR board diagnostics
- Front panel diagnostics (displayed only when the HKCU-FP1 CCU Control Panel is fitted)
- Camera hardware diagnostics
- ROM version information for major components

Camera settings

Page 1



1 Master gain value

Video output signal gain (dB units)

2 Shutter speed/Clear scan frequency

Shutter speed value. When ECS is on, the clear scan frequency is displayed.

3 Shutter/ECS

Shutter/ECS on/off indicator

4 Camera auto control information area

Top: Displays the Auto Setup category and execution status

Bottom: Displays the execution item

5 ND filter

Current ND filter selection

6 F-stop value

Lens f-stop value (iris value)

7 EX (lens extender)

Lens extender indicator

Notes

- Items that are turned off using the <DISPLAY> page settings of the CCU CONFIGURATION menu are not displayed.
- A “-” mark is displayed for each item when a camera is not connected.
- Even if an HSC-300 is connected, the CC filter selection is not displayed.

Page 2

6dB	1/2000	OFF
White		Black
R: 0		R: 0
G: 0		G: 0
B: 0		B: 0
		M: 0
BLK γ		Flare
: 0		R: 0
DTL		G: 0
: 0		B: 0
ND:1	F:4.7	EX

White: White balance R/G/B value

Black: Black balance R/G/B/Master value

BLK γ: Black gamma value

Flare: Flare balance R/G/B value

DTL: Detail level

Note

The items along the bottom edge are common to both pages 1 and 2.

System status

System Status		1/12
HXC-100	1080/59.94I	
Reference:	Free Lock	
SDI-1/2	: 1080/59.94I	
SDI-3/4	: 525/59.94I	
Component:	SD YCD	
Return1	: 1080/59.94I	
Return2	: 525/59.94I	
Return3	: NTSC	
Return4	: NTSC	

The camera model name and signal format are displayed at the top of the page (a “-” mark is displayed instead when a camera is not connected).

Reference: Reference signal format and lock status

SDI-1/2: SDI OUTPUT 1/2 connector output format setting

SDI-3/4: SDI OUTPUT 3/4 connector output format setting

Component: Component signal connector output format setting

Return1: Return 1 return signal format setting

Return2: Return 2 return signal format setting

Return3: Return 3 return signal format setting

Return4: Return 4 return signal format setting

CCU hardware diagnostics

Diagnosis		2/12
DPR	:OK	SDI :OK
SY	:OK	VIF :OK
Front Panel	: OK	

The camera Auto Setup category, and the corresponding setup item and status are displayed at the top of the page.

DPR: DPR board status

SDI: SDI board status

SY: SY board status

VIF: VIF board status

Front Panel: HKCU-FP1 CCU Control Panel status (displayed only when the HKCU-FP1 CCU Control Panel is fitted)

Camera system diagnostics

Page 1

System Diag 1/3		3/12
TRIAX Type	Digital	
Cable Connect		
Comp. Auto		
Step	4	
Fan Power	OK	
Timer	96H	
CCU Power	AC	OK
SerialNo	100001	

TRIAX Type: Triax transmission mode

TRIAX Cable: CCU triax cable connection status

TRIAX Comp.: Triax cable compensation mode selection

TRIAX Step: Triax cable compensation step (internal circuit step display)

Fan Power: CCU power supply fan status

Timer: Elapsed time since power-on

CCU Power: CCU power supply type and status

SerialNo: CCU serial number

Page 2

System Diag 2/3		4/12
CAMERA	Cable Connect	
	Data	OK
	Power	OK
	Tone Detect	
REMOTE	Cable Connect	
	Data	OK
	Power	OK

CAMERA Cable: Camera cable connection status

CAMERA Data: Camera data transmission status

CAMERA Power: Camera power supply status

CAMERA Tone: Camera identification tone detection status

REMOTE Cable: Remote device cable connection status

REMOTE Data: Remote device data transmission status

REMOTE Power: Remote device power supply status

Page 3

System Diag 3/3		5/12
Intercom		
CCU	Private	
CAMERA CH1	ENG	
	MIC	OFF
CH2	ENG	
	MIC	OFF
CAM MIC Gain	Local	
CH1	60dB	
CH2	60dB	

Intercom CCU: CCU intercom selection

Intercom CAMERA CH1: Camera intercom channel 1 selection and microphone status

Intercom CAMERA CH2: Camera intercom channel 2 selection and microphone status

CAM MIC Gain: Camera microphone circuit control selection

CAM MIC CH1: Camera microphone channel 1 amplifier gain

CAM MIC CH2: Camera microphone channel 2 amplifier gain

Network diagnostics

Page 1

Network Diag 1/3		6/12
MacAddress:	000000-000000	
Auto Negotiation:	ON	
Auto MDI/MDIX	: ON	
Connection Speed:	100M	
Duplex Mode	: HALF	
MDI/MDIX	: MDIX	
Link Status	: OK	

MacAddress: MAC address stored in CCU EEPROM

Auto Negotiation: Auto negotiation setting

Auto MDI/MDIX: Auto-MDIX setting

Connection Speed: Connection speed setting
Duplex Mode: Communication method setting
MDI/MDIX: Communications port wiring configuration selection
Link Status: Network connection status

Page 2

```
*Network Diag 2/3* 7/12

CNS Mode      :BRIDGE
CCU No.       :1
```

CNS Mode: REMOTE and LAN connectors mode setting
CCU No.: CCU number setting

Page 3

```
*Network Diag 3/3* 8/12

IP Address
0. 0. 0. 0
Subnet Mask
0. 0. 0. 0
Default Gateway
0. 0. 0. 0
```

IP Address: CCU IP address setting
Subnet Mask: CCU subnet mask setting
Default Gateway: CCU default gateway setting

CCU SY board diagnostics

```
*SY Diag* 9/12

Reference :HD
HD-SD Delay:Line(90H)
PLD Status :OK
SY :1.00
RET :1.00

SY PWR:OK VIF PWR:OK
```

Reference: Reference signal setting
HD-SD Delay: HD to SD delay setting
PLD Status: PLD status
PLD SY: SY-PLD version
PLD RET: RET-PLD version
SY PWR: SY board power supply status
VIF PWR: VIF board power supply status

CCU DPR board diagnostics

```
*DPR Diag* 10/12

HD CB :BAR 16:9(100%)
SD CB :SMPTE
SEQ ON:NPN
PLD Status:OK
DE-MUX:1.00
ANALOG:1.00
POST :1.00
MAP :1.00
IIC :OK
DPR PWR:OK SDI PWR:OK
```

HD CB: HD color bar setting
SD CB: SD color bar setting
SEQ ON: SEQ ON polarity
PLD Status: PLD status
PLD DE-MUX: DEMUX-PLD version
PLD ANALOG: ANALOG-PLD version
PLD POST: POST-PLD version
PLD MAP: MAP-PLD version
IIC: IIC bus control status
DPR PWR: DPR board power supply status
SDI PWR: SDI board power supply status

Front panel diagnostics

This screen is displayed only when the HKCU-FP1 CCU Control Panel is fitted.

```
*Front Panel Diag* 11/13

Assignable/Custom
SW1 :CAM POWER
SW2 :5600K
VOLUME :SD DTL Level

SW Bright:Low
IIC :OK
```

Assignable/Custom SW1: Function assigned to the SW1 button
Assignable/Custom SW2: Function assigned to the SW2 button
Assignable/Custom VOLUME: Function assigned to the CUSTOM knob
SW Bright: Button lights LED brightness setting
IIC: IIC bus control status

Camera hardware diagnostics

```
*CAMERA Diag* 11/12

ALL BOARD OK
```

Displays the camera hardware status.

ROM Version Information

ROM Version	12/12
CAMERA HXC-100	
1.00	09.01.01
CCU HXCU-100	
1.00	09.01.01
REMOTE RCP-920	
1.20	09.01.01

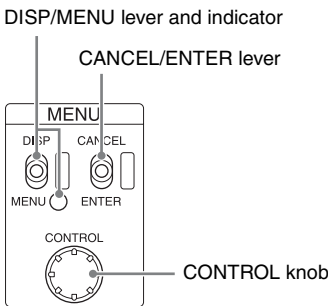
CAMERA: Camera model name and ROM version
CCU: CCU model name and ROM version
REMOTE: REMOTE connector device model name and ROM version

Setup Menu

The CCU system and peripheral settings can be modified using a picture monitor connected to the PIX output.

Changing Menu Item Settings

The menu screen is controlled using the knob and levers in the MENU control block on the front panel. Setting the CANCEL/ENTER lever to the ENTER position and pressing the CONTROL knob perform the same function.



To display a menu page

Set the DISP/MENU lever to the MENU position. When first powered on, the CCU MENU page is displayed.

To display the CCU MENU page

In menu display mode, turn the CONTROL knob to move the ➡ arrow to TOP in the upper right corner of the menu page, then press the CONTROL knob. The CCU MENU showing the menu configuration is displayed.

** CCU MENU **
➡SYSTEM OPERATION
CCU CONFIGURATION
NETWORK SETTINGS

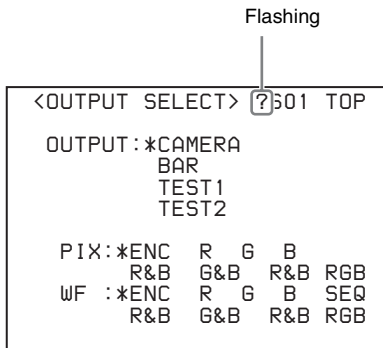
Menu name	Description
SYSTEM OPERATION	Input/output signal format and system-related settings
CCU CONFIGURATION	CCU configuration settings
NETWORK SETTINGS	Network-related settings

To select an item in the CCU MENU

Turn the CONTROL knob to move the ➡ arrow up/down to the desired menu item, then press the CONTROL knob. The most recently viewed page in the selected menu is displayed.

To change the displayed page

- 1 Turn the **CONTROL** knob to move the ➡ arrow to the page number, then press the **CONTROL** knob.
The ➡ arrow changes to a flashing ? question mark.



- 2 Turn the **CONTROL** knob to change the displayed page to the desired page, then press the **CONTROL** knob.
The ? question mark changes back to the ➡ arrow. Items on the page can now be selected and changed.

To change a menu item setting

If a ? question mark is displayed beside the page number, press the **CONTROL** knob to restore the ➡ arrow. Items on the page can now be selected and changed.

- 1 Turn the **CONTROL** knob to move the ➡ arrow to the desired item, then press the **CONTROL** knob.
The ➡ arrow changes to a flashing ? question mark.
- 2 Turn the **CONTROL** knob to change the setting.
To cancel a changed setting
Set the CANCEL/ENTER lever to the CANCEL position before pressing the **CONTROL** knob. The item is restored to its current setting.
To suspend menu changes
Set the DISP/MENU lever to the MENU position to exit the menu screen.
The DISP/MENU lever can be set to the MENU position again to restart the operation.
- 3 Press the **CONTROL** knob.
The ? question mark changes back to the ➡ arrow, and the item setting is registered.
- 4 Repeat steps 1 to 3 to change other settings on the same page.

To enter a character string

Some menu items require a character string input. Moving the ➡ arrow to an item with a character string input and pressing the **CONTROL** knob displays a rectangular cursor and a list of selectable characters. Turning the **CONTROL** knob moves the cursor between characters. The following menu item has character strings:

- CCU CONFIGURATION menu → <BAR CHARACTER> page → BAR CHARACTER

- 1 Move the text cursor to the input position, then press the **CONTROL** knob.
A second cursor is displayed in the character list.
- 2 Turn the **CONTROL** knob to move the cursor to the desired character, then press the **CONTROL** knob.
Repeat steps 1 and 2 to enter other characters.
 - Select INS to insert a space character at the cursor position.
 - Select DEL to delete the character at the cursor position.
 - Select RET to return to step 1 without changing the string.
 - Entering the maximum number of characters (up to the right edge) moves the cursor to ESC on the lower right of the character list.

- 3 Turn the **CONTROL** knob to move the cursor to END, then press the **CONTROL** knob.
The new input string is registered.

To cancel the character string setting

Turn the **CONTROL** knob to move the cursor to ESC, then press the **CONTROL** knob.

To exit the menu display

In menu display mode, set the DISP/MENU lever to the MENU position.

Menu List

Note

The following conventions are used in the menu list table.

Settings column values (e.g. **ON**, **OFF**, **0**): Default settings

ENTER to execute: Press the CONTROL knob or move the CANCEL/ENTER lever to the ENTER position to execute.

SYSTEM OPERATION menu

Page name Page No.	Item	Settings
<OUTPUT SELECT> S01	OUTPUT Output signal selection	CAMERA , BAR, TEST1, TEST2 TEST1 and TEST2 are not selectable if there is no communication with the camera.
	PIX PIX connector output signal selection	ENC , R, G, B, R&G, G&B, R&B, RGB
	WF WF connector output signal selection	ENC , R, G, B, SEQ, R&G, G&B, R&B, RGB
<GENLOCK PHASE> S02	REFERENCE	(NONE), (EXT IN) Reference signal input status (read only)
	GENLOCK	HD, SD
	External reference signal lock mode selection, lock status, and signal format	(OK), (NG) External reference signal lock status (read only) (OK): Locked (NG): Unlocked
		External reference signal format Displayed only when a reference signal is present (read only)
	Reference signal lock phase adjustments	
	H STEP	When GENLOCK is HD: -3.01 to 3.45 μ s 0.00 When GENLOCK is SD: -8.29 to 9.48 μ s 0.00
	COARSE	-99 to 99 0
	SC PHASE	0 to 359
	V PHASE	0 to 7
	SYNC OUT SYNC connector output signal selection	HD SYNC, SD SYNC

Page name Page No.	Item	Settings
<MULTI FORMAT> S03	FREQUENCY Operating frequency selection	
	HD	1.001, 1.000
	SD	(525 NTSC), (625 PAL) (Read only) When FREQUENCY HD is 1.001: (525 NTSC) When FREQUENCY HD is 1.000: (625 PAL)
	CAMERA FORMAT Transmission format selection	When FREQUENCY HD is 1.001: 1080/59.94i, 720/59.94P When FREQUENCY HD is 1.000: 1080/50i, 720/50P

Note

FREQUENCY
or CAMERA
FORMAT
mode setting
changes take
effect only
after the CCU
power supply
is turned off
and then on
again.

Note

The default setting is
different among the
sales areas.

United States and
Canada: 1.001

Other areas: 1.000

Note

The default setting is
different among the
sales areas.

United States and
Canada: (525 NTSC)

Other areas: (625 PAL)

Note

The default setting is
different among the
sales areas.

United States and
Canada: 1080/59.94i

Other areas: 1080/50i

Page name Page No.	Item	Settings
<OUTPUT FORMAT> S04	SLOT NO	
	1-1&2	When CAMERA FORMAT is 1080/59.94i: 1080/59.94i, 525/59.94i
	SDI OUTPUT 1/2 connector output format selection	When CAMERA FORMAT is 720/59.94P: 720/59.94P, 525/59.94i
	Sequence of format options: 1: HD 2: SD	When CAMERA FORMAT is 1080/50i: 1080/50i, 625/50i When CAMERA FORMAT is 720/50P: 720/50P, 625/50i
		Note The default setting is different among the sales areas. United States and Canada: 1080/59.94i Other areas: 1080/50i
	3&4	When CAMERA FORMAT is 1080/59.94i: M1080/59.94i, M525/59.94i
	SDI OUTPUT 3/4 connector output format selection	When CAMERA FORMAT is 720/59.94P: M720/59.94P, M525/59.94i
	Sequence of format options: 1: HD 2: SD	When CAMERA FORMAT is 1080/50i: M1080/50i, M625/50i When CAMERA FORMAT is 720/50P: M720/50P, M625/50i
		Note The default setting is different among the sales areas. United States and Canada: M525/59.94i Other areas: M625/50i
	COMPONENT Component signal connector output format selection	HD RGB, HD YPbPr, SD RGB, SD YCD
	HD-SD DELAY HD signal to SD signal delay mode selection	When CAMERA FORMAT is 1080 system format: 0-Delay , Line (90H), Frame (1F) When CAMERA FORMAT is 720 system format: 0-Delay, Line (120H), Frame (2F)
		When GENLOCK is HD: 0 to -71.1 μs
		When GENLOCK is SD: 0 to -51.7 μs

Page name Page No.	Item	Settings
<SD ASPECT> S05	SD ASPECT	SQUEEZE, EDGE CROP , LETTER BOX
	SD output aspect selection	
	SD LB SEL	16:9 , 15:9, 14:9, 13:9
	LETTER BOX aspect ratio selection	
	H POSITION	-99 to 99, (-99) to (99) 0
	Horizontal position setting	() displayed when SD ASPECT is SQUEEZE or LETTER BOX (read only)
	CENTER	ON , OFF, (ON), (OFF)
	Horizontal centering selection	() displayed when SD ASPECT is SQUEEZE or LETTER BOX (read only)
	V POSITION	-99 to 99, (-99) to (99) (0)
	Vertical position setting	() displayed when SD ASPECT is SQUEEZE or EDGE CROP (read only)
	CENTER	ON, OFF, (ON) , (OFF)
	Vertical centering selection	() displayed when SD ASPECT is SQUEEZE or EDGE CROP (read only)
	H INTERP	A , B, C, D, E
	Down converter horizontal filter selection	
	V INTERP	A , B, C, D, E
	Down converter vertical filter selection	

Page name Page No.	Item	Settings
<RETURN FORMAT> S06 The RET1 to 4 signal outputs support 16 combinations. <i>See "Return Signal Combinations" on page 29.</i>	RET1	When CAMERA FORMAT is 1080/59.94i: 1080/59.94i , 525/59.94i, NTSC When CAMERA FORMAT is 720/59.94P: 720/59.94P, 525/59.94i, NTSC When CAMERA FORMAT is 1080/50i: 1080/50i, 625/50i, PAL When CAMERA FORMAT is 720/50P: 720/50P, 625/50i, PAL SQUEEZE, EDGE CROP, LETTER BOX Not displayed for HD SDI signals 16:9, 15:9, 14:9, 13:9 Not displayed for HD SDI signals
	RET2	When CAMERA FORMAT is 1080/59.94i: 1080/59.94i , 525/59.94i, NTSC When CAMERA FORMAT is 720/59.94P: 720/59.94P, 525/59.94i, NTSC When CAMERA FORMAT is 1080/50i: 1080/50i, 625/50i, PAL When CAMERA FORMAT is 720/50P: 720/50P, 625/50i, PAL SQUEEZE, EDGE CROP, LETTER BOX Not displayed for HD SDI signals 16:9, 15:9, 14:9, 13:9 Not displayed for HD SDI signals
	RET3	When CAMERA FORMAT is 1080/59.94i: 1080/59.94i, 525/59.94i, NTSC When CAMERA FORMAT is 720/59.94P: 720/59.94P, 525/59.94i, NTSC When CAMERA FORMAT is 1080/50i: 1080/50i, 625/50i, PAL When CAMERA FORMAT is 720/50P: 720/50P, 625/50i, PAL SQUEEZE, EDGE CROP, LETTER BOX Not displayed for HD SDI signals 16:9, 15:9, 14:9, 13:9 Not displayed for HD SDI signals
	RET4	When CAMERA FORMAT is 1080/59.94i: 1080/59.94i, 525/59.94i, NTSC When CAMERA FORMAT is 720/59.94P: 720/59.94P, 525/59.94i, NTSC When CAMERA FORMAT is 1080/50i: 1080/50i, 625/50i, PAL When CAMERA FORMAT is 720/50P: 720/50P, 625/50i, PAL SQUEEZE, EDGE CROP, LETTER BOX Not displayed for HD SDI signals 16:9, 15:9, 14:9, 13:9 Not displayed for HD SDI signals

Page name Page No.	Item	Settings
<RETURN FORMAT> S06 The RET1 to 4 signal outputs support 16 combinations. <i>See "Return Signal Combinations" on page 29.</i>	RET1	When CAMERA FORMAT is 1080/59.94i: 1080/59.94i, 525/59.94i, NTSC When CAMERA FORMAT is 720/59.94P: 720/59.94P, 525/59.94i, NTSC When CAMERA FORMAT is 1080/50i: 1080/50i, 625/50i, PAL When CAMERA FORMAT is 720/50P: 720/50P, 625/50i, PAL SQUEEZE, EDGE CROP, LETTER BOX Not displayed for HD SDI signals 16:9, 15:9, 14:9, 13:9 Not displayed for HD SDI signals
	RET2	When CAMERA FORMAT is 1080/59.94i: 1080/59.94i, 525/59.94i, NTSC When CAMERA FORMAT is 720/59.94P: 720/59.94P, 525/59.94i, NTSC When CAMERA FORMAT is 1080/50i: 1080/50i, 625/50i, PAL When CAMERA FORMAT is 720/50P: 720/50P, 625/50i, PAL SQUEEZE, EDGE CROP, LETTER BOX Not displayed for HD SDI signals 16:9, 15:9, 14:9, 13:9 Not displayed for HD SDI signals
	RET3	When CAMERA FORMAT is 1080/59.94i: 1080/59.94i, 525/59.94i, NTSC When CAMERA FORMAT is 720/59.94P: 720/59.94P, 525/59.94i, NTSC When CAMERA FORMAT is 1080/50i: 1080/50i, 625/50i, PAL When CAMERA FORMAT is 720/50P: 720/50P, 625/50i, PAL SQUEEZE, EDGE CROP, LETTER BOX Not displayed for HD SDI signals 16:9, 15:9, 14:9, 13:9 Not displayed for HD SDI signals
	RET4	When CAMERA FORMAT is 1080/59.94i: 1080/59.94i, 525/59.94i, NTSC When CAMERA FORMAT is 720/59.94P: 720/59.94P, 525/59.94i, NTSC When CAMERA FORMAT is 1080/50i: 1080/50i, 625/50i, PAL When CAMERA FORMAT is 720/50P: 720/50P, 625/50i, PAL SQUEEZE, EDGE CROP, LETTER BOX Not displayed for HD SDI signals 16:9, 15:9, 14:9, 13:9 Not displayed for HD SDI signals

CCU CONFIGURATION menu

Page name Page No.	Item	Settings
<COLOR BAR> C01	HD BAR	
	HD output color bar settings	
	SEL	BAR 16:9 (100%) , BAR 16:9 (75%), SMPTE 16:9 (BLACK), SMPTE 16:9 (–I/Q), BAR 4:3 (100%), BAR 4:3 (75%), SMPTE 4:3 (BLACK), SMPTE 4:3 (–I/Q), MF-ARIB (75%), MF-ARIB (100%), MF-ARIB (+I), MF-SMPTE (–I,Q), MF-SMPTE (75%,Q), MF-SMPTE (100%,Q), MF-SMPTE (+I,Q), HD-CUSTOM, SDI CHECK FIELD, Y -RAMP, Y/C-RAMP, HD-CUSTOM2
	MF CB	MODIFY , EVEN
	SLOPE	WIDE , NARROW
	SD BAR	For NTSC: SMPTE , EIA, FULL, 95%, NTSC100%, Y/C-RAMP, Y -RAMP, DISABLE
	SD output color bar setting	For PAL: SMPTE , EIA, EBU, 95%, PAL100%, Y/C-RAMP, Y -RAMP, DISABLE DISABLE: Down conversion output of HD color bar signal
	BAR CHARA	ON, OFF
	Character superimposed on color bar signal	
	GRAY	ON , OFF ON: Gray screen output when camera power supply is off OFF: Color bar signal output when camera power supply is off
<BAR CHARACTER> C02	BAR CHARACTER	Settings for strings 1 to 11 that are superimposed on the color bar signal
	<ALL CLEAR>	ENTER to execute Execute to clear all character strings
<MONITOR 1> C03	CHARACTER	
	WHITE LEVEL	0.0 to 107.0% 71.5
	BLACK LEVEL	0.0 to 107.0%
	PIX CHARACTER	
	WHITE LEVEL	75.0 to 107.0%
	BLACK LEVEL	0.0 to 25.0%

Page name Page No.	Item	Settings
<MONITOR 2> C04	LEVEL GATE	---, 1&2, 1, 2, OFF ---: Displayed when camera not connected, video output not set to CAMERA, or video output is set to CAMERA and GATE MARKER is ON (read only)
	Y LEVEL1	0 to 108% 49 61
	Level gate 1 minimum and maximum detection levels and zebra range settings	–99 to 99 –25
	Y LEVEL2	0 to 108% 74 108
	Level gate 2 minimum and maximum detection levels and zebra range settings	–99 to 99 –25
	GATE MARKER	---, ON, OFF Gate signal display on/off and signal level setting ---: Displayed when camera not connected (read only)
		–99 to 99 0
	MODULATION	---, ON, OFF 4:3 aspect ratio mask function on/off when EDGE CROP is ON, and mask video level setting ---: Displayed when camera not connected (read only)
		–99 to 99 0
	MARKER	ON, OFF Marker signal on/off and superimposed signal selection 4:3 , 13:9, 14:9, EU VISTA, VISTA, CINEMA, FOLLOW DC

Page name Page No.	Item	Settings
<MIC/AUDIO> C05	CAM MIC GAIN	(REMOTE), (LOCAL) (REMOTE): MIC REMOTE source (LOCAL): Not MIC REMOTE source
	CH1	---, 20, 30, 40, 50, 60 dB ---: Displayed when camera not connected (read only)
	CH2	---, 20, 30, 40, 50, 60 dB ---: Displayed when camera not connected (read only)
	MIC REMOTE	MIC 1&2 , MIC 1.2
	MIC REMOTE gain control method	MIC 1&2: MIC 1, 2 common gain control MIC 1.2: MIC 1, 2 independent gain control
	MIC OUT	
	DELAY	0 to 3328 Fs
	MIC OUT 1,2 delay setting	
	MIC1 LEVEL	-20, 0 dBu
	MIC2 LEVEL	-20, 0 dBu
<INCOM/PGM> C06	SYSTEM INTERFACE	
	ENGINEER	CLEAR COM, RTS, (4W) Engineer line intercom system selection (4W): Displayed when the internal hardware switch is set to 4-Wire (read only)
	PRODUCER	CLEAR COM, RTS, (4W) Producer line intercom system selection (4W): Displayed when the internal hardware switch is set to 4-Wire (read only)
	PGM1 LEVEL	-20, 0 , +4 dBu
	PGM2 LEVEL	-20, 0 , +4 dBu

Page name Page No.	Item	Settings
<FRONT INCOM> C07	CCU front panel MIC/PGM switch position (read only)	(MIC ON), (OFF), (PGM ON)
	CCU front panel INTERCOM switch position (read only)	(PRIVATE), (PROD), (ENG)
	INCOM MIC	CARBON, ECM, DYNAMIC
	Headset microphone type connected to INTERCOM on the front panel	CARBON: Carbon microphone (power supply, 20 dB gain) ECM: Electret condenser microphone (power supply, 40 dB gain) DYNAMIC: Dynamic microphone (no power supply, 60 dB gain)
	MIC TYPE	BALANCE, UNBALANCE
	Headset microphone type connected to INTERCOM on the front panel	BALANCE: Balanced microphone UNBALANCE: Unbalanced microphone
	MIC GAIN	-6dB, 0dB , +6dB Input gain setting
	SIDE TONE	0 to 99 50
	PGM MIX	OFF , INCOM+PGM, L-INCOM/R-PGM
	PGM SEL	PGM1 , PGM2, PGM1+PGM2
<PROMPTER> C08	PGM1 LVL	0 to 99 50
	PGM2 LVL	0 to 99 50
	MODE	NORMAL , LOW LATENCY
	Video resolution mode switch	NORMAL: Color picture transmitted as-is in standard resolution with delay of approximately 5 frames LOW LATENCY: SD B&W picture transmitted as low resolution simplified images on VBS Y only with delay less than 1 frame
	TRANSFER	(VBS) , (VBS Y Only) (VBS): Displayed when MODE is NORMAL (read only) (VBS Y Only): Displayed when MODE is LOW LATENCY (read only)

Page name Page No.	Item	Settings
<VIDEO SETUP> C09	SETUP	ON, OFF , -- --: Displayed when format is PAL (read only)
	Q FILTER	NARROW , WIDE, -- --: Displayed when format is PAL (read only)
	Q FILTER bandwidth setting	
	SD G/Y SYNC	ON , OFF
	SD RGB component signal Gch-SYNC or SD YCD component signal Ych-SYNC on/off	
<VIDEO ADJUST> C10	WF SYNC	ON , OFF
	WF signal SYNC on/off	
	VBS	
	LEVEL	–99 to 99 0
	CHROMA	–99 to 99 0
	PIX	
	LEVEL	–99 to 99 0
	CHROMA	–99 to 99 0
	WF	
	LEVEL	–99 to 99 0
	CHROMA	–99 to 99 0
	G/Y LEVEL	–99 to 99 0
	B/B-Y LEVEL	–99 to 99 0
	R/R-Y LEVEL	–99 to 99 0

Page name Page No.	Item	Settings
<MENU SETTINGS> C11	RESUME	ON , OFF
	In menu mode, resume display of previously displayed page function	
	RE DIRECTION	
	CONTROL knob operating mode settings	
	CATEGORY	STD , RVS STD: CONTROL knob clockwise rotation moves the CCU MENU ➡ arrow down RVS: CONTROL knob counterclockwise rotation moves the CCU MENU ➡ arrow down
	PAGE	STD , RVS STD: CONTROL knob clockwise rotation displays the next page in the menu RVS: CONTROL knob counterclockwise rotation displays the next page in the menu
	ITEM	STD , RVS STD: CONTROL knob clockwise rotation moves the ➡ arrow down to the next item on the page RVS: CONTROL knob counterclockwise rotation moves the ➡ arrow down to the next item on the page
	DATA	STD , RVS STD: CONTROL knob clockwise rotation selects the next data option RVS: CONTROL knob counterclockwise rotation selects the next data option

Page name Page No.	Item	Settings
<DISPLAY>	MESSAGE	ALL , WARNING, OFF
C12	Camera messages and switch settings on/off. Displayed on the camera diagnostics screen.	ALL: Displays all messages WARNING: Displays system warning messages and menu control messages OFF: Displays only menu control messages
	ALARM JUMP	ON, OFF In menu mode, jump to display page if an error occurs function
	MASTER GAIN	ON , OFF
	ECS/SHUTTER	ON , OFF
	ND FILTER	ON , OFF
	IRIS	ON , OFF
	EXTENDER	ON , OFF
<DATE>	DATE/TIME	20YY/MM/DD hh:mm
C13	Date and time settings	Time displayed in 24-hour format
	TIME ZONE	hh:mm Time zone setting –11h59m to +11h59m
<OTHERS>	REAR PREVIEW	MOMENTARY , TOGGLE
C14	REMOTE device preview operation switching	MOMENTARY: Display preview while PREVIEW button on REMOTE device is pressed TOGGLE: Toggle preview on/off when the PREVIEW button on REMOTE device is pressed
	CAM POWER REMOTE	NORMAL , BACKUP NORMAL: When CCU power is applied, power is supplied to camera BACKUP: When CCU power is applied, camera supply remains in state when CCU power was last turned off.

Page name Page No.	Item	Settings
<FRONT PANEL 1>	ASSIGNABLE/CUSTOM	
C15	SWITCH1 HKCU-FP1 CCU Control Panel SW1 button assignment	NOT ASSIGN , GAMMA OFF, HD DTL OFF, SD DTL OFF, BLK GAMMA, KNEE OFF, AUTO KNEE, 5600K, CAM POWER NOT ASSIGN: Not assigned (indicator always off) GAMMA OFF: Gamma off when indicator on HD DTL OFF: HD detail off when indicator on SD DTL OFF: SD detail off when indicator on BLK GAMMA: Black gamma on when indicator on KNEE OFF: Knee off when indicator on AUTO KNEE: Auto knee on when indicator on 5600K: 5600K on when indicator on CAM POWER: Camera power on when indicator on
	SWITCH2 HKCU-FP1 CCU Control Panel SW2 button assignment	NOT ASSIGN , GAMMA OFF, HD DTL OFF, SD DTL OFF, BLK GAMMA, KNEE OFF, AUTO KNEE, 5600K, CAM POWER NOT ASSIGN: Not assigned (indicator always off) GAMMA OFF: Gamma off when indicator on HD DTL OFF: HD detail off when indicator on SD DTL OFF: SD detail off when indicator on BLK GAMMA: Black gamma on when indicator on KNEE OFF: Knee off when indicator on AUTO KNEE: Auto knee on when indicator on 5600K: 5600K on when indicator on CAM POWER: Camera power on when indicator on

Page name Page No.	Item	Settings
<FRONT PANEL 1> C15 Displayed only when the HKCU-FP1 CCU Control Panel is fitted	VOLUME	NOT ASSIGN , HD GAMMA, SD GAMMA, HD DTL LEVEL, SD DTL LEVEL, BLK GAMMA
	HKCU-FP1 CCU Control Panel	NOT ASSIGN: Not assigned (knob deactivated)
	CUSTOM knob assignment	HD GAMMA: HD M-gamma setting SD GAMMA: SD M-gamma setting HD DTL LEVEL: HD detail level setting SD DTL LEVEL: SD detail level setting BLK GAMMA: Black gamma setting
	VOLUME MODE	
	IRIS	REL, ABS
	IRIS knob operating mode	REL: Relative value mode ABS: Absolute value mode
	M BLACK	REL , ABS
	MASTER BLACK knob operating mode	REL: Relative value mode ABS: Absolute value mode
	R/B BLACK BLACK/FLARE knob function and operating mode	REL/BLACK , ABS/BLACK, REL/FLARE, ABS/FLARE REL/BLACK: BLACK (relative value mode) ABS/BLACK: BLACK (absolute value mode) REL/FLARE: FLARE (relative value mode) ABS/FLARE: FLARE (absolute value mode)
	R/B WHITE	REL , ABS
	WHITE knob operating mode	REL: Relative value mode ABS: Absolute value mode

Page name Page No.	Item	Settings
<FRONT PANEL 2> C16 Displayed only when the HKCU-FP1 CCU Control Panel is fitted	VOLUME REL COEFF	1/1, 1/2 , 1/4
	IRIS	1/1: Variable range roughly 100% of total variation 1/2: Variable range roughly 50% of total variation 1/4: Variable range roughly 25% of total variation
	M BLACK	1/1, 1/2, 1/4
	Relative coefficient when the IRIS knob is set to relative value mode	1/1: Variable range roughly 100% of total variation 1/2: Variable range roughly 50% of total variation 1/4: Variable range roughly 25% of total variation
	R/B BLACK	1/1, 1/2 , 1/4, (FLARE)
	Relative coefficient when the BLACK/FLARE knob is set to relative value mode	1/1: Variable range roughly 100% of total variation 1/2: Variable range roughly 50% of total variation 1/4: Variable range roughly 25% of total variation (FLARE): Displayed when the BLACK/FLARE knob is assigned to the FLARE function (read only)
	R/B WHITE	1/1, 1/2, 1/4
	Relative coefficient selection when the WHITE knob is set to relative value mode	1/1: Variable range roughly 100% of total variation 1/2: Variable range roughly 50% of total variation 1/4: Variable range roughly 25% of total variation
	CUSTOM	1/1, 1/2 , 1/4
	Relative coefficient when the CUSTOM knob is set to relative value mode	1/1: Variable range roughly 100% of total variation 1/2: Variable range roughly 50% of total variation 1/4: Variable range roughly 25% of total variation
	SW BRIGHT	NORMAL , LOW
	Front panel button lights LED brightness	

NETWORK SETTINGS menu

Page name Page No.	Item	Settings
<TCP/IP SETTING> N01	IP ADDRESS	0.0.0.0 to 255.255.255.255
	SUBNET MASK	0.0.0.0 to 255.255.255.255
	DEFAULT GATEWAY	0.0.0.0 to 255.255.255.255
	SET	ENTER to execute A "SET OK?" message is displayed. Press ENTER again to confirm the change.
<LAN SETTINGS> N02	AUTO NEGOTIATION	ON , OFF
	AUTO MDI/MDIX	ON , OFF
	CONNECTION SPEED	10M, 100M
	DUPLEX MODE	HALF, FULL
	MDI/MDIX	MDI , MDIX
	LINK CONDITION	(DOWN), (UP) (Read only)
	SET	ENTER to execute A "SET OK?" message is displayed. Press ENTER again to confirm the change.
<CNS SETTINGS> N03	CNS MODE	LEGACY , BRIDGE
	Network connection mode selection	LEGACY: External controller connected using CCA-5 cable only BRIDGE: External controller connected using point-to-point LAN cable
	CCU NO	Default: 0 1 to 96, A to Z
	SET	ENTER to execute A "SET OK?" message is displayed. Press ENTER again to confirm the change.
<NETWORK RESET> N04	ALL RESET	ENTER to execute A "NET SETTINGS RESET OK?" message is displayed. Press ENTER again to reset NETWORK SETTINGS menu items to factory default values.

Appendix

Notes on Use

Use and storage locations

Avoid using or storing the unit in the following places:

- Where it is subject to extremes of temperature (operating temperature: +5 to +40 °C (41 to 104 °F)). Note that in summer the temperature in a car with the windows closed can reach 50 °C (122 °F).
- Very damp or dusty places.
- Where rain is likely to reach the unit.
- Places subject to severe vibration.
- Near strong magnetic fields.
- Near transmitting stations generating strong radio waves.

Avoid violent impacts

Dropping the unit, or otherwise imparting a violent shock to it, is likely to cause it to malfunction.

Do not cover with cloth

While the unit is in operation, do not cover it with a cloth or other material. This can cause the temperature to rise, leading to a malfunction.

After use

Set the POWER switch on the CCU to the OFF position.

Care

If the body or panels of the unit become dirty, wipe them with a dry cloth. For severe dirt, use a soft cloth steeped in a small amount of neutral detergent, then wipe dry. Do not use volatile solvents such as alcohol or thinners, as these may damage the finish.

Digital Triax Transmission

Digital transmission between camera and CCU with powerful error correction function built-in. However, some errors, for example errors due to external noise in long-distance transmission, may be corrected by partial image interpolation of images in frame store.

In digital triax transmission, the following video delay in transmission may occur.

- The video delay in transmission between the camera and the CCU is approximately 9 to 12 ms.
- A delay of about 1 frame occurs on the viewfinder display if a camera image is sent back from the CCU to the camera as a return signal.
- A delay of about 5 frames occurs on the teleprompter video in standard mode (standard mode or low-latency mode using simplified images can be selected on the CCU).
- An appropriate delay is applied to the MIC 1 and 2 audio signals from the CCU to match the video delay.

- A certain time is required for the video signal transmitted between the camera and the CCU to stabilize after power is applied. This is not a malfunction.

Triax transmission distances

The maximum and minimum transmission distances allowed for triax cable connections are shown in the table below. The distances may vary according to the conditions, such as cable degradation.

Allowable transmission range when using triax cables with the following characteristics:

Attenuation: 3.8 to 45.6 dB at 100 MHz (including the connector loss)

Cable (for example)		Max. distance	Min. distance
Fujikura	8.5 mm dia.	600 m (1969 ft.)	50 m (164 ft.)
Fujikura	14.5 mm dia.	1200 m (3937 ft.)	100 m (328 ft.)
Belden 9232	13.2 mm dia.	850 m (2789 ft.)	75 m (246 ft.)

Error Messages

When an error is detected in the CCU or the camera, the ALARM indicator turns on and an error message is displayed on the CCU.

Error message	Indication
CCU: GEN LOCK NG	External reference sync error
CCU: DPR NG	Front DPR board power supply, PLD error
CCU: SDI NG	Rear SDI board power supply error
CCU: PS FAN NG	Power supply block fan error
CCU: PS CABLE SHORT	CAMERA connector triax cable short circuit error
CCU: PS CABLE OPEN	CAMERA connector triax cable open circuit error
CCU: PS RCP PWR SUPPLY NG	Remote control panel (connected to REMOTE connector) power supply error
CCU: VIF NG	Rear VIF board power supply error
CCU: SY NG	Front SY board power supply, PLD error
CCU:RX WARNING	Transmission error between camera and CCU

Return Signal Combinations

The return signals are grouped into the following 16 combinations. The number of the return signal (RET 1 to 4) on the RETURN INPUT connectors is set on the <RETURN FORMAT> page in the SYSTEM OPERATION menu.

SDI 1/3	SDI 2/4	VBS 1/3	VBS 2/4
RET1 HD SDI	RET2 HD SDI	RET3 VBS	RET4 VBS
RET1 HD SDI	RET2 SD SDI	RET3 VBS	RET4 VBS
RET1 SD SDI	RET2 HD SDI	RET3 VBS	RET4 VBS
RET1 SD SDI	RET2 SD SDI	RET3 VBS	RET4 VBS

SDI 1/3	SDI 2/4	VBS 1/3	VBS 2/4
RET1 HD SDI	RET4 HD SDI	RET3 VBS	RET2 VBS
RET1 HD SDI	RET4 SD SDI	RET3 VBS	RET2 VBS
RET1 SD SDI	RET4 HD SDI	RET3 VBS	RET2 VBS
RET1 SD SDI	RET4 SD SDI	RET3 VBS	RET2 VBS
RET3 HD SDI	RET2 HD SDI	RET1 VBS	RET4 VBS
RET3 HD SDI	RET2 SD SDI	RET1 VBS	RET4 VBS
RET3 SD SDI	RET2 HD SDI	RET1 VBS	RET4 VBS
RET3 SD SDI	RET2 SD SDI	RET1 VBS	RET4 VBS
RET3 HD SDI	RET4 HD SDI	RET1 VBS	RET2 VBS
RET3 HD SDI	RET4 SD SDI	RET1 VBS	RET2 VBS
RET3 SD SDI	RET4 HD SDI	RET1 VBS	RET2 VBS
RET3 SD SDI	RET4 SD SDI	RET1 VBS	RET2 VBS

License Declarations

The CCU teleprompter video circuit uses MPEG-2 technology.

MPEG-2 Video Patent Portfolio License

ANY USE OF THIS PRODUCT OTHER THAN CONSUMER PERSONAL USE IN ANY MANNER THAT COMPLIES WITH THE MPEG-2 STANDARD FOR ENCODING VIDEO INFORMATION FOR PACKAGED MEDIA IS EXPRESSLY PROHIBITED WITHOUT A LICENSE UNDER APPLICABLE PATENTS IN THE MPEG-2 PATENT PORTFOLIO, WHICH LICENSE IS AVAILABLE FROM MPEG LA, L.L.C., 250 STEELE STREET, SUITE 300, DENVER, COLORADO 80206.

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<http://www.mpegla.com>

Specifications

HXCU-100

General	
Power supply	AC 100 to 240 V, 50/60 Hz
Current consumption	4.5 A (max)
Peak inrush current	(1) Power ON, current probe method: 43 A (240 V) (2) Hot switching inrush current, measured in accordance with European standard EN55103-1: 8 A (230 V)
Operating temperature	5 to 40 °C (41 to 104 °F)
Storage temperature	–20 to +60 °C (–4 to +140 °F)
Weight	Approx. 8.3 kg (18 lb 5 oz)

Input/output connectors	
CAMERA	Triax (1) United States and Canada: Kings type Other areas: Fischer type
INTERCOM	XLR 5-pin (1)
INTERCOM/TALLY/PGM	D-sub 25-pin, female (1) • INCOM (PROD/ENG), 4W/RTS/CC, 0 dBu • TALLY (R, G) • PGM 2 systems, –20/0/+4 dBu
REMOTE	8-pin multiconnector (1)
TRUNK	D-sub 9-pin, female (1), RS-422A 1 system
LAN	8-pin (1)
Input connectors	
AC IN	(1), AC 100 to 240 V
SERIAL RETURN INPUT	BNC type (2) HD SDI: SMPTE 292M, 0.8 Vp-p, 75 Ω, 1.485/1.4835 Gbps bit rate SD SDI: SMPTE 259M, 270 Mbps bit rate
VBS RETURN INPUT	BNC type (2), 1.0 Vp-p, 75 Ω
REFERENCE INPUT	BNC type (2), loop-through output HD: SMPTE 274M, tri-level sync, 0.6 Vp-p, 75 Ω SD: Black burst (NTSC: 0.286 Vp-p, 75 Ω; PAL: 0.3 Vp-p, 75 Ω)
PROMPTER INPUT	BNC type (2), loop-through output, VBS signal, 1.0 Vp-p, 75 Ω, 1 system
MIC REMOTE	D-sub 15-pin, female (1) (JAE DA-C1-J10 series recommended)
Output connectors	
SDI OUT	BNC type (2) HD SDI: SMPTE 292M, 0.8 Vp-p, 75 Ω, 1.485/1.4835 Gbps bit rate SD SDI: SMPTE 259M, 0.8 Vp-p, 75 Ω, 270 Mbps bit rate HD SDI/SD SDI selectable
SDI OUT (MONITOR)	BNC type (2) HD SDI: SMPTE 292M, 0.8 Vp-p, 75 Ω, 1.485/1.4835 Gbps bit rate SD SDI: SMPTE 259M, 0.8 Vp-p, 75 Ω, 270 Mbps bit rate HD SDI/SD SDI selectable
Pr/R/R-Y, Y/G/Y, Pb/B/B-Y	BNC type (3) • HD component video Y (100% white): 0.7 Vp-p Pr/Pb (75% color bar): 0.7 Vp-p, 75 Ω • HD RGB video R/G/B (100% white): 0.7 Vp-p, 75 Ω • SD RGB video R/G/B (100% white): 0.7 Vp-p, 75 Ω • SD component video Y (100% white): 0.714 Vp-p Pr/Pb (75% color bar): 0.756 Vp-p, 75 Ω
VBS OUT	BNC type (2), VBS 1.0 Vp-p, 75 Ω
PIX OUT	BNC type (1), VBS/R/G/B (VBS 1.0 Vp-p, 75 Ω)

WF OUT	BNC type (1), VBS/R/G/B/SEQ (VBS 1.0 Vp-p, 75 Ω)
SYNC OUT	BNC type (1) HD: BTA-S001A, tri-level sync, 0.6 Vp-p, 75 Ω SD: composite sync, 0.3 Vp-p, 75 Ω HD SYNC/SD SYNC selectable
MIC OUT	XLR 3-pin, male (2), 0/-20 dBu
WF REMOTE	D-sub 15-pin, female (1) (JAE DA-C1-J10 series recommended)
WF MODE	4-pin (1)

Supplied accessories

Number plates (1 set)

Operating Instructions(1)

CD-ROM (1)

Warranty booklet (1)

Optional accessories

HKCU-FP1 CCU Control Panel

United States and Canada: Plug holder B (2-990-242-01)

Other areas: Plug holder C (3-613-640-01)

United States and Canada: Power cord set (1-551-812-XX)

Other areas: Power cord set (1-782-929-XX)

CCA-5-3 (3 m), CCA-5-10 (10 m) connection cables

Extension board

Service manual

Related equipment

HD Color Camera

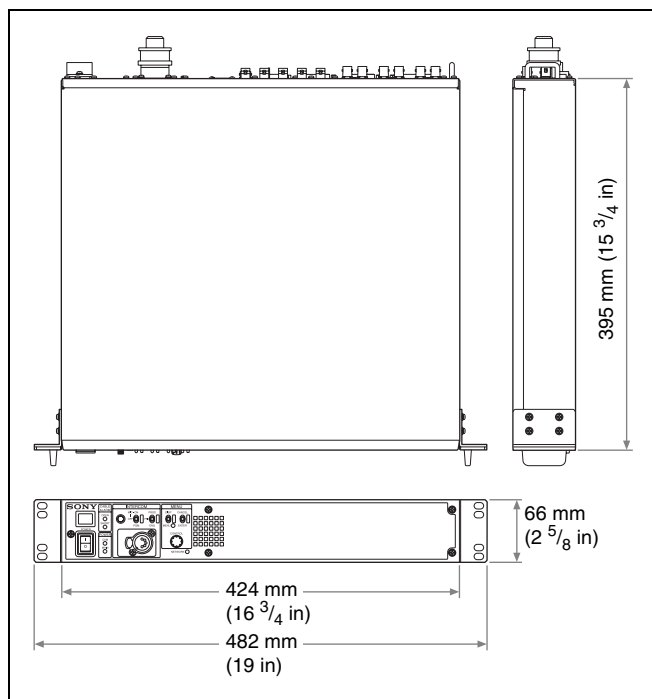
HXC-100

HSC-300

RCP-1000-series Remote Control Panel

MSU-1000/1500 Master Setup Unit

Dimensions



HKCU-FP1 CCU Control Panel (Optional)

Power consumption Approx. 3 W (supplied from the CCU)

Design and specifications are subject to change without notice.

Note

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

For Customer in China

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

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Printed on recycled paper.

<http://www.sony.net/>

Sony Corporation

Printed in Japan

SONY®



REMOTE CONTROL PANEL

RCP-750/751



警告

電気製品は、安全のための注意事項を守らないと、火災や人身事故になることがあります。

このオペレーションマニュアルには、事故を防ぐための重要な注意事項と製品の取り扱いかたを示してあります。**このオペレーションマニュアルをよくお読みのうえ**、製品を安全にお使いください。お読みになったあとは、いつでも見られるところに必ず保管してください。



MEMORY STICK™

OPERATION MANUAL

1st Edition (Revised 4)

Japanese/English

WARNING

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

AVERTISSEMENT

Afin de réduire les risques d'incendie ou d'électrocution, ne pas exposer cet appareil à la pluie ou à l'humidité.

Afin d'écartier tout risque d'électrocution, garder le coffret fermé. Ne confier l'entretien de l'appareil qu'à un personnel qualifié.

WARNUNG

Um die Gefahr von Bränden oder elektrischen Schlägen zu verringern, darf dieses Gerät nicht Regen oder Feuchtigkeit ausgesetzt werden.

Um einen elektrischen Schlag zu vermeiden, darf das Gehäuse nicht geöffnet werden. Überlassen Sie Wartungsarbeiten stets nur qualifiziertem Fachpersonal.

For the customers in the U.S.A.

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.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

All interface cables used to connect peripherals must be shielded in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

This product (fluorescent lamp in the liquid crystal display) contains mercury. Disposal of this product may be regulated if sold in the United States. For disposal or recycling information, please contact your local authorities or the Electronics Industries Alliance (www.eiae.org <http://www.eiae.org>).

For the customers in Europe

This product with the CE marking complies with the EMC Directive issued by the Commission of the European Community.

Compliance with this directive implies conformity to the following European standards:

- EN55103-1: Electromagnetic Interference (Emission)
- EN55103-2: Electromagnetic Susceptibility (Immunity)

This product is intended for use in the following Electromagnetic Environments: E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors), E4 (controlled EMC environment, ex. TV studio).

The manufacturer of this product is Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.

The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

Pour les clients européens

Ce produit portant la marque CE est conforme à la Directive sur la compatibilité électromagnétique (EMC) émise par la Commission de la Communauté européenne.

La conformité à cette directive implique la conformité aux normes européennes suivantes :

- EN55103-1 : Interférences électromagnétiques (émission)
- EN55103-2 : Sensibilité électromagnétique (immunité)

Ce produit est prévu pour être utilisé dans les environnements électromagnétiques suivants : E1 (résidentiel), E2 (commercial et industrie légère), E3 (urbain extérieur) et E4 (environnement EMC contrôlé, ex. studio de télévision).

Le fabricant de ce produit est Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japon.

Le représentant autorisé pour EMC et la sécurité des produits est Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Allemagne. Pour toute question concernant le service ou la garantie, veuillez consulter les adresses indiquées dans les documents de service ou de garantie séparés.

Für Kunden in Europa

Dieses Produkt besitzt die CE-Kennzeichnung und erfüllt die EMV-Richtlinie der EG-Kommission.

Angewandte Normen:

- EN55103-1: Elektromagnetische Verträglichkeit (Störaussendung)
- EN55103-2: Elektromagnetische Verträglichkeit (Störfestigkeit)

Für die folgenden elektromagnetischen Umgebungen: E1 (Wohnbereich), E2 (kommerzieller und in beschränktem Maße industrieller Bereich), E3 (Stadtgebiet im Freien) und E4 (kontrollierter EMV-Bereich, z.B. Fernsehstudio).

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For the customers in the USA

Lamp in this product contains mercury. Disposal of these
materials may be regulated due to environmental
considerations. For disposal or recycling information, please
contact your local authorities or the Electronic Industries
Alliance (www.eiae.org).

For the State of California, USA only

Perchlorate Material - special handling may apply, See
www.dtsc.ca.gov/hazardouswaste/perchlorate
Perchlorate Material : Lithium battery contains perchlorate.

For the customers in Taiwan only



廢電池請回收

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Overview

The RCP-750/751 Remote Control Panel is designed for remote control of the Sony BVP/HDC-series Color Video Camera via the CCU/HDCU-series Camera Control Unit.

The panel is connected to the CCU/HDCU-series Camera Control Unit (or the CNU-series Camera Command Network Unit, which is connected to the CCU/HDCU-series) by a special cable of up to 200 m (656 feet) in length.

The RCP-750 and RCP-751 are completely identical in their functions except with respect to the iris and master black adjustments.

For the iris and master black adjustments, the RCP-750 uses a joystick type control while the RCP-751 uses rotary knobs.

Features

Optimal control parts arrangement for basic camera operation

This remote control panel is provided with essential control functions for basic operation of a BVP/HDC-series camera.

The buttons, knobs, and other controls have been arranged according to their functions and with consideration to their frequency of use. Indicators and buttons light or flash to indicate the status of the system operation. Also, guard frames are provided to protect against accidental use of those buttons vital to camera operation. These features ensure easy and error-free use of this remote control panel.

Controlling the automatic setup function

The RCP-750/751 has built-in microcomputers that reliably perform automatic setup for the majority of the control items. The various items can be automatically adjusted independently or in combination.

Controlling the scene file function

Camera adjustment and control data such as paint data for a particular scene can be stored in the video camera in the form of a scene file. The stored data can easily be retrieved at any time to automatically adjust the

camera to the shooting conditions for that particular scene. This panel enables up to five scene files to be created and handled.

Controlling the ECS/shutter function of the camera

The ECS (Extended Clear Scan) and electronic shutter functions of the camera can be turned on/off from this panel. The ECS frequency and shutter speed are also selected.

Signal transmission via a digital line

Between this remote control panel and the camera control unit, signals are digitally transmitted via a single connection cable (CCA-5), ensuring a reliable signal. Operating power is also supplied via the cable.

Memory Stick slot

Various data, including scene files and reference files, can be stored on a **Memory Stick** and reproduced at any time.

Touch panel with 3 1/2-inch LCD for various operations

The control panel has a touch panel that permits various items to be selected and adjusted on the LCD in menu format.

Parallel operation with another control panel

Video cameras can be concurrently controlled from this panel and another controller, such as the MSU-900/950 Master Setup Unit.

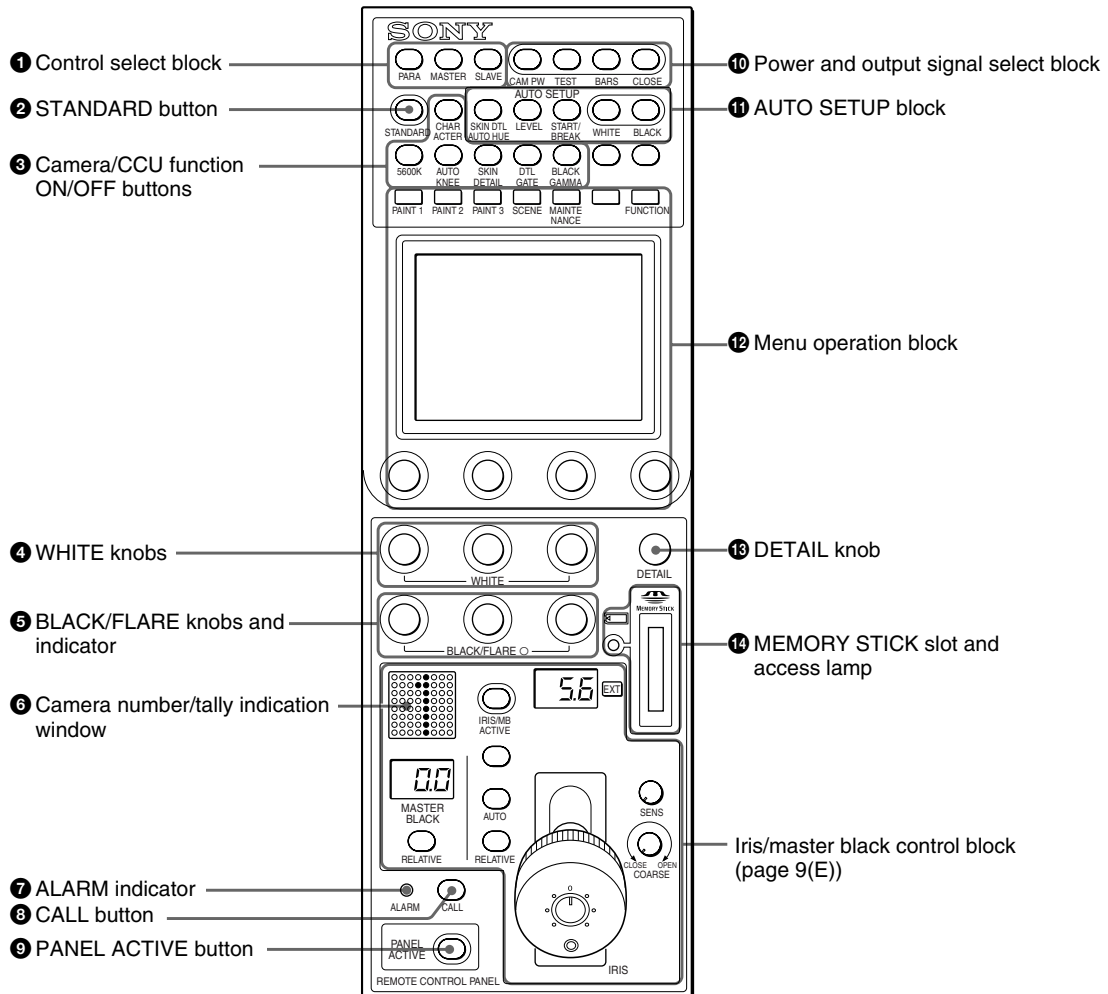
Four units mountable on a 19-inch rack

Up to four units of this control panel can be mounted in a line on a 19-inch EIA standard rack.

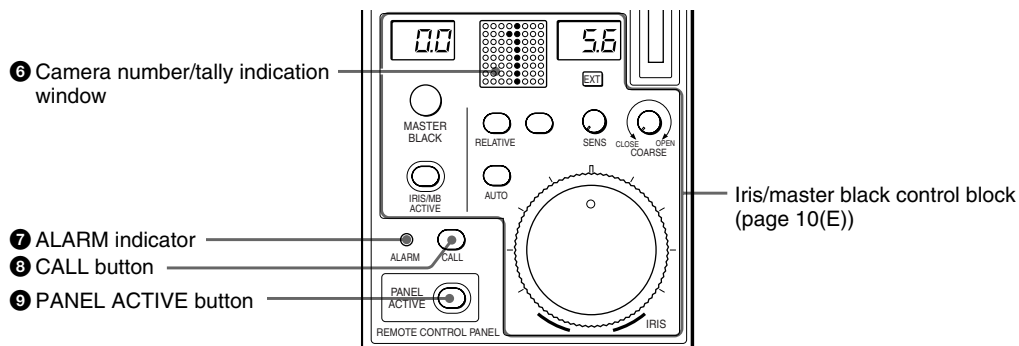
Locations and Functions of Parts

Operation Panel

RCP-750

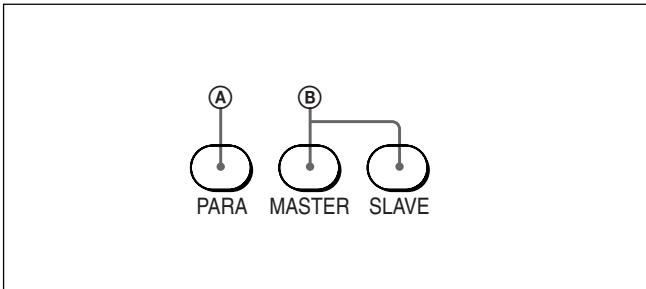


RCP-751



Locations and Functions of Parts

① Control select block



① PARA (parallel mode) button

This button lights when Parallel mode is active, in which concurrent operation with another control panel is possible.

When this button is lit, all the buttons and controls on this panel except for the iris/master black control block are active, even if the PANEL ACTIVE button is not lit.

If you press the button when lit, it goes dark and Parallel mode is cancelled.

② MASTER and SLAVE buttons

When adjusting the white balance of multiple cameras in Master/Slave mode, designate the master camera or the slave cameras. Press and light up the MASTER button to specify the connected camera for the master. Press and light up the SLAVE button to specify the connected camera for the slave. The slave cameras follow the master camera settings.

If you press a button when lit, it goes dark.

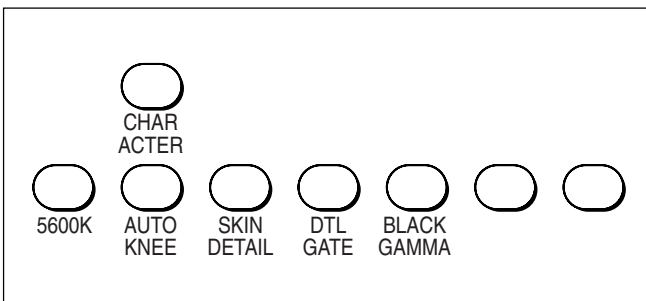
② STANDARD button

When you press this button, the video camera is initialized to its standard state and the button lights for several seconds.

If you press the button while it lights, the video camera retrieves the state before the button was lit.

③ Camera/CCU function ON/OFF buttons

Various functions of the video camera or the CCU/HDCU-series can be turned on and off from this panel.



5600K: 5600K electric color temperature conversion function

AUTO KNEE: Auto knee function. When this button is lit (ON), the knee point is automatically adjusted according to the light content of the picture.

SKIN DETAIL: Skin tone detail function

DTL GATE: Skin tone detail gate function. When this button is lit (ON), the adjustment range of the skin tone detail is displayed in white on the PIX (picture) monitor screen.

BLACK GAMMA: Black gamma function

CHARACTER: Self-diagnostic display function.

When this button is lit (ON), the contents of the self-diagnosis of the CCU/HDCU-series are displayed on the monitor connected to the CHARACTER OUTPUT connector of the CCU/HDCU-series. The contents are also mixed to the video signal to be output from the PIX1 OUTPUT connector. Each time you press this button, the status changes as follows.

OFF → ON (page 1) → ON (page 2) . . .
→ ON (page *n*) → OFF

The contents of the self-diagnosis may be displayed when required even if this button is not lit.

The right two buttons are for future use and do not function at present.

④ WHITE (white balance manual adjustment) knobs

Used to manually adjust the white balance. From the left, the knobs are for R, G, and B signal adjustment.

⑤ BLACK/FLARE (black balance/flare balance manual adjustment) knobs and indicator

Used to manually adjust the black balance (when the indicator is not lit) or the flare balance (when the indicator is lit).

From the left, the knobs are for R, G, and B signal adjustment.

Selection between black balance and flare balance is made using the Maintenance menu.

See “Changing the Function of the Rotary Encoders” on page 27(E).

⑥ Camera number/tally indication window

The number of the camera being controlled from this panel is displayed in orange.

When a red tally signal is sent to the camera, the number is displayed in black and the background of the number lights in red.

When a green tally signal is sent to the camera, the number is displayed in black and the background of the number lights in green.

When both the red and green tally signals are simultaneously sent, the left half of the background lights in red and the right half lights in green.

⑦ ALARM indicator

Lights when trouble occurs in the camera system and the self-diagnostic function activates at the video camera or the CCU/HDCU-series.

⑧ CALL button

Press to send a call signal to the video camera, on which the CALL button lights. The tally lamps on the camera and the red tally lamp on the CCU/HDCU-series light when not lit, or go dark when lit.

When the CALL button on the video camera is pressed, the CALL button on this panel lights and a buzzer sounds.

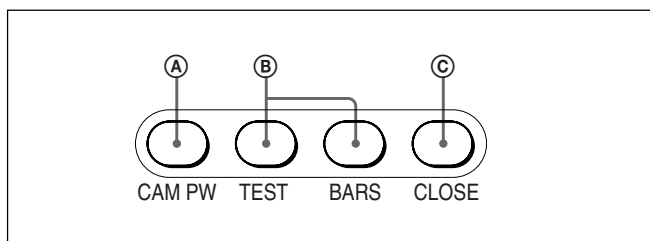
⑨ PANEL ACTIVE button

Press and light up the button to permit this panel to control the camera system (Panel active status).

The IRIS/MB ACTIVE button also lights.

If you press this button so that it goes dark, the panel will be locked, preventing accidental misoperation.

⑩ Power and output signal select block



① CAM PW (camera power) button

Press and light up this button to turn the power supply to the video camera ON. (The button promptly flashes until the camera becomes ready for transmission.)

When you press this button again, it starts flashing and the power supply is turned off.

⑪ Signal output select buttons

Press and light up one of these buttons to activate the test signal generator of the video camera and send the respective signals.

TEST: To send a signal to test the video circuits

BARS: To send a color bar signal

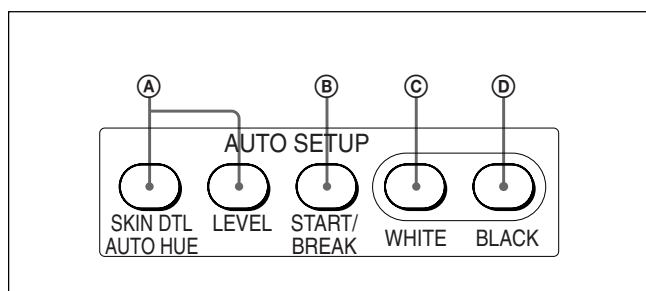
Note

The BARS button takes priority to the TEST button. If the BARS button is lit, press the button to turn it dark before pressing the TEST button.

⑫ CLOSE button

Press and light the button to close the iris. To release the close mode, press the button again so that it goes dark.

⑬ AUTO SETUP block



① Auto adjustment item select buttons

Press and light up these buttons to select the items to be automatically adjusted.

SKIN DTL AUTO HUE: Skin tone detail automatic hue

LEVEL: Gamma balance, knee point, master black level, etc.

② START/BREAK button

Press to start automatic adjustment of the selected items.

The button lights during adjustment and goes dark when adjustment is completed. If you press the button when lit, the automatic adjustment is canceled and the button flashes. To stop the flashing, press the button again.

③ WHITE (white balance) button

Press to automatically adjust the white balance.

The button lights during adjustment and goes dark when adjustment is completed.

If you press this button when lit or the START/BREAK button, the automatic adjustment is canceled and the button flashes. To stop the flashing, press the button again.

Locations and Functions of Parts

Ⓓ BLACK (black balance) button

Press to automatically adjust the black balance and black set.

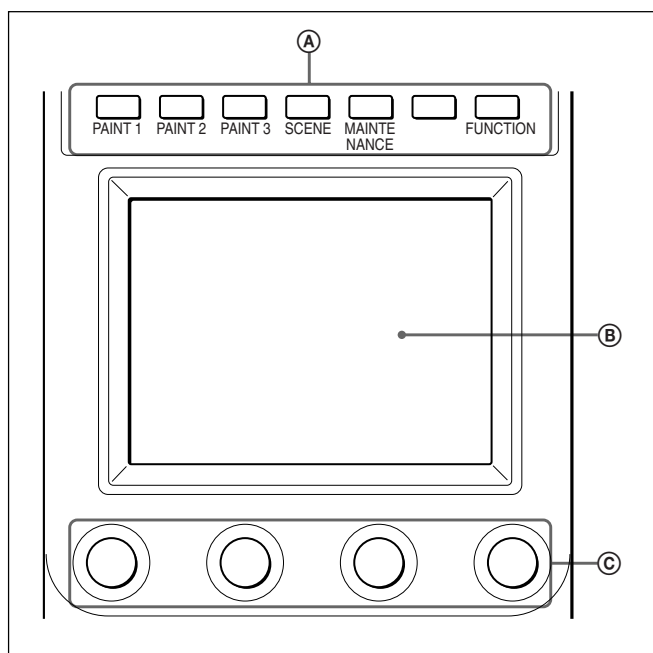
The button lights during adjustment and goes dark when adjustment is completed.

If you press this button when lit or the START/BREAK button, the automatic adjustment is canceled and the button flashes. To stop the flashing, press the button again.

Note

If an error occurs during adjustment, the pressed button flashes.

12 Menu operation block



Ⓐ MODE (mode select) buttons

Select the menu mode.

If you press and light one of these buttons, the menu for the selected mode appears on the LCD.

PAINT 1/2/3: Each selects the Paint menu to adjust various paint items, such as white, black, and flare.

SCENE: Selects the File operation menu to register and retrieve scene files.

MAINTENANCE: Selects the Maintenance menu to set the H and SC phases of CCU/HDCU and operational conditions of this control panel.

FUNCTION: Selects the Function menu to control various camera and CCU/HDCU functions.

When none of the buttons are lit, the status display (page 14(E)) is obtained.

For the items of each menu, see "Menu Items" on page 18(E).

Ⓑ LCD/touch panel

Normally displays the statuses (see page 14(E)).

When you press a MODE button, the corresponding menu is displayed to permit you to adjust the displayed items.

Ⓒ Control knobs (rotary encoders)

Adjust the selected items on the touch panel.

13 DETAIL knob

Used to adjust the detail level.

You may select HD detail or SD detail using the Maintenance menu.

See "Changing the Functions of the Rotary Encoders" on page 27(E).

14 MEMORY STICK slot and access lamp

Insert a **Memory Stick** to store setting data, such as reference files and scene files of the video camera or CCU/HDCU.

The access lamp shows the status of the **Memory Stick**.

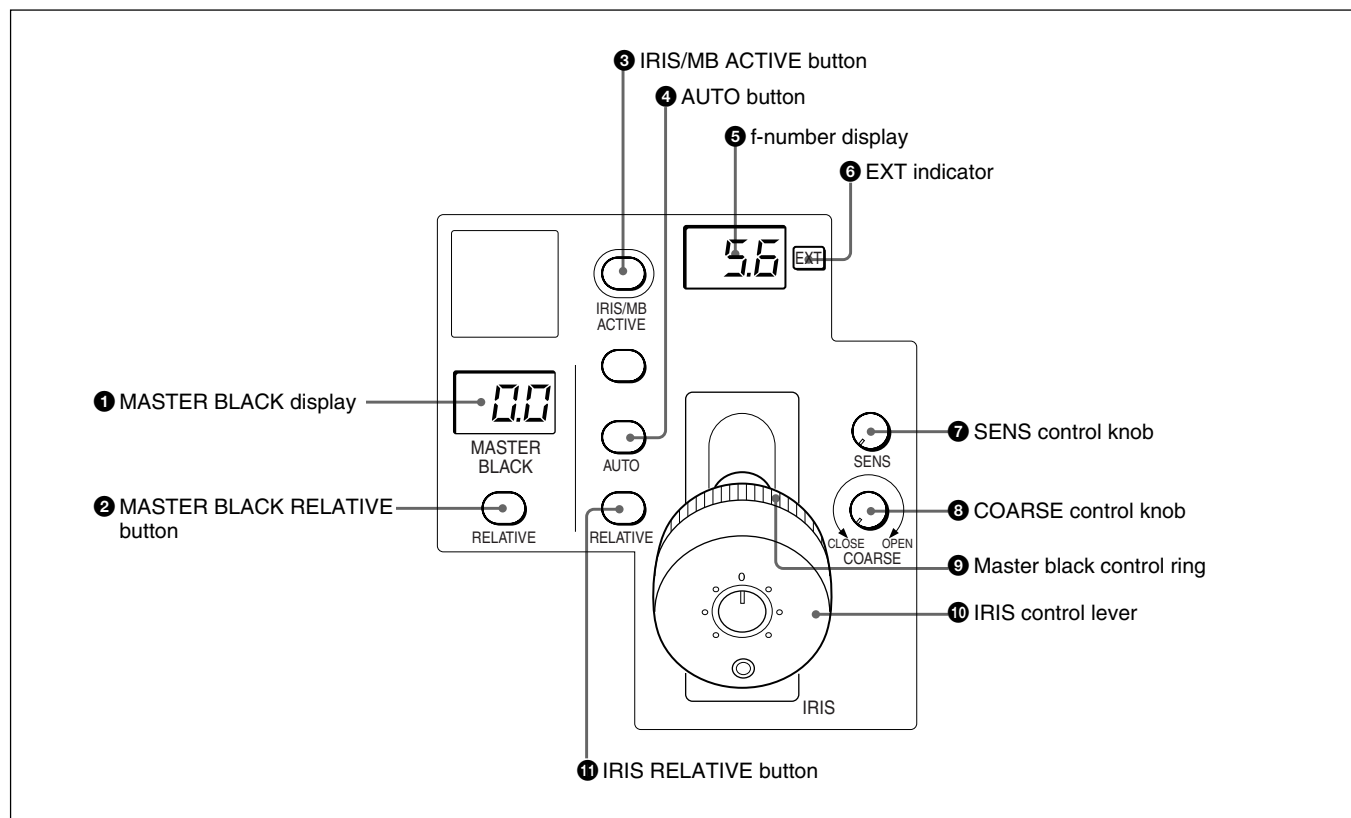
Off: No **Memory Stick** is inserted.

Lit in green: There is a **Memory Stick** in the slot. In this condition, you can safely eject the **Memory Stick**.

Lit in red: Data are being read/written. If you eject the **Memory Stick** in this condition, the data are not guaranteed. All the data may be lost.

For details on Memory Sticks, see page 28(E).

Iris/master black control block (RCP-750)



1 MASTER BLACK display

Displays the current master black setting in the range from -99 to +99.

2 MASTER BLACK RELATIVE button

When the IRIS/MB ACTIVE button is lit, the master black adjustment mode can be selected with this button.

Press and light up the button for Relative mode, or press and turn it dark for Absolute mode.

When the IRIS/MB ACTIVE button is not lit, Relative mode is automatically selected and this button is not operative.

3 IRIS/MB ACTIVE (iris/master black active) button

Press and light up this button to enable the iris/master black control block of the panel.

When the PANEL ACTIVE button is pressed, this button also lights.

If you press this button so that it goes dark, the panel will be locked, preventing accidental misoperation.

4 AUTO button

Press and light the button to automatically adjust the iris according to the amount of input light.

When this button is lit, the reference value for automatic iris adjustment can be set in a range of $\pm 1f$ with the iris control.

If you press the button when lit, it goes dark and manual iris adjustment is enabled.

5 f-number display

Displays the f number of the current iris setting. When the iris is closed, "CL" is displayed.

6 EXT (lens extender) indicator

Lights when a lens extender or digital extender is used.

7 SENS (sensitivity) control knob

Used for manual iris adjustment in Absolute mode. This control is not operative when Relative mode is selected.

See the table "Iris adjustment functions" on the next page.

8 COARSE control knob

Used for manual iris adjustment.

See the table "Iris adjustment functions" on the next page.

Locations and Functions of Parts

9 Master black control ring

Turn to manually adjust the master black level.

10 IRIS control lever

When the AUTO button is not lit, you can adjust the iris manually by moving the lever.
When the AUTO button is lit, the reference value for automatic iris adjustment can be set in a range of $\pm 1f$ with this lever.

See the table “Iris adjustment functions” to the right.

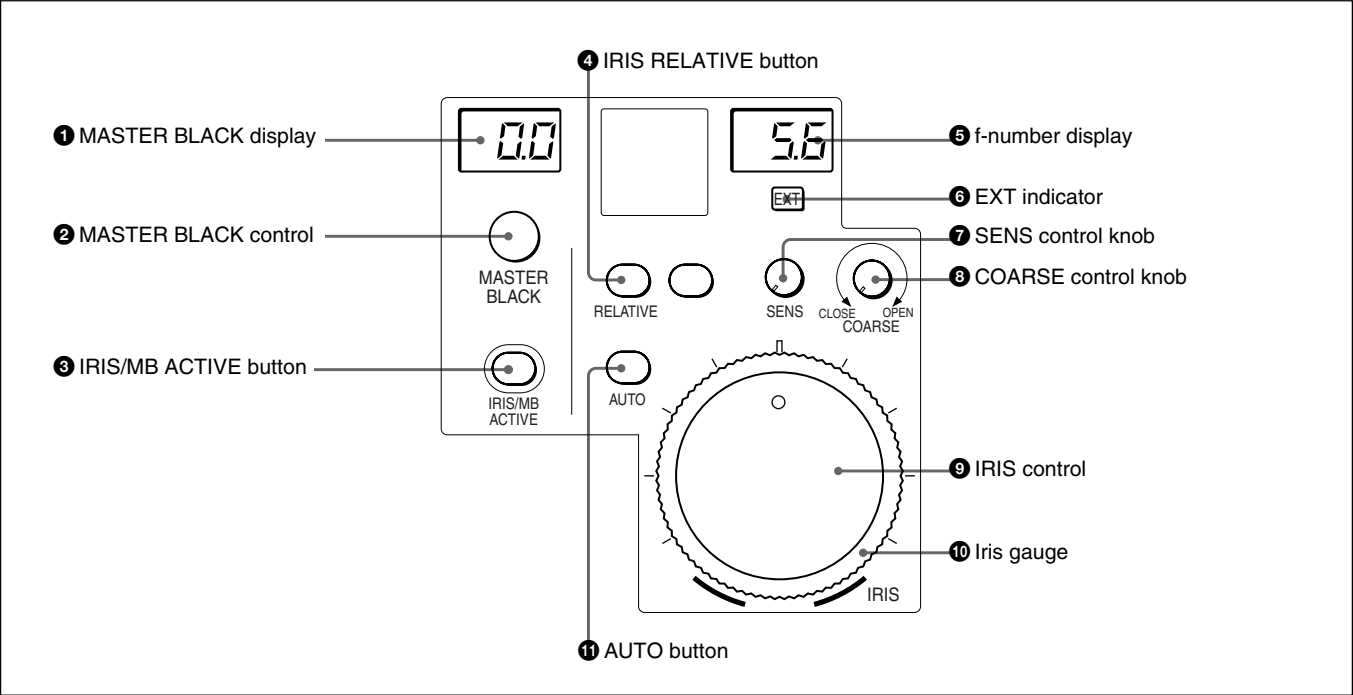
11 IRIS RELATIVE (iris relative) button

When the IRIS/MB ACTIVE button is lit, the iris adjustment mode can be selected with this button. Press and light up the button for Relative mode or press so that it goes dark for Absolute mode.
When the IRIS/MB ACTIVE button is not lit, Relative mode is automatically selected and this button is not operative.

Iris adjustment functions

	Relative mode (RELATIVE button lit)	Absolute mode (RELATIVE button not lit)
IRIS lever (RCP-750)/ IRIS control (RCP-751)	Adjusts the iris with relative values within 1/4 of the total range from OPEN to CLOSED.	Adjusts the iris within the variable range set by the SENS and COARSE controls.
COARSE control	Adjusts the total range from OPEN to CLOSED in relative values.	Sets the lower limit for CLOSED.
SENS control	Does not function.	Sets the upper limit for OPEN according to CLOSED value set by the COARSE control.

Iris/master black control block (RCP-751)



1 MASTER BLACK display

Displays the current master black setting in the range from -99 to +99.

2 MASTER BLACK control

Manually adjust the master black level. The setting is displayed in the MASTER BLACK display.

3 IRIS/MB ACTIVE (iris/master black active) button

Press and light up this button to enable the iris/master black control block of the panel.
When the PANEL ACTIVE button is pressed, this button also lights.
If you press this button so that it goes dark, the panel will be locked, preventing accidental misoperation.

④ IRIS RELATIVE (iris relative) button

When the IRIS/MB ACTIVE button is lit, the iris adjustment mode can be selected with this button. Press and light up the button for Relative mode or press so that it goes dark for Absolute mode. When the IRIS/MB ACTIVE button is not lit, Relative mode is automatically selected and this button is not operative.

⑤ f-number display

Displays the f number of the current iris setting. When the iris is closed, “CL” is displayed.

⑥ EXT (lens extender) indicator

Lights when a lens extender or digital extender is used.

⑦ SENS (sensitivity) control knob

Used for manual iris adjustment in Absolute mode. This control is not operative when Relative mode is selected.

See the table “Iris adjustment functions” on the previous page.

⑧ COARSE control knob

Used for manual iris adjustment.

See the table “Iris adjustment functions” on the previous page.

⑨ IRIS control

When the AUTO button is not lit, you can adjust the iris manually by turning the control. When the AUTO button is lit, the reference value for automatic iris adjustment can be set in a range of $\pm 1f$ with this control.

See the table “Iris adjustment functions” on the previous page.

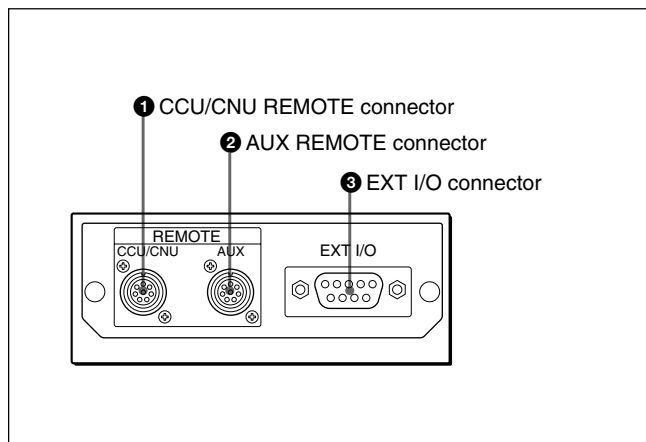
⑩ Iris gauge

The white line on the gauge provides a click position for the IRIS control. Turn the gauge to set the line to the most frequently used iris position, and it can be used as the reference for manual iris adjustment. The gauge rotates infinitely in either direction. When no click position is required, set the line outside the rotation range of the IRIS control.

⑪ AUTO button

Press and light the button to automatically adjust the iris according to the amount of input light. When this button is lit, the reference value for automatic iris adjustment can be set in a range of $\pm 1f$ with the iris control. If you press the button when lit, it goes dark and manual iris adjustment is enabled.

Connector Panel



① CCU/CNU REMOTE (camera control unit/camera command network unit remote) connector (8-pin)

Connect to the RCP/CNU connector of a camera control unit or the RCP connector of a camera command network unit.

② AUX REMOTE (auxiliary remote) connector (8-pin)

Connect to the RCP-700/701.

③ EXT I/O (external input/output) connector (9-pin)

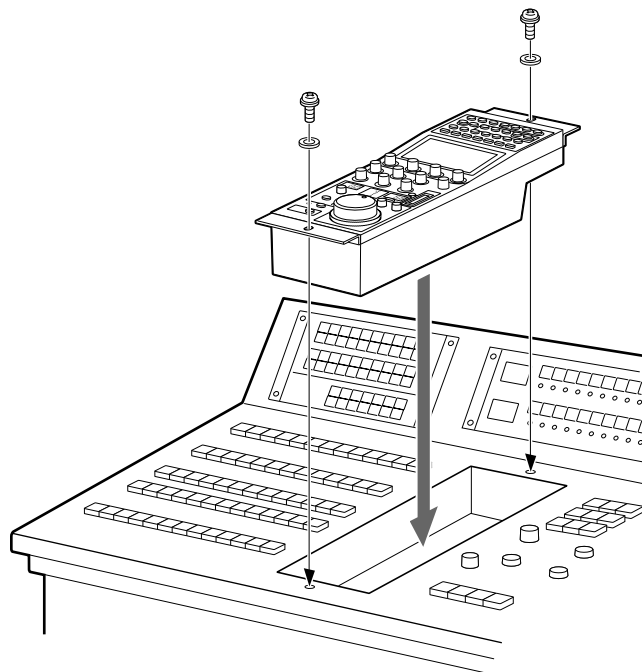
With expansion functions added, this connector permits you to control an external device.

Caution

When installing this panel, provide a gap of 7 cm (3 inches) or more behind the connector panel to prevent damage to cables.

Mounting on a Console

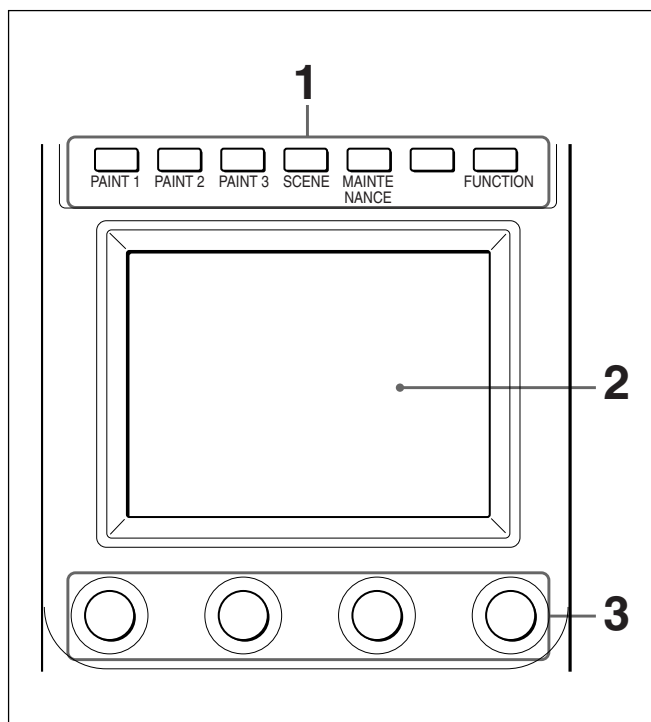
The RCP-750/751 can be mounted on a console as shown below:



Menu Configuration and Basic Menu Operations

The RCP-750/751 provides menu operations for various functions such as adjustments of system equipment.

Basic Operating Procedure



When all the MODE buttons are not lit, the status display (see the next page) is obtained.

- 1 To display a menu, press and light one of the MODE buttons.

The menu operation mode is initiated and the menu for the pressed button appears on the display.

PAINT 1/2/3: Paint menu

See page 14(E) for the display configuration and page 18(E) for the menu items.

SCENE: Scene file operation menu

See page 16(E) for the display configuration and operation.

MAINTENANCE: Maintenance menu

See page 21(E) for the menu items and page 25(E) for adjustments.

FUNCTION: Function menu

See page 17(E) for the display configuration and page 24(E) for the menu items.

- 2 Select the item to be adjusted.

Press the button that shows the name of the item on the menu to obtain the corresponding adjustment display or operation area.

When the selected menu is composed of multiple pages

With the menu that is composed of multiple pages such as Paint menu, press ▲ or ▼ to flip the pages.

See “Initial display (Paint menu)” on the next page.

When a submenu is shown

Press the desired submenu item to change the display.

See “Submenu” on page 15(E).

- 3 Set or adjust the item (parameters).

- Turn the control knobs (or press the button) to adjust (or set) the corresponding item (parameters) to the desired values.
See “Adjustment display (Paint menu)” on page 15(E).
- When a message is displayed, follow the instruction and press **[OK]**.

When the adjustment is finished

- To adjust another item of the same menu, press the names of that item.
- To adjust items of another menu, press the corresponding MODE button.
- To release the menu operation mode, press the lit MODE button.
- You may select Function menu without exiting the currently selected menu. When you exit Function menu by either of the following methods, the previous menu is restored.
 - Press the lit FUNCTION button so that it goes dark.
 - Press the lit MODE button for the previous menu.

Menu Configuration and Basic Menu Operations

Basic Configuration of Menu Display

Status display

When you do not select any of the MODE buttons (PAINT 1, PAINT 2, PAINT 3, SCENE, MAINTENANCE, FUNCTION) of the menu operation block (all unlit), the LCD shows the following status display:

On the status display, each item is only displayed. The setting is made with the Function menu or with the corresponding knob on the operation panel.

Shutter	M. Gain	Gamma	ND	CC
60	0dB	0.45	1	A
White			Detail	
0	0	0	0	
Black				
0	0	0		
CAM	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
CCU	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
Digital EXT : ON				

You may adjust these items using the Function menu.

You may adjust these items using the WHITE knobs, BLACK/FLARE knobs, or DETAIL knob.

The "Detail" and "Black" columns can be changed to "SD Detail" or "Flare" using the Maintenance menu.

The optical fiber levels at the camera and CCU and the status of the digital extender are displayed.

Initial display (Paint menu)

When you press and light the PAINT 1 (or PAINT 2, PAINT 3) button of the menu operation block, the initial display of the Paint menu is obtained.

To clear the adjusted values

The names of the items are displayed. Press the name of the item to be adjusted. The color of the pressed name area will change, and the lower half of the panel will become the adjustment display (see the next page).

Current page number / total number of pages

1 / 7

Press either to flip the pages of the menu.

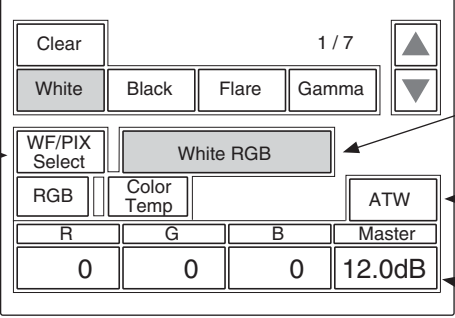
Clear					▲
White	Black	Flare	Gamma	▼	

Adjustment display (Paint menu)

When you select an item on the initial display of the Paint menu, the lower half of the panel becomes the adjustment display for the selected item.

Example: when you select "White" from the initial display

When you press this, the upper half of the panel becomes the monitor output setting display (see the next page).



The name of the item selected on the initial display is displayed. If you press this area after pressing **Clear**, all the adjustment values for the selected item are initialized to standard.

When there are any ON/OFF functions related to the adjustment, the names of the functions are displayed on this line.

The adjustment parameters for the selected item and their adjustment values are displayed.

You may adjust these items using the corresponding control knobs.

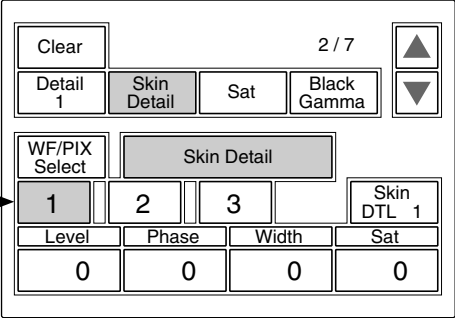
If you press a value area after pressing **Clear**, that adjustment value is initialized to standard.

Submenu

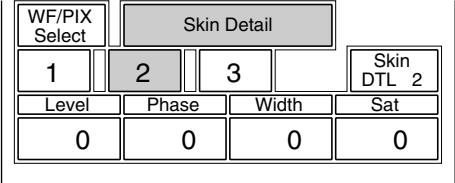
If the selected item has many parameters, a submenu is displayed.

Example: when you select "Skin Detail" from the initial display

Submenu



Press to switch the parameters.



Menu Configuration and Basic Menu Operations

Monitor output set display (Expansion menu)

When you press **WF/PIX Select** on an adjustment display of the Paint menu, the upper half of the panel becomes the monitor output setting display.

Press again to return to the previous display.

WF/PIX Monitor Select

R

G

B

RGB

SEQ

ENC

WF/PIX Select

R/G/B: To independently select the R, G, or B signal.

RGB: To select the R, G, and B signals in combination.

SEQ: Only the WF output is enabled, and you can monitor the waveforms of the R, G, and B signals in sequence.

ENC (encode): The encoded signal is output.

Scene file operation menu display

When you press and light the SCENE button of the menu operation block, the scene file operation menu display is obtained.

To recall a scene file:
Press the number of the desired scene file, and the settings stored in the corresponding scene file will be retrieved.
The color of the number of the retrieved file changes.
When you press the same number again, the previous condition will be restored.

Scene File Recall

1

2

3

4

5

Store

To store the current settings in a scene file:
First press and light **Store**, then select the desired scene file number.
When file registration is finished, **Store** returns to its original color.

Function menu displays

When you press and light the FUNCTION button of the menu operation block, the scene file operation menu display is obtained.

When “Operation” is selected

Press **Filter Ctrl** and change its color to enable filter selection from this display.

Press ▲ or ▼ to select the desired filter.
The number of ND and CC filters you may select depends on the camera.

Operation	SW					
Filter Ctrl	ND	▲	CC	▲	Gamma	▲
	1	▼	A	▼		0.45
Shutter		ECS		Master Gain		▲
60		30.00		0dB		▼

Press ▲ or ▼ to set the gamma value.
You may change it in ±0.05 steps.

Press ▲ or ▼ to set the master gain
The value increases when ▲ is pressed and decreases when ▼ is pressed.

You may adjust these items using the corresponding control knobs.

When “SW” is selected

Operation	SW			
S-Skin Knee	Low Key Sat	ATW	PsF	1 / 2 ▲ ▼
Sat		Mono		
Black Gamma		Knee Aperture	Knee Sat	
5600K	Auto Knee	Skin Detail	Detail Gate	

Current page number / total number of pages

Press either to flip the pages of the menu.

These buttons turn on and off the corresponding functions.
Any button whose designation includes “Off” turns the respective function OFF when you light it. Other buttons turn the respective functions ON when you light them.

Menu Configuration and Basic Menu Operations

Menu Items

The “Control items” marked with ● are those assigned to the control knobs. The other items are operated on the menu display.

Paint menu

Paint menu consists of pages 1 to 7.

You can select page 1 through 3 directly by pressing the MODE buttons, PAINT 1, PAINT 2, or PAINT 3.

Pressing ▲ or ▼ of the page selected with a MODE button flip pages 1 through 7 in sequence.

Page	Menu	Submenu	Control item	Function
Paint 1	White	RGB	● R/G/B/Master	Adjusts the white balance.
			ATW	Executes the auto-trace white balance adjustment.
		Color Temp	● Master/Balance/Color Temp	Adjusts the color temperature.
			ATW	Executes the auto-trace white balance adjustment.
	Black		● R/G/B/Master	Adjusts the black balance.
	Flare	● R/G/B	Adjusts the flare balance.	
		Flare Off	Turn the flare ON/OFF.	
	Gamma	● R/G/B/Master	Adjusts the gamma.	
		Gamma Off	Turns the gamma ON/OFF.	
Paint 2	Detail 1	HD ^{a)}	● Level	Adjusts the HD detail level.
			● Limiter	Adjusts the HD detail limiter.
			● Crispening	Adjusts the HD detail crispening.
			● Level Dep	Adjusts the HD level dependence.
			Detail Off	Turns the HD detail ON/OFF.
			SD DTL Off	Turns the SD detail ON/OFF.
		SD ^{a)}	● Level	Adjusts the SD detail level.
			● Limiter	Adjusts the SD detail limiter.
			● Crispening	Adjusts the SD detail crispening.
			● Level Dep	Adjusts the SD level dependence.
			Detail Off	Turns the HD detail ON/OFF.
			SD DTL Off	Turns the SD detail ON/OFF.
	Skin Detail	1/2/3 (common)	● Level	Adjusts the skin detail level.
			● Phase	Adjusts the skin detail phase.
			● Width	Adjusts the skin detail width.
			● Sat	Adjusts the skin detail saturation.
			Gate #	Turns the skin detail gate ON/OFF (each channel).
			Skin DTL #	Turns the skin detail ON/OFF (each channel).
	Saturation		● Level	Adjusts the saturation.
			Sat	Turns the saturation ON/OFF.
	Black Gamma	RGB	● R/G/B/Master	Adjusts the black gamma.
			Range	Adjusts the black gamma range.
		Y	● Y	Adjusts the black gamma.
			Range	Adjusts the black gamma range.
			Black Gam Y	Turns the black gamma Y ON/OFF.

a) The submenu to select HD or SD is displayed only when an HD camera is connected.

Page	Menu	Submenu	Control item	Function
Paint 3	Knee Point		● R/G/B/Master	Adjusts the knee point.
			Knee Off	Turns the knee ON/OFF.
	Knee Slope		● R/G/B/Master	Adjusts the knee slope.
			Knee Off	Turns the knee ON/OFF.
	Matrix	Matrix 1	● R-G/G-B/B-R	Adjusts the matrix coefficients.
			User Matrix	Turns the user matrix ON/OFF.
			Preset Matrix	Turns the preset matrix ON/OFF.
			Matrix Off	Turns all the matrixes ON/OFF.
		Matrix 2	● R-B/G-R/B-G	Adjusts the matrix coefficients.
			User Matrix	Turns the user matrix ON/OFF.
			Preset Matrix	Turns the preset matrix ON/OFF.
			Matrix Off	Turns all the matrixes ON/OFF.
	Multi Matrix		● Phase	Adjusts the multi matrix phase.
			● Hue	Adjusts the multi matrix hue.
			● Sat	Adjusts the multi matrix saturation.
			Matrix Gate	Turns the multi matrix gate ON/OFF.
			Multi Matrix	Turns the multi matrix ON/OFF.
			Matrix Off	Turns all the matrixes ON/OFF.
			All Clear	Clears all the matrix settings.
Paint 4	Gamma/Knee		● Gamma	Adjusts the master gamma.
			● Blk Gamma	Adjusts the master black gamma.
			● Knee Point	Adjusts the master knee point.
			● Knee Slope	Adjusts the master knee slope.
			Gamma Off	Turns the gamma ON/OFF.
			Knee Off	Turns the knee ON/OFF.
	Knee Saturation		● Knee Point	Adjusts the master knee point.
			● Knee Slope	Adjusts the master knee slope.
			● Level	Adjusts the knee saturation.
			Knee Off	Turns the knee ON/OFF.
			Knee Sat	Turns the knee saturation ON/OFF.
	Low Key Saturation		● Level	Adjusts the low key saturation level.
			Low Key Sat	Turns the low key saturation ON/OFF.
	White Clip		● R/G/B/Master	Adjusts the white clip.
			White Clip Off	Turns the white clip ON/OFF.
Paint 5	Detail 1	HD ^{a)}	● Level	Adjusts the HD detail level.
			● Limiter	Adjusts the HD detail limiter.
			● Crispening	Adjusts the HD detail crispening.
			● Level Dep	Adjusts the HD level dependence.
			Detail Off	Turns the HD detail ON/OFF.
			SD DTL Off	Turns the SD detail ON/OFF.
		SD ^{a)}	● Level	Adjusts the SD detail level.
			● Limiter	Adjusts the SD detail limiter.
			● Crispening	Adjusts the SD detail crispening.
			● Level Dep	Adjusts the SD level dependence.
			Detail Off	Turns the HD detail ON/OFF.
			SD DTL Off	Turns the SD detail ON/OFF.

a) The submenu to select HD or SD is displayed only when an HD camera is connected.

Menu Configuration and Basic Menu Operations

Page	Menu	Submenu	Control item	Function
Paint 5 (Continued)	Detail 2	HD ^{a)}	● H/V Ratio	Adjusts the HD detail H/V ratio.
			● N. Freq	Adjusts the HD detail boost frequency.
			● Mix Ratio	Adjusts the HD detail mix ratio.
			● Comb	Adjusts the HD detail comb.
			Detail Off	Turns the HD detail ON/OFF.
			SD DTL Off	Turns the SD detail ON/OFF.
		SD ^{a)}	● H/V Ratio	Adjusts the SD detail H/V ratio.
			● N. Freq	Adjusts the SD detail boost frequency.
			● Comb	Adjusts the SD detail comb.
			Detail Off	Turns the HD detail ON/OFF.
	SD DTL Off		Turns the SD detail ON/OFF.	
	Detail 3	HD ^{a)}	● W.Limiter	Adjusts the HD detail white limiter.
			● B.Limiter	Adjusts the HD detail black limiter.
			● Fine	Adjusts the HD fine detail level.
			● Knee Apert	Adjusts the HD knee aperture.
			Fine Detail	Turns the HD fine detail ON/OFF.
			Knee Aperture	Turns the HD knee aperture ON/OFF.
		SD ^{a)}	● W.Limiter	Adjusts the SD detail white limiter.
			● B.Limiter	Adjusts the SD detail black limiter.
			Fine Detail	Turns the SD fine detail ON/OFF.
			Knee Aperture	Turns the SD knee aperture ON/OFF.
	Cross Color Suppression	● CCS Level	Adjusts the level for cross color suppression.	
		● N. Level	Adjusts the notch level.	
		● N. Freq	Adjusts the notch frequency.	
		CCS	Turns the cross color suppression ON/OFF.	
Paint 6	Gamma Table	● Standard	Adjusts the gamma table.	
		● Hyper	Adjusts the hyper gamma table.	
		● Special	Adjusts the special gamma table.	
		● User	Adjusts the user gamma table.	
		Standard	Selects the standard gamma table.	
		Hyper	Selects the hyper gamma table.	
		Special	Selects the special gamma table.	
		User	Selects the user gamma table.	
		Gamma Off	Turns the gamma ON/OFF.	
	Auto Knee	● Point Limit	Adjusts the point limit for auto knee.	
		● Auto Slope	Adjusts the knee slope for auto knee.	
		Adaptive	Turns the adaptive highlight control for auto knee ON/OFF.	
		Knee Off	Turns the knee ON/OFF.	
	Auto Iris	● Pattern	Adjusts the auto iris pattern.	
		● Phase	Adjusts the skin tone auto iris phase.	
		● Width	Adjusts the skin tone auto iris width.	
		Normal Mode	Selects Normal mode for auto iris.	
		Skin Mode	Selects Skin mode for auto iris.	
		Iris Auto Hue	Executes the auto hue.	
		Auto Iris Gate	Turns the skin tone auto iris gate ON/OFF.	

a) The submenu to select HD or SD is displayed only when an HD camera is connected.

Page	Menu	Submenu	Control item	Function
Paint 6 (Continued)	ECS/S-EVS		● SLS	Adjusts the slow-shutter speed.
			● Shutter	Adjusts the shutter speed.
			● ECS	Adjusts the ECS frequency.
			● S-EVS	Adjusts the Super EVS.
			Slow Shutter	Turns the slow-shutter mode ON/OFF.
			Shutter	Turns the shutter mode ON/OFF.
			ECS	Turns the ECS mode ON/OFF.
			S-EVS	Turns the Super EVS mode ON/OFF.
Paint 7	Noise Suppression		● Level	Adjusts the noise suppression level.
			Noise Sup	Turns the noise suppression ON/OFF.

Maintenance menu

Menu	2ndary menu	Submenu	Control item	Function
Adjusting	Black Shading	R/G/B	● H Saw/H Para/V Saw/V Para	Adjusts the black shading.
			Auto B Shading	Executes the auto black shading.
	White Shading	R/G/B	● H Saw/H Para/V Saw/V Para	Adjusts the white shading.
			Auto W Shading	Executes the auto white shading.
	Phase	H Phase	● H Step	Adjusts the H phase.
			● H Coarse	
			● H Fine	
		SC Phase	● SC	Adjusts the SC phase.
	Auto Iris		● BF	Adjusts the black burst signal phase.
			● Pattern	Adjusts the auto iris patterns.
			● Level	Adjusts the auto iris level.
			● APL Ratio	Adjusts the auto iris APL ratio.
			● Iris Gain	Adjusts the auto iris gain.
Camera Config	Preset Matrix		SMPTE-240M	Sets the preset matrix.
			ITU-709	
			SMPTE Wide	
			NTSC	
			EBU	
			ITU-601	
	16:9 → 4:3 ^{b)}		Crop	Turns the crop in aspect conversion ON/OFF.
File	Reference File Store ^{b)}			Stores a reference file.
	Reference File Transfer ^{b)}		CAM → MS	Transfers a reference file (from a camera to a Memory Stick).
			MS → CAM	Transfers a reference file (from a Memory Stick to a camera).
	Scene File Transfer		CAM → MS	Transfers a scene file (from a camera to a Memory Stick).
			MS → CAM	Transfers a scene file (from a Memory Stick to a camera).
	OHB File Store ^{b)}			Stores a OHB file.

b) This function becomes operable if enabled with g) (page 23(E)) or in Engineer mode only.

Menu Configuration and Basic Menu Operations

Menu	2ndary menu	Submenu	Control item	Function
SD Adjusting	SD Matrix	Matrix 1	● R-G/G-B/B-R	Set the matrix coefficients.
			User Matrix	Turns the user matrix ON/OFF.
			Preset Matrix	Turns the preset matrix ON/OFF.
			Matrix Off	Turns all the matrixes ON/OFF
		Matrix 2	● R-B/G-R/B-G	Set the matrix coefficients.
			User Matrix	Turns the user matrix ON/OFF.
			Preset Matrix	Turns the preset matrix ON/OFF.
			Matrix Off	Turns all matrixes ON/OFF.
	SD Multi Matrix	● Phase	Select the multi matrix phase.	
		● Hue	Adjust the multi marrâx hue.	
		● Sat	Adjust the multi matrix saturation.	
		Multi Matrix	Turns the multi matrix ON/OFF.	
		Matrix Off	Turns all the matrixes ON/OFF	
		All Clear	Clears all the multi matrix settings.	
CCU Config	Menu Cont ^{b)}	Menu Disp On	Displays the CCU Menu.	
		Enter	Activates/deactivates “Enter.”	
		Cancel	Activates/deactivates “Cancel.”	
		● Select	Selects the menu item.	
Super Motion	Flicker Reduction ^{c)}	Flicker Reduction	Turns the flicker suppression of the HD Super-Motion camera ON/OFF.	
	Field Rate ^{d)}	[x1, x3]	Sets the field rate when using a Super-Motion camera.	
	Frame Interpolation ^{d)}	[OFF, A, B, C]	Sets the pattern to make the reference output picture in 3-times mode.	
	Flicker Reduction ^{d)}	[OFF, Normal, Strong]	Sets the flicker suppression in 3-times mode.	
RCP Config	RCP Adjusting	Buzzer Volume	● Call	Adjusts the volume of the call buzzer.
			● Touch	Adjusts the volume of the response sound of the touch panel.
			● Switch	Adjusts the volume of the confirmation sound of self-illuminating switches.
			● Master	Adjusts the total buzzer sound volume.
			Call Buzzer	Turns the call buzzer ON/OFF.
			Touch Click	Turns the response sound of the touch panel ON/OFF.
			SW Click	Turns the confirmation sound of switches ON/OFF.
			All Off	Turns all the buzzers ON/OFF.
		LED Bright	● Switch	Adjust the brightness of the corresponding LEDs.
			● Tally	
			● Other	
			● Master	Adusts the master brightness of the LEDs.
	Rotary Encoder Setting	BLACK/FLARE	Black	Selects the black balance adjustment.
			Flare	Selects the flare balance adjustment.
		DETAIL	Detail (HD)	Selects the HD detail adjustment.
			SD Detail	Selects the SD detail adjustment.

b) This function becomes operable if enabled with g) (page 23(E)) or in Engineer mode only.

c) When connected to an HD system

d) When connected to an SD system

Menu	2ndary menu	Submenu	Control item	Function
RCP Config (Continued)	Date/Time	Date	● Year	Adjusts the date for the built-in clock of this unit.
			● Month	
			● Day	
			Set	
			Cancel	
		Time	● Hour	Adjusts the time for the built-in clock of this unit.
			● Minute	
			● Second	
			Set	
			Cancel	
	Information ^{e)}			Displays the software version of this unit.
	Preview Setting		RCP	RCP contact preview
			CCU	CCU rear preview
			CNU S-BUS	CNU S-BUS preview
	Camera		Gate Phase InterLock	Turns the gate phase interlock for the multi matrix ON/OFF.
	Security		Engineer Mode	Sets the unit to Engineer Mode. ^{f)}
		Status ^{e)}	CCU Mnu Enable ^{g)}	Enables CCU menu control.
Ref. Enable ^{g)}			Enables registration and transfer of the reference file.	
OHB Enable ^{g)}			Enables registration of the OHB file.	
Crop Enable ^{g)}			Enables crop ON/OFF in aspect conversion.	
LCD	LCD Brightness		● Bright	Adjusts the brightness of the LCD of this panel.
Memory Stick	Memory Stick		Format	Formats a Memory Stick.

e) Selectable or displayed only in Engineer Mode

f) Engineer Mode will be canceled when you turn off the unit.

g) The corresponding function becomes operable in Engineer mode regardless of this setting.

Menu Configuration and Basic Menu Operations

Function menu

Menu	Submenu	Control item	Function
Operation		Filter Ctrl	Selects the filter remote or local mode.
		ND (1/2/3/4/5)	Selects ND filters.
		CC (A/B/C/D/E)	Selects CC filters.
		Gamma	Selects the step gamma.
		Master Gain	Selects the master gain.
		Shutter	Turns the shutter mode ON/OFF.
		ECS	Turns the ECS mode ON/OFF.
		● Shutter	Selects the shutter speed.
		● ECS	Selects the ECS frequency.
SW	page 1	5600K	Turns 5600K electric color temperature conversion function ON/OFF.
		Auto Knee	Turns the auto knee function ON/OFF. When this button is in inverse video (ON), the knee point is automatically adjusted according to the light content of the picture.
		Skin Detail	Turns the skin detail function ON/OFF.
		Detail Gate	Skin tone detail gate function. When this button is in inverse video (ON), the adjustment range of the skin tone detail is displayed in white on the monitor screen.
		Black Gamma	Turns the black gamma function ON/OFF.
		Knee Aperture	Turns the knee aperture function ON/OFF.
		Knee Sat	Turns the knee saturation function ON/OFF.
		Sat	Turns the saturation function ON/OFF.
		Mono	Turns the mono color function ON/OFF. This function mixes the chroma signals of a single hue to the luminance signal. The chroma level is modulated according to the luminance signal.
		S-Skin Knee	Turns the Super-skin knee function ON/OFF.
		Low Key Sat	Turns the function to compensate the chroma level in dark areas ON/OFF.
		ATW	Turns the auto-tracing white function ON/OFF.
		PsF	Turns the CCD progressive read function ON/OFF.
	page 2	Knee Off	Turns the knee compensation function ON/OFF (OFF when lit).
		Gamma Off	Turns the gamma function ON/OFF (OFF when lit).
		Detail Off	Turns the detail compensation function ON/OFF (OFF when lit).
		Matrix Off	Turns the linear matrix function to enhance color fidelity ON/OFF (OFF when lit).
		White Clip Off	Turns the limiter function for highlight signals ON/OFF (OFF when lit).
		Level Dep Off	Turns the level dependence which controls the details in the dark part of a picture ON/OFF (OFF when lit).
		Chroma Off	Turns the chroma function ON/OFF (OFF when lit).
		SD DTL Off	Turns the detail function for SD output ON/OFF with a HDTV camera connected (OFF when lit).
		SD MTX Off	Turns the linear matrix function for SD output ON/OFF with a HDTV camera connected (OFF when lit).

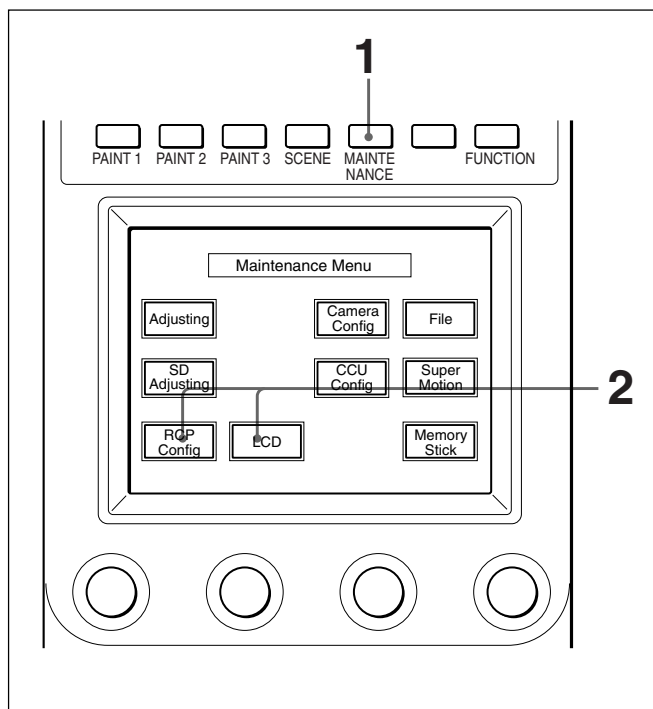
Initial Settings

Setting the Operating Conditions of the RCP-750/751

By using the RCP Configuration menu or LCD setting display, you can set the built-in clock of the RCP-750/751 and adjust various conditions of the RCP-750/751, such as the sound volume of the warning buzzer and the brightness of the indicators and LCD.

To display the RCP Configuration menu/LCD setting display

Proceed as follows:

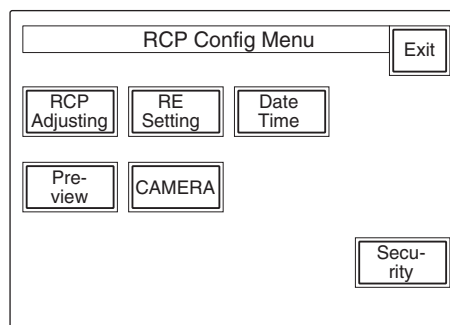


- 1 Press to light the MAINTENANCE button of the menu operation block.

The Maintenance Menu appears.

- 2 To display RCP Configuration menu, press **RCP Config**.

The RCP Configuration menu appears.



To obtain the LCD setting display, press **LCD**.

The LCD setting display (page 27(E)) appears.

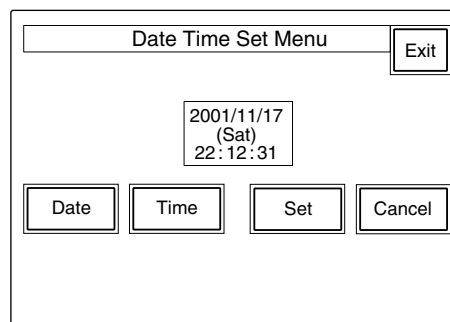
Setting the Built-in Clock

The RCP-750/751 has a built-in clock to record the date and time when reference and scene files are saved to **Memory Sticks**.

To set the clock, proceed as follows.

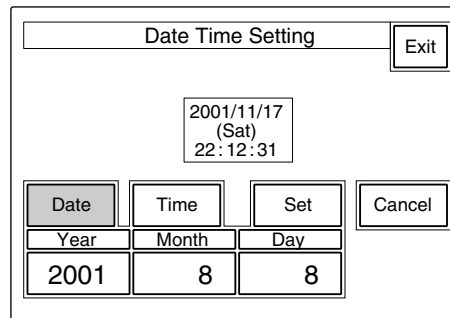
- 1 Press **Date/Time** on the RCP Configuration menu.

The current setting is displayed on the Date/Time Set menu.



- 2 To set the date:

1) Press and light **Date**.



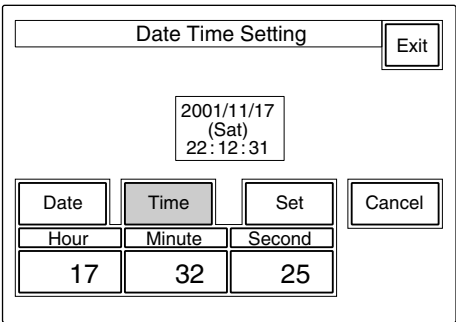
Initial Settings

- 2) Set the Year, Month and Day with the left three control knobs.
- 3) Press **Set**.

The set date becomes valid.
To restore the previous setting, press **Cancel** instead of **Set**.

3 To set the time:

- 1) Press and light **Time**.



- 2) Set the Hour, Minute and Second with the left three control knobs.
- 3) Press **Set** in synchronization with a time signal.

The set time becomes valid.
To resume the previous setting, press **Cancel** instead of **Set**.

When the clock setting is completed

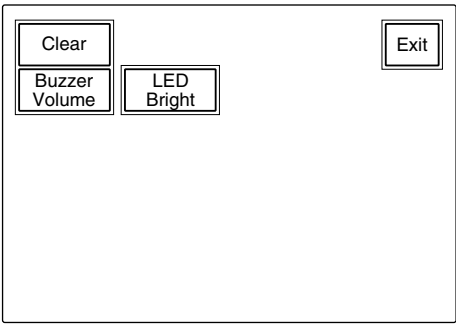
Press **Exit** to leave the menu.

Adjusting the Buzzer Sound

A buzzer sounds on the RCP-750/751 when it receives call signal or a panel control is operated.
When required, you may turn on/off the buzzer or adjust the sound volume.
To adjust the buzzer, proceed as follows:

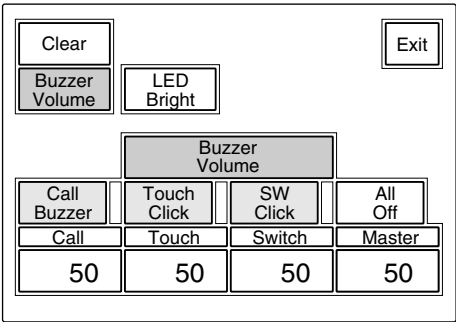
- 1 Press **RCP Adjusting** on the RCP Configuration menu.

The RCP adjustment menu appears.



2 Press and light **Buzzer Volume**.

The lower half of the display becomes the Buzzer Volume adjustment display.



- 3 Adjust the levels with the corresponding control knobs (50 is the standard value with all items).
Call: Sound volume of the buzzer when a call signal is received
Touch: Sound volume of the buzzer when a button displayed on the menu display is operated
Switch: Sound volume of the buzzer when a button on the panel is operated
The master volume can be adjusted with the rightmost control knob (**Master**).

To turn on/off the buzzers independently

Press the corresponding button. When it is lit, the buzzer is on.

- Call Buzzer:** For the buzzer sound when a call signal is received
- Touch Click:** For the buzzer sound when a button displayed on the menu display is operated
- SW Click:** For the buzzer sound when a button on the panel is operated

To turn off all the buzzers

Press and light **All Off**.

When the adjustment is completed

Press **Exit** to leave the menu.

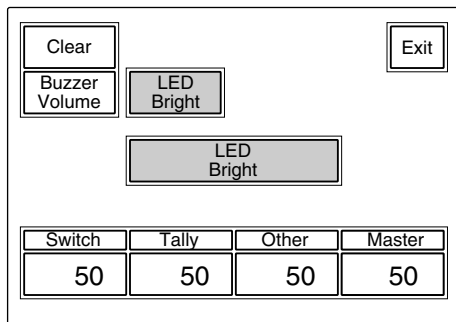
Adjusting the Brightness of the LEDs

You can adjust the brightness of the LEDs of the panel buttons and camera number/tally indication window. To adjust the brightness, proceed as follows.

1 Press **[RCP Adjusting]** on the RCP Configuration menu to display the RCP adjustment menu.

2 Press and light **[LED Bright]**.

The lower half of the display becomes the LED Brightness adjustment display.



3 Adjust the brightness with the corresponding control knobs (50 is the standard value with all items).

Switch: Brightness of the built-in LEDs of the control buttons

Tally: Brightness of the built-in LEDs of the camera number/tally indication window

Other: Brightness of the other LED indicators/lamps, including the master black indicator and f-number indicator

The master brightness can be adjusted with the rightmost control knob (**Master**).

When the adjustment is completed

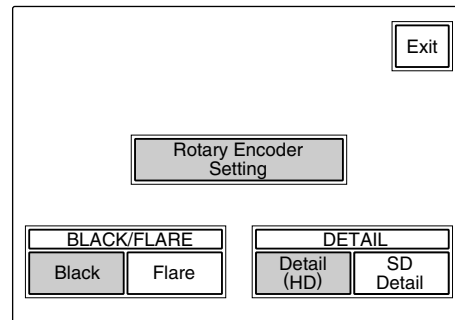
Press **[Exit]** to leave the menu.

Changing the Functions of the Rotary Encoders

You can change the functions of BLACK/FLARE control knobs and DETAIL control knob.

Proceed as follows:

1 Press **[RE Setting]** on the RCP Configuration menu to obtain the Rotary Encoder Setting display.



2 When changing the function of the BLACK/FLARE control knobs, press **[Black]** or **[Flare]** as desired.

When changing the function of the DETAIL control knob, press **[Detail (HD)]** or **[SD Detail]** as desired.

When the adjustment is completed

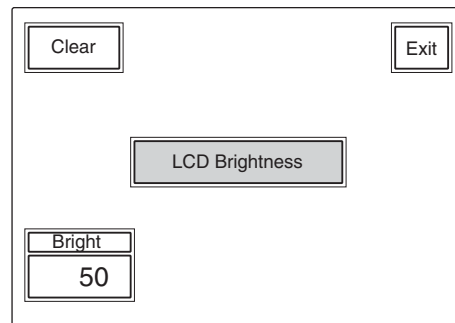
Press **[Exit]** to leave the menu.

Adjusting the Brightness of the LCD

You can adjust the brightness of the display of the menu control block.

Proceed as follows:

1 Press **[LCD]** on the Maintenance menu to display the LCD setting display.



2 Adjust the brightness with the leftmost control knob (50 is the standard value).

When the adjustment is completed

Press **[Exit]** to leave the menu.

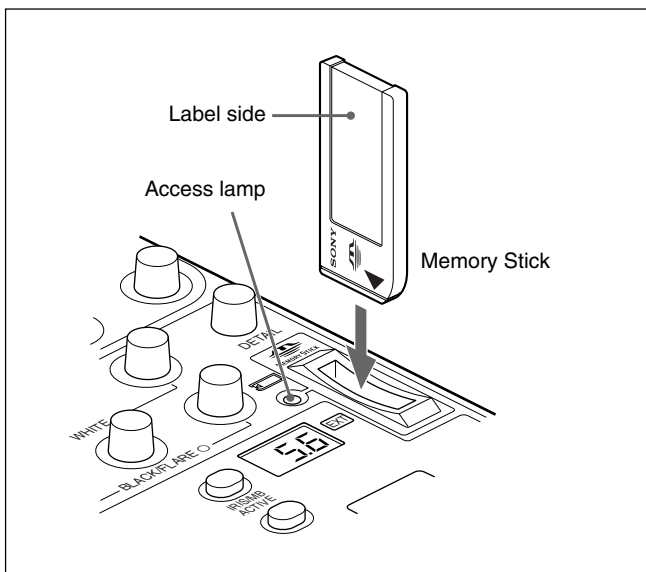
Memory Sticks

Using a Memory Stick

When a **Memory Stick** is inserted in the panel, the file data can be stored on the **Memory Stick**, which enables you to share data among RCPs.

Inserting a Memory Stick

Insert a **Memory Stick** with the label side to the left into the **Memory Stick** slot until it clicks and the access lamp lights in red.



Note

Never insert/remove a **Memory Stick** while the access lamp is lit in red.

To remove a Memory Stick

If you push the inserted **Memory Stick**, the **Memory Stick** will pop out a little. Then pull the **Memory Stick** out.

Access lamp

The access lamp shows the status of the **Memory Stick**.

Off: No **Memory Stick** is inserted.

Lit in green: There is a **Memory Stick** in the slot. In this condition, you can safely eject the **Memory Stick**.

Lit in red: Data are being read/written. If you eject the **Memory Stick** in this condition, the data are not guaranteed. All the data may be lost.

We recommend backing up important data.

28(E)

Notes on Memory Stick

On Memory Stick

Memory Stick media are available in three sizes: standard size, compact “Memory Stick Duo” size, and the smallest “Memory Stick Micro” (“M2”¹⁾) size. Once attached to a Memory Stick Duo adapter, a “Memory Stick Duo” is the same size as a standard “Memory Stick,” and as a result can be used with products requiring a standard **Memory Stick**. Also, once attached to a standard-size M2 adaptor, a “Memory Stick Micro” is the same size as a standard **Memory Stick**, and as a result can be used with products requiring a standard **Memory Stick**.

1) “M2” is an abbreviation for “Memory Stick Micro.”

Types of Memory Stick

Memory Stick is available in the following six types to meet various requirements in functions.

Memory Stick

Stores any type of data except copyright-protected data that requires the “MagicGate” copyright protection technology.

MagicGate Memory Stick

Equipped with the “MagicGate” copyright protection technology.

Memory Stick (“MagicGate”/High-Speed Transfer Compatible)

Equipped with “MagicGate” copyright protection technology and allows high-speed data transfer. This type of **Memory Stick** can be used with products requiring a **Memory Stick**, “MagicGate Memory Stick,” and “Memory Stick PRO.”¹⁾

1) Operation is not guaranteed for all of the compliant products. (Some products may not accept this type of **Memory Stick**.)

This unit is not compliant with high-speed data transfer with this type of **Memory Stick**.

Memory Stick-ROM

Stores pre-recorded, read-only data. You cannot record on “Memory Stick-ROM” or erase the pre-recorded data.

Memory Stick (with Memory Select Function)

Composed of multiple 128 MB memory units.

The mechanical switch at the back of the Memory Stick allows you to select the memory unit to be used depending on usage.

The memory units cannot be used simultaneously and continuously.

Memory Stick PRO

Memory Stick with “MagicGate” copyright protection technology, exclusive for “Memory Stick PRO”-compliant products.

Usable type of Memory Stick

You can use **Memory Stick** and “MagicGate Memory Stick” of 128MB or less as well as “Memory Stick PRO” of 2GB or less with this unit.

“Memory Stick Duo” of 128MB or less and “Memory Stick PRO Duo” of 2GB or less can also be used by using the Memory Stick Duo adaptor.

(They cannot be directly mounted. Be sure to use a Memory Stick Duo adaptor.)

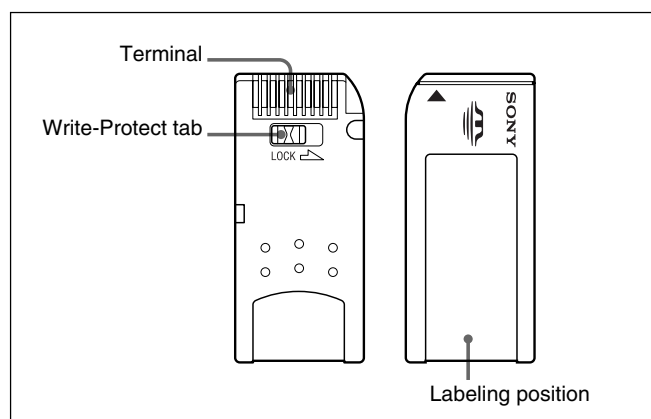
Note on data read/write speed

Data read/write speed may vary depending on the combination of the “Memory Stick” and “Memory Stick” compliant product you use.

On MagicGate

MagicGate is copyright-protection technology that uses encryption technology.

Structure of Memory Stick




You cannot record or erase data when the write-protect tab on the **Memory Stick** is set to LOCK.

Handling of Memory Stick

- Image data may be damaged in the following cases:
 - If you remove the **Memory Stick**, or turn the power off when the access lamp is lit in red
 - If you use a **Memory Stick** near static electricity or a magnetic field

We recommend backing up important data.

- Prevent metallic objects or your finger from coming into contact with the terminal of the connecting section.
- Do not attach any material other than the supplied label to the label space.
- Attach the label at the prescribed labeling position. Make sure the label is attached at the labeling position properly.
- Do not bend, drop, or apply strong shock to a **Memory Stick**.
- Do not disassemble or modify a **Memory Stick**.
- Do not let the **Memory Stick** get wet.
- Do not use or keep a **Memory Stick** in locations that are:
 - Extremely hot such as in a car parked in the sun
 - Under direct sunlight
 - Very humid or subject to corrosive gases
- When you carry or store a **Memory Stick**, keep it in its case.
- **Memory Sticks** of the sizes that can be used with the RCP-750/751 may not be used with some cameras. To exchange the setting data with a camera via a **Memory Stick**, be sure to use **Memory Sticks** of a size that can be used with both the RCP-750/751 and the camera.

- “Memory Stick”, , and “MagicGate Memory Stick” are trademarks of Sony Corporation.
- “Memory Stick Duo” and MEMORY STICK DUO are trademarks of Sony Corporation.
- “Memory Stick PRO” and MEMORY STICK PRO are trademarks of Sony Corporation.
- “Memory Stick PRO Duo” and MEMORY STICK PRO DUO are trademarks of Sony Corporation.
- “Memory Stick-ROM” and MEMORY STICK-ROM are trademarks of Sony Corporation.
- “MagicGate Memory Stick” is trademark of Sony Corporation.
- “MagicGate” and MAGICGATE are trademarks of Sony Corporation.

Specifications

General

Power requirements	10.5 to 35 V DC
Power consumption	4 W max.
Maximum cable length	200 m (656 feet) with CCU/ HDCU connected
Operating temperature	5°C to 40°C (41°F to 104°F)
Dimensions (w/h/d)	RCP-750: 102 × 354 × 126.5 mm (4 1/8 × 14 × 5 inches) RCP-751: 102 × 354 × 86.5 mm (4 1/8 × 14 × 3 1/2 inches)
Mass	RCP-750: 1.5 kg (3 lb 5 oz) RCP-751: 1.3 kg (2 lb 14 oz)

Inputs/outputs

REMOTE	CCU/CNU: 8-pin multiconnector (1) AUX: 8-pin multiconnector (1)
EXT I/O	9-pin D-sub connector (1)

Supplied accessory

Operation Manual (1)

Optional accessories

Remote cable CCA-5-3 (3 m)
Remote cable CCA-5-10 (10 m)
Remote cable CCA-5-30 (30 m)
Maintenance Manual
Memory Stick

Design and specifications are subject to change
without notice.

Note

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

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



* 3 - 2 0 6 - 9 1 4 - 0 5 * (1)

SONY®



REMOTE CONTROL PANEL

RCP-920

RCP-921



電気製品は、安全のための注意事項を守らないと、火災や人身事故になることがあります。

このオペレーションマニュアルには、事故を防ぐための重要な注意事項と製品の取り扱いかたを示してあります。**このオペレーションマニュアルをよくお読みのうえ**、製品を安全にお使いください。お読みになったあとは、いつでも見られるところに必ず保管してください。

OPERATION MANUAL
1st Edition (Revised 2)

Japanese/English

For the customers in the U.S.A.

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.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

All interface cables used to connect peripherals must be shielded in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

For the customers in Europe

This product with the CE marking complies with the EMC Directive issued by the Commission of the European Community.

Compliance with this directive implies conformity to the following European standards:

- EN55103-1: Electromagnetic Interference (Emission)
- EN55103-2: Electromagnetic Susceptibility (Immunity)

This product is intended for use in the following Electromagnetic Environments: E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors), E4 (controlled EMC environment, ex. TV studio).

Pour les clients en Europe

Ce produit portant la marque CE est conforme à la Directive sur la compatibilité électromagnétique (EMC) émise par la Commission de la Communauté européenne.

La conformité à cette directive implique la conformité aux normes européennes suivantes :

- EN55103-1 : Interférences électromagnétiques (émission)
- EN55103-2 : Sensibilité électromagnétique (immunité)

Ce produit est prévu pour être utilisé dans les environnements électromagnétiques suivants : E1 (résidentiel), E2 (commercial et industrie légère), E3 (urbain extérieur) et E4 (environnement EMC contrôlé, ex. studio de télévision).

Für Kunden in Europa

Dieses Produkt besitzt die CE-Kennzeichnung und erfüllt die EMV-Richtlinie der EG-Kommission.

Angewandte Normen:

- EN55103-1: Elektromagnetische Verträglichkeit (Störaussendung)
- EN55103-2: Elektromagnetische Verträglichkeit (Störfestigkeit)

Für die folgenden elektromagnetischen Umgebungen: E1 (Wohnbereich), E2 (kommerzieller und in beschränktem Maße industrieller Bereich), E3 (Stadtgebiet im Freien) und E4 (kontrollierter EMV-Bereich, z.B. Fernsehstudio).

For the customers in Europe

The manufacturer of this product is Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.

The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

Pour les clients en Europe

Le fabricant de ce produit est Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japon.

Le représentant autorisé pour EMC et la sécurité des produits est Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Allemagne. Pour toute question concernant le service ou la garantie, veuillez consulter les adresses indiquées dans les documents de service ou de garantie séparés.

Für Kunden in Europa

Der Hersteller dieses Produkts ist Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.

Der autorisierte Repräsentant für EMV und Produktsicherheit ist Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Deutschland. Bei jeglichen Angelegenheiten in Bezug auf Kundendienst oder Garantie wenden Sie sich bitte an die in den separaten Kundendienst- oder Garantiedokumenten aufgeführten Anschriften.

For the State of California, USA only

Perchlorate Material - special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate

Perchlorate Material : Lithium battery contains perchlorate.

For the customers in Taiwan only

廢電池請回收

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Precautions

Note on faulty pixels on the LCD panel

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

Overview

Features

The RCP-920/921 Remote Control Panel is designed for remote control of the BVP/HDC series Color Video Camera via the CCU/HDCU Camera Control Unit. This panel is connected to the CCU/HDCU Camera Control Unit (or the CNU-700 Camera Command Network Unit, which is connected to the CCU/HDCU) by a dedicated cable of up to 200 m (656 feet) in length and controls the camera functions which are used most frequently in basic applications from a distance.

The RCP-920 and RCP-921 are completely identical in their functions except with respect to the iris and master black adjustments.

For the iris and master black adjustments, the RCP-920 uses a joystick type control while the RCP-921 uses rotary knobs.

The principal features of the RCP-920/921 are as follows.

Optimized control arrangement for basic camera operation

This remote control panel is provided with essential control functions for basic operation of a BVP/HDC-series camera.

The buttons, knobs, and other controls have been arranged according to their functions and with consideration to their frequency of use. Indicators and buttons light or flash to indicate the status of the system operation.

Also, guard frames are provided to protect against accidental use of those buttons vital to camera operation. These features ensure easy and error-free use of this remote control panel.

Auto setup control

The RCP-920/921 has built-in microcomputers that reliably perform automatic setup for the majority of the control items. The various items can be automatically adjusted independently or in combination.

Scene file control

Using the paint menu, camera adjustment data for a particular scene can be stored in the video camera as a scene file. Up to five such files can be stored. This allows quick adaptation to various shooting conditions simply by calling up a scene file.

Camera SLS/ECS/shutter function control

The SLS (Slow Shutter), ECS (Extended Clear Scan), and electronic shutter functions of the camera can be turned ON/OFF from this panel. The ECS frequency and shutter speed are also selected using the buttons on the panel.

Dedicated cable or Ethernet connection

The connection between the remote control panel and the camera control unit is established by a single dedicated cable (CCA-5) that reliably sends and receives all necessary signals and also provides power for the panel. Alternatively, a connection via Ethernet cable is also possible.

Support for parallel operation with other control panels

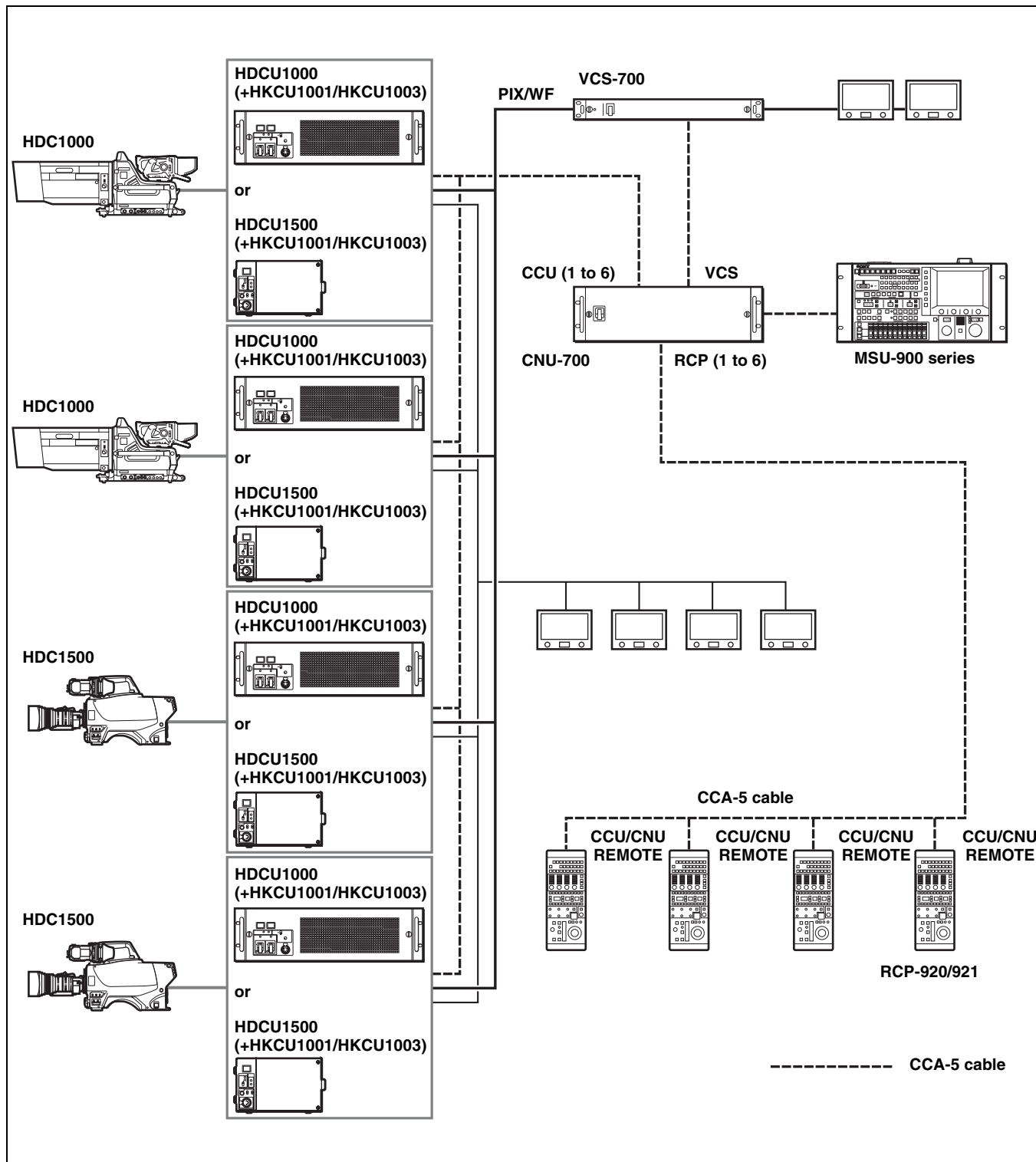
Video cameras can be concurrently controlled from this panel and other controller, such as the MSU-900/950 Master Setup Unit.

Four units fit in 19-inch rack

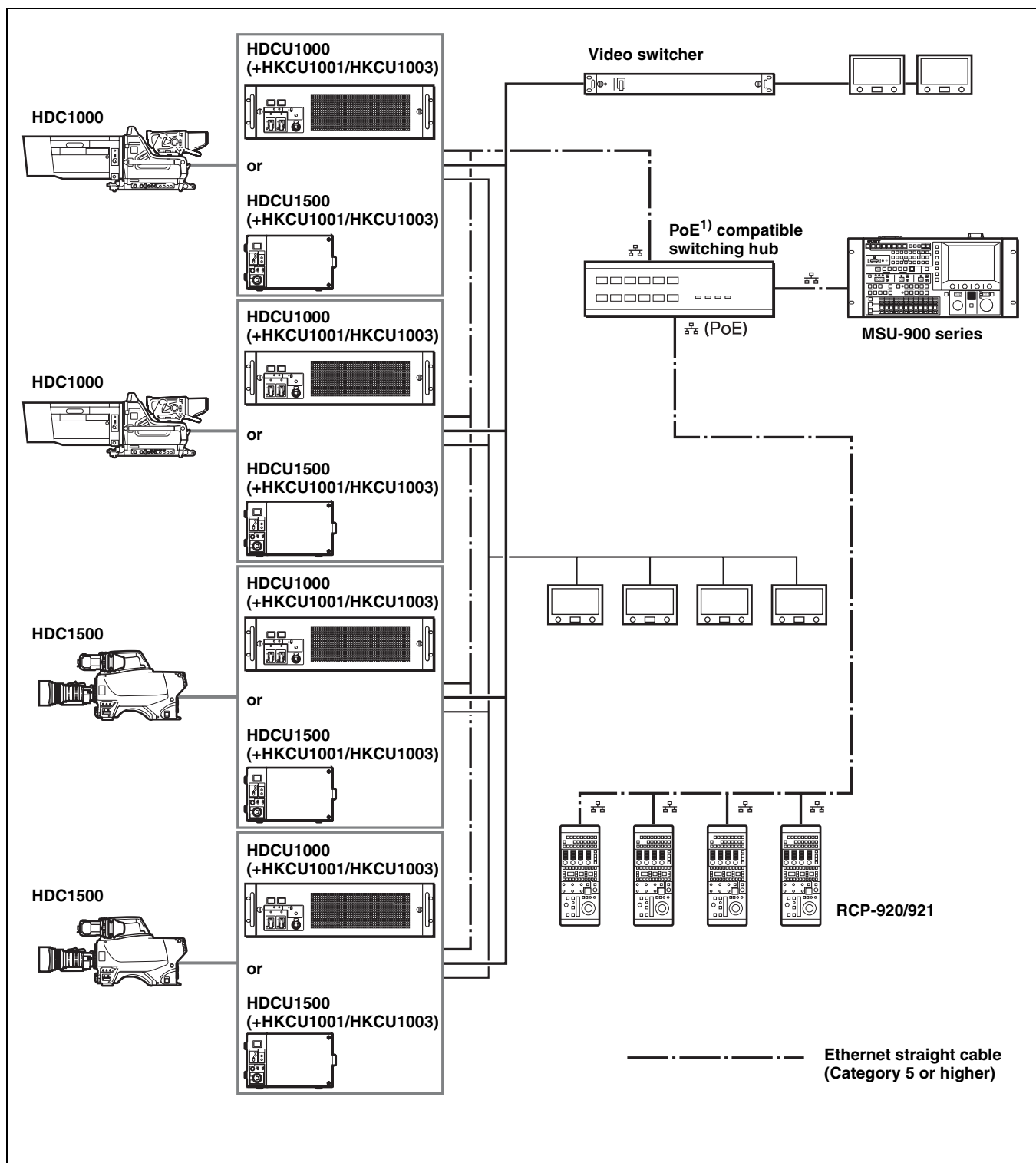
Up to four units of this control panel can be mounted in line on a 19-inch EIA standard rack.

Examples of System Configurations

Command cable system (for HDC series)



Ethernet system (for HDC series)



1) Power over Ethernet

About the switching hub power supply

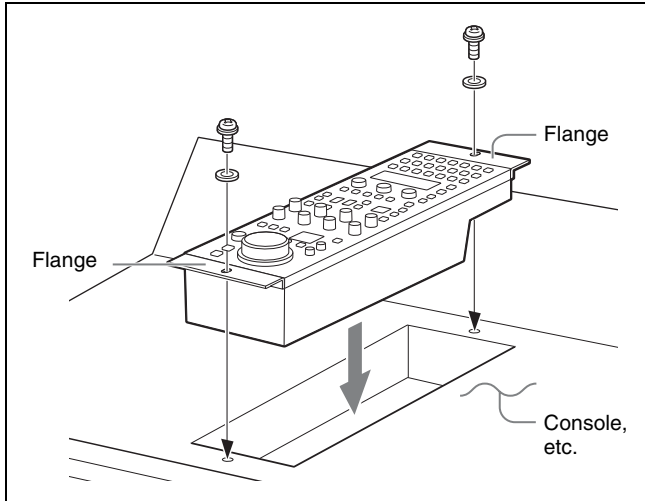
As the maximum power of the RCP-920/921 is 14 W, multiply 14 W by the number of connected RCP units when considering the power supply from the switching hub.

Precautions for Ethernet System Connections

When connecting the unit to the system with an Ethernet cable, make sure to ground the unit using one of the following methods.

- Secure the flanges on the unit with screws.
- Connect a ground wire to the bottom of the unit.

To secure the flanges on the unit with screws

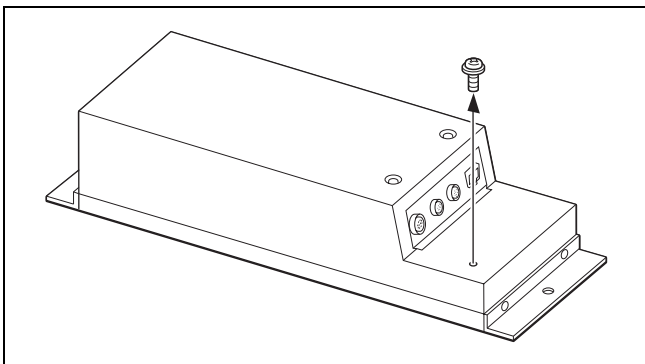


Note

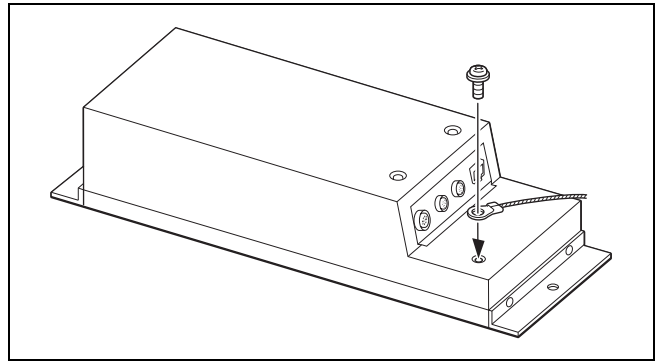
The screws are not supplied with this unit. Use screws that are suited to the installation location.

To connect a ground wire to the bottom of the unit

- 1 Unscrew the screw on the rear of the unit.

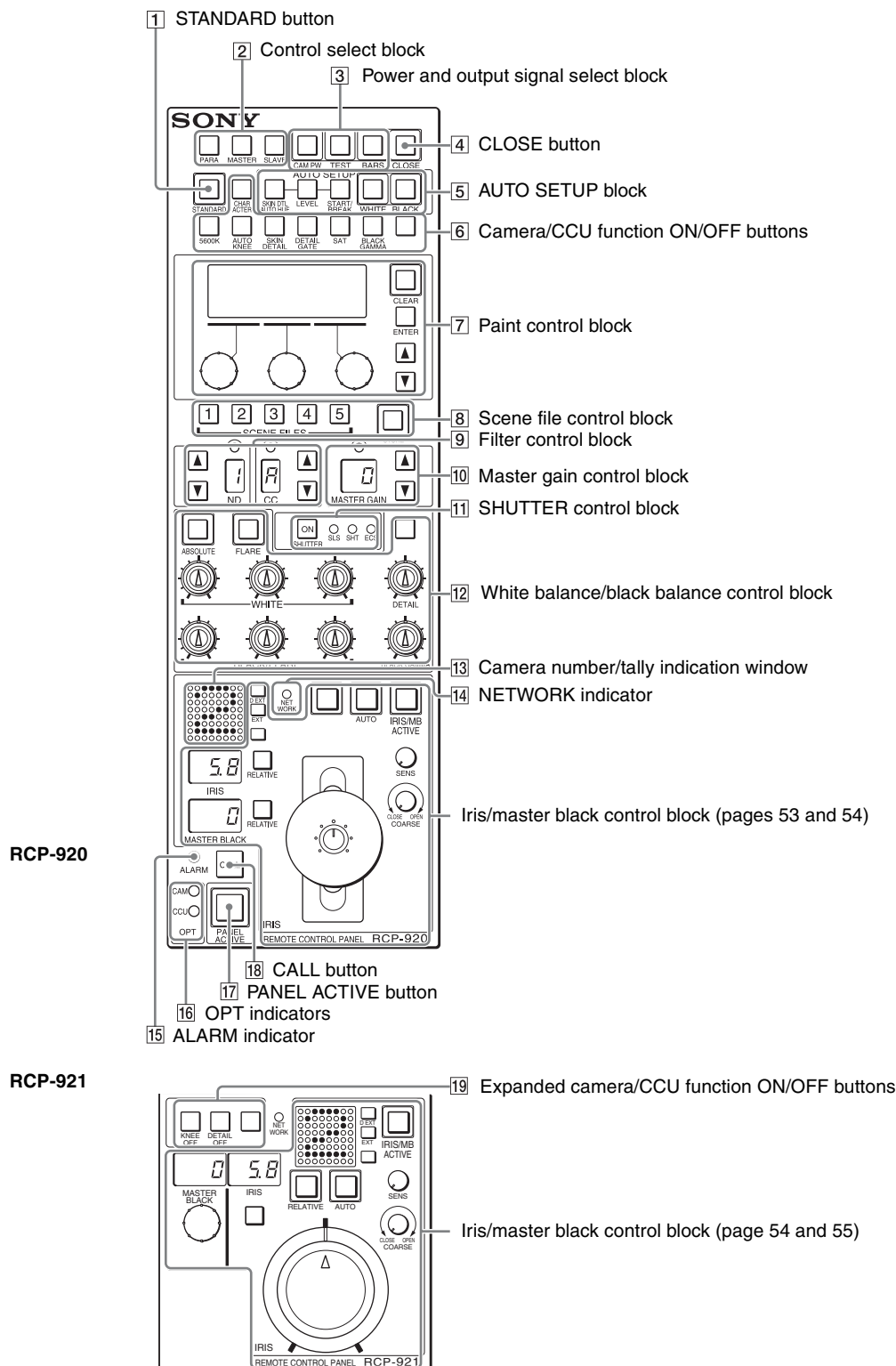


- 2 Attach the ground wire with the removed screw.



Location and Function of Parts

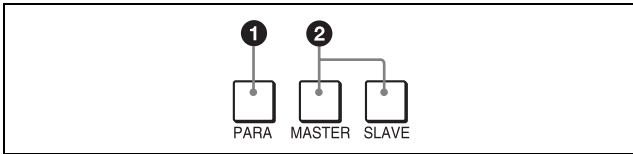
Operation Panel



1 STANDARD button

When you press this button, the video camera settings are initialized to the reference values stored on the video camera, and the button lights for several seconds. If you press the button while it lights, the video camera retrieves the state before the button was lit.

2 Control select block



1 PARA (parallel mode) button

Lights when Parallel mode is active, in which concurrent operation with another control panel is possible. When this button is lit, all the buttons and controls on this panel except for the iris/master black control block and CLOSE button are active, even if the PANEL ACTIVE button is not lit.

If you press the button while lit, it goes dark and Parallel mode is cancelled.

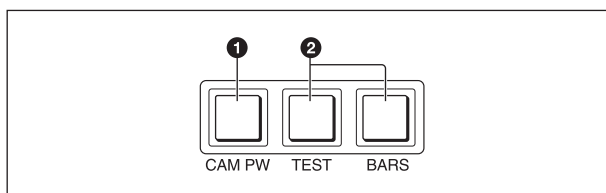
2 MASTER and SLAVE buttons

When adjusting the white balance of multiple cameras in Master/Slave mode, designate the master camera or the slave camera with these buttons.

Press and light up the MASTER button to specify the connected camera for the master. Press and light up the SLAVE button to specify the connected camera for the slave. The slave cameras follow the master camera settings.

If you press a button when lit, it goes dark.

3 Power and output signal select block



1 CAM PW (camera power) button

Press and light up this button to turn the power supply to the video camera ON. (The button promptly flashes until the camera becomes ready for transmission.)

When you press this button again, it starts flashing and the power supply is turned OFF.

2 Test signal output select buttons

Press and light up one of these buttons to activate the test signal generator of the video camera and send the respective signals.

TEST: To send a sawtooth signal to test the video circuits.

BARS: To send a color bar signal.

Note

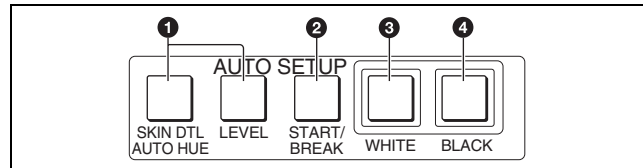
The BARS button takes priority to the TEST button. If the BARS button is lit, press the button to turn it dark before pressing the TEST button.

4 CLOSE (iris close) button

Press and light up this button to close the iris. If you press the button while lit, it goes dark and iris closure is canceled.

5 AUTO SETUP block

This block has various buttons for automatic adjustment of the camera.



1 Auto adjustment item select buttons

Press and light up these buttons to select items to be automatically adjusted.

SKIN DTL AUTO HUE: Skin tone detail automatic hue

LEVEL: Gamma balance, knee point, master black level, etc.

2 START/BREAK button

Press to start automatic adjustment of the selected items. The button lights during adjustment and goes dark when adjustment is completed.

If you press the button when lit, the automatic adjustment is cancelled and the button flashes. To stop the flashing, press the button again.

3 WHITE (white balance) button

Press to automatically adjust the white balance.

The button lights during adjustment and goes dark when adjustment is completed.

If you press this button when lit or the START/BREAK button, the automatic adjustment is cancelled and the button flashes. To stop the flashing, press the button again.

4 BLACK (black balance) button

Press to automatically adjust the black balance and black set.

The button lights during adjustment and goes dark when adjustment is completed.

If you press this button when lit or the START/BREAK button, the automatic adjustment is cancelled and the button flashes. To stop the flashing, press the button again.

Note

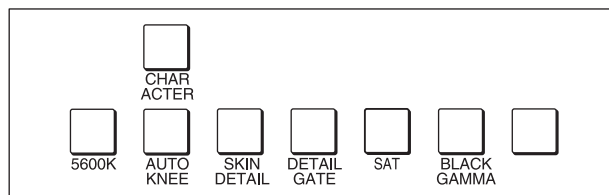
If an error occurs during adjustment, the pressed button flashes.

6 Camera/CCU function ON/OFF buttons

Various functions of the video camera or the CCU/HDCU can be turned ON and OFF from this panel. The following switching functions are assigned to seven of the buttons at the factory and the rightmost button is reserved for future use.

Press and light up these buttons to turn ON the respective functions.

Press again so that the buttons go dark to turn OFF the functions.



5600K: 5600K electric color temperature conversion function

AUTO KNEE: Auto knee function. When this button is lit (ON), the knee point is automatically adjusted according to the light content of the picture.

SKIN DETAIL: Skin tone detail function

DETAIL GATE: Skin tone detail gate function. When this button is lit (ON), the adjustment range of the skin tone detail is displayed in white on the monitor screen.

SAT: Saturation function

BLACK GAMMA: Black gamma function

CHARACTER: Self-diagnostic display function.

When this button is lit (ON), the contents of the self-diagnosis of the CCU/HDCU is displayed on a monitor connected to the CHARACTER OUTPUT connector of the CCU/HDCU.

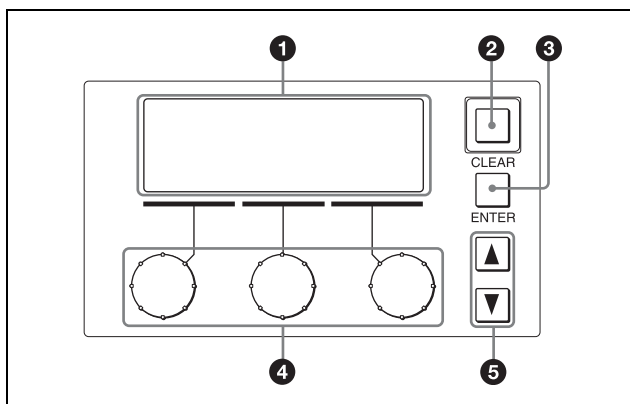
The contents are also mixed to the video signal to be output from the PIX1 OUTPUT connector.

Each time you press this button, the display changes as follows:



The contents of the self-diagnosis may be displayed when required even if this button is not lit.

7 Paint control block



1 LCD panel

Shows adjustment items and other information.

2 CLEAR button

Press and hold for more than 1 second to clear the manually adjusted settings of the selected items and resume the standard settings (which can be defined by the user).

3 ENTER button

Press to select or confirm menu and adjustment items, etc.

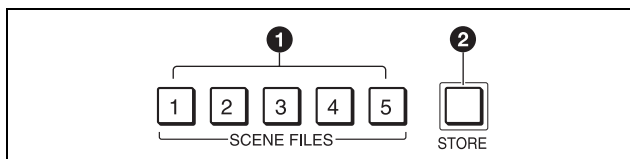
4 Paint controls (rotary encoders)

Adjust the value of the selected paint adjustment item.

5 MENU UP/DOWN button

Used for moving between menu pages. Press the ▲ button to go back one page and the ▼ button to go to the next page.

8 Scene file control block



1 SCENE FILES buttons

While the STORE button is flashing: When you press one of these buttons, the current setting data is stored as a file of the corresponding number.

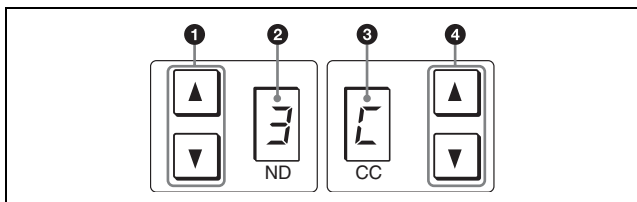
While the STORE button is out: The stored data can be retrieved by pressing and lighting up the button of the desired number. Press the lit button to turn it dark and resume the previous status.

② STORE (scene file store) button

To store a scene file, first press this button so that the button starts flashing, then press the SCENE FILES button of the desired number. When file storage is completed, the STORE button goes dark.

To cancel storage, press the flashing button again before pressing the SCENE FILES button. The STORE button goes dark.

⑨ Filter control block



① ND filter select buttons

Once either button is pressed, both buttons light up. Each time you press the buttons, the ND filter setting changes as follows. (Filters shown below are examples. Actual filters will differ, depending on the camera.)

▲ : 1 → 2 → 3 → 4 → 5 → 1 → ...

▼ : 5 → 4 → 3 → 2 → 1 → 5 → ...

It continuously changes when either button is kept pressed.

② ND filter display

Indicates the number corresponding to the selected ND filter. (Filters shown below are examples. Actual filters will differ, depending on the camera.)

1: Clear

2: 1/4 ND

3: 1/8 ND

4: 1/16 ND

5: 1/64 ND

③ CC (color temperature conversion) filter display

Indicates the type corresponding to the selected CC filter. (Filters shown below are examples. Actual filters will differ, depending on the camera.)

A: Cross filter

B: 3200K (clear)

C: 4300K

D: 6300K

E: 8000K

④ CC (color temperature conversion) filter select buttons

Once either button is pressed, both buttons light up. Each time you press the buttons, the CC filter setting changes as follows. (Filters shown below are examples. Actual filters will differ, depending on the camera.)

▲ : A → B → C → D → E → A → ...

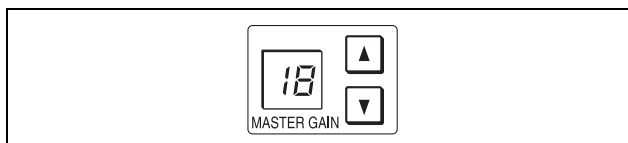
▼ : E → D → C → B → A → E → ...

It continuously changes when either button is kept pressed.

Note

Once you press any of the buttons ① and ④, all the four buttons light, enabling both the ND and CC filter selections.

⑩ Master gain control block

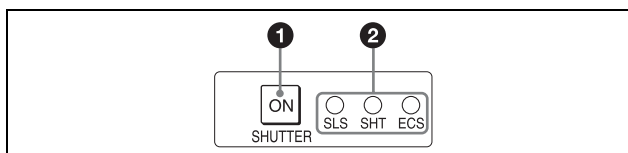


MASTER GAIN buttons and display

Select the appropriate video gain according to the illumination of the subject to be shot. The selected value (in dB) is displayed in the window.

The gain value increases when the ▲ (up) button is pressed and decreases when the ▼ (down) button is pressed. It continuously changes when either button is kept pressed.

⑪ SHUTTER control block



① ON button

Turns the camera SLS function, shutter function, or ECS function ON and OFF. Pressing the button causes it to light and turns the function ON. Pressing the button again causes it to go dark and turns the function OFF.

② SLS/SHUTTER/ECS indicators

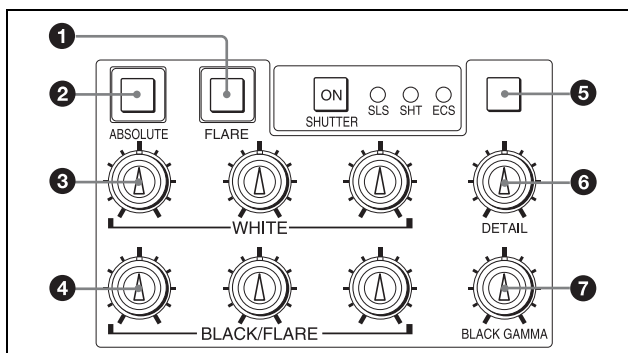
The indicator for the function selected via the menu lights.

SLS: Slow Shutter mode

SHT: Shutter mode

ECS: ECS (Extended Clear Scan) mode

⑫ White balance/black balance control block



① FLARE (flare balance adjustment mode) button

Toggle the black balance adjustment mode and flare balance adjustment mode for the BLACK/FLARE knobs. Press and light the button to select the flare balance adjustment mode. Press the button again so that it goes dark when adjusting the black balance.

② ABSOLUTE (absolute value mode) button

Press and light up this button to set the mode of manual adjustment with the WHITE, BLACK, FLARE, BLACK GAMMA, and DETAIL knobs from Relative mode to Absolute mode.

In the following cases, Relative mode is automatically selected (the lit button goes dark).

- When an automatic setup (level, white, black) is completed.
 - When a scene file is retrieved.
 - When the adjustment mode is switched between the flare balance and black balance by pressing the FLARE button.
 - When the controlled CCU/HDCU is changed due to the RCP Assign settings of the master setup unit (MSU).
- When the PANEL ACTIVE button is out, or one of the PARA, MASTER, or SLAVE buttons is lit, Relative mode is automatically selected and this ABSOLUTE button is not operative.

③ WHITE (white balance manual adjustment) knobs

Used to manually adjust the white balance. From the left, the knobs are for R, G, and B signal adjustment.

④ BLACK/FLARE (black balance/flare balance manual adjustment) knobs

Used to manually adjust the black balance (when the FLARE button is out) or the flare balance (when the FLARE button is lit).

From the left, the knobs are for R, G, and B signal adjustment.

⑤ Spare button

For future use.

⑥ DETAIL adjustment knob

Turn to adjust the detail level.

⑦ BLACK GAMMA adjustment knob

Turn to adjust the black gamma.

⑬ Camera number/tally indication window

The number of the camera being controlled from this panel is displayed in orange.

When a red tally signal is sent to the camera, the number is displayed in black and the background of the number lights in red.

When a green tally signal is sent to the camera, the number is displayed in black and the background of the number lights in green.

When both the red and green tally signals are simultaneously sent, the left half of the background lights in red and the right half lights in green.

⑭ NETWORK indicator

Indicates the status during connection to an Ethernet system.

Lit: Normal connection to the control device (CCU/HDCU) is established.

Flashing: There is no connection to the control device (CCU/HDCU).

Out: No camera network connection is established, or settings for connection to an Ethernet system are not configured.

⑮ ALARM indicator

Lights in red when trouble occurs in the camera system and the self-diagnostic function activates at the video camera head or the CCU/HDCU.

⑯ OPT (optical) indicators

When this panel is used in a camera system with optical fiber connection, indicates the reception status of the optical signal (the reception level).

The CAM indicator shows the reception status for the CCU/HDCU-to-camera link. The CCU indicator shows the reception status for the camera-to-CCU/HDCU link.

Green: Good reception

Orange: Weakened reception

Red: Severely weakened reception

Out: Connection problem, or no optical fiber connection

⑰ PANEL ACTIVE button

Press and light up this button to enable control (panel active condition) of the camera system connected to this panel. The IRIS/MB ACTIVE button will also be lit at the same time.

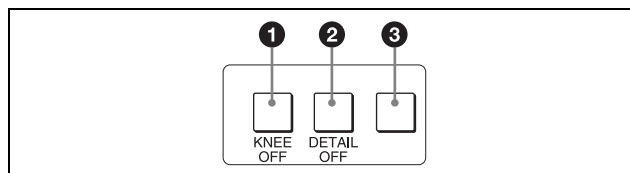
If you press this button so that it goes dark, the panel will be locked, preventing accidental misoperation.

⑱ CALL button

Press this button so that signal is sent to the camera and the CALL button on the camera lights. If the tally lamps on the camera and the red tally lamp on the CCU/HDCU were lit, they will go dark. Conversely, if they were out, they will light.

When the CALL button on the camera is pressed, the CALL button on this panel lights and a buzzer sounds.

⑲ Expanded camera/CCU function ON/OFF buttons (RCP-921 only)



① KNEE OFF button

Press and light up this button to turn the knee function OFF.

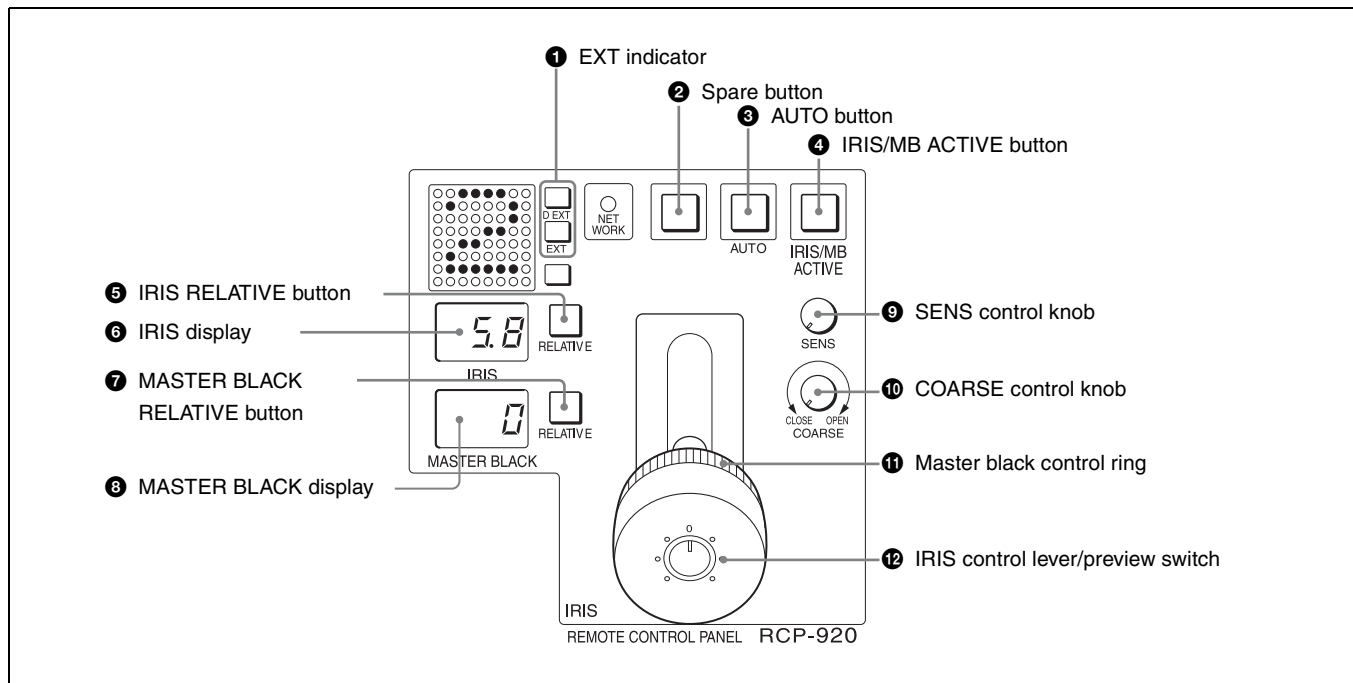
② DETAIL OFF button

Press and light up this button to turn the detail function OFF.

③ Spare button

For future use.

Iris/master black control block (RCP-920)



1 EXT (lens extender) indicator

EXT: Lights when lens extender is used.

D EXT: Lights when digital extender function is ON in a camera equipped with that function.

2 Spare button

For future use.

3 AUTO button

Press and light up this button to automatically adjust the iris according to the amount of input light.

While the button is lit, the reference value for auto adjustment can be fine-adjusted in the range of $\pm 1F$.

If you press the button when lit, it goes dark and Manual iris adjustment is enabled.

4 IRIS/MB ACTIVE (iris/master black active) button

Press and light up this button to enable iris, CLOSE button, and master black controls on the panel.

When the PANEL ACTIVE button is pressed, this button also lights up.

5 IRIS RELATIVE button

When the IRIS/MB ACTIVE button is lit, the iris manual adjustment mode can be selected with this button. Press and light up the button for the Relative mode or press so that it goes dark for Absolute mode. When the IRIS/MB ACTIVE button is out, Relative mode is automatically selected and this button is not operative.

6 IRIS display

Displays the F number of the current iris setting. When the lens is closed, "CL" is displayed.

7 MASTER BLACK RELATIVE button

When the IRIS/MB ACTIVE button is lit, the master black adjustment mode can be selected with this button. Press and light up the button for the Relative mode or press so that it goes dark for Absolute mode. When the IRIS/MB ACTIVE button is out, Relative mode is automatically selected and this button is not operative.

8 MASTER BLACK display

Displays the current master black setting in the range from -99 to +99.

9 SENS (sensitivity) control knob

Used for manual iris adjustment in Absolute mode. This control is not operative when Relative mode is selected.

See the table "Iris adjustment functions" (page 54).

10 COARSE control knob

Used for manual iris adjustment.

See the table "Iris adjustment functions" (page 54).

11 Master black control ring

Turn to manually adjust the master black level.

The setting is displayed on the MASTER BLACK display.

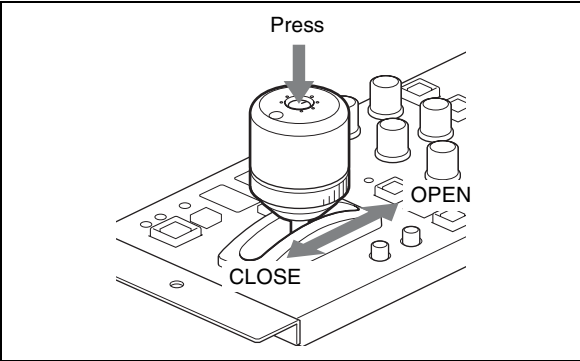
12 IRIS control lever/preview switch

When the AUTO button is out, you can adjust the iris manually by moving the lever.

When the AUTO button is lit, the reference value for automatic iris adjustment can be set in a range of $\pm 1F$ with this lever.

Press the switch axially to output preview key signals from the EXT I/O connector.

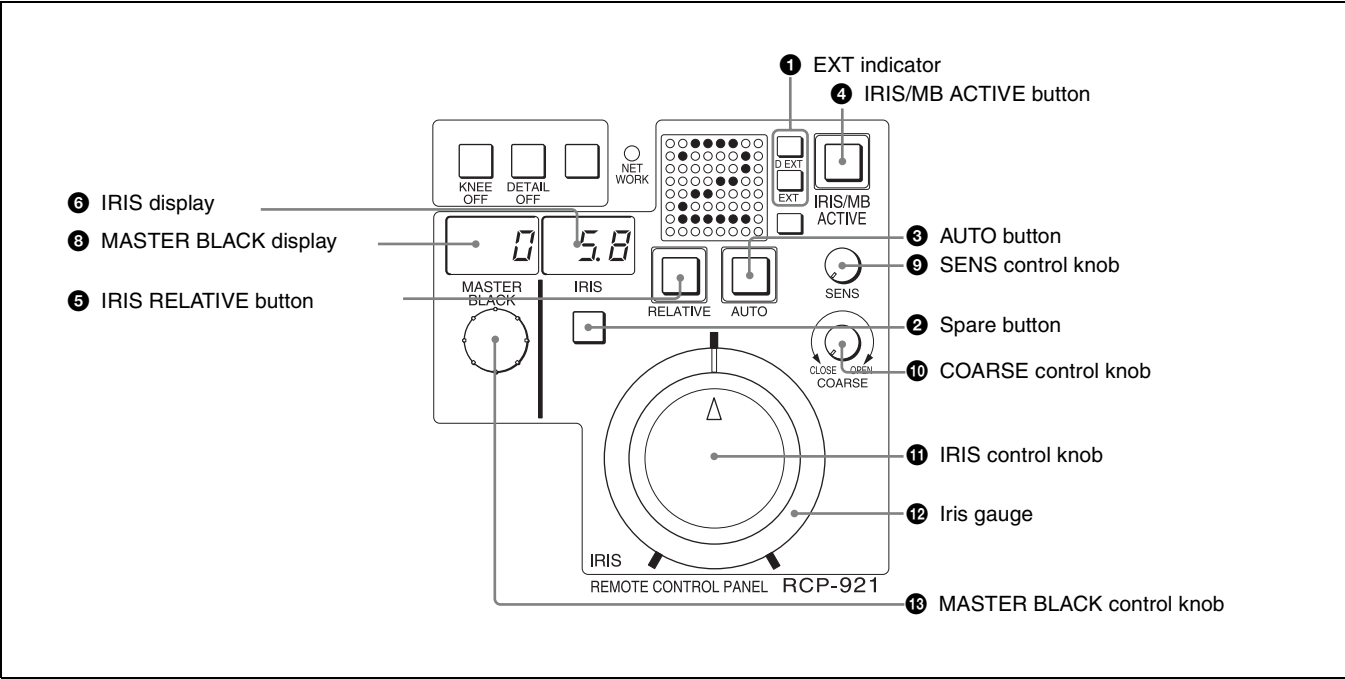
See the table “Iris adjustment functions” (page 54).



Iris adjustment functions

	Relative mode (IRIS RELATIVE button lit)	Absolute mode (IRIS RELATIVE button out)
IRIS lever (RCP-920) IRIS control knob (RCP-921)	Adjusts the iris with relative values within 1/4 of the total range from OPEN to CLOSED.	Adjusts the iris within the variable range set by the SENS and COARSE controls.
COARSE control knob	Adjusts the total range from OPEN to CLOSED in relative values.	Sets the lower limit for CLOSED.
SENS control knob	Does not function.	Sets the upper limit for OPEN, referenced to the CLOSED value set by the COARSE control.

Iris/master black control block (RCP-921)



Parts ❶ through ❿ have the same function as shown for the RCP-920.

❶ IRIS control

When the AUTO button is out, you can adjust the iris manually by turning the control.

When the AUTO button is lit, the reference value for automatic iris adjustment can be set in a range of $\pm 1F$ with this control.

See the table “Iris adjustment functions” (page 54).

❷ Iris gauge

The white line on the gauge provides a click position for the IRIS control. Turn the gauge to set the line to the most frequently used iris position, and it can be used as the reference for manual iris adjustment.

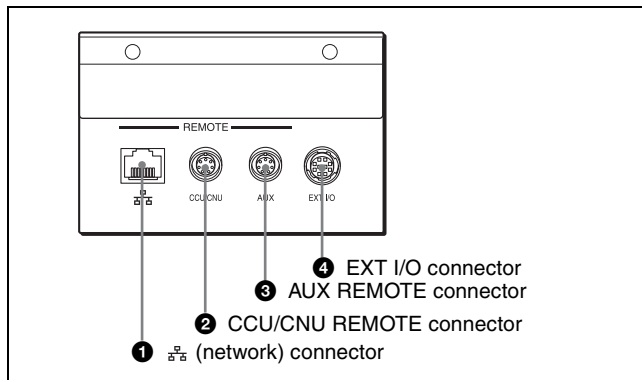
The gauge rotates infinitely in either direction. When no click position is required, set the line outside the rotation range of the IRIS control.

❸ MASTER BLACK control knob

Manually adjust the master black level.

The setting is displayed on the MASTER BLACK display.

Connector Panel



❶ (network) connector (8-pin RJ-45)

Used for establishing an Ethernet connection.

Connect to the network (10BASE-T/100BASE-TX) hub using a network cable (shielded type with Category 5 and higher). Through this connector, you can receive power from devices, such as hubs supporting PoE, that are compatible with IEEE802.3af standard.

CAUTION

For safety, do not connect the connector for peripheral device wiring that might have excessive voltage to this port.

Follow the instructions for this port.

ATTENTION

Par mesure de sécurité, ne raccordez pas le connecteur pour le câblage de périphériques pouvant avoir une tension excessive à ce port.

Suivez les instructions pour ce port.

ACHTUNG

Aus Sicherheitsgründen nicht mit einem Peripheriegerät-Anschluss verbinden, der zu starke Spannung für diese Buchse haben könnte.

Folgen Sie den Anweisungen für diese Buchse.

❷ CCU/CNU REMOTE (camera control unit/camera command network unit remote) connector (8-pin multiconnector, female)

Connects to the RCP/CNU connector of the camera control unit or the RCP connector of the camera command network unit.

❸ AUX REMOTE (auxiliary remote) connector (8-pin multiconnector, female)

Connects to the RCP-700/701.

Note

The AUX REMOTE connector supplies power to the remote control panel (RCP). Do not connect anything other than the RCP to this connector.

❹ EXT I/O connector (10-pin, male)

Supplies preview signals.

Menu Configuration and Basic Operation

The RCP-920/921 provides menu operations for various functions such as adjustments of system equipment.

Basic operation

In the factory default condition, the first page of the paint menu appears on the LCD panel when power is supplied. During subsequent use, the last used menu page will appear.

For information on how to switch from and to other menu pages, see “Menu transition diagram” (page 59).

Paint menu

1 Display the menu.

The paint menu appears when power is supplied.
To call up other paint menu pages, press ▲ or ▼ on the MENU UP/DOWN button in the paint control block.

2 Set or adjust the item.

Turn the paint control for the respective setting to adjust the value (or select a setting).

Note

In the following cases, some items cannot be operated from the paint menu.

Button status	Unavailable items
ABSOLUTE button: Lit	WHITE COLOR TEMP DETAIL LEVEL
ABSOLUTE button: Lit FLARE button: Out	BLACK
ABSOLUTE button: Lit FLARE button: Lit	FLARE
ABSOLUTE button: Lit SD button: Out ¹⁾	DETAIL LEVEL
ABSOLUTE button: Lit SD button: Lit ¹⁾	SD DETAIL LEVEL

1) Only when an SD function is assigned to either of the spare buttons. You can assign an SD function to the spare button in the SW ASSIGN menu of the configuration menu.

Configuration menu

1 Display the configuration menu.

Press the ENTER button once to go to the top page of the paint menu.

Press the ENTER button again and hold it for at least 1 second. The top page of the configuration menu appears.

2 Go to the page with the item to be set.

Turn the right paint control to move the cursor to the setting or adjustment item that you want to set, and press the ENTER button. A display for the respective setting appears. Use the ▲ and ▼ buttons as required to move between pages.

3 Select the item.

Turn the paint control to move the cursor to the item and press the ENTER button. The cursor shape becomes “?”.

4 Set or adjust the item.

Turn the right paint control to adjust the value (or select a setting), and press the ENTER button. The change becomes active, and the cursor shape returns to “>.”

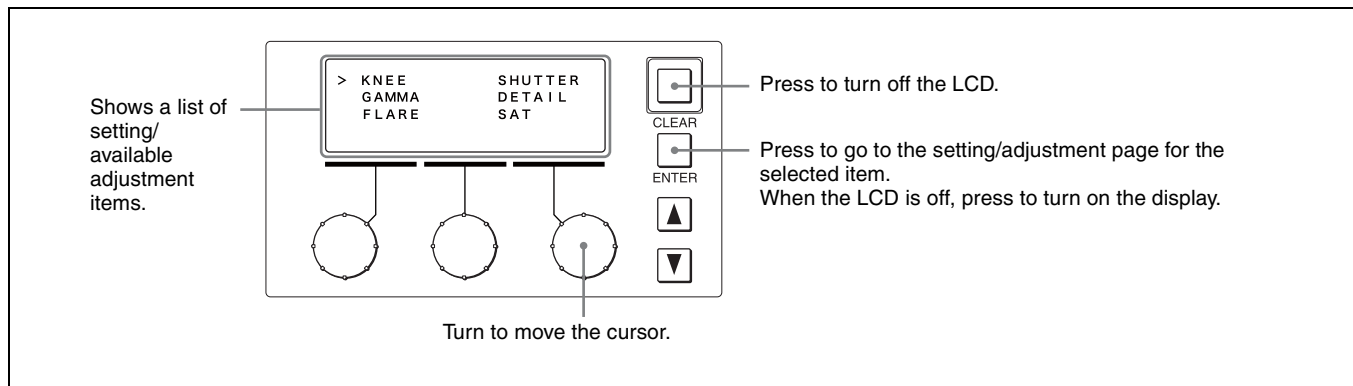
Note

For pages which contain a “SET” item, any changes on the page will not become active until confirmed by the setting procedure. To do this, move the cursor to “SET” and press the ENTER button twice.

Basic configuration of menu pages

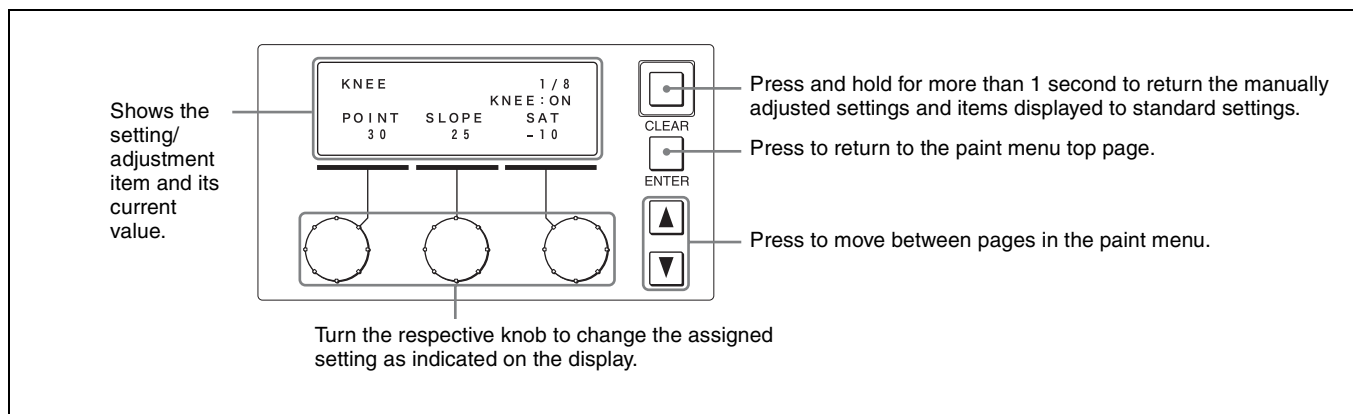
Paint menu

Top page



Setting/adjustment page

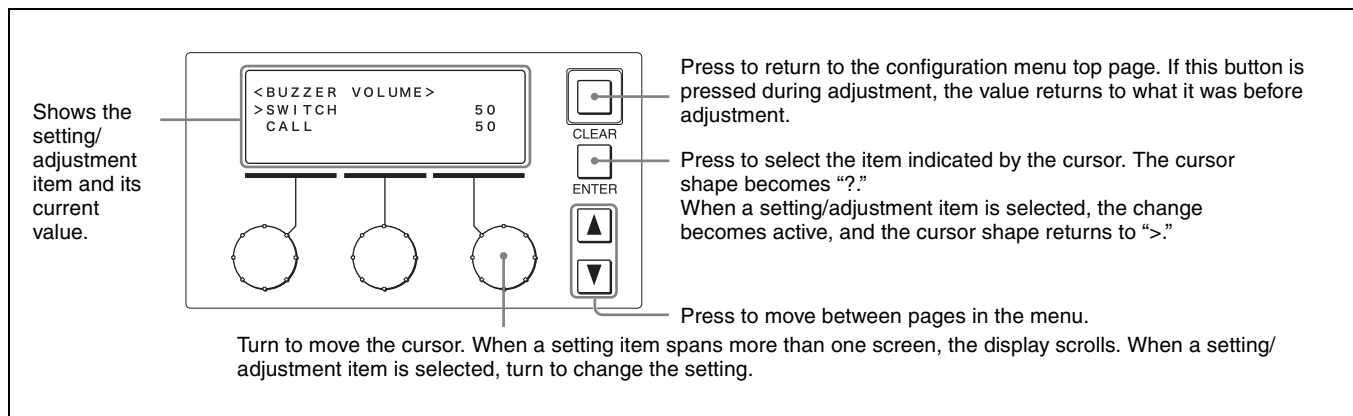
Example: Knee point adjustment page (accessed by selecting KNEE from the paint menu top page)



Configuration menu

Setting/adjustment page

Example: VR SETTING page

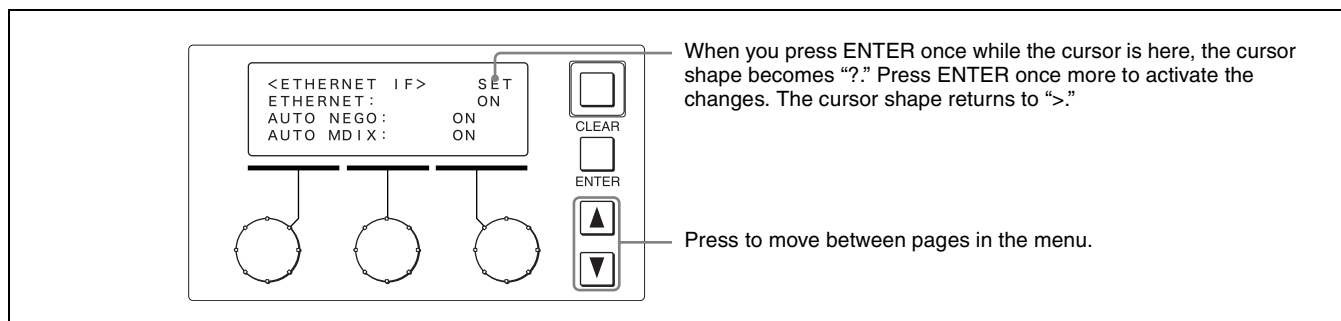


Page with SET item

For pages which have a “SET” item, changes must be confirmed by the setting procedure before they become active.

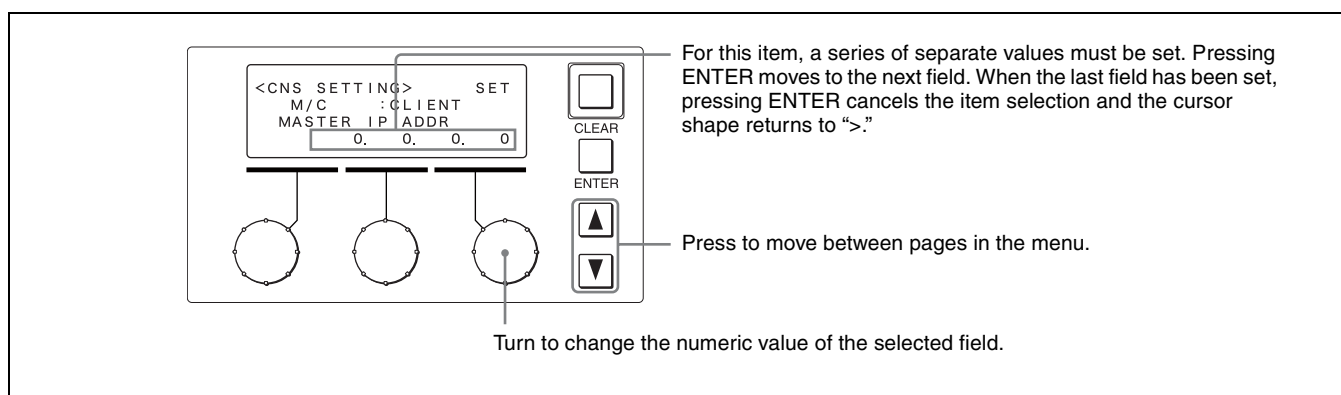
Otherwise the changes will be lost when switching to another page.

Example: ETHERNET IF page

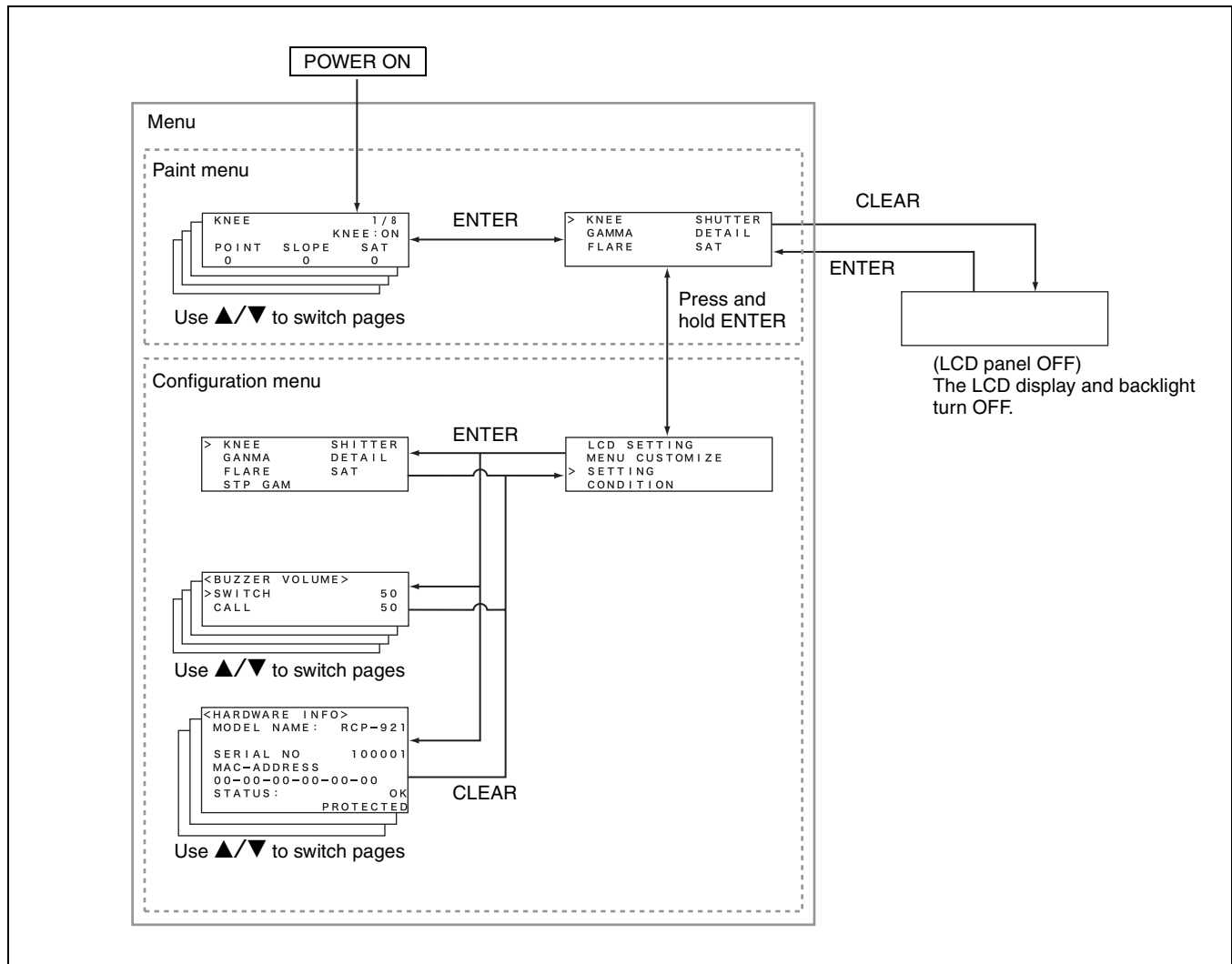


Entering a series of numeric values

Example: CNS SETTING page



Menu transition diagram



Menu Items

For details on the respective functions, see the operation manual of the connected camera or CCU.

Paint menu

Primary menu	Secondary menu	Operation/ adjustment item	Settings	Function	Factory default
TOP MENU	—	—	—	Lists items on the paint menu	KNEE/GAMMA/FLARE/SHUTTER/DETAIL/SAT
SELECT MENU	KNEE	Point	—	Adjusts master knee point	—
		Slope	—	Adjusts master knee slope	—
		Sat	—	Adjusts knee saturation	—
	GAMMA	R	—	Adjusts R channel gamma	—
		Master	—	Adjusts master gamma	—
		B	—	Adjusts B channel gamma	—
	FLARE	R	—	Adjusts R channel flare	—
		G	—	Adjusts G channel flare	—
		B	—	Adjusts B channel flare	—
	BLACK	R	—	Adjusts R channel black	—
		G	—	Adjusts G channel black	—
		B	—	Adjusts B channel black	—
	SHUTTER	Mode	—	Selects shutter mode	—
		—	—	—	—
		Speed ¹⁾	—	Selects shutter speed/ECS frequency/number of slow shutter frames	—
	DETAIL	Level	—	Adjusts detail level	—
		Limit	—	Adjusts detail limit	—
		Crisp	—	Adjusts crispening	—
	SAT	Saturation	—	Adjusts saturation level	—
		—	—	—	—
		—	—	—	—
	STP GAM	Step ¹⁾	—	Selects step gamma	—
		—	—	—	—
		—	—	—	—
	WHITE	R	—	Adjusts R channel white	—
		G	—	Adjusts G channel white	—
		B	—	Adjusts B channel white	—
	C TEMP	—	—	—	—
		Bal	—	Color temperature compensation	—
		C.Temp	—	Adjusts color temperature	—
	PHASE	H Coarse	—	Adjusts H Phase	—
		H Fine	—	Adjusts H Phase fine	—
		SC	—	Adjusts SC Phase	—
	SKIN DTL	Level	—	Adjusts skin detail level	—
		—	—	—	—
		—	—	—	—

Primary menu	Secondary menu	Operation/ adjustment item	Settings	Function	Factory default
SELECT MENU (Continue)	SD DTL	Level	—	Adjusts SD detail level	—
		Limit	—	Adjusts SD detail limit	—
		Crisp	—	Adjusts SD detail crispening	—
	AUTO IRIS	Level	—	Adjusts auto iris level	—
		Ratio	—	Adjusts auto iris APL ratio	—
		Gain	—	Adjusts auto iris gain	—
	SSM	—	—	—	—
		—	—	—	—
		Flicker Reduce	ON/OFF	Sets SuperMotion flicker reduction function	—
	M.WHITE	Master White Gain	Master White Gain	Adjusts master white gain	—
		—	—	—	—
		—	—	—	—

1) Only the setting value is displayed. The item name is not displayed.

Configuration menu

Primary menu	Secondary menu	Operation/ adjustment item	Settings	Function	Factory default
LCD SETTING		BRIGHT	0 to 99	Sets backlight brightness for LCD	50
		CONTRAST	0 to 99	Sets LCD contrast	50
MENU CUSTOMIZE				Sets items displayed on paint menu top page	KNEE/GAMMA/ FLARE/ SHUTTER/ DETAIL/SAT
SETTING	SW ASSIGN ¹⁾	SW01	5600K/AT KNEE/ SKIN DTL/DTL GATE/SAT/ B.GAM/IRIS REL/ SD/KNEE OFF/ GAM OFF/DTL OFF/W.CLP OFF/ CLOSE/SDDTL OFF/SEQ	Sets function assignments for each button	5600K
		SW02			AT KNEE
		SW03			SKIN DTL
		SW04			DTL GATE
		SW05			SAT
		SW06			B.GAM
		SW07			—
		SW08			—
		SW09			IRIS REL ²⁾
		SW10 ²⁾			KNEE OFF
		SW11 ²⁾			DTL OFF
		SW12 ²⁾			—
		SW13 ²⁾			—

Primary menu	Secondary menu	Operation/adjustment item	Settings	Function	Factory default
SETTING (Continue)	VR REL MODE SET ¹⁾	WHITE	Select from 1/1, 1/2, or 1/4	Sets variable range for white balance in Relative mode	1/2
		BLACK (FLARE)	Select from 1/1, 1/2, or 1/4	Sets variable range for black (flare) balance in Relative mode	1/2
		DETAIL	Select from 1/1, 1/2, or 1/4	Sets variable range for detail level in Relative mode	1/2
		B.GAM	Select from 1/1, 1/2, or 1/4	Sets variable range for black gamma in Relative mode	1/2
	RCP No. SET	RCP No.	1 to 24	Specifies System Number (RCP Number) of RCP unit ³⁾	—
	PREVIEW	CONTACT	ON/OFF	Sets function for preview signal output from EXT I/O connector on RCP	ON
		CCU	ON/OFF	Sets function for preview signal output from CCU	OFF
		S-BUS	ON/OFF	Sets function for preview signal output to S-BUS system	OFF
	LED BRIGHTNESS	SWITCH/LED	0 to 99	Sets lighted switch and LED brightness	50
		TALLY	0 to 99	Sets tally indication window brightness	50
		7SEGMENT	0 to 99	Sets brightness for 7-segment LED display (MASTER GAIN/ND/CC FILTER/IRIS/MASTER BLACK)	50
	BUZZER VOLUME	SWITCH	0 to 99	Sets volume of the sound emitted when a switch on the RCP is pressed	50
		CALL	0 to 99	Sets call volume of buzzer	50
	TIME	DATE	XXXX / XX / XX	Sets date	—
		TIME	XX : XX	Sets time	—
		TIME ZONE	COUNTRY	Sets time zone	(GMT) London
	SECURITY MODE	MODE	NORMAL/ ENGINEER	Specifies security level	NORMAL
		SET	—	Specifies mode	—
	CNS SETTING ¹⁾	CNS MODE	LEGACY/ BRIDGE/MCS	Sets camera network system connection mode LEGACY: System connection using conventional 700 protocol cable BRIDGE: Mode for one-to-one connections using the network MCS: Mode for multi-camera systems using the network	LEGACY
		(Sub mode) LEGACY: None BRIDGE: CONNECT MCS: M/C	CONNECT: PASSIVE/ ACTIVE/SEMI-AT	Sets submode for bridge mode PASSIVE: Waits for connection ACTIVE: Actively connects SEMI-AT: Semi-automatic mode that switches between PASSIVE/ACTIVE based on device connected via 700 protocol	SEMI-AT
			M/C: CLIENT	Sets submode for multi-camera system mode	CLIENT
		MASTER IP ADDR	xxx.xxx.xxx.xxx	Sets master IP address of multi-camera system mode	0.0.0.0
		TARGET IP ADDR	xxx.xxx.xxx.xxx	Sets IP address for connection target in bridge mode	0.0.0.0

Primary menu	Secondary menu	Operation/adjustment item	Settings	Function	Factory default
SETTING (Continue)	ETHERNET IF ¹⁾	ETHERNET	ON/OFF	Turns Ethernet connection ON/OFF	OFF
		AUTO NEGOT	ON/OFF	Turns the Auto Negotiation function ON/OFF	ON
		AUTO MDIX	ON/OFF	Turns the AUTO MDI/MDIX function ON/OFF	ON
		SPEED ⁴⁾	10M/100M	Sets the connection speed	100M
		DUPLEX ⁴⁾	HALF/FULL	Sets the connection to full duplex or half duplex	FULL
		MDI/MDIX ⁴⁾	MDI/MDIX	Sets MDI/MDIX	MDI
	TCP/IP SETTING ¹⁾	IP ADDRESS	xxx.xxx.xxx.xxx	Sets the IP address	0.0.0.0
		SUBNET MASK	xxx.xxx.xxx.xxx	Sets the subnet mask	0.0.0.0
		DEFAULT GATEWAY	xxx.xxx.xxx.xxx	Sets the default gateway	0.0.0.0
	ALL RESET ¹⁾	ALL RESET	—	Returns all configuration menu settings to factory defaults	—
	Shutter Display	Angle	ON/OFF	Turns the angle display function for shutter display ON/OFF	OFF
CONDITION	HARDWARE INFO	Model name	—	Shows model name	—
		Serial No.	—	Shows serial number	—
		Mac-address	—	Shows Mac address	—
	SOFTWARE INFO	Main Version	—	Shows main program version	—
		Main Release Date	—	Shows main program release date	—
		Main Comment	—	Shows main program ROM comments	—
		PLD Version	—	Shows PLD program version	—
	RCP DATA/ TIME	Date	—	Shows date setting	—
		Time	—	Shows time setting	—
		TimeZone	—	Shows time zone setting	—
	CNS SETTING ¹⁾	CONNECT	—	Shows status of connection to camera network system	—
		CNS MODE	—	Shows mode of connection to camera network system	—
		RCP No.	—	Shows RCP unit's system number (RCP number)	—
		TARGET/ MASTER IP ADDR	—	Shows IP address of connection target BRIDGE: TARGET IP ADDR MCS: MASTER IP ADDR	—
	ETHERNET IF ¹⁾	LINK	—	Shows Ethernet connection status	—
		ETHERNET	—	Shows whether Ethernet function is enabled/disabled	—
		AUTO NEGOT	—	Shows whether Auto Negotiation function is ON/OFF	—
		AUTO MDIX	—	Shows whether AUTO MDI/MDIX function is ON/OFF	—
		SPEED	—	Shows current connection speed	—
		DUPLEX	—	Shows current full/half duplex status	—
		MDI/MDIX	—	Shows current MDI/MDIX status	—

Primary menu	Secondary menu	Operation/ adjustment item	Settings	Function	Factory default
CONDITION (Continue)	TCP/IP SETTING ¹⁾	IP ADDR	—	Shows assigned IP address	—
		SUBNET MASK	—	Shows configured subnet mask	—
		DEFAULT GATEWAY	—	Shows configured default gateway	—

1) Can only be displayed or configured if ENGINEER is selected as MODE on SECURITY MODE screen.

2) RCP-921 only.

3) Only enabled if CNS MODE in CNS SETTING is MCS.

4) Fixed at AUTO when AUTO NEGO is set to ON.

Items available for MENU CUSTOMIZE

Display	Function	Left adjustment knob	Center adjustment knob	Right adjustment knob
K N E E	KNEE	POINT	SLOPE	SAT
G A M M A	GAMMA	Rch	Master	Bch
F L A R E	FLARE	Rch	Gch	Bch
B L A C K	BLACK	Rch	Gch	Bch
S T P G A M	STEP GAMMA	STEP		
S H U T T E R	SHUTTER	SELECT		SPEED
D E T A I L	DETAIL	LEVEL	LIMIT	CRISP
S A T	SATURATION	SATURATION		
W H I T E	WHITE	Rch	Gch	Bch
C . T E M P	COLOR TEMP		BAL	C.TEMP
P H A S E	H/SC PHASE	H COARSE	H FINE	SC
S K I N D T L	SKIN DETAIL	LEVEL		
S D D T L	SD DETAIL	LEVEL	LIMIT	CRISP
A . I R I S	AUTO IRIS	LEVEL	RATIO	GAIN
S S M	SUPERMOTION			Flicer Reduce
M . W H I T E	MASTER WHITE GAIN	M.White Gain		
(Blank)	(No function assignment)	—	—	—

Initial Settings

Configuring the RCP-920/921 Operating Environment

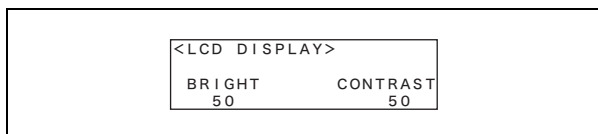
The RCP configuration menu allows you to configure settings on the RCP-920/921 such as the internal clock, buzzer volume, and LED and LCD brightness.

To adjust the LCD

You can adjust the brightness and contrast for the menu display panel.

- 1 Move the cursor to LCD SETTING in the RCP configuration menu, and press ENTER button.

The LCD settings screen appears.



- 2 Turn the left adjustment knob to adjust the brightness, and turn the right adjustment knob to adjust the contrast.
- 3 Press CLEAR button.

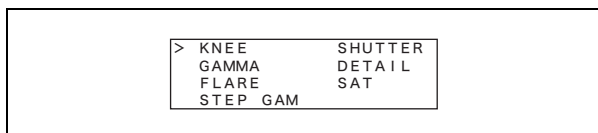
The first screen of the RCP configuration menu reappears.

To customize the paint menu

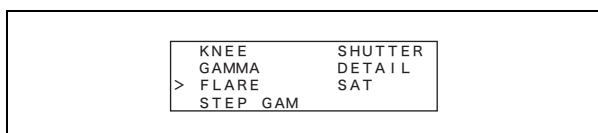
You can select up to eight setting items to appear in the paint menu.

- 1 Move the cursor to MENU CUSTOMIZE in the RCP configuration menu, and press ENTER button.

The paint menu customization screen appears.

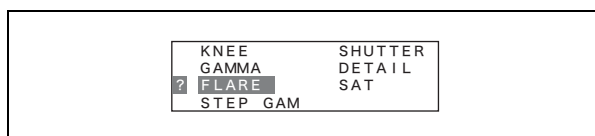


- 2 Turn the right adjustment knob to move the cursor to the item you want to change.

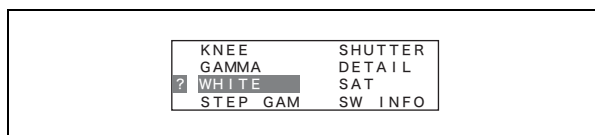


- 3 Press ENTER button to enable configuration.

The cursor appears as "?" and the selected item flashes.

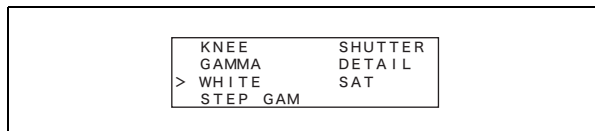


- 4 Turn the right adjustment knob to change the setting item.



- 5 Press ENTER button to confirm the selection.

The cursor appears as ">" again.



- 6 Repeat steps 2 to 5 for each paint menu item you want to change.
- 7 Press CLEAR button.

The first screen of the RCP configuration menu reappears.

To set the clock

The RCP-920/921 has an internal clock. Perform the following steps to set the clock.

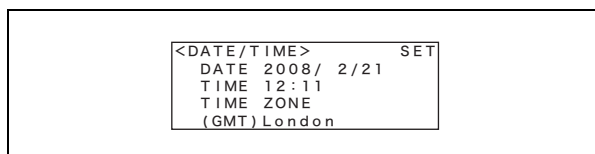
- 1 Move the cursor to SETTING in the RCP configuration menu, and press ENTER button.

The settings and adjustment screens appear.

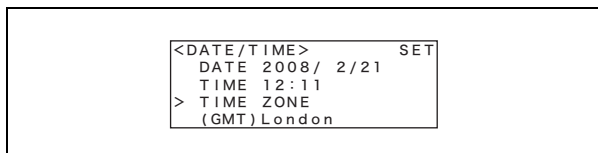
- 2 Use the ▲ and ▼ buttons to move through the settings and adjustment screens, and display the <DATE/TIME> page.

Note

The LCD can only display up to four setting items at one time. If a page has more than four items, turn the right adjustment knob to scroll the page.

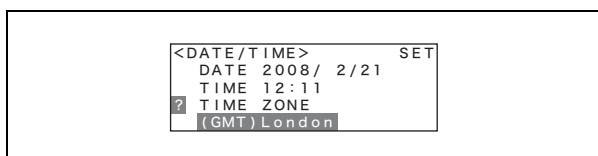


- 3** Turn the right adjustment knob to move the cursor to TIME ZONE.



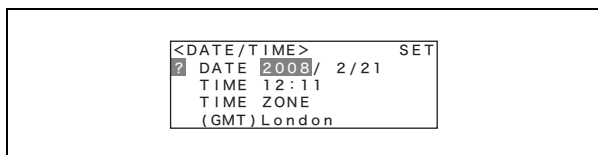
- 4** Set the time zone.

- ① Press ENTER button to enable configuration. The cursor appears as “?” and the selected time zone flashes.
- ② Turn the right adjustment knob to change the time zone, and press ENTER button. The time zone is set.



- 5** Set the date.

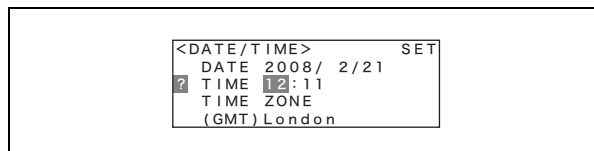
- ① Turn the right adjustment knob to move the cursor to DATE.
- ② Press ENTER button to enable configuration. The cursor appears as “?” and the year setting flashes.
- ③ Turn the right adjustment knob to change the year setting, and press ENTER button. The month setting flashes.
- ④ Turn the right adjustment knob to change the month setting, and press ENTER button. The day setting flashes.
- ⑤ Turn the right adjustment knob to change the day setting, and press ENTER button. The date is set.



- 6** Set the time.

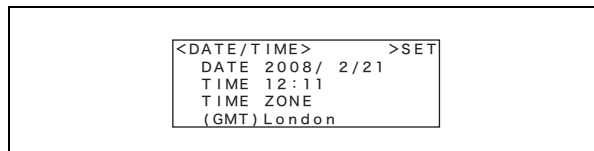
- ① Turn the right adjustment knob to move the cursor to TIME.
- ② Press ENTER button to enable configuration. The cursor appears as “?” and the hour setting flashes.

- ③ Turn the right adjustment knob to change the hour setting, and press ENTER button. The minute setting flashes.
- ④ Turn the right adjustment knob to change the minute setting, and press ENTER button. The time is set.



- 7** Save the date and time settings.

- ① Turn the right adjustment knob to move the cursor to SET in the upper right of the screen.
- ② Press ENTER button to enable configuration. The cursor appears as “?”.
- ③ Press ENTER button again to save the settings.



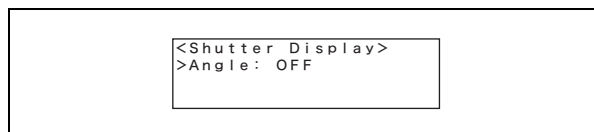
- 8** Press CLEAR button.

The first screen of the RCP configuration menu reappears.

To change the shutter display to an angle value

You can change settings on the RCP-920/921 to change the Step Shutter display to an angle value.

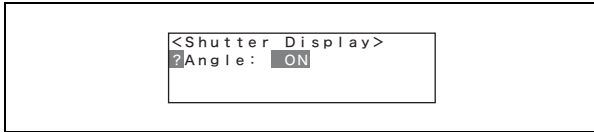
- 1** Move the cursor to SETTING in the RCP configuration menu, and press ENTER button. The settings and adjustment screens appear.
- 2** Use the ▲ and ▼ buttons to move through the settings and adjustment screens, and display the <Shutter Display> page.



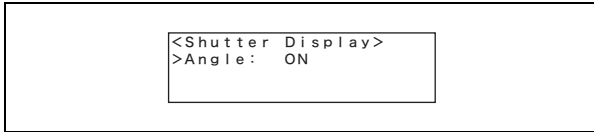
- 3** Change the shutter display setting.

- ① Press ENTER button to enable configuration. The cursor appears as “?” and the setting flashes.

- ② Turn the right adjustment knob to change the setting, and press ENTER button.



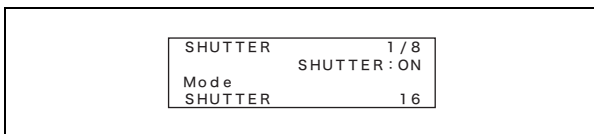
The shutter display setting is changed.



- 4 Press CLEAR button.

The first screen of the RCP configuration menu reappears.

The SHUTTER display on the SHUTTER page of the paint menu will be displayed as an angle (degree units).



To change the RCP number

When using the RCP-920/921 in a multi-camera network system, you must assign the unit a unique device number. When connecting the unit to a CCU directly or connecting the unit to a CNU, this configuration is not necessary.

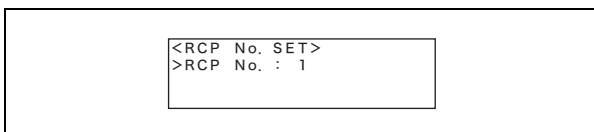
Note

Malfunctions may occur if you assign the RCP a number that is already in use by another device in a multi-camera system connected via Ethernet. Be sure to assign a different number for each device.

- 1 Move the cursor to SETTING in the RCP configuration menu, and press ENTER button.

The settings and adjustment screens appear.

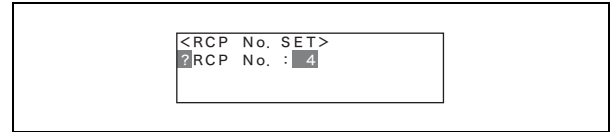
- 2 Use the ▲ and ▼ buttons to move through the settings and adjustment screens, and display the <RCP No. SET> page.



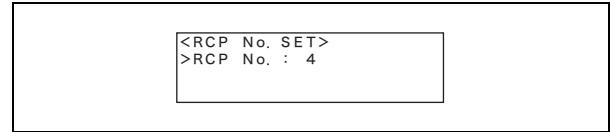
- 3 Change the RCP number setting.

- ① Press ENTER button to enable configuration.
The cursor appears as “?” and the setting flashes.

- ② Turn the right adjustment knob to change the setting, and press ENTER button.



The RCP number setting is changed.



- 4 Press CLEAR button.

The first screen of the RCP configuration menu reappears.

To change the output destination for previews (RCP-920)

When you press the IRIS control lever/preview switch on the RCP-920, preview key signals are output. You can enable or disable the output settings for destinations individually.

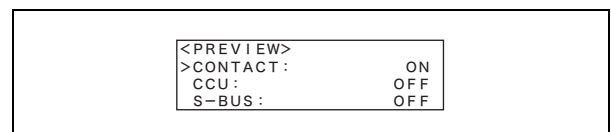
The output destinations you can configure are as follows.

- EXT I/O connector on the RCP unit (Factory setting: ON)
- External output connector on the CCU (Factory setting: OFF)
- S-BUS system via the CNU (Factory setting: OFF)

- 1 Move the cursor to SETTING in the RCP configuration menu, and press ENTER button.

The settings and adjustment screens appear.

- 2 Use the ▲ and ▼ buttons to move through the settings and adjustment screens, and display the <PREVIEW> page.



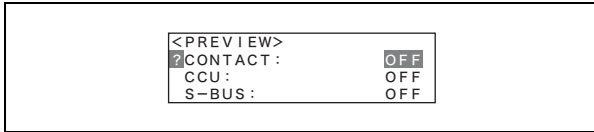
- 3 Turn the right adjustment knob to move the cursor to the preview output destination you want to configure.

To configure the EXT I/O connector on the RCP unit, move the cursor to CONTACT.

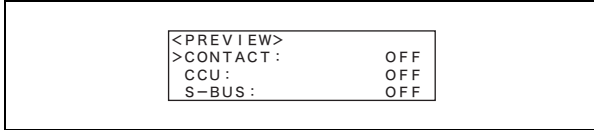
- 4 Change the preview output setting.

- ① Press ENTER button to enable configuration.
The cursor appears as “?” and the setting flashes.

- ② Turn the right adjustment knob to change the setting, and press ENTER button.



The preview output setting is changed.



- 5 Press CLEAR button.

The first screen of the RCP configuration menu reappears.

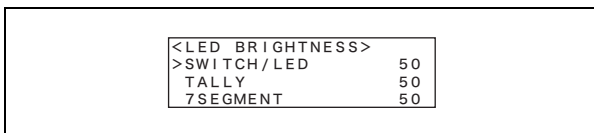
To adjust LED brightness

You can adjust the brightness of buttons and the LEDs in the tally indication window on the RCP-920/921.

- 1 Move the cursor to SETTING in the RCP configuration menu, and press ENTER button.

The settings and adjustment screens appear.

- 2 Use the ▲ and ▼ buttons to move through the settings and adjustment screens, and display the <LED BRIGHTNESS> page.



- 3 Turn the right adjustment knob to move the cursor to the item you want to configure.

The items you can configure are as follows.

SWITCH/LED: Adjusts the brightness for the button LEDs and the OPT and ALARM indicators.

TALLY: Adjusts the brightness for the LEDs in the camera number/tally indication window.

7SEGMENT: Adjusts the brightness for the LED number displays of the ND/CC filter, MASTER GAIN, IRIS, and MASTER BLACK indicators.

- 4 Set the brightness for each LED.

- ① Press ENTER button to enable configuration.
The cursor appears as “?” and the setting flashes.

- ② Turn the right adjustment knob to change the setting, and press ENTER button.



The brightness is set.



- 5 Press CLEAR button.

The first screen of the RCP configuration menu reappears.

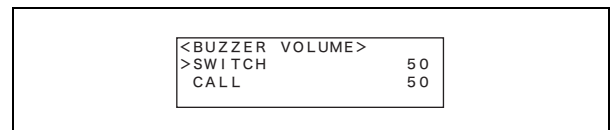
To adjust the buzzer volume

When a call signal is received on the RCP-920/921 or the panel is operated, the buzzer will emit a sound. You can adjust the buzzer volume as necessary.

- 1 Move the cursor to SETTING in the RCP configuration menu, and press ENTER button.

The settings and adjustment screens appear.

- 2 Use the ▲ and ▼ buttons to move through the settings and adjustment screens, and display the <BUZZER VOLUME> page.



- 3 Turn the right adjustment knob to move the cursor to the item you want to configure.

The items you can configure are as follows.

SWITCH: Adjusts the buzzer volume for when the buttons on the operation panel are pressed.

CALL: Adjusts the buzzer volume for when call signals are received.

- 4 Set the buzzer volume for each item.

- ① Press ENTER button to enable configuration.
The cursor appears as “?” and the setting flashes.
- ② Turn the right adjustment knob to change the setting, and press ENTER button.



The buzzer volume is set.



5 Press CLEAR button.

The first screen of the RCP configuration menu reappears.

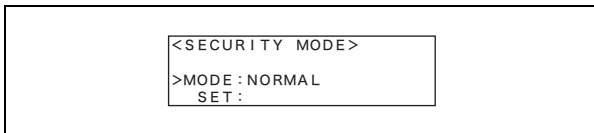
To change the security mode

The RCP-920/921 has an Engineer mode to limit access to certain settings. These settings cannot be configured unless Engineer mode is enabled.

1 Move the cursor to SETTING in the RCP configuration menu, and press ENTER button.

The settings and adjustment screens appear.

2 Use the ▲ and ▼ buttons to move through the settings and adjustment screens, and display the <SECURITY MODE> page.

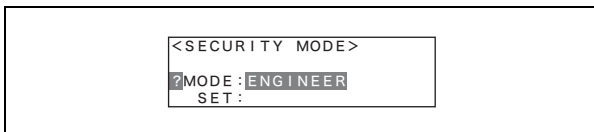


3 Turn the right adjustment knob to move the cursor to MODE.

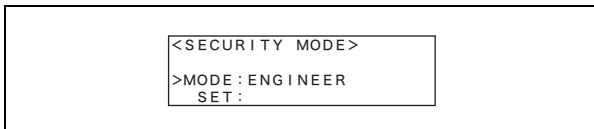
4 Change the security mode setting.

① Press ENTER button to enable configuration.
The cursor appears as “?” and the setting flashes.

② Turn the right adjustment knob to change the setting to ENGINEER, and press ENTER button.



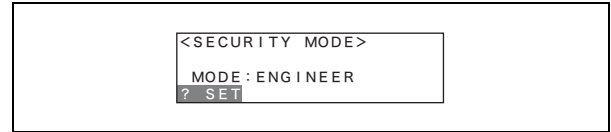
The security mode setting is changed.



5 Save the security mode setting.

① Turn the right adjustment knob to move the cursor to SET.

② Press ENTER button to enable configuration.
The cursor appears as “?” and the setting flashes.



③ Press ENTER button again to save the settings.



6 Press CLEAR button.

The first screen of the RCP configuration menu reappears.

Note

The security mode returns to NORMAL when the unit is turned off.

To change switch assignments

You can change the functions of certain switches on the RCP-920/921 (the camera/CCU function ON/OFF buttons), and assign them different functions.

Note

This setting can only be configured in Engineer mode.

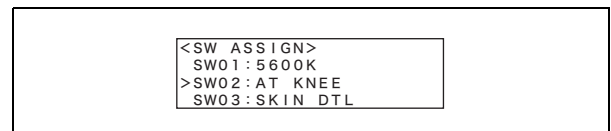
1 Move the cursor to SETTING in the RCP configuration menu, and press ENTER button.

The settings and adjustment screens appear.

2 Use the ▲ and ▼ buttons to move through the settings and adjustment screens, and display the <SW ASSIGN> page.

Note

The LCD can only display up to four setting items at one time. If a page has more than four items, turn the right adjustment knob to scroll the page.



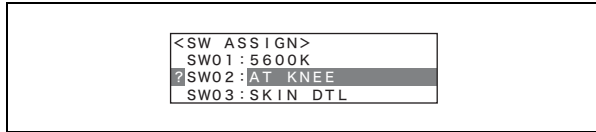
3 Turn the right adjustment knob to move the cursor to the switch you want to configure.

Note

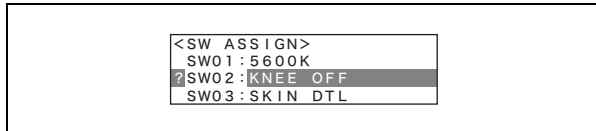
When you enter the settings configuration mode, the LEDs for all of the assignable switches dim temporarily, and only the switch selected for configuration with the cursor will remain lit. This allows you to confirm the switch for which you are currently changing the function.

- 4 Press ENTER button to enable configuration.

The cursor appears as “?” and the setting flashes.

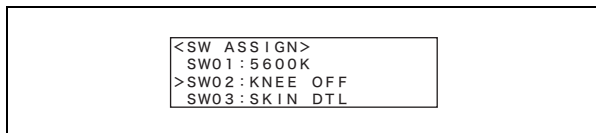


- 5 Turn the right adjustment knob to change the setting item.



- 6 Press ENTER button to confirm the selection.

The cursor appears as “>” again.



- 7 Repeat steps 3 to 6 for each switch you want to configure.

- 8 Press CLEAR button.

The first screen of the RCP configuration menu reappears.

Use the supplied function labels to relabel each switch for which the function has been changed.

To reset the settings in the RCP configuration menu

You can reset all the settings in the RCP configuration menu to their default configurations.

Note

This setting can only be configured in Engineer mode.

- 1 Move the cursor to SETTING in the RCP configuration menu, and press ENTER button.

The settings and adjustment screens appear.

- 2 Use the ▲ and ▼ buttons to move through the settings and adjustment screens, and display the <ALL RESET> page.



- 3 Reset the settings.

- ① Press ENTER button to enable configuration.
The cursor appears as “?” and the START? display flashes.



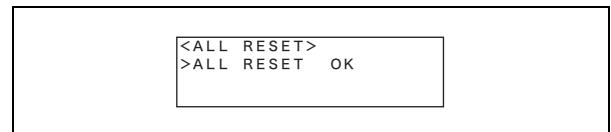
- ② Press ENTER button again.

OK appears, and all the settings are reset.

To cancel resetting, press CLEAR button when START? is displayed.

Note

The resetting procedure is complete when OK appears, and all the settings in the RCP configuration menu will be set to their factory default configurations.



- 4 Press CLEAR button.

The first screen of the RCP configuration menu reappears.

To change adjustment knob sensitivity

You can adjust the sensitivity of the WHITE, BLACK/FLARE, DETAIL, and BLACK GAMMA adjustment knobs when they are used in Relative mode.

Note

This setting can only be configured in Engineer mode.

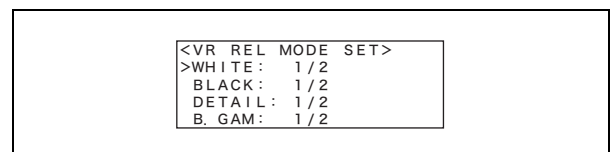
- 1 Move the cursor to SETTING in the RCP configuration menu, and press ENTER button.

The settings and adjustment screens appear.

- 2 Use the ▲ and ▼ buttons to move through the settings and adjustment screens, and display the <VR REL MODE SET> page.

Note

The LCD can only display up to four setting items at one time. If a page has more than four items, turn the right adjustment knob to scroll the page.



- 3 Turn the right adjustment knob to move the cursor to the item you want to change.
- 4 Change the sensitivity for each adjustment knob.
 - ① Press ENTER button to enable configuration. The cursor appears as “?” and the setting flashes.
 - ② Turn the right adjustment knob to change the setting, and press ENTER button.

```

<VR REL MODE SET>
?WHITE: 1/4
BLACK: 1/2
DETAIL: 1/2
  
```

The sensitivity is changed.

```

<VR REL MODE SET>
>WHITE: 1/4
BLACK: 1/2
DETAIL: 1/2
  
```

- 5 Press CLEAR button.

The first screen of the RCP configuration menu reappears.

To configure system connection settings

The RCP-920/921 supports system connections via the CCU/CNU REMOTE connector and connections to camera network systems via the Ethernet connector. Perform the following steps to configure system connection settings.

Notes

- To apply the configurations, you must restart the unit.
- This setting can only be configured in Engineer mode.

- 1 Move the cursor to SETTING in the RCP configuration menu, and press ENTER button. The settings and adjustment screens appear.
- 2 Use the ▲ and ▼ buttons to move through the settings and adjustment screens, and display the <CNS SETTING> page.

Note

The LCD can only display up to four setting items at one time. If a page has more than four items, turn the right adjustment knob to scroll the page.

```

<CNS SETTING> SET
> CNS MODE: LEGACY

MASTER IP ADDR 0. 0. 0. 0
TARGET IP ADDR 0. 0. 0. 0
  
```

- 3 Select a system connection mode.

The following three modes are available. Select one based on your system environment.

LEGACY: Select this mode when using the CCU/CNU REMOTE connector and a CCA-5 cable for system connection.

BRIDGE: Select this mode when using Ethernet to connect the RCP to a CCU or camera on a one-to-one basis.

MCS: Select this mode when using Ethernet to connect to a multi-camera system (MCS) comprised of multiple cameras, CCUs, and panels. (Factory setting: LEGACY)

Notes

- For details on selecting your mode, see one of the sections that follow: “To configure Legacy mode,” “To configure Bridge mode,” or “To configure multi-camera system (MCS) mode.”
- When using an Ethernet connection, be sure to configure the Ethernet connection settings.

- 4 Save the system connection settings.

- ① Turn the right adjustment knob to move the cursor to SET in the upper right of the screen.
- ② Press ENTER button to enable configuration. The cursor appears as “?”.
- ③ Press ENTER button again to save the settings.

```

<CNS SETTING> >SET
CNS MODE: LEGACY

MASTER IP ADDR 0. 0. 0. 0
TARGET IP ADDR 0. 0. 0. 0
  
```

- 5 Press CLEAR button.

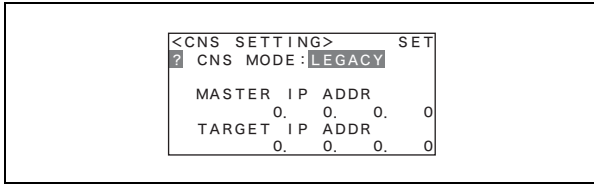
The first screen of the RCP configuration menu reappears.

To configure Legacy mode

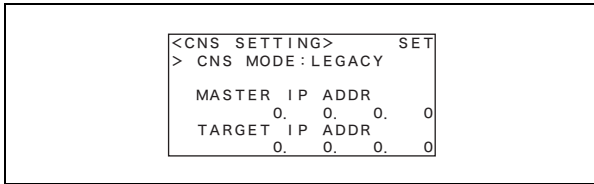
- 1 Set the camera network system mode (CNS MODE) to Legacy.

- ① Turn the right adjustment knob to move the cursor to CNS MODE.
- ② Press ENTER button to enable configuration. The cursor appears as “?” and the setting flashes.

- ③ Turn the right adjustment knob to select LEGACY, and press ENTER button.



The CNS mode is set.



2 Save the system connection settings.

- ① Turn the right adjustment knob to move the cursor to SET in the upper right of the screen.
- ② Press ENTER button to enable configuration. The cursor appears as “?” and the setting flashes.
- ③ Press ENTER button again to save the settings.

3 Press CLEAR button.

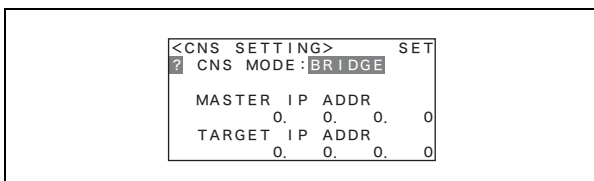
The first screen of the RCP configuration menu reappears.

To configure Bridge mode

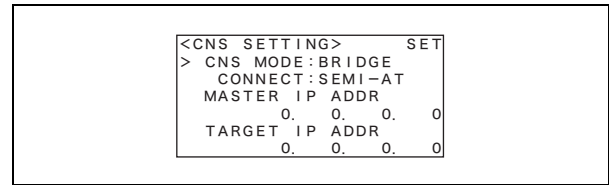
Bridge mode connects the RCP to the CCU on a one-to-one basis via Ethernet. The device that connects to the unit is referred to as the “target.”

1 Set the camera network system mode (CNS MODE) to Bridge.

- ① Turn the right adjustment knob to move the cursor to CNS MODE.
- ② Press ENTER button to enable configuration. The cursor appears as “?” and the setting flashes.
- ③ Turn the right adjustment knob to select BRIDGE, and press ENTER button.



The CNS mode is set.



2 Set the submode for Bridge mode.

In Bridge mode, you must configure the submode and target IP address to determine functioning. Under normal circumstances, set the RCP to ACTIVE or SEMI-AT.

- ① Turn the right adjustment knob to move the cursor to CONNECT.
- ② Press ENTER to enable configuration. The cursor appears as “?” and the setting flashes.
- ③ Turn the right adjustment knob to change the setting item.

Select one of the following based on the connection status.

ACTIVE: Connects to the target automatically.

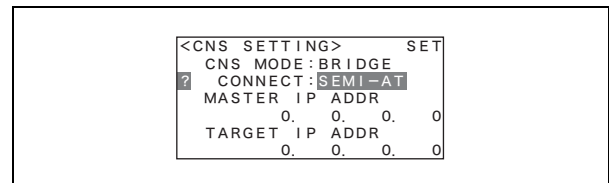
PASSIVE: Awaits connection from the target.

SEMI-AT: Switches between Active and Passive depending on the connection environment. Active is enabled when the RCP stands alone, and Passive is enabled when the RCP is connected to a CCU or camera via CCA-5 cable.

(Factory setting: SEMI-AT)

Note

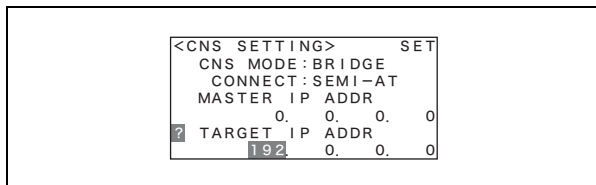
If both devices in the connection are set to Active, malfunctions may occur.



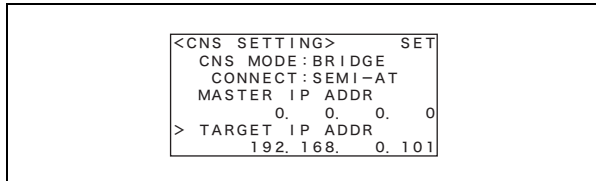
3 Set the target IP address.

- ① Turn the right adjustment knob to move the cursor to TARGET IP ADDRESS. Enter the IP address of the target device for connection when Active or Semi-Auto is selected. This configuration is not necessary when Passive is selected.
- ② Press ENTER button to enable configuration. The cursor appears as “?” and the first section of the IP address flashes.

- ③ Turn the right adjustment knob to change the setting, and press ENTER button.
The second section of the IP address flashes. Set this section of the IP address as you did above.



- ④ Enter the entire IP address, and press ENTER button.
The target IP address is set.



4 Save the system connection settings.

- ① Turn the right adjustment knob to move the cursor to SET in the upper right of the screen.
- ② Press ENTER button to enable configuration.
The cursor appears as “?”.
- ③ Press ENTER button again to save the settings.

5 Press CLEAR button.

The first screen of the RCP configuration menu reappears.

To configure multi-camera system (MCS) mode

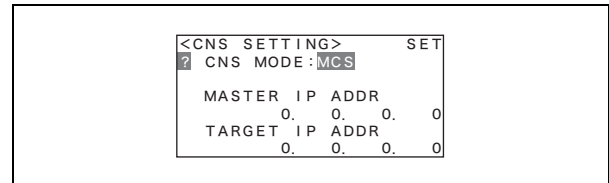
Use MCS mode for systems that include multiple connected CCUs, cameras, and panels such as the MSU and RCP.

Configure the submode as follows to determine functioning.

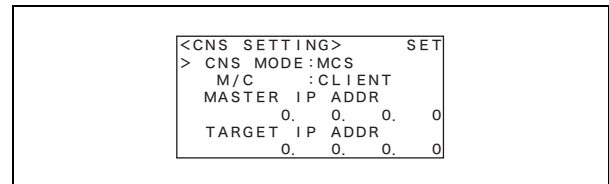
1 Set the camera network system mode (CNS MODE) to MCS.

- ① Turn the right adjustment knob to move the cursor to CNS MODE.
- ② Press ENTER button to enable configuration.
The cursor appears as “?” and the setting flashes.

- ③ Turn the right adjustment knob to select MCS, and press ENTER button.



The CNS mode is set.

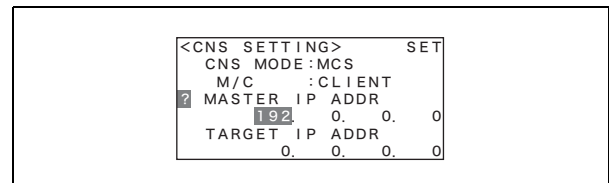


2 Set the master IP address.

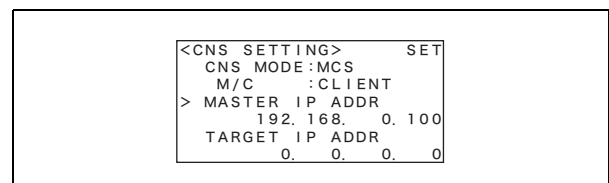
The RCP-920/921 is always defined as a client in a multi-camera system, and the submode (Master/Client) is automatically set to CLIENT.

You must set the IP address of the master device when configuring a client device in a multi-camera system.

- ① Turn the right adjustment knob to move the cursor to MASTER IP ADDRESS.
- ② Press ENTER button to enable configuration.
The cursor appears as “?” and the first section of the IP address flashes.
- ③ Turn the right adjustment knob to change the setting, and press ENTER button.
The second section of the IP address flashes. Set this section of the IP address as you did above.



- ④ Enter the entire IP address, and press ENTER button.
The master IP address is set.



3 Save the system connection settings.

- ① Turn the right adjustment knob to move the cursor to SET in the upper right of the screen.

- ② Press ENTER button to enable configuration.
The cursor appears as “?”
- ③ Press ENTER button again to save the settings.

4 Press CLEAR button.

The first screen of the RCP configuration menu reappears.

To configure Ethernet connection settings

The RCP-920/921 supports connections to camera network systems via the Ethernet connector. Perform the following steps to configure Ethernet connection settings.

Notes

- To apply the configurations, you must restart the unit.
- This setting can only be configured in Engineer mode.

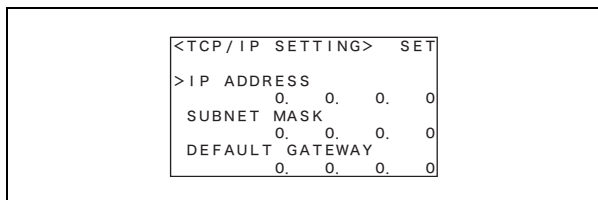
1 Move the cursor to SETTING in the RCP configuration menu, and press ENTER button.

The settings and adjustment screens appear.

2 Use the ▲ and ▼ buttons to move through the settings and adjustment screens, and display the <TCP/IP SETTING> page.

Note

The LCD can only display up to four setting items at one time. If a page has more than four items, turn the right adjustment knob to scroll the page.



3 Configure the TCP/IP settings.

The items you can configure are as follows.

IP ADDRESS: Set the IP address to assign the RCP.

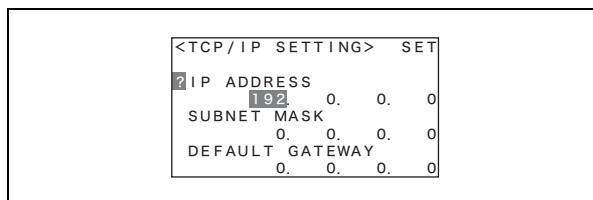
SUBNET MASK: Set the subnet mask of your network environment.

DEFAULT GATEWAY: If necessary, set the default gateway of your network environment.

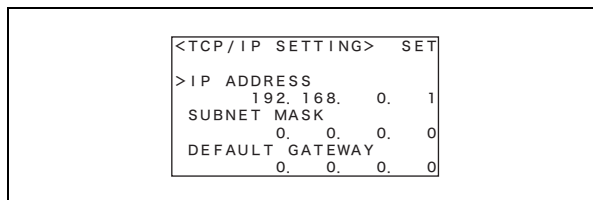
Set the IP address of this unit.

- ① Turn the right adjustment knob to move the cursor to IP ADDRESS.
- ② Press ENTER button to enable configuration.
The cursor appears as “?” and the first section of the IP address flashes.

- ③ Turn the right adjustment knob to change the setting, and press ENTER button.
The second section of the IP address flashes. Set this section of the IP address as you did above.

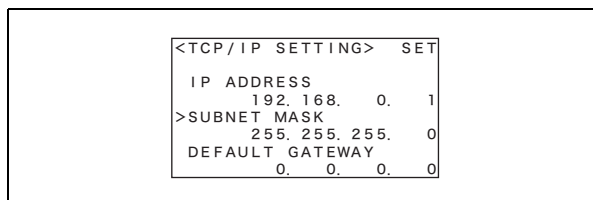


- ④ Enter the entire IP address, and press ENTER button.
The IP address of this unit is set.



4 Set the subnet mask and default gateway.

Configure the subnet mask and (if necessary) the default gateway as you did the IP address.



5 Save the TCP/IP settings.

- ① Turn the right adjustment knob to move the cursor to SET in the upper right of the screen.
- ② Press ENTER to enable configuration.
The cursor appears as “?”
- ③ Press ENTER button again to save the settings.

6 Press CLEAR button.

The first screen of the RCP configuration menu reappears.

To configure Ethernet interface settings

Notes

- To apply the configurations, you must restart the unit.
- This setting can only be configured in Engineer mode.

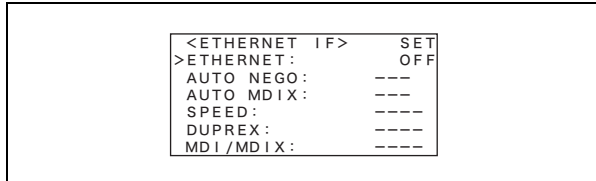
1 Move the cursor to SETTING in the RCP configuration menu, and press ENTER button.

The settings and adjustment screens appear.

- 2 Use the ▲ and ▼ buttons to move through the settings and adjustment screens, and display the <ETHERNET IF> page.

Note

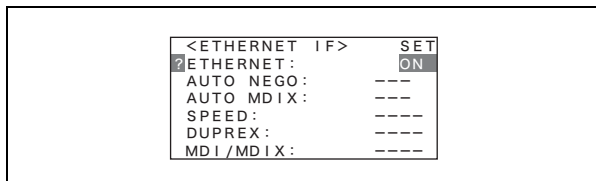
The LCD can only display up to four setting items at one time. If a page has more than four items, turn the right adjustment knob to scroll the page.



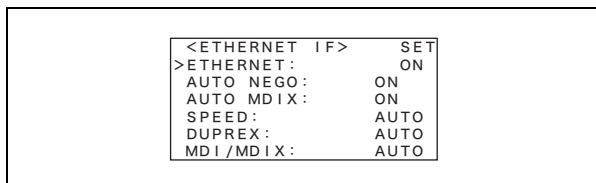
- 3 Enable or disable Ethernet interface.

When using Ethernet, enable Ethernet interface.
(Factory setting: OFF)

- ① Turn the right adjustment knob to move the cursor to ETHERNET.
- ② Press ENTER button to enable configuration.
The cursor appears as “?” and the setting flashes.
- ③ Turn the right adjustment knob to change the setting, and press ENTER button.



The Ethernet interface setting is configured.



- 4 Configure each Ethernet interface setting.

The items you can configure are as follows.

AUTO NEGOT: The Ethernet interface of this unit supports Auto Negotiation. If the devices to which you are connecting support Auto Negotiation, set this to ON and the transmission rate (Speed) and transmission method (Duplex) will be set automatically. If the devices do not support Auto Negotiation, set this to OFF.
(Factory setting: ON)

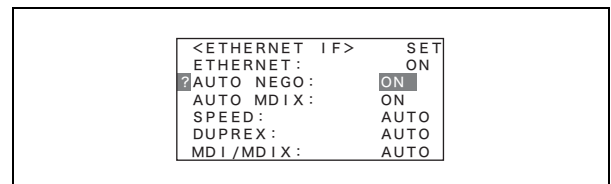
AUTO MDIX: Automatically set the polarity of the Ethernet cable to be connected. If Auto Negotiation is enabled, you can set this to ON.
(Factory setting: ON)

SPEED: This is the connection speed setting for the Ethernet line. If Auto Negotiation is disabled, manually configure this setting (10M or 100M) based on the devices to be connected.
(Factory setting: 100M)

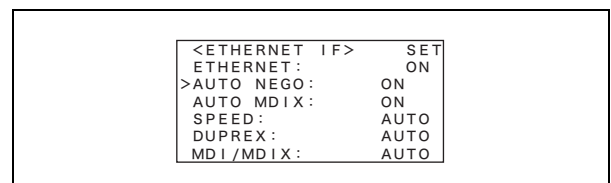
DUPLEX: This is the transmission method setting for the Ethernet line. If Auto Negotiation is disabled, manually configure this setting (HALF or FULL) based on the devices to be connected.
(Factory setting: FULL)

MDI/MDIX: Set the polarity of the Ethernet cable to be connected. If AUTO MDIX is disabled, manually set the polarity (MDI or MDIX) based on the devices and cable to be connected.
(Factory setting: MDI)

- ① Turn the right adjustment knob to move the cursor to the item you want to configure.
- ② Press ENTER button to enable configuration.
The cursor appears as “?” and the setting flashes.
- ③ Turn the right adjustment knob to change the setting, and press ENTER button.



The Ethernet interface settings are configured.



- 5 Save the Ethernet interface settings.

- ① Turn the right adjustment knob to move the cursor to SET in the upper right of the screen.
- ② Press ENTER button to enable configuration.
The cursor appears as “?”.
- ③ Press ENTER button again to save the settings.

- 6 Press CLEAR button.

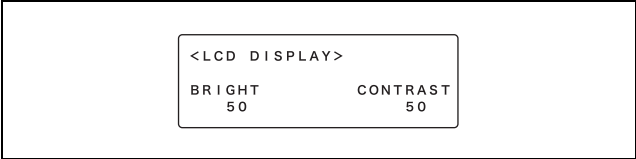
The first screen of the RCP configuration menu reappears.

Adjusting the LCD Display

The RCP-920/921 is provided with LCD-display adjustment mode, which permits you to adjust the brightness and contrast of the LCD display of the paint control block.

To enter LCD-display adjustment mode

While holding down the PARA and MASTER buttons, press the ENTER button on the paint control block. The LCD display shows the following:



To adjust the LCD display

Turn the paint controls (rotary encoders). You can adjust the brightness with the left control and the contrast with the right control.

To release LCD-display adjustment mode

Press the PARA and MASTER buttons simultaneously. The menu display before entering the LCD-display adjustment mode reappears.

Note

The values set in LCD-display adjustment mode are stored in memory when the modes are canceled. Be sure to release the modes before turning OFF the power.

Specifications

General

- Power requirements 10.5 to 30 V DC
- Power consumption 4 W max.
- Maximum cable length 200 m (656 ft) (with CCA-5 cable connection)
- Operating temperature 5 °C to 40 °C (41 °F to 104 °F)
- Dimensions (w/h/d, excluding projections)
 - RCP-920/921: 102 × 310 × 67 mm (4 1/8 × 12 1/4 × 2 3/4 in)
- Dimensions (w/h/d, including projections)
 - RCP-920: 102×310×125 mm (4 1/8 × 12 1/4 × 5 in)
 - RCP-921: 102 × 310 × 84 mm (4 1/8 × 12 1/4 × 3 3/8 in)
- Mass 1.8 kg (3 lb 15 oz)

Inputs/outputs

- REMOTE
 - CCU/CNU 8-pin RJ-45 connector
 - AUX 8-pin multiconnector, female (1)
- EXT I/O 8-pin multiconnector, female (1)
- 10-pin, male (1)

Supplied accessories

- Operation Manual (1)

Optional accessories

- External I/O connector
 - HIROSE HR10A-10PA-10S (74) 1-566-437-12
- CCA-5-3 remote cable (3 m)
- CCA-5-10 remote cable (10 m)
- CCA-5-30 remote cable (30 m)

Design and specifications are subject to change without notice.

Note

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