

SONY®

HD CAMERA CONTROL UNIT

HDCU2080

HDCU2580

3G/HD SDI OUTPUT EXPANSION UNIT

HKCU2007

SD ENCODER UNIT

HKCU1001

MULTI INTERFACE UNIT

HKCU1003

Digital **HDVS**

OPERATION MANUAL
1st Edition (Revised 4)

English

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Overview

The HDCU2080/2580 Camera Control Unit is connected to a Sony HD-series high-definition video camera. It carries out signal processing and provides an interface for external equipment.

This unit may be combined with an MSU-1000 series Master Setup Unit (optional) or an RCP-1000 series Remote Control Panel (optional) to form a camera control system. Further, a system capable of controlling multiple video cameras can be configured by adding a CNU-700 Camera Command Network Unit.

The HDCU2080/2580 has the following major features.

Front panel for increased usefulness

The HDCU2080/2580 features a design that places menu operation switches and status LEDs related to optical transmission, etc., on the front panel. These were moved from under the cover of the HDCU1080's front panel, providing even greater convenience.

Multiple video inputs and outputs

The HDCU2080/2580 features the following standard-feature signal input/output ports.

HDCU2080

- Four SDI outputs (HD/SD switchable outputs)
- Four HD/SD-SDI return inputs
- Four SD analog return inputs
- Two teleprompter inputs
- One HD TRUNK output
- One HD prompter input

HDCU2580

- Four SDI outputs (HD/SD switchable outputs)
- Three HD/SD-SDI/VBS return inputs
- One teleprompter input
- One HD TRUNK output
- One HD prompter input

In addition, a variety of input/output interfaces are offered via optional installable boards.

HKCU2007 3G/HD SDI Output Expansion Unit

This provides four 3G-SDI or HD-SDI outputs.

With multiple boards of this type installed, the HDCU2080/2580 outputs up to 16 (HDCU2080) or 4 (HDCU2580) HD-SDI signals.

Note

The HDCU2080/2580 does not support 3G digital optical output.

HKCU1001 SD Encoder Unit

Installing this board makes it possible to output SD analog composite signals (PAL), SD picture monitor signals and SD waveform monitor signals.

HKCU1003 Multi Interface Unit

This board consists of 3 types of VDA boards, and makes the following input/output signals possible:

- Frame reference input and output to lock 2-3 pull-down sequence
- SD analog component signal (RGB or Y/R-Y/B-Y) or SD analog composite signal output
- SD analog composite signal (PAL) output, SD picture monitor signal output, SD waveform monitor signal output

External reference signals

The HDCU2080/2580 can be locked to an external reference signal. Either an HD tri-level sync signal or an SD sync (black burst) signal may be used as the reference signal.

Built-in down converter

When the system is operating at a 50 Hz field frequency, HD signals can be converted to SD component SDI signals using the down converter. The output signal aspect ratio may be set to 4:3 edge crop, 16:9 squeeze, or letter box. The down converter has image enhancement, gamma control, and matrix ON/OFF features, and can be controlled externally.

Built-in simplified up converter

The HDCU2080/2580 has a simplified up converter to allow monitoring of SD signal return video using an HD viewfinder. The aspect ratio of the return video signal may be set to 4:3 edge crop, 16:9 squeeze, or letter box.

Digital Optical Transfer

The HDCU2080/2580 may be connected to a camera using an optical fiber cable (two single-mode optical fiber lines, two power lines and two control lines) for the transmission of digital video, audio, and control signals. By connecting together optical fiber cables, signals may be transmitted up to a maximum of 4,000 meters (13,100 feet) (HDCU2080) / 2,000 meters (6,600 feet) (HDCU2580). The maximum length of the cable supplying power varies with the camera system configuration and with the type of optical fiber cable. The HDCU2080/2580 can also be connected to the HDC1580 camera.

HD TRUNK function

HD-SDI-equivalent digital data separate from an HD-SDI video signal can be sent from an HDC2580 series camera to the HDCU2080/2580.

HD prompter function

HD-SDI-equivalent digital data separate from a return video signal can be sent from the HDCU2080/2580 to an HDC2580 series camera.

Safety-oriented power supply

The HDCU2080/2580 is designed for safety. When the power is turned on, a low voltage is supplied at first. Only after it has been verified that an appropriate camera is attached, the normal high voltage power supply is activated. The power is not supplied unless a camera is connected via an optoelectric cable.

Also, the HDCU2080/2580 is equipped with an alarm indicator to warn of open or short circuits in the cable.

Wide range of audio functions

This unit has connectors for two-channel analog audio outputs, a digital audio output (HDCU2080 only), and a program audio input. Further, the HDCU2080/2580 can use 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.

Remote control

The level and phases of this unit's output signals can be controlled remotely by an MSU-1000 series Master Setup Unit.

Microphone volume control

The camera's microphone volume can be controlled via the MIC REMOTE connector, MSU, or RCP.

Character monitor signal output

The results of the HDCU2080/2580 self-diagnosis and setup menu can be obtained with a text display by character signal output.

Rack mountable

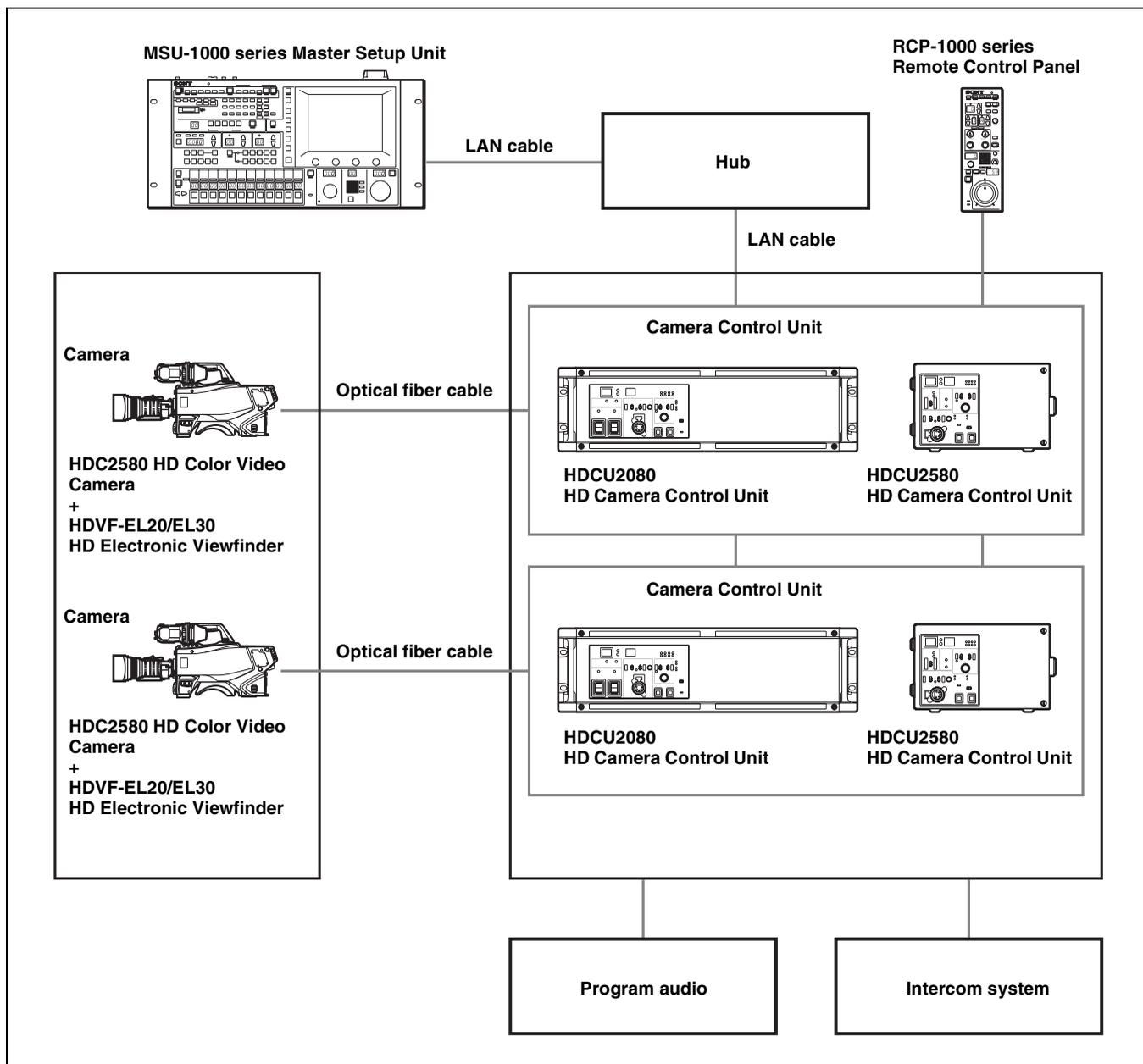
This unit may be installed in a standard EIA 19-inch rack (three units high).
(The HDCU2580 needs the RMM-301 Rack Mount Adaptor (optional).)

Plug-in unit configuration

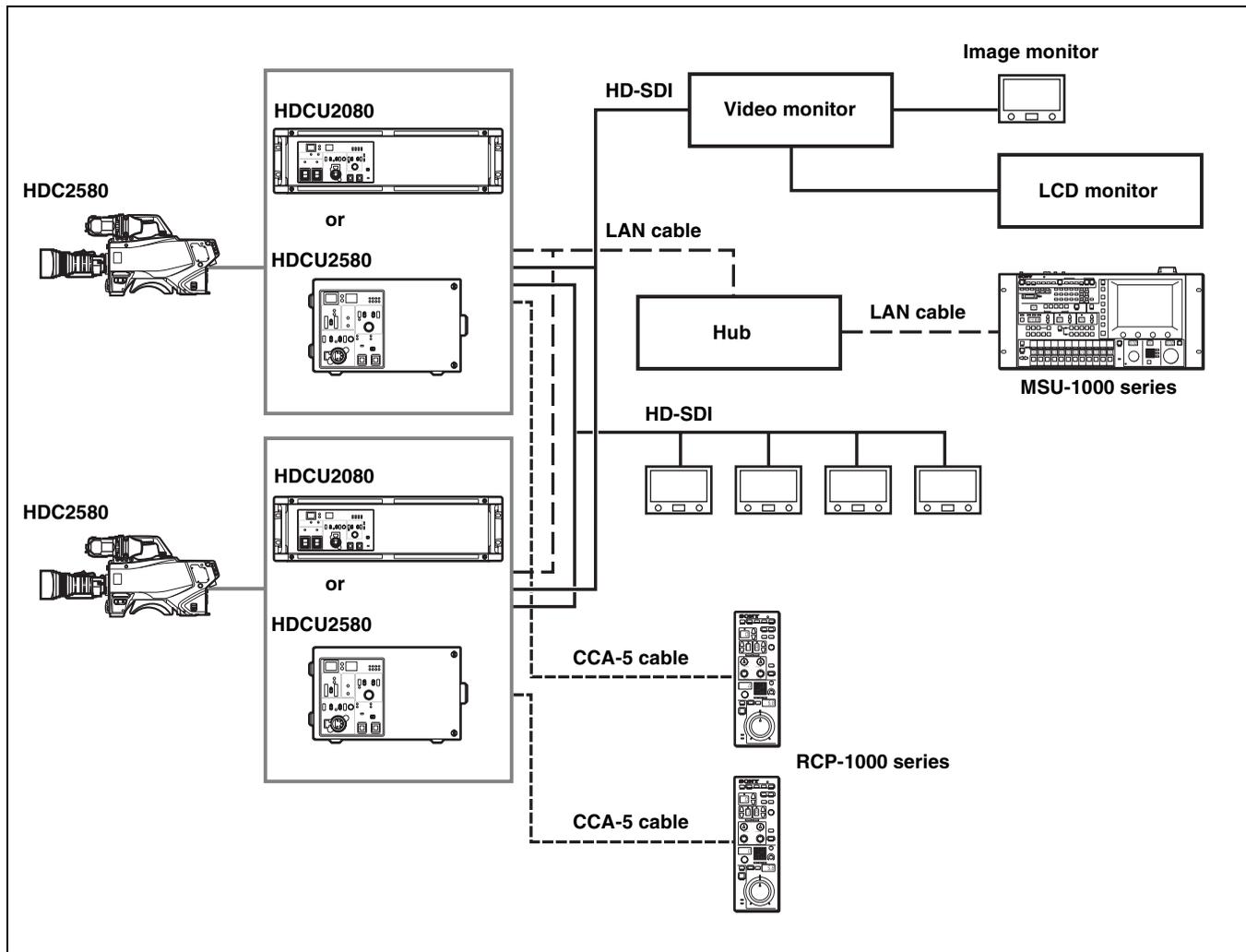
Internal printed circuit boards are designed for easy plug-in and removal, which makes it easy to inspect and maintain the unit.

System Configuration

Basic System Components

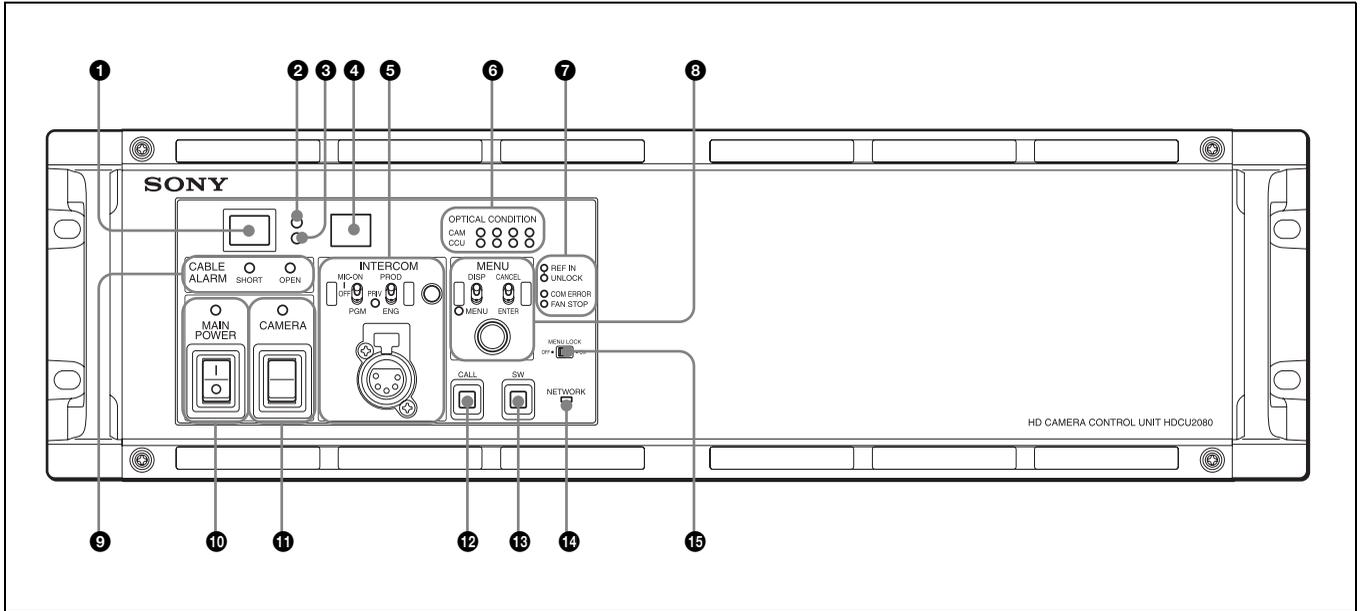


System Operation Example



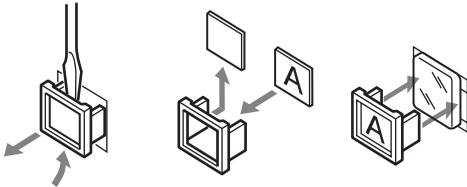
Locations and Functions of Parts

HDCU2080 Front Panel



1 Red tally indicator

Lights in red when this unit receives a red tally signal. When the CALL button on the MSU-1000 series Master Setup Unit, RCP-1000 series Remote Control Panel, etc., is pressed, this indicator will go out if previously lit, and light up if previously off. You can attach the supplied number plate here.



2 Yellow tally indicator

Lights in yellow when this unit receives a yellow tally signal.

3 Green tally indicator

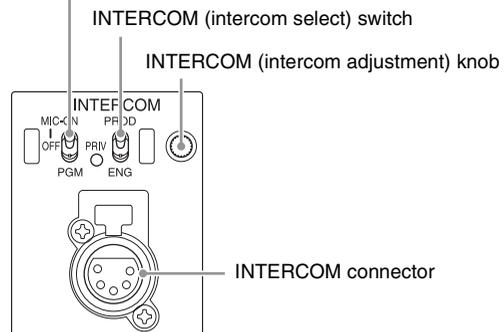
Lights in green when this unit receives a green tally signal.

4 CCU number display

The camera number set via the CCU menu is displayed.

5 INTERCOM audio input/output and control block

MIC/PGM (microphone/program) switch



• 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 front panel.

PROD: Connects the producer line.

PRIV: Blocks the connection to the producer line or engineer line, allowing private intercom talk between the CCU and the camera.

ENG: Connects the engineer line.

• PRIV (Private) indicator

Lights when the intercom is in private mode.

• INTERCOM (intercom adjustment) knob

Adjusts the receiver audio level of the intercom.

• INTERCOM connector (XLR 5-pin)

Connects the intercom headset.

To use a headset with a plug other than an XLR 5-pin plug, consult a Sony service or sales representative.

6 Optical signal reception status indicator

When the two lamps on the right (green) are lighted:

Reception status is excellent.

When the second lamp from the right (green) is lighted:

Reception status is good.

When the second lamp from the left (yellow) is lighted:

Reception status is low.

When the lamp on the left (red) is lighted: Reception status is at the lowest level.

7 Status display indicator

REF IN (Green): REFERENCE is being input.

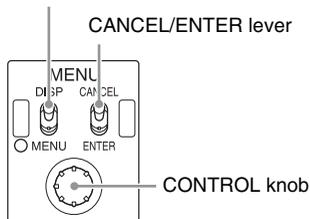
UNLOCK (Red): The input REFERENCE is not locked.

COM ERROR (Red): There is a communication failure with the camera or other external control equipment (such as the RCP-1000 series Remote Control Panel).

FAN STOP (Red): The power fan is stopped.

8 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.

9 CABLE ALARM indicators

SHORT (red): Lights in red when the power supply cord of an optical fiber cable is short to external, or two power supply cords are short. Power isn't input to the camera when this indicator lights.

OPEN (red): Lights in red when a camera isn't connected to the CAMERA connector on the rear panel of this unit via an optical fiber cable. Flashes when the connection status of an optical fiber cable is bad.

10 MAIN POWER switch and indicator

Turns the entire camera system on and off, including this unit, the video camera, and the RCP-1000 series Remote Control Panel connected to the REMOTE connector of this unit.

Press the "I" side to turn the camera system on, and the "O" side to turn it off. The indicator lights when the power switch is turned on.

11 CAMERA POWER switch and indicator

Turns the video camera on and off when the MAIN POWER switch is turned on. Press the top side to turn on the video camera and the bottom side to turn it off.

When the CAM PW button of the remote control panel connected to this unit is set to off, this switch alone cannot be used to turn on the video camera.

12 Call button

When pressed, this outputs a call signal to the camera and external control device (the RCP-1000 series, etc.) that are connected to this unit. Use this when you want to call and speak with the camera operator or external control device operator via intercom.

13 Assignable button

You can set a function for this button via the CCU menu.

14 Network indicator

Displays the network system connection status.

On: When CNS SETTING in the NETWORK SETTING menu is set to either BRIDGE or MCS, this indicates that external control equipment (MSU-1000/1500 Master Setup Unit, RCP-1000-series Remote Control Panel, or other device) is connected.

Flashing: When CNS SETTING in the NETWORK SETTING menu is set to either BRIDGE or MCS, this indicates a connection problem with the external control equipment (MSU-1000/1500 Master Setup Unit, RCP-1000-series Remote Control Panel, or other device).

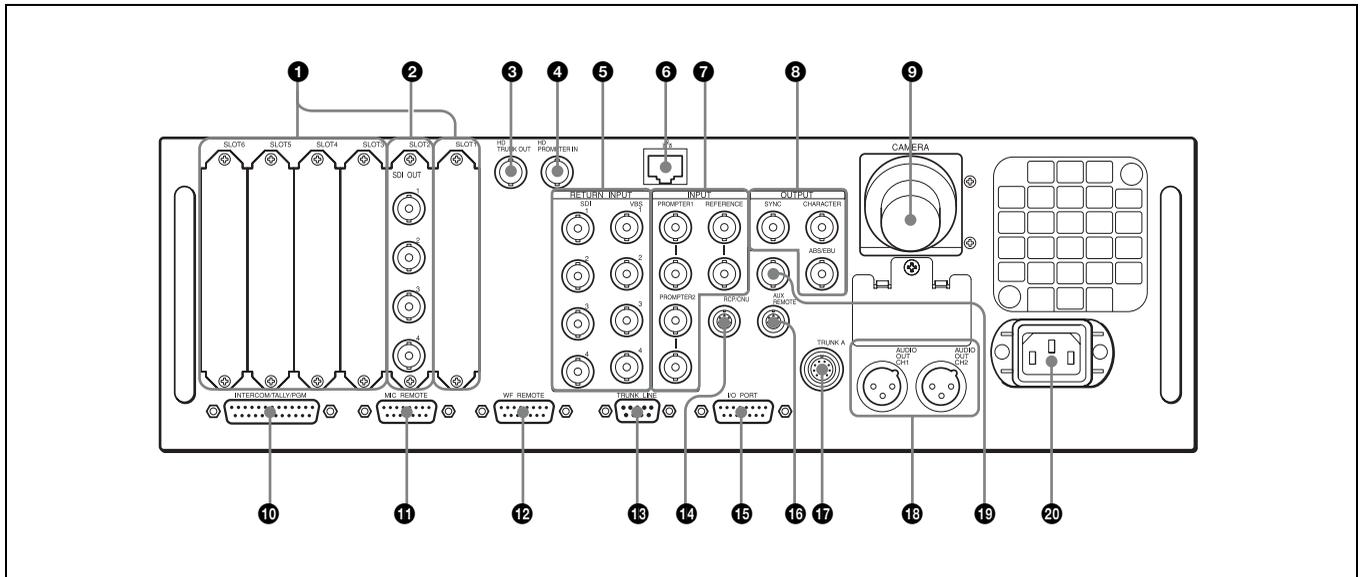
Off: When CNS SETTING in the NETWORK SETTING menu is set to either BRIDGE or MCS, this indicates that a LAN cable is not connected or that the network system connection parameters have not been set.

When the CNS SETTING in the NETWORK SETTING menu is set to LEGACY, this remains turned off.

15 Menu lock switch

This locks out operation of the front panel menu operation area.

HDCU2080 Rear Panel



1 Expansion slots

For installation of an optional HKCU2007 3G/HD SDI Output Expansion Unit, HKCU1001 SD Encoder Unit, or HKCU1003 Multi Interface Unit.

Note

The HDCU2080 does not support 3G digital optical output.

For details on installation, contact a Sony service or sales representative.

2 HD/SD SDI OUTPUT (SDI output connectors) area (BNC-type)

The signal from the video camera may be output as two HD-SDI signals or two SD-SDI signals. The signals output from the OUTPUT3 and OUTPUT4 connectors can be superimposed character and marker signals.

Signals of the same format are output from the SDI 1 and SDI 2 connectors; similarly, signals of another format can be output from the SDI 3 and SDI 4 connectors.

For details on settings, contact a Sony service or sales representative.

3 HD TRUNK OUT connector (BNC-type)

When an HD TRUNK function-compatible camera is connected to the CAMERA connector, the HD-SDI signal input to the camera's HD TRUNK IN connector is output from the HD TRUNK OUT connector.

4 HD PROMPTER IN connector (BNC-type)

When an HD prompter function-compatible camera is connected to the CAMERA connector, the HD-SDI signal input to the HD PROMPTER IN connector is output from the camera's SDI connector.

Note

Input an HD-SDI signal with a frequency synchronized to the camera control unit.

5 RETURN INPUT area

1 SDI 1 to 4 (HD/SD-SDI return video 1/2/3/4 input) connectors (BNC-type)

Four different HD/SD-SDI return video input signals may be received independently.

The selection of RET 1, 2, 3, or 4 is made by the return switch of the video camera.

The type of input signal on RET 1, 2, 3, and 4 may be set individually using the setup menu, or using the MSU-1000 series Master Setup Unit. The aspect ratio can also be selected for an SD signal.

For details on the setup menu, contact a Sony service or sales representative.

Refer also to the Master Setup Unit manual.

2 VBS 1 to 4 (VBS return video 1/2/3/4 input) connectors (BNC-type)

Four different VBS return video input signals may be received independently.

The selection of RET 1, 2, 3, or 4 is made by the return switch of the video camera.

The type of input signal on RET 1, 2, 3, and 4 may be set individually using the setup menu, or using the MSU-1000 series Master Setup Unit.

An aspect ratio may also be selected for SD signals.

For details on setup menu operations, contact a Sony service or sales representative.

Refer also to the Master Setup Unit manual.

6 LAN connector (RJ-45 8-pin)

For LAN connection. Connect a LAN HUB (10BASE-T/100BASE-TX), using a LAN cable (shielded type of category 5 or more).

7 INPUT area

① PROMPTER 1, 2 (tele-prompter input) connectors (BNC-type)

Input a teleprompter signal to either of the two connectors. The input signal is output from the other connector as is (loop-through output). If loop-through output is not used, terminate the unused connector at 75 ohms. If the signal used is a 1.0 Vp-p, 75-ohm signal, it may be output from the PROMPTER OUT connector of the video camera with a frequency bandwidth of 5 MHz, regardless of signal format.

② REFERENCE connectors (BNC-type)

Input an HD tri-level reference sync signal or SD reference sync signal (black burst signal) to either of the two connectors. The input signal is output from the other connector as is (loop-through output). If loop-through output is not used, terminate the unused connector at 75 ohms.

The type of reference signal is selected using the setup menu, or using the MSU-1000 series Master Setup Unit.

For details on the setup menu, contact a Sony service or sales representative.

Note

To use the VBS signal of the HKCU1001 SD Encoder Unit or the HKCU1003 Multi Interface Unit (when SC phase lock is required), use an SD reference sync signal (black burst signal).

8 OUTPUT area

① SYNC (sync signal output) connector (BNC-type)

Used for output of SD composite sync signal or an HD tri-level sync signal from the internal sync signal generator. (Factory setting: SD composite sync)

For details on signal selection, contact a Sony service or sales representative.

② CHARACTER (character output) connector (BNC-type)

Outputs the self-diagnostic results or the setup menu as an SD monochrome analog video signal.

③ AES/EBU connector (BNC-type)

Outputs an AES/EBU format digital audio signal input to a video camera.

④ CAMERA connector (optical fiber connector)

Used to connect a video camera, using an optical fiber cable. All video camera signals, including power supply, control, video, and audio, are sent and received over one optical fiber cable.

Note

Dust on the connection surface of the optical fiber cable may result in transmission errors. When not connected, always cover the end of the connector with the supplied cap.

⑩ INTERCOM/TALLY/PGM (intercom/tally/program audio) connector (D-sub 25-pin)

Used for input and output of intercom, tally, and program audio signals. Connect to the intercom/tally/program audio connector of the intercom system.

Flag function: 10-pin is assigned for the output pin of the Flag function.

⑪ MIC REMOTE (microphone remote) connector (D-sub 15-pin)

Using this connector, the video camera's microphone input level may be set by external equipment such as an audio mixer, in five level (–60, –50, –40, –30, and –20 dB).

When shooting, set the volume to a level appropriate for the audio conditions.

This connector also outputs red, green and yellow tally signals.

The microphone input level may also be set using the setup menu or an RCP. For details on the setup menu, contact a Sony service or sales representative.

⑫ WF REMOTE (waveform monitor remote) connector (D-sub 15-pin)

Used to attach to the appropriate connector on a recall-type waveform monitor when operating the waveform monitor display using an MSU-1000 series Master Setup Unit or an RCP-1000 series Remote Control Panel. On the recall-type waveform monitor, set/preset the display mode to waveform monitor, and then select (recall) that mode externally.

For details on these operations, refer to the Master Setup Unit or Remote Control Panel manuals.

⑬ TRUNK LINE connector (D-sub 9-pin, RS-232C standard)

Used to connect to the CCU connector on a video camera via an RS-232C interface. Used mainly for communication with equipment on the camera side.

Communication with up to two channels is available.

⑭ RCP/CNU connector (round 8-pin)

Used to connect to an MSU-1000 series Master Setup Unit, CNU-700 Camera Command Network Unit, or RCP-1000 series Remote Control Panel via a CCA-5 Connection Cable. Control signals are sent and received via this connector.

When using an RCP-1000 series unit, power is also supplied.

⑮ I/O PORT connector (D-sub 15-pin)

Used for remote control using an external control device.

Note

Use of a D-sub case wider than 42 mm can cause interference at connectors ②, ④, ⑤.

It is recommended that you use a JAE-made DA-C1-J10.

⑯ AUX REMOTE connector (round 8-pin)

This is used to connect a sub-camera RCP for operating a sub-camera.

⑰ TRUNK A connector (round 12-pin)

Used to connect to the CCU connector on a video camera via an RS-232C or RS-422A interface.

Communication with up to two channels is available.

18 AUDIO OUT CH1, CH2 (audio output 1, 2) connectors (XLR 3-pin)

Used for output of the audio signal to the AUDIO IN connectors of the video camera.

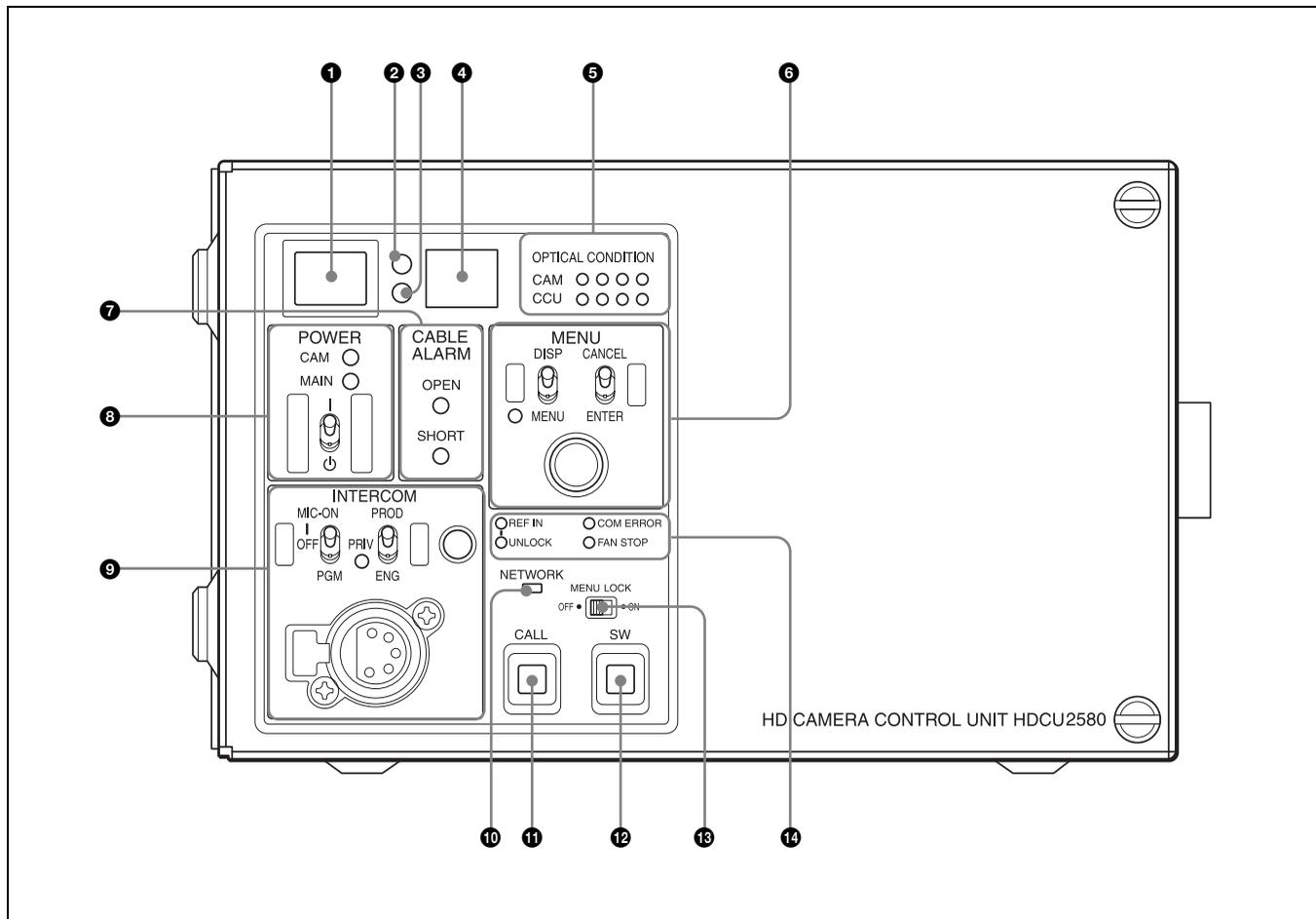
19 SPARE connector (BNC-type)

Reserved for future use.

20 AC IN (AC power input) connector

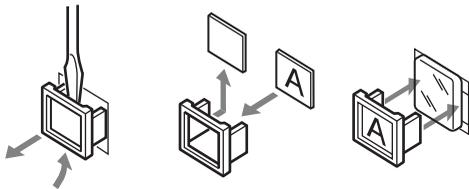
Use the specified AC power cord to connect to an AC power supply. The AC power cord can be secured to this unit, using the plug holder (optional).

HDCU2580 Front Panel



1 Red tally indicator

Lights in red when this unit receives a red tally signal. When the CALL button on the MSU-1000 series Master Setup Unit, RCP-1000 series Remote Control Panel, etc., is pressed, this indicator will go out if previously lit, and light up if previously off. You can attach the supplied number plate here.



2 Yellow tally indicator

Lights in yellow when this unit receives a yellow tally signal.

3 Green tally indicator

Lights in green when this unit receives a green tally signal.

4 CCU number display

The camera number set via the CCU menu is displayed.

5 Optical signal reception status indicator

This indicates the camera and CCU's optical signal reception status when performing optical transmissions.

When the two lamps on the right (green) are lighted:
Reception status is excellent.

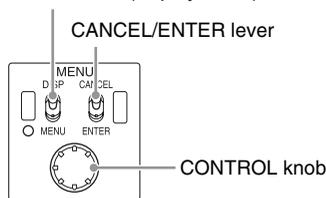
When the second lamp from the right (green) is lighted:
Reception status is good.

When the second lamp from the left (yellow) is lighted:
Reception status is low.

When the lamp on the left (red) is lighted: Reception status is at the lowest level.

6 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.

7 CABLE ALARM indicators

OPEN (red): Lights in red when a camera isn't connected to the CAMERA connector on the rear panel of this unit via an optical fiber cable. Flashes when the connection status of an optical fiber cable is bad.

SHORT (red): Lights in red when the power supply cord of an optical fiber cable is short to external, or two power supply cords are short. Power isn't input to the camera when this indicator lights.

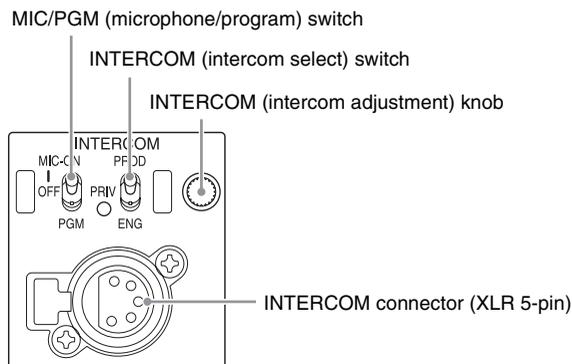
8 POWER switch and indicators

Turns the entire system on and off, including this unit, the video camera, and the RCP-1000 series Remote Control Panel connected to the REMOTE connector of this unit. The MAIN indicator and the CAM indicator light when the power switch is turned on. Pressing the CAM PW button of the master setup unit and the remote control panel turns off the video camera only, and only the CAM indicator turns off.

Note

In order for the power supply to supply the unit with the necessary power to start up, energy is consumed even when this switch is set to OFF.

9 INTERCOM audio input/output and control block



• 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 front panel.

PROD: Connects the producer line.

PRIV: Blocks the connection to the producer line or engineer line, allowing private intercom talk between the CCU and the camera.

ENG: Connects the engineer line.

• PRIV (Private) indicator

Lights when the intercom is in private mode.

• INTERCOM (intercom adjustment) knob

Adjusts the receiver audio level of the intercom.

• INTERCOM connector (XLR 5-pin)

Connects the intercom headset.

To use a headset with a plug other than an XLR 5-pin plug, consult a Sony service or sales representative.

10 Network indicator

Displays the network system connection status.

On: When CNS SETTING in the NETWORK SETTING menu is set to either BRIDGE or MCS, this indicates that external control equipment (MSU-1000/1500 Master Setup Unit, RCP-1000-series Remote Control Panel, or other device) is connected.

Flashing: When CNS SETTING in the NETWORK SETTING menu is set to either BRIDGE or MCS, this 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: When CNS SETTING in the NETWORK SETTING menu is set to either BRIDGE or MCS, this indicates that a LAN cable is not connected or that the network system connection parameters have not been set.

When the CNS SETTING in the NETWORK SETTING menu is set to LEGACY, this remains turned off.

11 Call button

When pressed, this outputs a call signal to the camera and external control device (the RCP-1000 series, etc.) that are connected to this unit. Use this when you want to call and speak with the camera operator or external control device operator via intercom.

12 Menu lock switch

This locks out operation of the front panel menu operation area.

13 Assignable button

You can set a function for this button via the CCU menu.

14 Status display indicator

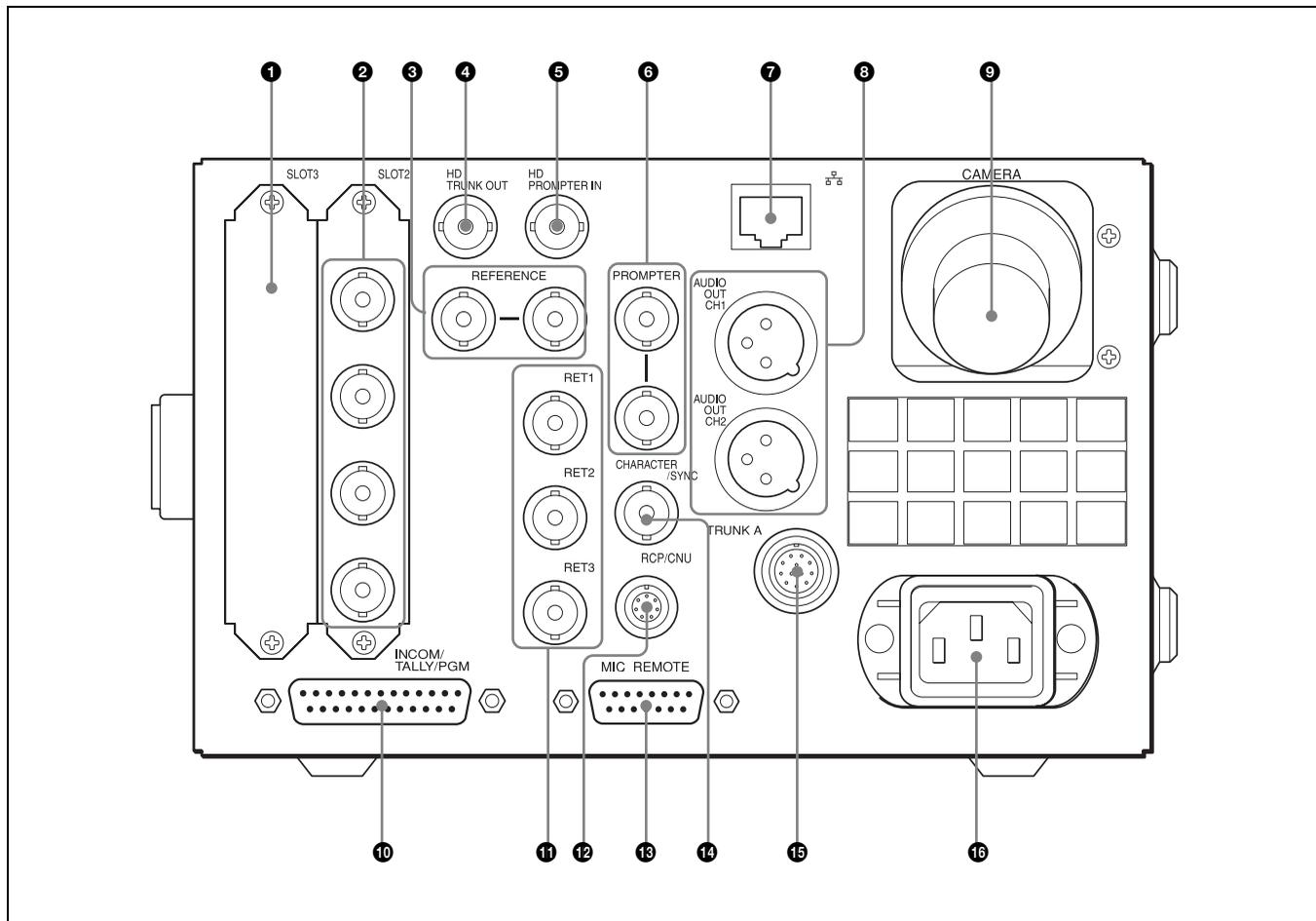
REF IN (Green): REFERENCE is being input.

UNLOCK (Red): The input REFERENCE is not locked.

COM ERROR (Red): There is a communication failure with the camera or other external control equipment (such as the RCP-1000 series Remote Control Panel).

FAN STOP (Red): The power fan is stopped.

HDCU2580 Rear Panel



1 Expansion slots

For installation of an optional HKCU2007 3G/HD SDI Output Expansion Unit, HKCU1001 SD Encoder Unit, or HKCU1003 Multi Interface Unit.

Note

The HDCU2580 does not support 3G digital optical output.

For details on installation, contact a Sony service or sales representative.

2 HD/SD SDI OUTPUT (SDI output connectors) area (BNC-type)

The signal from the video camera may be output as two HD-SDI signals or two SD-SDI signals. The signals output from the OUTPUT3 and OUTPUT4 connectors can be superimposed character and marker signals.

Signals of the same format are output from the SDI 1 and SDI 2 connectors; similarly, signals of another format can be output from the SDI 3 and SDI 4 connectors.

For details on settings, contact a Sony service or sales representative.

3 REFERENCE connectors (BNC-type)

Input an HD tri-level reference sync signal or SD reference sync signal (black burst signal) to either of the two connectors.

The input signal is output from the other connector as is (loop-through output). If loop-through output is not used, terminate the unused connector at 75 ohms.

The type of reference signal is selected using the setup menu, or using the MSU-1000 series Master Setup Unit.

For details on the setup menu, contact a Sony service or sales representative.

Note

To use the VBS signal of the HKCU1001 SD Encoder Unit or the HKCU1003 Multi Interface Unit (when SC phase lock is required), use an SD reference sync signal (black burst signal).

4 HD TRUNK OUT connector (BNC-type)

When an HD TRUNK function-compatible camera is connected to the CAMERA connector, the HD-SDI signal input to the camera's HD TRUNK IN connector is output from the HD TRUNK OUT connector.

5 HD PROMPTER IN connector (BNC-type)

When an HD prompter function-compatible camera is connected to the CAMERA connector, the HD-SDI signal input to the HD PROMPTER IN connector is output from the camera's SDI connector.

Note

Input an HD-SDI signal with a frequency synchronized to the camera control unit.

6 PROMPTER (tele-prompter) connectors (BNC-type)

Input a teleprompter signal to either of the two connectors. The input signal is output from the other connector as is (loop-through output). If loop-through output is not used, terminate the unused connector at 75 ohms. If the signal used is a 1.0 Vp-p, 75-ohm signal, it may be output from the PROMPTER OUT connector of the video camera with a frequency bandwidth of 5 MHz, regardless of signal format.

RET4 (return video input 4)

When required, either of the PROMPTER connectors can be assigned for the fourth return video input, exclusively for analog VBS signals.

For details on settings, contact a Sony service or sales representative.

7  (LAN) connector (RJ-45 8-pin)

For LAN connection. Connect a LAN HUB (10BASE-T/100BASE-TX), using a LAN cable (shielded type of category 5 or more).

8 AUDIO OUT CH1, CH2 (audio output 1, 2) connectors (XLR 3-pin)

Used for output of the audio signal to the AUDIO IN connectors of the video camera.

9 CAMERA connector (optical fiber connector)

Used to connect a video camera, using an optical fiber cable. All video camera signals, including power supply, control, video, and audio, are sent and received over one optical fiber cable.

Note

Dust on the connection surface of the optical fiber cable may result in transmission errors. When not connected, always cover the end of the connector with the supplied cap.

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

Used for input and output of intercom, tally, and program audio signals. Connect to the intercom/tally/program audio connector of the intercom system.

Flag function: 10-pin is assigned for the output pin of the Flag function.

11 RET1, RET2, RET3 (return video input 1, 2, 3) connectors (BNC-type)

- Three different return video input signals may be received independently.
- The selection of the return video input signal is made by the return video switch of the video camera.
- The input signal may be set to HD-SDI, SD-SDI, or analog VBS, using the setup menu, or using the MSU-1000 series Master Setup Unit.

For details on the setup menu, contact a Sony service or sales representative.

Refer also to the Master Setup Unit manual.

12 RCP/CNU connector (round 8-pin)

Used to connect to an MSU-1000 series Master Setup Unit, CNU-700 Camera Command Network Unit, or RCP-1000 series Remote Control Panel via a CCA-5 Connection Cable. Control signals are sent and received via this connector. When using an RCP-1000 series unit, power is also supplied.

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

Using this connector, the video camera's microphone input level may be set by external equipment such as an audio mixer, in five level (−60, −50, −40, −30, and −20 dB). When shooting, set the volume to a level appropriate for the audio conditions. This connector also outputs red, yellow and green tally signals.

When DSUB-15 in the CCU CONFIGURATION menu is set to WF REMOTE and an MSU-1000 series Master Setup Unit or an RCP-1000 series Remote Control Panel is used to remotely control a waveform monitor display, use a connector that is compatible with recall-type waveform monitors. On the recall-type waveform monitor, set/preset the display mode to waveform monitor, and then select (recall) that mode externally.

The microphone input level may also be set using the setup menu. For details on the setup menu, contact a Sony service or sales representative.

14 CHARACTER/SYNC connector (BNC-type)

Outputs the self-diagnostic results or the setup menu as an SD monochrome analog video signal.

When CHARA/SYNC in the CCU CONFIGURATION menu is set to SYNC, this can also be used as a SYNC connector. SD composite sync or an HD tri-level sync signal will be output from the internal sync signal generator. (The default is set to SD composite sync.)

For details on signal selection, contact a Sony service or sales representative.

15 TRUNK A connector (round 12-pin)

Used to connect to the CCU connector on a video camera via an RS-232C or RS-422A interface. Communication with up to two channels is available.

16 AC IN (AC power input) connector

Use the specified AC power cord to connect to an AC power supply. The AC power cord can be secured to this unit, using the plug holder (optional).

Internal Switches

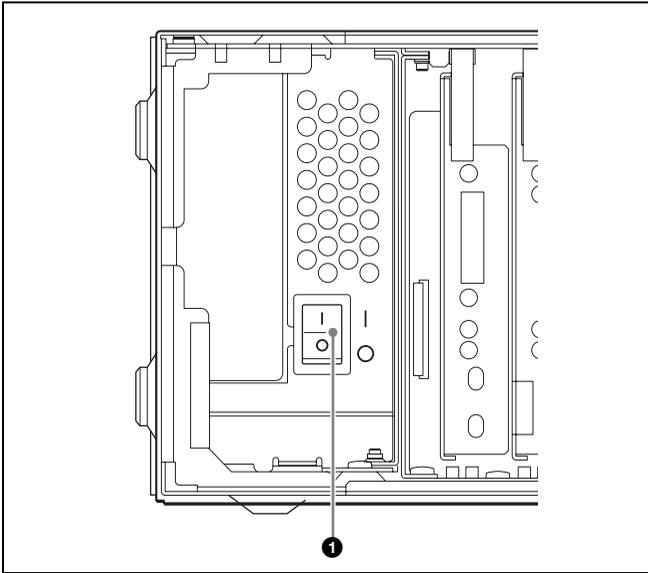
Note

To reduce the risk of electric shock, fire or injury, do not open the cabinet. To adjust the internal settings, refer to qualified service personnel.

There are no internal switches on HDCU2080.

HDCU2580 Internal Switches

The following switches are located inside the unit, behind the front panel:



1 Internal main power switch

When an abnormality has occurred, and power cannot be cut off with the POWER switch on the front panel, you may turn off the unit using the internal main power switch. When the switch is set to OFF, setting the POWER switch on the front panel to ON doesn't turn on the unit.

HKCU2007 3G/HD SDI Output Expansion Unit (optional)

Notes

- To reduce the risk of electric shock, fire or injury, do not open the cabinet. To adjust the internal settings, refer to qualified service personnel.
- The HDCU2080/2580 does not support 3G digital optical output.

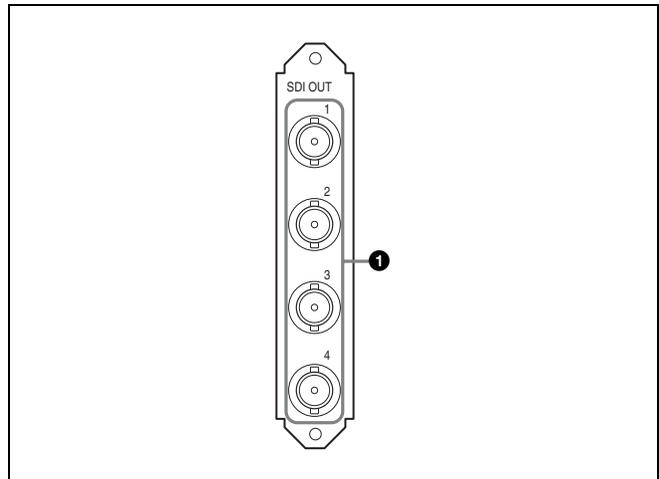
The HKCU2007 3G/HD SDI Output Expansion Unit consists of a DRX front board and an HIF rear board.

When these boards are installed in the front and rear expansion slots of the unit, the number of HD-SDI output connectors increases by four. These can also be installed on HDCU2080/2580's expansion slots.

The format of SDI signals output via each upper/lower pair of connectors on the HIF board can be set.

For details on installation, contact a Sony service or sales representative.

HIF-57 Board



1 SDI OUT 1, 2, 3, 4 (HD serial digital interface output 1-4) connectors (BNC-type)

The signal from the video camera may be output as four HD-SDI signals.

HKCU1001 SD Encoder Unit (optional)

Note

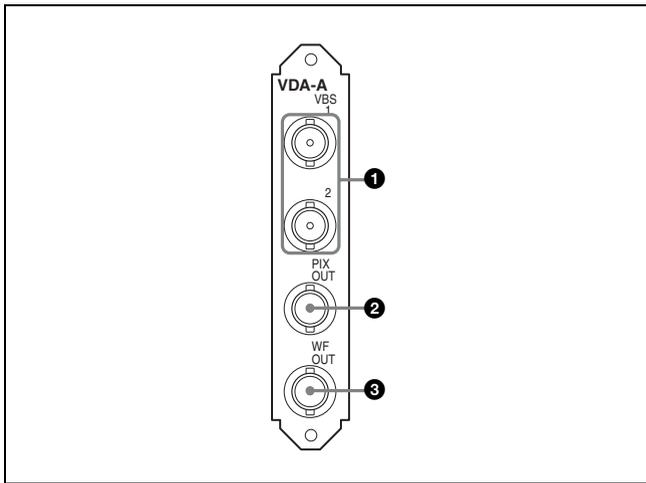
To reduce the risk of electric shock, fire or injury, do not open the cabinet. To adjust the internal settings, refer to qualified service personnel.

The HKCU1001 consists of an EN-A front board and a VDA-A rear board.

When these boards are installed in the front and rear expansion slots of the unit, the unit outputs SD composite signals, waveform monitor output signals, and picture monitor output signals through the VDA-A board's connectors.

For details on installation, contact a Sony service or sales representative.

VDA-A Board



❶ VBS 1, 2 (composite video output 1, 2) connectors (BNC-type)

The signal from the video camera may be output as two analog composite signals.

❷ PIX OUT (picture monitor output) connector (BNC-type)

Outputs the video signal for a picture monitor selected with the PICTURE MONITOR button of an RCP-1000 series Remote Control Panel or MSU-1000 series Master Setup Unit. Character signals or marker signals can be superimposed on the video signal output through this connector.

For details on these operations, refer to the Master Setup Unit or Remote Control Panel manuals.

❸ WF OUT (waveform monitor output) connector (BNC-type)

Outputs the video signal for a waveform monitor selected with the WF MONITOR button of an RCP-1000 series Remote Control Panel or MSU-1000 series Master Setup Unit.

For details on these operations, refer to the Master Setup Unit or Remote Control Panel manuals.

HKCU1003 Multi Interface Unit (optional)

Note

To reduce the risk of electric shock, fire or injury, do not open the cabinet. To adjust the internal settings, refer to qualified service personnel.

The HKCU1003 consists of an EN-B front board and three VDA rear boards (A/B/C).

When the EN-B board and one of the VDA rear boards are installed in the front and rear expansion slots of the unit, the unit inputs or outputs the following signals.

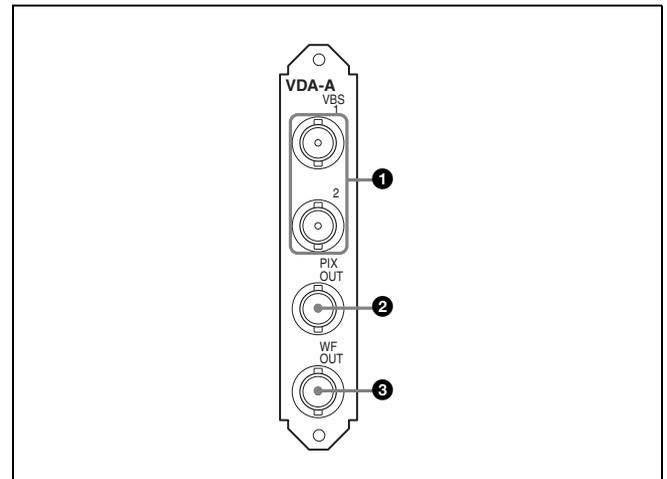
- Outputs SD composite signals, waveform monitor output signals, and picture monitor output signals through a VDA-A board.
- Inputs/outputs the frame sequence signal when operating a 24P system through a VDA-B board.
- Outputs analog component signals or analog composite signals through a VDA-C board.

When you use either the VDA-A board or the VDA-B board, insert the EN-B board in the corresponding expansion slot on the front of the HDCU2080/2580. When either the VDA-A board or the VDA-B board is installed, you can insert the VDA-C board in an expansion slot on the rear panel of the HDCU2080. Don't insert any board in the corresponding expansion slot on the front of the HDCU2080.

It is not possible to install the VDA-C board to HDCU2580.

For details on installation, contact a Sony service or sales representative.

VDA-A Board



❶ VBS 1, 2 (composite video output 1, 2) connectors (BNC-type)

The signal from the video camera may be output as two analog composite signals.

❷ PIX OUT (picture monitor output) connector (BNC-type)

Outputs the video signal for a picture monitor selected with the PICTURE MONITOR button of an RCP-1000 series Remote Control Panel or MSU-1000 series Master Setup Unit.

Character signals or marker signals can be superimposed on the video signal output through this connector.

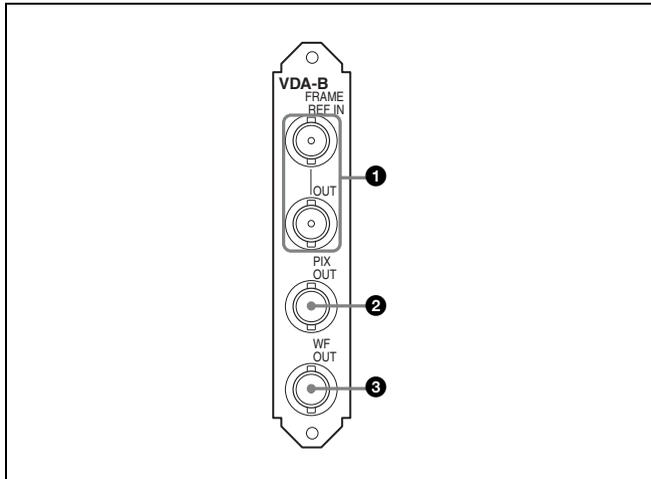
For details on these operations, refer to the Master Setup Unit or Remote Control Panel manuals.

③ WF OUT (waveform monitor output) connector (BNC-type)

Outputs the video signal for a waveform monitor selected with the WF MONITOR button of an RCP-1000 series Remote Control Panel or MSU-1000 series Master Setup Unit.

For details on these operations, refer to the Master Setup Unit or Remote Control Panel manuals.

VDA-B Board



① FRAME REF IN, OUT (frame reference input/output) connectors (BNC-type)

Input an HD tri-level reference sync signal or SD reference sync signal (black burst signal) for the sequence-lock between the camera control units, to the upper of the two connectors. The input signal is output from the lower connector as is (loop-through output).

When not using the OUT connector, terminate it at 75 ohms.

② PIX OUT (picture monitor output) connector (BNC-type)

Outputs the video signal for a picture monitor selected with the PICTURE MONITOR button of an RCP-1000 series Remote Control Panel or MSU-1000 series Master Setup Unit.

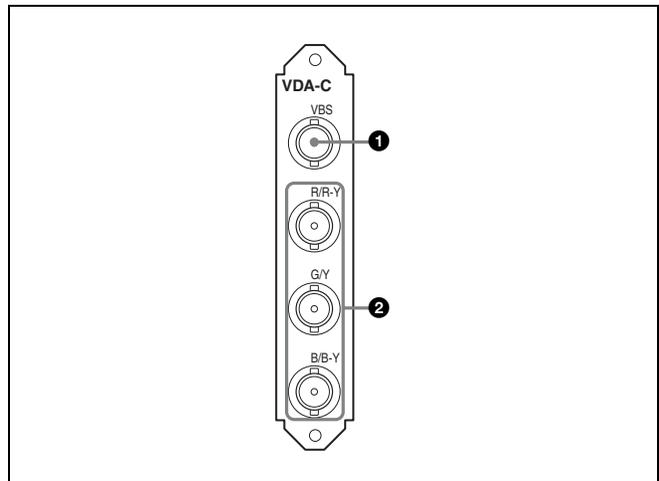
For details on these operations, refer to the Master Setup Unit or Remote Control Panel manuals.

③ WF OUT (waveform monitor) connector (BNC-type)

Outputs the video signal for a waveform monitor selected with the WF MONITOR button of an RCP-1000 series Remote Control Panel or MSU-1000 series Master Setup Unit.

For details on these operations, refer to the Master Setup Unit or Remote Control Panel manuals.

VDA-C Board (Not used in this unit)



① VBS (composite video signal output) connector (BNC-type)

The signal from the video camera may be output as an analog composite signal.

② R/R-Y, G/Y, B/B-Y (component video signal output) connectors (BNC-type)

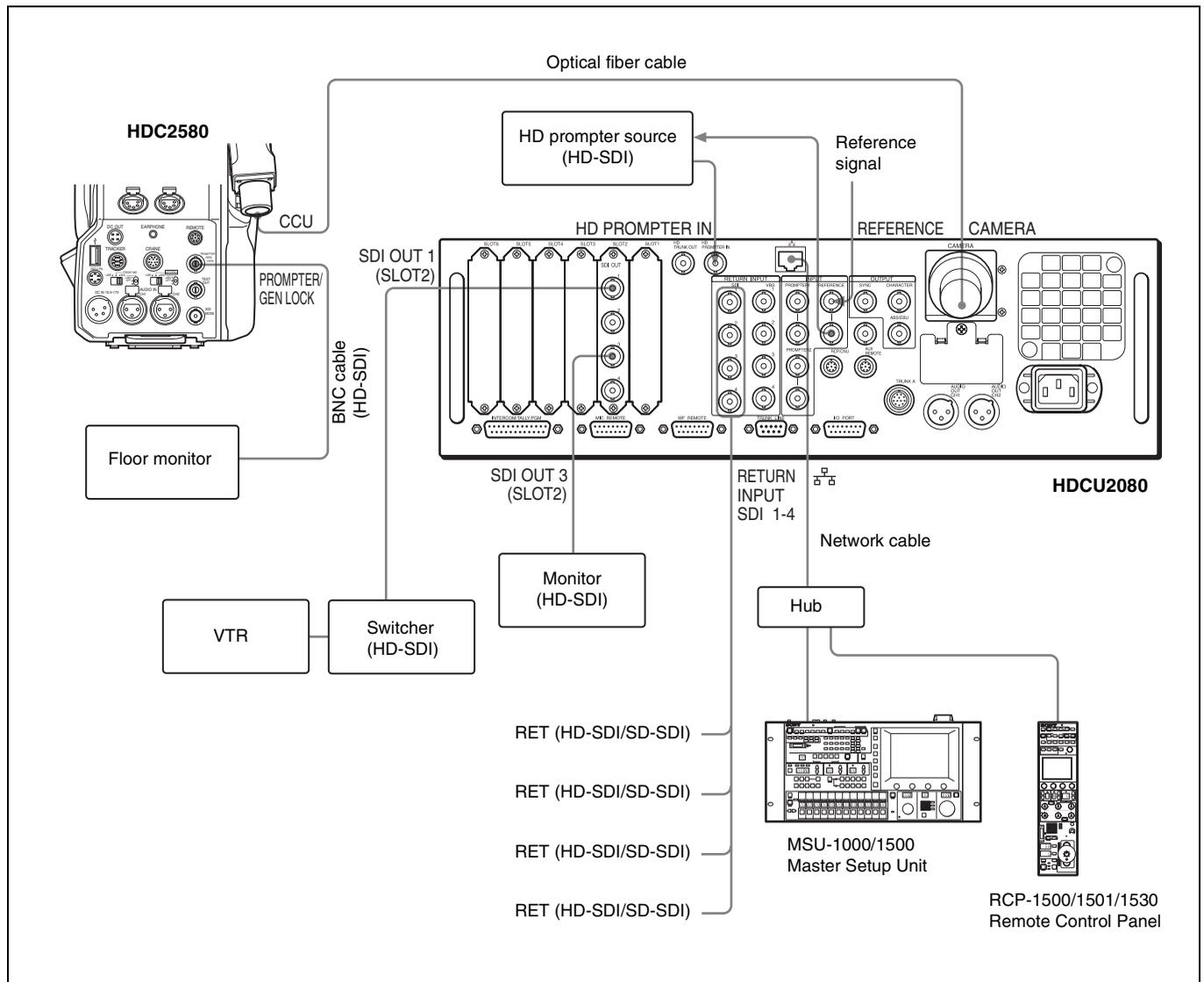
The signal from the video camera may be output as a R/R-Y, G/Y, B/B-Y component signal or an RGB component signal.

Connections and Settings

Fiber Transmission System

The camera and the camera control unit are connected via a single optical fiber cable, and the optical transmission is achieved.

Connection example



Settings

Camera

MAINTENANCE menu, <SDI OUT> page:
Set SDI-1 OUT to HD PROMPTER.

Camera control unit

Format: Select a format of 1080/50I.

Status Display

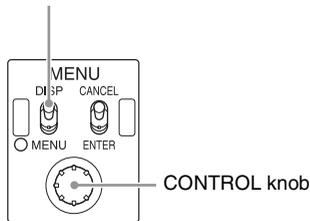
The CCU system status can be monitored using a picture monitor connected to the PIX output.

For information on monitoring and changing settings, see "Setup Menu" on page 25.

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.

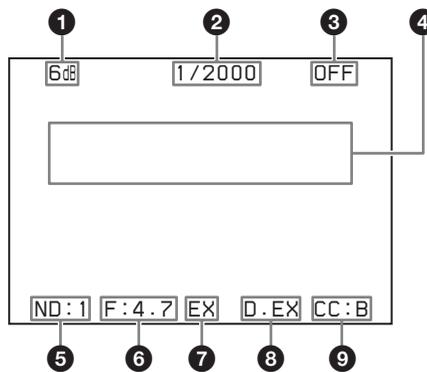
Status Display Screen

The following information is displayed on the status display screen.

- Camera settings
- System status
- CCU hardware diagnostics
- Camera system diagnostics
- Network diagnostics
- CCU AT board diagnostics
- CCU AVP board diagnostics
- CCU DTX board diagnostics
- Status of the boards inserted in Slot1 to 6
- CCU SDP board diagnostics
- 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

8 D.EX

Digital lens extender indicator

9 CC filter

Current CC filter selection

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.

Page 2

| | | |
|----------|----------|-----|
| 6dB | 1/2000 | OFF |
| WHT R: 0 | BLK R: 0 | |
| G: 0 | G: 0 | |
| B: 0 | B: 0 | |
| | M: 0.0 | |
| BLK γ | FLR R: 0 | |
| : 0 | G: 0 | |
| DTL | B: 0 | |
| : 0 | M: 0 | |
| ND: 1 | F: 4.7 | EX |

WHT: White balance R/G/B value

BLK: Black balance R/G/B/Master value
BLK γ : Black gamma value
FLR: Flare balance R/G/B/Master value
DTL: Detail level

Page 3

```

EC 0 H:A V:A  $\gamma$ : 0
SD Matrix: ON
CC Reduction: ON
Coring: 0 Level : 35
SD Detail: ON
Level : 0 Comb : 0
Limit : 0 Lim-w : 0
Crisp : 0 Lim-b : 0
LDKnee: 0 LDGain: 0
Ratio : 0
Freq : 0

```

The setting status for CCU SD signals is displayed.

SD Matrix: Linear matrix correction for down converter output setting

SD Detail: Contour correction function for down converter output setting

Note

Items with no explanation are the same as those listed under "Page 1" in "Camera settings" above.

System status

```

*System Status* 1/20
Ref:HD Lock
Camera :HDC2580
1080/50I
HD Main:1080/50I
HD Conv:-----
SD Conv:525/50I
RET1:1080/50I (PsF)
RET2:1080/50I (PsF)
RET3:1080/50I (PsF)
RET4:1080/50I (PsF)

```

The model name of the camera connected to the unit, the format setting, CCU output format setting, external reference setting and return signal format setting are displayed.

Ref: Reference signal format and lock status

Camera: Model name of the connected camera

HD Main: Return signal format

HD Conv: HD up convert setting status

SD Conv: SD up convert setting status

RET1: Return 1 return format selection status

RET2: Return 2 return format selection status

RET3: Return 3 return format selection status

RET4: Return 4 return format selection status

CCU hardware diagnostics

```

2/20

** Diagnosis **
A:AT :OK 2:DRX OK
B:AVP :OK 3:DRX OK
C:DTX :OK 4:RC OK
D: 5:EN1-A OK
1:DRX :OK 6:EN2-B OK

```

The name of the board connected to the unit's front panel and that board's self-diagnostic results are displayed.

HDCU2080

Slot A to D

Slot 1 to 6

HDCU2580

Slot A to C

Slot 2 to 3

Camera system diagnostics

Page 1

```

*System Diag 1/3* 3/20

Optical Condition
CAMERA OK
CCU OK

Fan Power OK
Timer 56H
CCU Power AC OK
Fiber Cable ~100m

SerialNo 00002002

```

CAMERA: Camera light sensor level

CCU: CCU light sensor level

Fan Power: CCU power supply fan status

Timer: Elapsed time since power-on

CCU Power: CCU power supply type and status

Fiber Cable: Cable length

SerialNo: CCU serial number

Page 2

```

*System Diag 2/3* 4/20

CAMERA Cable Connect
Data OK
Power OK
RCP/CNU Cable Connect
Data OK
Power OK

```

CAMERA Cable: Camera cable connection status

CAMERA Data: Camera data transmission status

CAMERA Power: Camera power supply status

RCP/CNU Cable: This unit's REMOTE connector cable connection status

RCP/CNU Data: Data transmission status from a device connected to this unit's REMOTE connector

RCP/CNU Power: Power supply status to a device connected to this unit's REMOTE connector

Page 3

```
*System Diag 3/3* 5/20
Intercom
CCU System
Intercom MIC
CAMERA ENG ON
PROD OFF
CAM MIC Gain Local
CH1 60dB
CH2 60dB
```

- Intercom CCU:** CCU intercom selection status
- Intercom MIC CAMERA ENG:** Status for the camera microphone of the ENG line (When 1CH is selected via the INTERCOM menu (C07), --- is displayed.)
- Intercom MIC CAMERA PROD:** Status for the camera microphone of the PROD line
- CAM MIC Gain:** Camera microphone circuit control status
- CAM MIC CH1:** Camera microphone circuit 1 amp gain status
- CAM MIC CH2:** Camera microphone circuit 2 amp gain status

Network diagnostics

Page 1

```
*Network Diag 1/3* 6/20
MacAddress 00014A-xxxxxx
Auto Negotiation: ON
Auto MDIX : ON
Connect Speed : 100M
Duplex Mode : FULL
MDI/MDIX Select : MDIX
Link Status :OK
```

- MacAddress:** CCU MAC address
- Auto Negotiation:** Auto negotiation setting status
- Auto MDIX:** Auto-MDIX setting status
- Connect Speed:** Connection speed setting status
- Duplex Mode:** Communication method setting status
- MDI/MDIX Select:** Communications port wiring configuration selection status
- Link Status:** LAN connection status

Page 2

```
*Network Diag 2/3* 7/20
CNS Mode : MCS
CCU No. : (1)
Master IP Address
192.168. 0.100
```

CNS Mode: REMOTE and LAN connectors mode setting status

CCU No.: CCU number setting status

Master IP Address: Master device IP address

Page 3

```
*Network Diag 3/3* 8/20
IP Addr :192.168. 0.101
NetMask :255.255.255. 0
Def GW :192.168. 0.254
```

- IP Addr:** CCU IP address setting status
- NetMask:** CCU subnet mask setting status
- Def GW:** CCU default gateway setting status

CCU AT board diagnostics

```
*AT Diag* 9/20
System Frequency:1.000
CAM Format Setting
1080/50I
Reference :HD Remote
Line Delay :Line(90H)
Power Supply:OK
PLD Version :4.00 Done
VIF Power :OK
```

- System Frequency:** System frequency
- CAM Format Setting:** Camera format setting status
- Reference:** Reference signal setting status
- Line Delay:** HD-SD delay setting status
- Power Supply:** Status of power supply to the AT board
- PLD Version:** AT board PLD version
- VIF Power:** Status of power supply to the VIF board

CCU AVP board diagnostics

```
*AVP Diag* 10/20
Front Power:OK
PLD Version:1.00 Done
ADO Power :OK
```

- Front Power:** Status of power supply to the AVP board
- PLD Version:** AVP board PLD version
- ADO Power:** Status of power supply to the ADO board

CCU DTX board diagnostics

```
*DTX Diag*           11/20

Return Delay  :F/S
Active Ret CH :2CH
Front Power:OK
PLD Version:1.00 Done
Rear:SDI      Power:OK
```

Return Delay: Return delay setting status

Active Ret CH: The selected RET channel

Front Power: Status of power supply to the DTX board

PLD Version: DTX board PLD version

Rear: Name of the board installed in the rear expansion slot

Power: Status of power supply to the board installed in the rear expansion slot

Status of the board inserted in Slot1

```
*Slot1 Diag*        12/20

1&2: 1080/50I
3&4:M1080/50I
HD CB:BAR 16:9(100%)

Front:DRX          Power:OK
PLD Version:1.00 Done
Rear :HIF          Power:OK
```

1 & 2: Output format of Output 1 & 2

3 & 4: Output format of Output 3 & 4

HD CB: The output color bar signal

Front: Status of power supply to the board installed in option slot 1 and the board name

PLD Version: PLD version of the board installed in option slot 1 and the board name

Rear: Status of power supply to the rear board and board name

Note

The items displayed differ depending on board connected to the expansion slot.

Status of the board inserted in Slot2

```
*Slot2 Diag*        13/20

1&2: 1080/50I
3&4:M1080/50I
HD CB:BAR 16:9(100%)
SD CB:SMPTE

Front:RC           Power:OK
PLD Version:1.00 Done
Rear :HIF          Power:OK
```

1 & 2: Output format of Output 1 & 2

3 & 4: Output format of Output 3 & 4

HD CB: The output color bar signal

Front: Status of power supply to the board installed in option slot 2 and the board name

PLD Version: PLD version of the board installed in option slot 2 and the board name

Rear: Status of power supply to the rear board and board name

Note

The items displayed differ depending on board connected to the expansion slot.

Status of the board inserted in Slot3

```
*Slot3 Diag*        14/20

Front:None         Power:OK
PLD Version:1.00 Done
Rear :HIF          Power:OK
```

The setting status of the board installed in Slot3 (front/rear) is displayed.

Note

The items displayed differ depending on board connected to the expansion slot.

Status of the board inserted in Slot4 (HDCU2080 only)

```
*EN-A(Slot4) Diag* 15/20

Front:EN1-A       Power:OK
PLD Version:1.00 Done
Mode              :Normal
Rear:VDA-A        Power:OK
```

The setting status of the board installed in Slot4 (front/rear) is displayed.

Note

The items displayed differ depending on board connected to the expansion slot.

Status of the board inserted in Slot5 (HDCU2080 only)

```
*EN-B(Slot5) Diag* 16/20

Sub-Ref:None
      Unknown

Front:EN2-B   Power:OK
PLD Version:1.00 Done

Rear:UDA-B   Power:OK
```

The setting status of the board installed in Slot5 (front/rear) is displayed.

Note

The items displayed differ depending on board connected to the expansion slot.

Status of the board inserted in Slot6 (HDCU2080 only)

```
*Slot-6 Diag*      17/20

Front None

Rear :-----
```

The setting status of the board installed in Slot6 (front/rear) is displayed.

Note

The items displayed differ depending on board connected to the expansion slot.

CCU SDP board diagnostics

```
*SDP Diag*        18/20

Power:OK

PLD Version:1.00 Done
```

Power: Status of power supply to the SDP board
PLD Version: SDP board PLD version

Camera hardware diagnostics

```
*CAMERA Diag*    19/20

ALL BOARD OK
```

Displays the camera hardware status.

ROM version information for major components

```
*ROM Version*    20/20

CAMERA HDC2580
      1.00      11.12.20
CCU    HDCU2080
      1.00      11.12.20
```

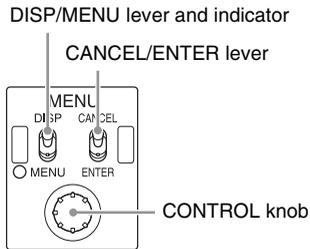
CAMERA: ROM version of the camera connected to this unit
CCU: ROM version of this unit

Setup Menu

The CCU system and peripheral settings can be checked and 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.

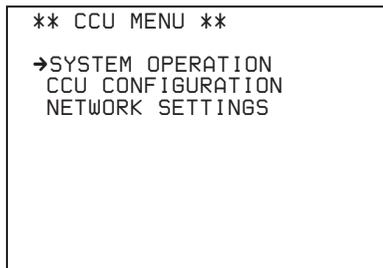


To display a menu page

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 pointer (➡) 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.



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

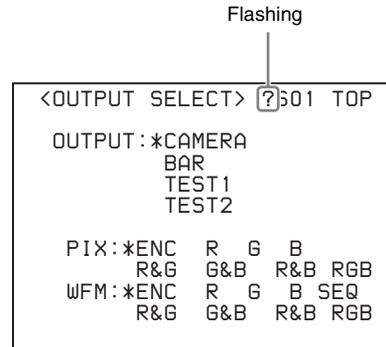
To select an item in the CCU MENU

Turn the CONTROL knob to move the pointer (➡) 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 pointer (➡) to the page number, then press the CONTROL knob.

The pointer (➡) 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 pointer (➡). 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 pointer (➡). Items on the page can now be selected and changed.

- 1 Turn the CONTROL knob to move the pointer (➡) to the desired item, then press the CONTROL knob. The pointer (➡) 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 pointer (➡), 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 pointer (➡) 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

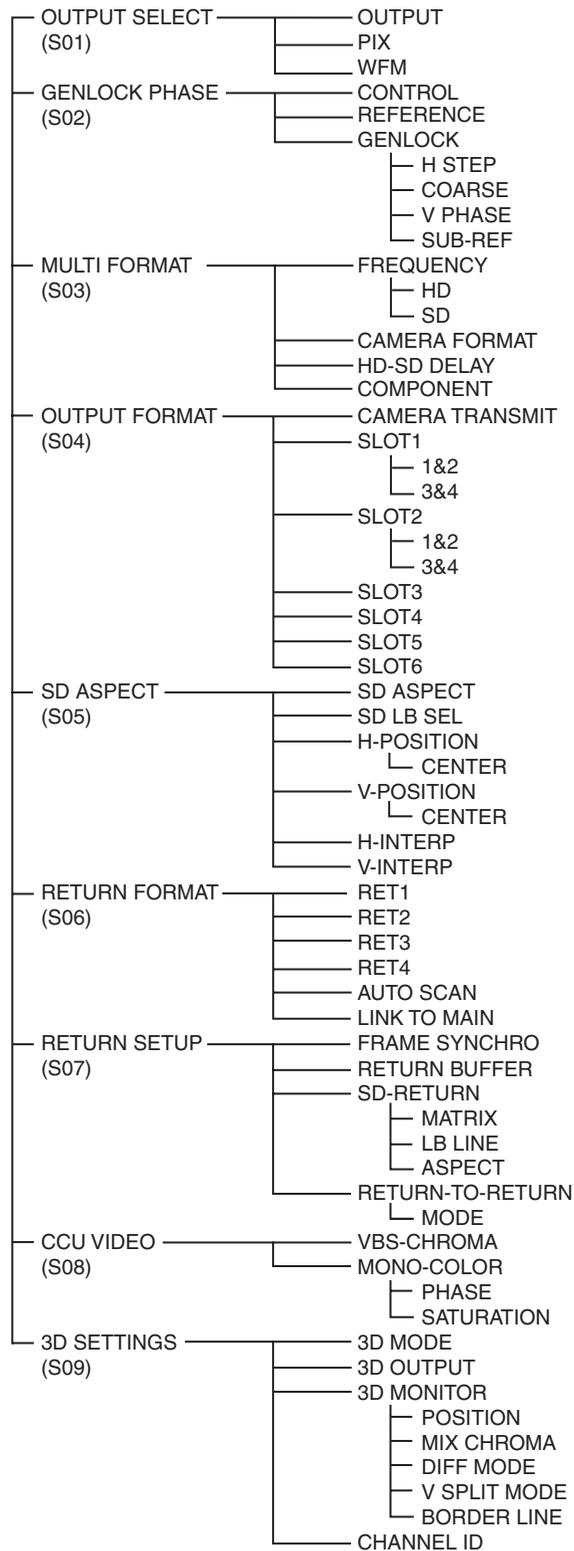
Turn the CONTROL knob to move the cursor to ESC, then press the CONTROL knob.

To exit the menu display

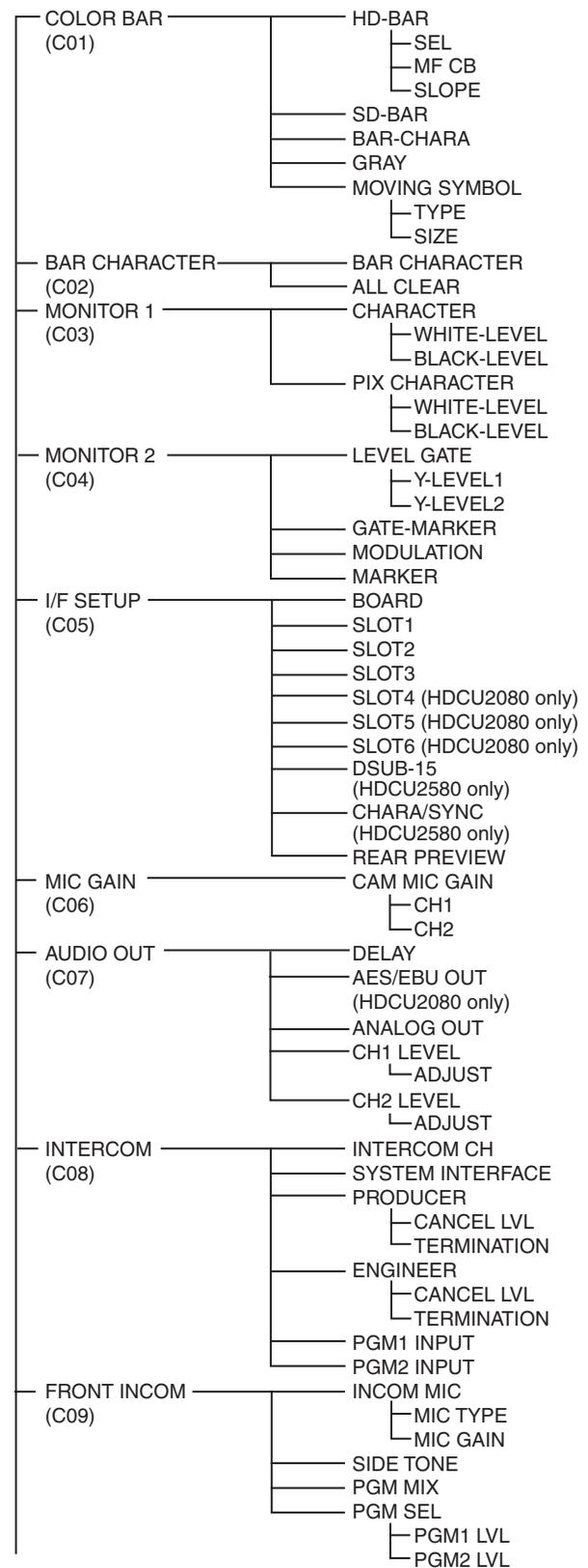
In menu display mode, set the DISP/MENU lever to the MENU position.

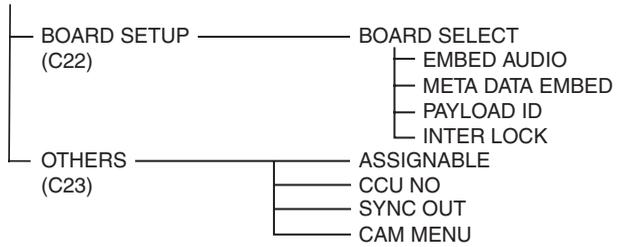
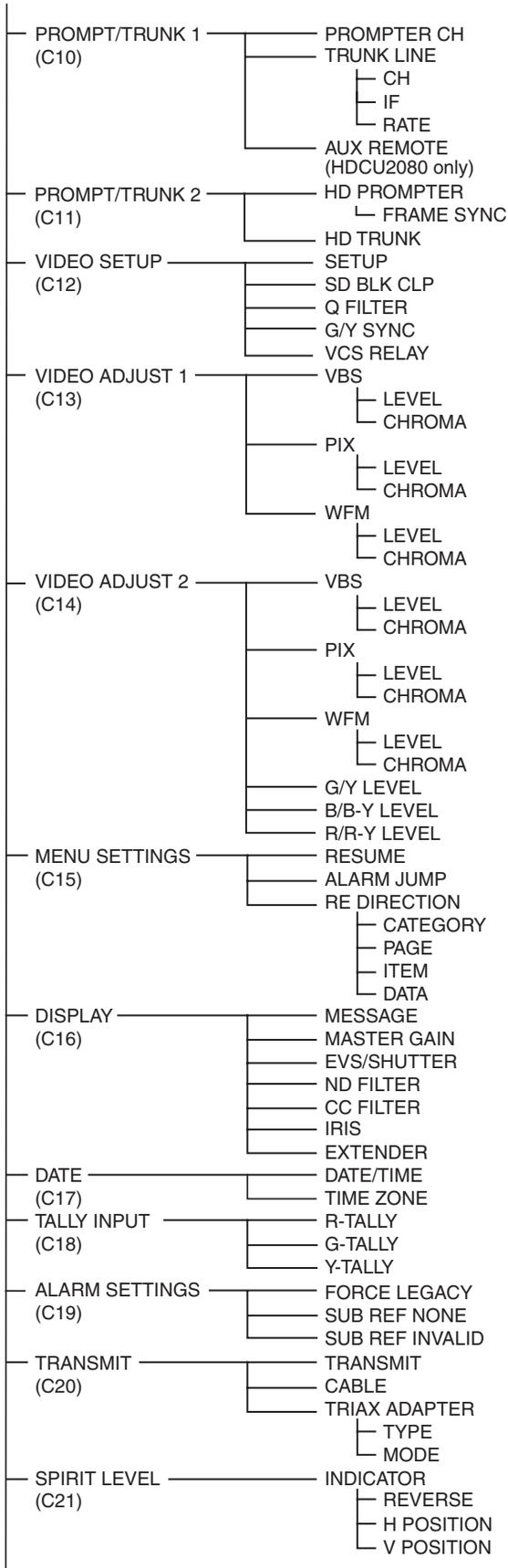
Menu Tree

SYSTEM OPERATION menu

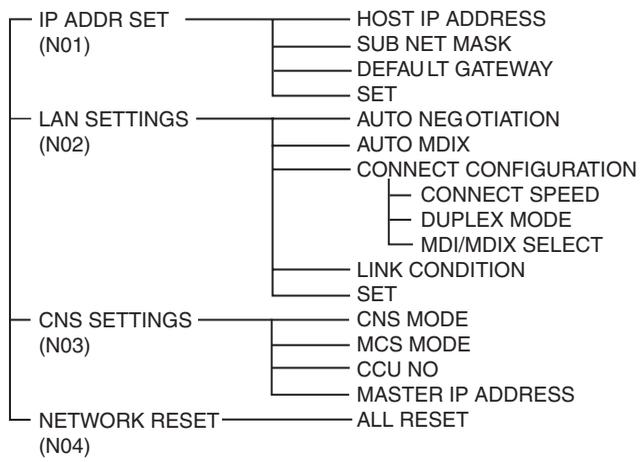


CCU CONFIGURATION menu





NETWORK SETTINGS menu



Menu List

Note

The following conventions are used in the menu list table.

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

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

SYSTEM OPERATION menu

| SYSTEM OPERATION | | | |
|------------------------|--|--|--|
| Page name Page No. | Item | Settings | Description |
| <OUTPUT SELECT> S01 | OUTPUT | CAMERA, BAR , TEST1, TEST2 | Selects the output signal. TEST1 and TEST2 are not selectable if there is no communication with the camera. |
| | PIX | ENC , R, G, B, R&G, G&B, R&B, RGB | Selects the PIX connector output signal. |
| | WFM | ENC , R, G, B, SEQ, R&G, G&B, R&B, RGB | Selects the WFM connector output signal. |
| <GENLOCK PHASE> S02 | CONTROL | (REMOTE), (LOCAL) | |
| | REFERENCE | (NONE), (EXT IN) | Displays the status of the reference signal input. |
| | GENLOCK | HD, SD | This unit's GEN LOCK mode: displays the lock status and format. HD : HD SD : SD |
| | | (OK), (NG) | Sets the lock status of the external reference signal. (OK) : Locked (NG) : Unlocked |
| | | External reference signal format | Displayed only when a reference signal is present. |
| | H STEP | When GENLOCK mode is HD: -3.01 to 3.45 μsec 0.00 | Horizontal phase (STEP) |
| | | When GENLOCK mode is SD: -8.29 to 9.48 μsec 0.00 | Displays the sub-reference signal format. |
| | COARSE | -99 to 99 0 | Horizontal phase Displays the sub-reference signal format. |
| | V PHASE | 0 to 7 | Vertical phase (line) Displays the sub-reference signal format. |
| | SUB-REF | (NONE), (EXT IN) | Displayed only when a sub-reference signal is present. |
| | Note Displayed only when HKCU1003 is connected | (UNKNOWN), (Frame Gate), (HD), (SD) Sub-reference signal format display | |
| <MULTI FORMAT> S03 | FREQUENCY | | |
| | HD | 1.000 | Displays the operating frequency. |
| | SD | (625PAL) | |
| | CAMERA FORMAT | 1080/50I | Displays the transmission format. |
| | HD-SD DELAY | Line (90H), Frame (1F) , 0-Delay | Sets the phase output for SD signals down converted from this unit's HD signals. |
| | COMPONENT | RGB, YCD | Selects the component signal connector's output format. (Displayed only when HKCU1003 is installed.) |

Note

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

| SYSTEM OPERATION | | | |
|------------------------|------------------------------------|----------------|--|
| Page name Page No. | Item | Settings | Description |
| <OUTPUT FORMAT> S04 | CAMERA TRANSMIT | 1080/50I | Displays the output format. This setting works in conjunction with CAMERA FORMAT. |
| | SLOT1 (board name) (HDCU2080 only) | | |
| | 1&2 | Output format* | Selects the output format for expansion slot 1's SDI OUT1/2 connector. |
| | 3&4 | Output format* | Selects the output format for expansion slot 1's SDI OUT3/4 connector. |
| | SLOT2 (board name) | | |
| | 1&2 | Output format* | Selects the output format for expansion slot 2's SDI OUT1/2 connector. |
| | 3&4 | Output format* | Selects the output format for expansion slot 2's SDI OUT3/4 connector. |
| | SLOT3 (board name) | Output format* | Selects the output format for expansion slot 3's SDI OUT connector. |
| | SLOT4 (board name) | Output format* | Selects the output format for expansion slot 4's SDI OUT connector. (HDCU2080 only) |
| | SLOT5 (board name) | Output format* | Selects the output format for expansion slot 5's SDI OUT connector. (HDCU2080 only) |
| | SLOT6 (board name) | Output format* | Selects the output format for expansion slot 6's SDI OUT connector. (HDCU2080 only) |

* Use the charts on the following as an example of how to configure these settings. The settings differ depending on the boards connected to the expansion slots.

| Slot1 1&2 | Slot1 3&4 | Slot2 1&2 | Slot2 3&4 | Slot3 1&2 | Slot3 3&4 | Slot4 |
|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| 1080/50I | M1080/50I | 1080/50I | M1080/50I | 625/50I | M625/50I | PAL |

An "M" next to the output format indicates that a cable's character will be output with the signal.

| SYSTEM OPERATION | | | |
|-----------------------|------------|--|---|
| Page name Page No. | Item | Settings | Description |
| <SD ASPECT> S05 | SD ASPECT | SQUEEZE, EDGE CROP , LETTER BOX | Selects the SD output aspect. |
| | SD LB SEL | 16:9 , 15:9, 14:9, 13:9 | Selects the LETTER BOX aspect ratio. |
| | H-POSITION | -99 to 99, (-99) to (99) <u>0</u> | Sets the horizontal position. Settings in (): Displayed when SQUEEZE or LETTER BOX is selected in SD ASPECT. (Display only) |
| | CENTER | ON , OFF, (ON), (OFF) | Sets the horizontal centering position. Settings in (): Displayed when SQUEEZE or LETTER BOX is selected in SD ASPECT. (Display only) |
| | V-POSITION | -99 to 99, (-99) to (99) <u>0</u> | Sets the vertical position. Settings in (): Displayed when SQUEEZE or EDGE CROP is selected in SD ASPECT. (Display only) |
| | CENTER | ON, OFF, (ON), (OFF) | Sets the vertical centering position. Settings in (): Displayed when SQUEEZE or EDGE CROP is selected in SD ASPECT. (Display only) |
| | H-INTERP | A , B, C, D, E | Selects the down converter horizontal filter. |
| | V-INTERP | A , B, C, D, E | Selects the down converter vertical filter. |

SYSTEM OPERATION

| Page name Page No. | Item | Settings | Description |
|------------------------|------------------|--|--|
| <RETURN FORMAT> S06 | RET1 | 1080/50I (PsF) , 625/50I (PsF), PAL | Sets the return signal input format. |
| | RET2 | SQUEEZE , EDGE CROP, LETTER BOX, | <p>Sets input format, aspect ratio, and letterbox mode.</p> <p>Note RET4 for HDCU2580 is locked to PAL.</p> |
| | RET3 | 16:9 , 15:9, 14:9, 13:9 | |
| | RET4 | | |
| | AUTO SCAN | Execute via EXEC. | |
| | | | <p>Automatically detects the return signal input format, and then executes.</p> <p>Note If the automatically detected result is invalid, the previous setting flashes for 5 seconds, and then the previous setting is maintained.</p> |
| | LINK TO MAIN | MANUAL /AUTO | Sets the mode for linking the return signal to this signal. |
| <RETURN SETUP> S07 | FRAME SYNCHRO | OFF, ON | Set the FRAME SYNCHRO function for the return signal to on/off. |
| | RETURN BUFFER | NORMAL , EXTEND | Set the buffer extension function for the return signal to on/off. |
| | SD-RETURN | | |
| | MATRIX | OFF, ON | Turn the HD matrix to the SD return signal on/off. |
| | LB LINE | 360, 364 | Set the effective line setting for letterbox. |
| | ASPECT | MANUAL , AUTO | Sets the auto-linking function for this unit's aspect setting. |
| | RETURN-TO-RETURN | | |
| | MODE | NORMAL , SMOOTH | "SMOOTH" is available when the return signal is HD-SDI. |
| <CCU VIDEO> S08 | VBS-CHROMA | OFF, ON | Turns the VBS output signal's cross signal on/off. |
| | MONO-COLOR | OFF , ON | Sets the MONO COLOR function on/off. |
| | PHASE | 0 to 358, 0 | Adjusts the color phase for the MONO COLOR function. |
| | SATURATION | -99 to 99, 0 | Adjusts the color saturation for the MONO COLOR function. |
| <3D SETTINGS> S09 | 3D MODE | OFF , ON | Turns the 3D Mode setting ON/OFF. (Available only with the HDFA-200 expansion.) |
| | 3D OUTPUT | 3D MONITOR , RIGHT ONLY, LEFT ONLY | Sets 3D Monitor output. |
| | 3D MONITOR | SPLIT SCREEN , SIDE BY SIDE, ANAGLYPH, 50% MIX, DIFFERENCE, DIFF Y ONLY, MIRROR, CROP SPLIT, V SPLIT, CHECKER BOARD, LINE BY LINE | Displays the format. |
| | POSITION | -99 to 99, 0 | Sets the WIPE division ratio and MIX mix ratio. (Displayed when 3D MODE is set to ON.) |
| | MIX CHROMA | ON , OFF | Selects whether to display chroma information when MIX is activated. |
| | DIFF MODE | L-R , R-L | Switches to the difference image calculation operation. |
| | V SPLIT MODE | L/R , R/L | Switches the left and right sides when splitting the display. |
| | BORDER LINE | OFF , ON | Selects whether or not to display the boundary line when splitting the display. |
| | CHANNEL ID | (OFF), (ON) | Selects whether to display the Channel ID with this line's output. |

CCU CONFIGURATION menu

| CCU CONFIGURATION | | | | |
|-----------------------|------------------------|--|--|---|
| Page name Page No. | Item | Settings | Description | |
| <COLOR BAR> C01 | HD-BAR | | | |
| | 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 | Sets an HD output color bar. | |
| | MF CB | MODIFY , EVEN | Sets a multi-format color bar. | |
| | SLOPE | WIDE , NARROW | Sets the chroma band for a color bar. | |
| | SD-BAR | SMPTE , EIA, EBU, 95%, PAL100%, Y/C-RAMP, Y-RAMP | Sets SD output for a color bar. | |
| | | DSB, ENB | DSB : Down convert and display the HD color bar. ENB : Display the set SD color bar. | |
| | BAR-CHARA | ON, OFF | Turns the signal for characters superimposed on a color bar ON/OFF. | |
| | GRAY | ON , OFF | ON : Gray screen output when camera power supply is off. OFF : Color bar signal output when camera power supply is off. | |
| | MOVING SYMBOL | ON, OFF | Turns the moving symbol superimposed on the color bar ON/OFF. | |
| | | TYPE | 0 , 1, 2 | Sets the symbol type. |
| | | SIZE | SMALL , LARGE | Sets the symbol size. |
| | <BAR CHARACTER> C02 | BAR CHARACTER | | Sets strings 1 to 12 that are superimposed on the color bar signal. |
| | | ALL CLEAR | | Execute to clear all character strings. (Execute via ENTER.) |
| <MONITOR 1> C03 | CHARACTER | | Sets the MONITOR output bar character. | |
| | WHITE-LEVEL | 0.0 to 107.0% 71.5 | Sets the MONITOR output bar character level. | |
| | BLACK-LEVEL | 0.0 to 107.0% | Sets the MONITOR output bar character border black level. | |
| | PIX CHARACTER | | Sets the PIX output bar character. (Displayed only when HKCU1001/1003 is installed.) | |
| | WHITE-LEVEL | 0.0 to 107.0%, 75.0 | Sets the PIX output bar character level. | |
| | BLACK-LEVEL | 0.0 to 107.0% | Sets the PIX output bar character border black level. | |

CCU CONFIGURATION

| Page name Page No. | Item | Settings | Description | |
|-----------------------|---------------------|---|--|--|
| <MONITOR 2> C04 | LEVEL GATE | ---, 1&2, 1, 2, OFF | 1&2: Displays level gate 1 & 2. 1: Displays level gate 1. 2: Displays level gate 2. ---: Displayed when camera not connected, video output not set to CAMERA, or video output is set to CAMERA and GATE MARKER is ON. (Display only) | |
| | Y-LEVEL1 | 0 to 108% 49 61 -99 to 99 -25 | Sets the level gate 1 minimum and maximum detection level. Sets the level gate 1 zebra range. | |
| | Y-LEVEL2 | 0 to 108% 74 108 -99 to 99 -25 | Sets the level gate 2 minimum and maximum detection level. Sets the level gate 2 zebra range. | |
| | GATE-MARKER | ---, ON, OFF -99 to 99 0 | Sets the gate signal display to ON/OFF. ---: Displayed when a camera is not connected. Sets the gate signal level. | |
| | MODULATION | ---, ON, OFF -99 to 99 0 | Sets the 4:3 aspect ratio mask function to ON/OFF when EDGE CROP is set to ON. ---: Displayed when a camera is not connected. Sets the mask video level. | |
| | MARKER | ON, OFF 4:3 , 13:9, 14:9, EU VISTA, VISTA, CINEMA, FOLLOW DC | Sets the marker signal to ON/OFF. Selects a superimposed marker signal. | |
| | </I/F SETUP> C05 | BOARD | FRONT, REAR | Display only |
| | | SLOT1 | BOARD NAME DISPLAY | Detects and displays the boards installed to the front/rear of the CCU. (Display only) |
| | | SLOT2 | BOARD NAME DISPLAY | |
| | | SLOT3 | BOARD NAME DISPLAY | |
| | | SLOT4 | BOARD NAME DISPLAY (HDCU2080 only) | |
| | | SLOT5 | BOARD NAME DISPLAY (HDCU2080 only) | |
| SLOT6 | | BOARD NAME DISPLAY (HDCU2080 only) | | |
| DSUB-15 | | MIC-REMOTE , WF-REMOTE | Sets the output for the MIC REMOTE connector. (HDCU2580 only) | |
| CHARA/SYNC | | CHARACTER , SYNC | Sets the output for the CHARACTER/SYNC connector. (HDCU2580 only) | |
| REAR PREVIEW | | MOMENTARY , TOGGLE | Selects the REAR PREVIEW output operating mode. | |
| <MIC GAIN> C06 | CAM MIC GAIN | | Sets the microphone gain. | |
| | CH1 | ---, 20, 30, 40, 50, 60 dB | Settings vary depending on microphones. ---: Displayed when a camera is not connected. (Display only) | |
| | CH2 | ---, 20, 30, 40, 50, 60 dB | | |
| <AUDIO OUT> C07 | DELAY | 0 to 3840FS | Sets the camera's microphone output phase. | |
| | AES/EBU OUT | MIC 1/2 , AES, EBU | Selects the MIC OUT DIGITAL output. (HDCU2080 only) | |
| | ANALOG OUT | MIC 1/2 , AES, EBU | Selects the MIC OUT ANALOG output. | |
| | CH1 LEVEL | 0 , +4, -20 | Sets the AUDIO CH1 output level. | |
| | ADJUST | -99 to 99 0 | | |
| | CH2 LEVEL | 0 , +4, -20 | Sets the AUDIO CH2 output level. | |
| | ADJUST | -99 to 99 0 | | |

**CCU
CONFIGURATION**

| Page name Page No. | Item | Settings | Description |
|-----------------------|----------------------|---------------------------------------|--|
| <INTERCOM> C08 | INTERCOM CH | 1CH, 2CH | Selects the intercom channel number. |
| | SYSTEM INTERFACE | | |
| | PRODUCER | 4WIRE , RTS, CLEAR COM | Sets the producer line intercom system. |
| | CANCEL LVL | -99 to 99 0 | Sets the side tone cancel level. |
| | TERMINATION | (OFF) , ON | Connects to a 200 Ω terminator, if ON is selected while 2-wire intercom interface (RTS or CLEAR COM) is used. (OFF) : Displayed when 4WIRE is selected in SYSTEM I/F. (Display only) |
| | ENGINEER | 4WIRE , RTS, CLEAR COM | Sets the engineer line intercom system. |
| | CANCEL LVL | -99 to 99 0 | Sets the side tone cancel level. |
| | TERMINATION | (OFF) , ON | Connects to a 200 Ω terminator, if ON is selected while 2-wire intercom interface (RTS or CLEAR COM) is used. (OFF) : Displayed when 4WIRE is selected in SYSTEM I/F. (Display only) |
| | PGM1 INPUT | -20, 0 , +4 dBu | Sets the PGM1 input level. |
| | PGM2 INPUT | -20, 0 , +4 dBu | Sets the PGM2 input level. |
| | <FRONT INCOM> C09 | | (MIC ON), (MIC OFF), (PGM ON) |
| | | (PROD), (ENG), (PRIVATE) | CCU front panel INTERCOM switch position. (Display only) |
| INCOM MIC | | CARBON, ECM, DYNAMIC | Sets the headset microphone connected to the INTERCOM connector on the front panel. CARBON : Carbon microphone (power supply, 20dB gain) ECM : Electret condenser microphone (power supply, 40dB gain) DYNAMIC : Dynamic microphone (no power supply, 60dB gain) |
| MIC TYPE | | BALANCE, UNBALANCE | Sets the headset microphone connected to the INTERCOM connector on the front panel. BALANCE : Balanced microphone UNBALANCE : Unbalanced microphone |
| MIC GAIN | | -6dB, 0dB , +6dB | Sets the input gain. |
| SIDE TONE | | 0 to 99 50 | Sets the side tone level. |
| PGM MIX | | OFF , INCOM+PGM, L-INCOM/R-PGM | OFF : Signals are not mixed. INCOM+PGM : INCOM and PGM signals are mixed. L-INCOM/R-PGM : Outputs an INCOM signal through the left channel and a PGM signal through the right. |
| PGM SEL | | PGM1 , PGM2, PGM1 + PGM2 | Selects the PGM type. |
| PGM1 LVL | | 0 to 99 50 | Sets the PGM1 level. |
| PGM2 LVL | | 0 to 99 50 | Sets the PGM2 level. |

| CCU CONFIGURATION | | | |
|---|-------------|---|---|
| Page name Page No. | Item | Settings | Description |
| <PROMPT/TRUNK 1> C10 | PROMPTER CH | 1CH, 2CH | Sets the number of prompter lines. (HDCU2580 is locked to 1CH.) |
| | TRUNK LINE | | |
| | CH | 1CH, 2CH | Sets the number of channels to be used. |
| | IF | 232C , 422A | Sets the communication line mode. |
| | RATE | (38Kbps), (19Kbps), (75Kbps), (150Kbps) | Displays the TRUNK line. (Display only) |
| | AUX REMOTE | DISABLE , ENABLE | Sets whether or not AUX REMOTE is used. (HDCU2080 only) |
| <PROMPT/TRUNK 2> C11 | HD PROMPTER | (ENABLE), (DISABLE) | Displays "ENABLE" or "DISABLE" for HD PROMPTER. |
| | FRAME SYNC | OFF , ON, (ON) | Turns the frame sync function ON/OFF. |
| | HD TRUNK | (ENABLE), (DISABLE) | Displays "ENABLE" or "DISABLE" for HD TRUNK. |
| <VIDEO SETUP> C12 | SETUP | ON , OFF, --- | ON : Adds a setup signal to VBS and SD YCD component signal Ych-SYNC. OFF : No setup signal is added. ---: Displayed when the format is PAL. (Display only) |
| | SD BLK CLP | OFF, ON | Y signals from SD SDI output that are less than 0% are clipped at 0%. |
| | Q FILTER | WD , NA | Sets the Q filter bandwidth. (Displayed only when HKCU1001 or HKCU1003 is installed.) |
| | G/Y SYNC | OFF , ON | Sets the R/G/B component signal's G ch-SYNC to on/off. (Displayed only when HKCU1001 or HKCU1003 is installed.) |
| | VCS RELAY | OFF, ON | Sets the PIX/WFM connector output. (Displayed only when HKCU1001 or HKCU1003 is installed.) |
| <VIDEO ADJUST 1> C13 (Available when an HKCU1001 or HKCU1003 board is installed) | VBS | | |
| | LEVEL | -99 to 99, 0 | Adjusts the VBS output video level. |
| | CHROMA | -99 to 99, 0 | |
| | PIX | | |
| | LEVEL | -99 to 99, 0 | Adjusts the PIX output video level. |
| | CHROMA | -99 to 99, 0 | |
| | WFM | | |
| | LEVEL | -99 to 99, 0 | Adjusts the WFM output video level. |
| | CHROMA | -99 to 99, 0 | |
| <VIDEO ADJUST 2> C14 (Available when two HKCU1001 or HKCU1003 boards are installed) | VBS | | |
| | LEVEL | -99 to 99, 0 | Adjusts the VBS output video level. |
| | CHROMA | -99 to 99, 0 | |
| | PIX | | |
| | LEVEL | -99 to 99, 0 | Adjusts the PIX output video level. |
| | CHROMA | -99 to 99, 0 | |
| | WFM | | |
| | LEVEL | -99 to 99, 0 | Adjusts the WFM output video level. |
| | CHROMA | -99 to 99, 0 | |
| (Available when yet another VDA board from the HKCU1003 is installed to the option slot) | G/Y LEVEL | -99 to 99, 0 | Adjusts the G/Y output video level. |
| | B/B-Y LEVEL | -99 to 99, 0 | Adjusts the B/B-Y output video level. |
| | R/R-Y LEVEL | -99 to 99, 0 | Adjusts the R/R-Y output video level. |

| CCU CONFIGURATION | | | |
|--|-----------------|---|---|
| Page name Page No. | Item | Settings | Description |
| <MENU SETTINGS> C15 | RESUME | <u>ON</u> , OFF | Turns ON/OFF the menu mode resume page display function. |
| | ALARM JUMP | ON, <u>OFF</u> | Turns ON/OFF the error-related page display function for when an error occurs while in menu mode. |
| | RE DIRECTION | | CONTROL knob operating mode settings |
| | CATEGORY | <u>STD</u> , RVS | STD : CONTROL knob clockwise rotation moves the CCU MENU pointer (➡) down. RVS : CONTROL knob counterclockwise rotation moves the CCU MENU pointer (➡) down. |
| | PAGE | <u>STD</u> , 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 | <u>STD</u> , RVS | STD : CONTROL knob clockwise rotation moves the pointer (➡) down to the next item on the page. RVS : CONTROL knob counterclockwise rotation moves the pointer (➡) down to the next item on the page. |
| | DATA | <u>STD</u> , RVS | STD : CONTROL knob clockwise rotation selects the next data option. RVS : CONTROL knob counterclockwise rotation selects the next data option. |
| <DISPLAY> C16 | MESSAGE | <u>ALL</u> , WARNING, OFF | ALL : Displays all messages. WARNING : Displays system warning messages and menu control messages. OFF : Displays only menu control messages. |
| Turn camera messages and switch settings ON/OFF for the camera's diagnostics screen. | MASTER GAIN | <u>ON</u> , OFF | Displays or hides the master gain indication. |
| | EVS/SHUTTER | <u>ON</u> , OFF | Displays or hides the ECS/shutter indication. |
| | ND FILTER | <u>ON</u> , OFF | Displays or hides the ND filter indication. |
| | CC FILTER | <u>ON</u> , OFF | Displays or hides the CC indication. |
| | IRIS | <u>ON</u> , OFF | Displays or hides the IRIS indication. |
| | EXTENDER | <u>ON</u> , OFF | Displays or hides the EXTENDER indication. |
| <DATE> C17 | DATE/TIME | 20YY/MM/DD hh:mm | Sets the date and time. |
| | TIME ZONE | hh:mm -11h59m to +11h59m | Sets the time zone. |
| <TALLY INPUT> C18 | R-TALLY | <u>CONTACT</u> , POWER (24V), POWER (TTL) | RED tally input setting |
| | G-TALLY | <u>CONTACT</u> , POWER (24V), POWER (TTL) | GREEN tally input setting |
| | Y-TALLY | <u>CONTACT</u> , POWER (24V), POWER (TTL) | YELLOW tally input setting |
| <ALARM SETTINGS> C19 | FORCE LEGACY | OFF, <u>ON</u> | Set to OFF to not display the FORCE LEGACY alarm. |
| | SUB REF NONE | OFF, <u>ON</u> | Set to OFF to not display the REF NONE alarm. |
| | SUB REF INVALID | OFF, <u>ON</u> | Set to OFF to not display the REF INVALID alarm. |
| <TRANSMIT> C20 | TRANSMIT | AUTO, HIGH BIT RATE, HD-SDI, (HD-SDI) | Sets the optical transmission rate between a camera and CCU. |
| | CABLE | <u>CAMERA CABLE</u> , COAX | Sets the transmission method between a camera and CCU. |
| | TRIAx ADAPTER | | |
| | TYPE | <u>DISABLE</u> , A-TRIAx, D-TRIAx | Sets the TRIAX adapter type. |
| | MODE | AUTO TRIAX, FIBER | Sets the transmission method of the TRIAX adapter. |

| CCU CONFIGURATION | | | | |
|--|------------------------------|--|---|--|
| Page name Page No. | Item | Settings | Description | |
| <SPIRIT LEVEL> C21 (Available only when a serial lens is attached to the HDC2580 HD Color Camera.) | INDICATOR | OFF , ON, --- | Turns the spirit level display on/off. | |
| | REVERSE | OFF , ON | OFF : Moves to the tilted direction. ON : Moves to the reverse direction of the tilted direction. | |
| | H POSITION | 0 to 99, 50 | Adjusts the horizontal position. | |
| | V POSITION | 0 to 99, 50 | Adjusts the vertical position. | |
| <BOARD SETUP> C22 | BOARD SELECT | DRX1 , DRX2, DRX3, RC | Selects the board to set. DRX1 to 3 : Only when an HKCU2007 board is installed. | |
| | EMBED AUDIO | ON , OFF | Sets superimposition of audio data to ON/OFF. | |
| | META DATA EMBED | OFF , ON | Sets superimposition of metadata to ON/OFF. | |
| | PAYLOAD ID | LATEST , 2002, 2010, 2011 | Sets the PAYLOAD ID of VIDEO. | |
| | INTER LOCK | OFF , ON | SDI output (3, 4) format linking function | |
| <OTHERS> C23 | ASSIGNABLE | NONE , BARS, CLEAN, CAM POWER, FORCE LEGACY, REF LOCAL HD, REF LOCAL SD | Sets the function for the assignable button. NONE : No assignment. BARS : Sets the color bar output to ON/OFF. CLEAN : Sets character superimposition for all output slots to ON/OFF. CAM POWER : Sets camera power to ON/OFF. FORCE LEGACY : Forces the communication mode to LEGACY mode. REF LOCAL HD : Sets GENLOCK to LOCAL HD. REF LOCAL SD : Sets GENLOCK to LOCAL SD. | |
| | CCU NO | 0 , 0 to 96, A to Z | Sets the CCU number. | |
| | SYNC OUT | SD SYNC , HD SYNC | Sets the SYNC OUT connector. | |
| | CAM MENU | OFF , ON | Displays the Camera menu. | |
| | | | | <p>Notes</p> <ul style="list-style-type: none"> If CAM MENU is set to ON, CCU CONFIGURATION menu operations cannot be performed because only Camera menu operations are available. The Camera menu is not displayed when SD signal is output. |
| | <hr/> | | | |
| | NETWORK SETTINGS menu | | | |

| NETWORK SETTINGS | | | |
|-----------------------|-----------------|-----------------------------------|---|
| Page name Page No. | Item | Settings | Description |
| <IP ADDR SET> N01 | HOST IP ADDRESS | 0.0.0.0 to 255.255.255.255 | Displays the IP address. |
| | SUB NET MASK | 0.0.0.0 to 255.255.255.254 | Displays the subnet mask. |
| | DEFAULT GATEWAY | 0.0.0.0 to 255.255.255.255 | Displays the default gateway. |
| | SET | | A "SET OK?" message is displayed. Press ENTER again to confirm the change. (Execute via ENTER.) |

NETWORK SETTINGS

| Page name Page No. | Item | Settings | Description |
|------------------------|-----------------------|-----------------------------------|---|
| <LAN SETTINGS> N02 | AUTO NEGOTIATION | <u>ON</u> , OFF | Selects whether to automatically set the connection speed and communication system according to the device connected. |
| | AUTO MDIX | <u>ON</u> , OFF | Sets the communication line. |
| | CONNECT CONFIGURATION | | |
| | CONNECT SPEED | 10M, <u>100M</u> | Selects the connection speed. 10M: 10BASE-TX 100M: 100BASE-TX Available only when OFF is selected in AUTO NEGOTIATION. |
| | DUPLEX MODE | HALF, <u>FULL</u> | Selects the communication system. HALF: Half-duplex communication. FULL: Full-duplex communication. Available only when OFF is selected in AUTO NEGOTIATION. |
| | MDI/MDIX SELECT | <u>MDI</u> , MDIX | Selects the communication line. |
| | LINK CONDITION | (DOWN), (UP) | Displays connection status. (Display only) (DOWN): Connection failure (UP): Connection successful |
| | SET | | A "SET OK?" message is displayed. Press ENTER again to confirm the change. (Execute via ENTER.) |
| <CNS SETTINGS> N03 | CNS MODE | <u>LEGACY</u> , BRIDGE, MCS | Sets the communication mode. |
| | MCS MODE | (CLIENT) | Displays that the CCU is a CLIENT. |
| | CCU NO | blank, 1 to 96 | Sets the CCU number. |
| | MASTER IP ADDRESS | <u>0.0.0.0</u> to 255.255.255.255 | Sets the master device's IP address for MCS mode. |
| <NETWORK RESET> N04 | ALL RESET | | A "NET SETTINGS RESET OK?" message is displayed. Press ENTER again to reset NETWORK SETTINGS menu items to factory default values. (Execute via ENTER.) |

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) for HDCU2080, -10 to +40°C (14 to 104°F) for HDCU2580) 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 this unit 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.

On condensation

If the unit is suddenly taken from a cold to a warm location, or if ambient temperature suddenly rises, moisture may form on the outer surface of the unit and/or inside of the unit. This is known as condensation. If condensation occurs, turn off the unit and wait until the condensation clears before operating the unit. Operating the unit while condensation is present may damage the unit.

The fan and battery are consumable parts that will need periodic replacement

The fan and battery are consumable parts that will need periodic replacement.

When operating at room temperature, a normal replacement cycle will be about 5 years.

However, this replacement cycle represents only a general guideline and does not imply that the life expectancy of these parts is guaranteed. For details on parts replacement, contact your dealer.

Life expectancy of the electrolytic capacitor

The life expectancy of the electrolytic capacitor is about 5 years under normal operating temperatures and normal usage (8 hours per day; 25 days per month). If usage exceeds the above normal usage frequency, the life expectancy may be reduced correspondingly.

Error Messages

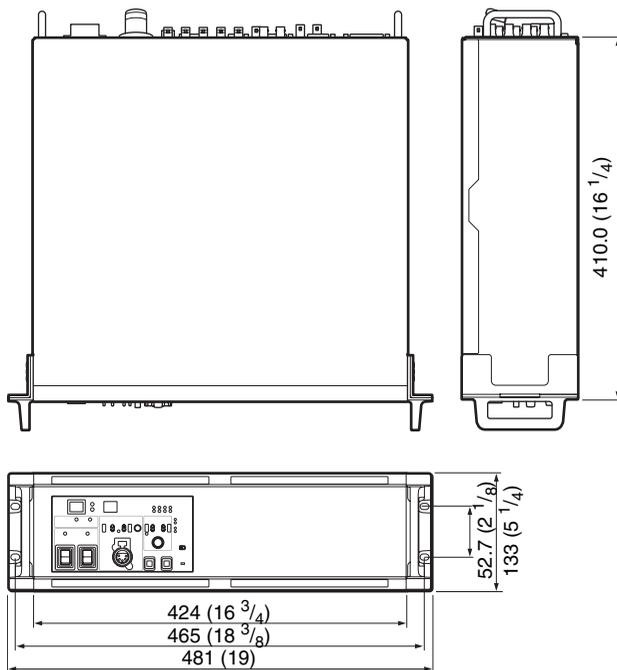
When an error is detected in this unit or the camera, the ALARM indicator turns on and an error message is displayed on this unit.

| Error message | Indication |
|--------------------------|---|
| CCU:GEN LOCK NG | External reference sync error |
| CCU:DRX NG | Front DRX 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 optical fiber cable short circuit error |
| CCU:PS CABLE OPEN | CAMERA connector optical fiber cable open circuit error |
| CCU:PS RCP PWR SUPPLY NG | Remote control panel (connected to REMOTE connector) power supply error |
| CCU:RX WARNING | Transmission error between camera and CCU |
| CCU: CAM INVALID FORMAT | An invalid format is selected. |
| CCU: CAMERA INVALID | An invalid camera is connected. |

Specifications

HDCU2080

| General | |
|--------------------------------|--|
| Power supply | 100/120/220-240 V AC, 50/60 Hz (To change to a different power supply, contact a Sony service or sales representative.) |
| Current consumption | 5.4 A (max.) |
| Operating temperature | 5°C to 40°C (41°F to 104°F) |
| Storage temperature | -20°C to +60°C (-4°F to +140°F) |
| Mass | Approx. 17.5 kg (38 lb 9 oz) |
| Dimensions (Unit: mm (inches)) | |



| Input/Output connectors | |
|-------------------------|--|
| CAMERA | Optical fiber connector (1) 240 V AC power supply |
| INTERCOM/TALLY/ PGM | D-sub 25-pin connector (1) <ul style="list-style-type: none"> INTERCOM (PROD/ENG), 4W/RTS/CC, 0 dBu PGM, 2 systems, 0 dBu/-20 dBu TALLY (R, G, Y) FLAG |
| RCP/CNU | 8-pin multi-connector (1) |
| AUX REMOTE | 8-pin multi-connector (1) |
| TRUNK A | 12-pin (1) |
| TRUNK LINE | D-sub 9-pin, female (1), RS-232C, for CHU transmission or system expansion |
| I/O PORT | D-sub 15-pin, female (1) (JAE-made DA-C1-J10 recommended) |

| LAN | 8-pin (1) |
|-------------------------------|--|
| Input connectors | |
| AC IN | (1), 100/120/220-240 V (To change to a different power supply, contact a Sony service or sales representative.) |
| SDI RET IN | BNC-type (4) HD-SDI: SMPTE ST292-1, 1.485 Gbps/1.4835 Gbps SD-SDI: SMPTE 259M, 270 Mbps |
| VBS RET IN | BNC-type (4), analog signal, 1.0 V p-p, 75 ohms |
| REFERENCE | BNC-type (2), loop-through output HD: SMPTE 274M, tri-level sync, 0.6 Vp-p, 75 ohms SD: Black burst (PAL: 0.3 Vp-p, 75 ohms) |
| PROMPTER 1, 2 | BNC-type (4), loop-through output, analog signal, 1.0 Vp-p, 75 ohms |
| MIC REMOTE | D-sub 15-pin (1) (JAE-made DA-C1-J10 recommended) |
| HD PROMPTER IN | BNC-type (1), SMPTE ST292-1, 75 ohms, 1.485 Gbps |
| Output connectors | |
| AUDIO OUT CH1, CH2 | XLR 3-pin, male (2), 0 dBu/-20 dBu/+4 dBu |
| AES/EBU | BNC-type (1), AES/EBU format |
| CHARACTER | BNC-type (1), VBS, 1 Vp-p, 75 ohms, character on/off switchable |
| WF REMOTE | D-sub 15-pin, female (1) (JAE-made DA-C1-J10 recommended) |
| HD/SD SDI OUTPUT | BNC-type (2) HD-SDI: SMPTE ST292-1, 0.8 Vp-p, 75 ohms, 1.485 Gbps SD-SDI: SMPTE 259M, 0.8 Vp-p, 75 ohms, 270 Mbps HD-SDI/SD-SDI selectable. |
| HD/SD SDI OUTPUT (MONI) | BNC-type (2) HD-SDI: SMPTE ST292-1, 0.8 Vp-p, 75 ohms, 1.485 Gbps SD-SDI: SMPTE 259M, 0.8 Vp-p, 75 ohms, 270 Mbps HD-SDI/SD-SDI and character ON/OFF selectable |
| SYNC | BNC-type (1) HD: BTA-S001, tri-level sync, 0.6 Vp-p, 75 ohms SD: composite sync, 0.3 Vp-p, 75 ohms HD SYNC/SD SYNC selectable |
| HD TRUNK OUT | BNC-type (1) SMPTE ST292-1, 0.8 Vp-p, 75 ohms, 1.485 Gbps |
| Supplied accessories | |
| Number plates (1 set) | |
| Fuses (1 set) | |
| Operation guide (1) | |
| Operation manual (CD-ROM) (1) | |

Optional accessories

| |
|---|
| AC power cord (1-830-860-XX) |
| Power cord plug holder (3-613-640-01) |
| HKCU2007 3G/HD SDI Output Expansion Unit |
| HKCU1001 SD Encoder Unit |
| HKCU1003 Multi Interface Unit |
| CCA-5-3 Connection Cable (3 meters/10 feet) |
| CCA-5-10 Connection Cable (10 meters/33 feet) |
| Expansion Board |
| Maintenance manual |

Related devices

| |
|---|
| HDC2580 HD Color Camera |
| RCP-1000 series Remote Control Panel |
| MSU-1000 series Master Setup Unit |
| CNU-700 Camera Command Network Unit |
| HZC-CSM10 Camera System Management Software |

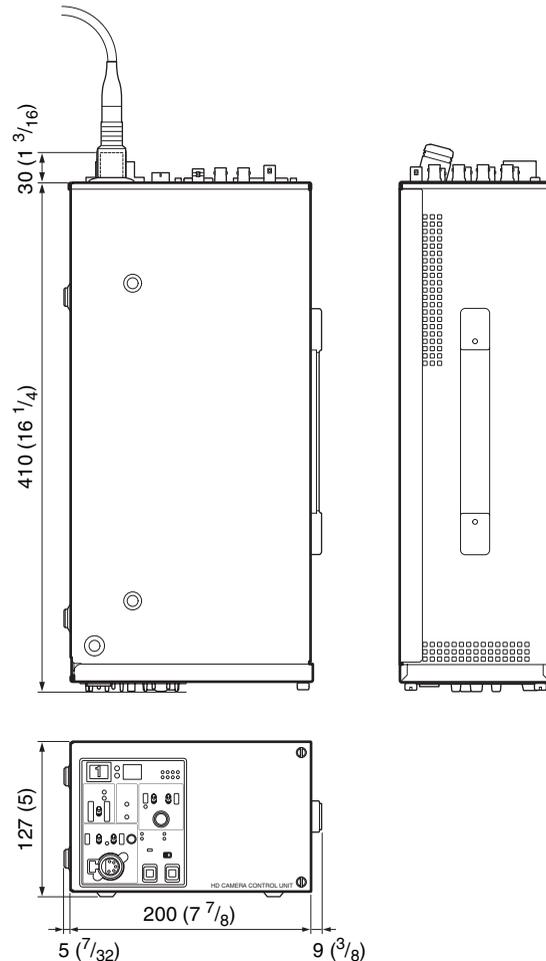
Design and specifications are subject to change without notice.

HDCU2580

General

| | |
|-----------------------|---------------------------------|
| Power supply | 100 to 240 V AC, 50/60 Hz |
| Current consumption | 4.1 A (max.) |
| Standby power | Approx. 5 W |
| Operating temperature | -10°C to +40°C (+14°F to 104°F) |
| Storage temperature | -20°C to +60°C (-4°F to 140°F) |
| Mass | Approx. 6.7 kg (14 lb 12 oz) |

Dimensions (Unit: mm (inches))



Input/Output connectors

| | |
|------------------------|---|
| CAMERA | Optical fiber connector (1) 180 V DC power supply |
| INTERCOM/TALLY/ PGM | D-sub 25-pin connector (1) <ul style="list-style-type: none">• INTERCOM (PROD/ENG), 4W/RTS/CC, 0 dBu• PGM, 2 systems, 0 dBu/-20 dBu• TALLY (R, G, Y)• FLAG |
| RCP/CNU | 8-pin multi-connector (1) |
| TRUNK A | 12-pin (1) |
| LAN | 8-pin (1) |

| Input connectors | |
|------------------|--|
| AC IN | (1), 100 to 240 V AC |
| RET 1, 2, 3 | BNC-type (3) HD-SDI: SMPTE ST292-1, 1.485 Gbps/1.4835 Gbps SD-SDI: SMPTE 259M, 270 Mbps VBS: 1.0 Vp-p, 75 ohms |
| REFERENCE | BNC-type (2), loop-through output HD: SMPTE 274M, tri-level sync, 0.6 Vp-p, 75 ohms SD: Black burst (PAL: 0.3 Vp-p, 75 ohms) |
| PROMPTER | BNC-type (2), loop-through output, analog signal, 1.0 Vp-p, 75 ohms |
| MIC REMOTE | D-sub 15-pin (1) (JAE-made DA-C1-J10 recommended) (switchable to WF REMOTE by an internal setting) |
| HD PROMPTER IN | BNC-type (1), SMPTE ST292-1, 75 ohms, 1.485 Gbps |

| Output connectors | |
|-------------------------|--|
| AUDIO OUT CH1, CH2 | XLR 3-pin, male (2), 0 dBu/−20 dBu/+4 dBu |
| HD/SD SDI OUTPUT | BNC-type (2) HD-SDI: SMPTE ST292-1, 0.8 Vp-p, 75 ohms, 1.485 Gbps SD-SDI: SMPTE 259M, 0.8 Vp-p, 75 ohms, 270 Mbps HD-SDI/SD-SDI selectable |
| HD/SD SDI OUTPUT (MONI) | BNC-type (2) HD-SDI: SMPTE ST292-1, 0.8 Vp-p, 75 ohms, 1.485 Gbps SD-SDI: SMPTE 259M, 0.8 Vp-p, 75 ohms, 270 Mbps HD-SDI/SD-SDI and character ON/OFF selectable |
| CHARACTER/SYNC | BNC-type (1) HD SYNC: HD, BTA-S001, tri-level sync, 0.6 Vp-p, 75 ohms SD SYNC: SD, composite sync, 0.3 Vp-p, 75 ohms CHARACTER: VBS, 1 Vp-p, 75 ohms, character ON/OFF selectable CHARACTER/HD SYNC/SD SYNC selectable |
| HD TRUNK OUT | BNC-type (1) SMPTE ST292-1, 0.8 Vp-p, 75 ohms, 1.485 Gbps |

| Supplied accessories | |
|--|--|
| Number plates (1 set) | |
| Operation guide (1) | |
| Operation manual (CD-ROM) (1) | |
| Optional accessories | |
| AC power cord (1-830-860-XX) | |
| Power cord plug holder (3-613-640-01) | |
| HKCU2007 3G/HD SDI Output Expansion Unit | |
| HKCU1001 SD Encoder Unit | |

| HKCU1003 Multi Interface Unit |
|---|
| CCA-5-3 Connection Cable (3 meters/10 feet) |
| CCA-5-10 Connection Cable (10 meters/33 feet) |
| RMM-301 Rack Mount Adaptor |
| Expansion Board |
| Maintenance manual |
| Related devices |
| HDC2580 HD Color Camera |
| RCP-1000 series Remote Control Panel |
| MSU-1000 series Master Setup Unit |
| CNU-700 Camera Command Network Unit |
| HZC-CSM10 Camera System Management Software |

Design and specifications are subject to change without notice.

HKCU2007 (optional)

| General | |
|-----------------------|---|
| Power supply | 5.5 W |
| Operating temperature | −10°C to +40°C (14°F to 104°F) |
| Storage temperature | −20°C to +60°C (−4°F to +140°F) |
| Dimensions (w/h/d) | DRX board: Approx. 19 × 110 × 226 mm (3/4 × 4 3/8 × 8 7/8 inches) HIF board: Approx. 19 × 98 × 159 mm (3/4 × 3 7/8 × 6 1/4 inches) |
| Mass | DRX board: Approx. 0.24 kg (8 oz) HIF board: Approx. 0.09 kg (3 oz) |
| Output connectors | |
| HIF board | |
| SDI OUT | BNC-type (4) 3G-SDI: SMPTE ST424/425-1, 0.8 Vp-p, 75 ohms, 2.970 Gbps/2.967 Gbps HD-SDI: SMPTE ST292-1, 0.8 Vp-p, 75 ohms, 1.485 Gbps 3G-SDI/HD-SDI selectable Character ON/OFF selectable (connectors 3/4) |

Note

The HDCU2080/2580 does not support 3G-SDI.

Design and specifications are subject to change without notice.

HKCU1001 (optional)

| General | |
|-----------------------|--|
| Power supply | 2.5 W |
| Operating temperature | -10°C to +40°C (14°F to 104°F) |
| Storage temperature | -20°C to +60°C (-4°F to +140°F) |
| Dimensions (w/h/d) | EN-A board: Approx. 19 × 110 × 226 mm (3/4 × 4 3/8 × 8 7/8 inches) VDA-A board: Approx. 19 × 98 × 159 mm (3/4 × 3 7/8 × 6 1/4 inches) |
| Mass | EN-A board: Approx. 0.22 kg (7.8 oz) VDA-A board: Approx. 0.10 kg (3.5 oz) |

| Output connectors | |
|-------------------|---|
| VDA-A board | |
| VBS | BNC-type (2), 1.0 Vp-p, 75 ohms, VBS |
| PIX OUT | BNC-type (1), VBS/R/G/B (VBS 1.0 Vp-p, 75 ohms) |
| WF OUT | BNC-type (1), VBS/R/G/B/SEQ (VBS 1.0 Vp-p, 75 ohms) |

| Supplied accessories | |
|----------------------|--|
| 4-pin connector (1) | |

Design and specifications are subject to change without notice.

HKCU1003 (optional)

| General | |
|-----------------------|--|
| Power supply | 3.6 W |
| Operating temperature | -10°C to +40°C (14°F to 104°F) |
| Storage temperature | -20°C to +60°C (-4°F to +140°F) |
| Dimensions (w/h/d) | EN-B board: Approx. 19 × 110 × 226 mm (3/4 × 4 3/8 × 8 7/8 inches) VDA-A/B/C board: Approx. 19 × 98 × 159 mm (3/4 × 3 7/8 × 6 1/4 inches) |
| Mass | EN-B board: Approx. 0.22 kg VDA-A/B/C board: Approx. 0.10 kg |

| Output connectors | |
|-------------------|---|
| VDA-A board | |
| VBS | BNC-type (2), 1.0 Vp-p, 75 ohms, VBS |
| PIX OUT | BNC-type (1), VBS/R/G/B (VBS 1.0 Vp-p, 75 ohms) |
| WF OUT | BNC-type (1), VBS/R/G/B/SEQ (VBS 1.0 Vp-p, 75 ohms) |

| VDA-B board | |
|---------------|---|
| FRAME REF IN | BNC-type (1) HD: SMPTE 274M, tri-level sync input, 0.6 Vp-p, 75 ohms SD: Black burst input, 0.286 Vp-p, 75 ohms |
| FRAME REF OUT | BNC-type (1) Loop-through output or frame sync pulse output, 0.3 Vp-p, 75 ohms, switchable |
| PIX OUT | BNC-type (1), VBS/R/G/B (VBS 1.0 Vp-p, 75 ohms) |

| | |
|--------|---|
| WF OUT | BNC-type (1), VBS/R/G/B/SEQ (VBS 1.0 Vp-p, 75 ohms) |
|--------|---|

| VDA-C board | |
|-------------------|---|
| VBS | BNC-type (1), 1.0 Vp-p, 75 ohms, VBS |
| R/R-Y, G/Y, B/B-Y | BNC-type (3) <ul style="list-style-type: none"> • RGB video R/G/B (100% white): 0.7 Vp-p, 75 ohms • Component video Y (100% white): 0.714 Vp-p R-Y/B-Y (75% color bar): 0.756 Vp-p, 75 ohms |

| Supplied accessories | |
|----------------------|--|
| 4-pin connector (1) | |

Design and specifications are subject to change without notice.

Notes

- 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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