SONY

5-013-052-**12** (1)

Color Camera

Operating Instructions

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

HDC5000

Table of Contents

Overview

The HDC5000 is a color camera equipped with a newly developed 2/3-inch 4K CMOS sensor with global shutter for F10 (4K/59.94P)/F11 (4K/50P) high sensitivity and high signal-to-noise ratio.
Operation as a studio camera is supported when connected with an HDCU5000/5500 Camera Control Unit (CCU) using an optical fiber cable.

Note

Before starting system operation, check that the software version and ROM version of the unit and system devices meet the version requirements.

Supported Formats

The unit supports 3840×2160/59.94P, 50P, 29.97P, 25P, 24P, 23.98P, 1920×1080/59.94P, 50P, and HDR formats as standard. You can extend the formats that are supported by installing the following camera operating software (option).

For details, contact a Sony service or sales representative.

	Camera Operating Software				
Extended formats	**HZC-DFR50**	**HZC-QFR50**	**HZC-HFR50**	**HZC-PSF50**	**HZC-UG50**
1920×1080/59.94P(2×)	○	○	○		
1920×1080/50P(2×)	○	○	○		
1920×1080/59.94P(3×), (4×)		○	○		
1920×1080/59.94P(6×), (8×)			○		
1920×1080/50P(3×), (4×)		○	○		
1920×1080/50P(6×), (8×)			○		
3840×2160/59.94P(2×)			○		
3840×2160/50P(2×)			○		
1920×1080/29PsF, 25PsF, 24PsF, 23.98PsF				○	
HD (RGB444)					○

○: Required camera operating software

- Limited subscription licenses are available for each software, with the period of validity of the license indicated by the last character of the name.
  If a character that does not denote a license period of validity is the last character, the license will not expire (indefinite).
  - M: Valid for 30 days
  - W: Valid for 7 days
  - P: Portable license, valid for 365 days

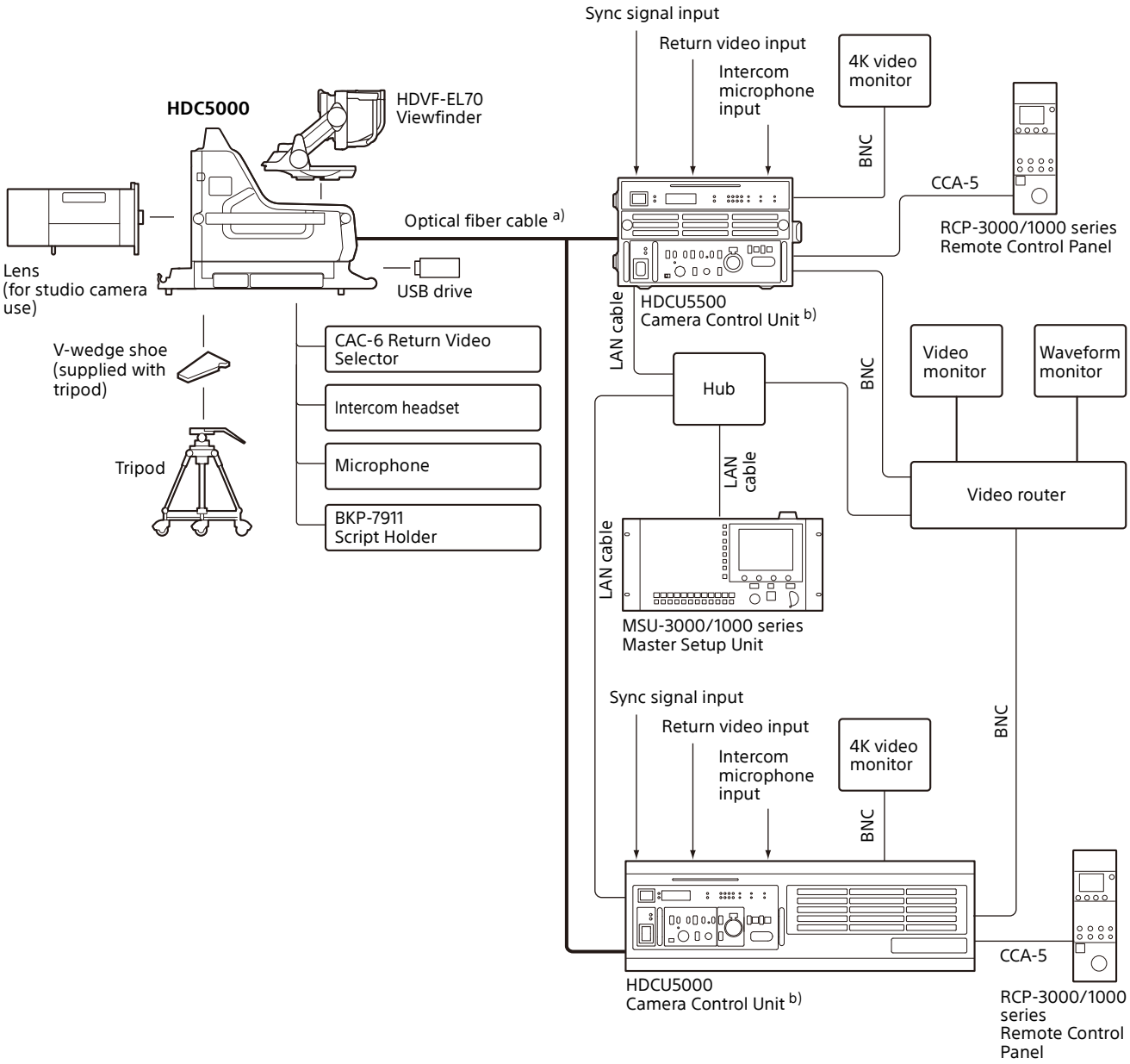
  * Portable licenses are available for HZC-HFR50 software.

System Configuration

Note

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

Connection example (optical fiber transmission)

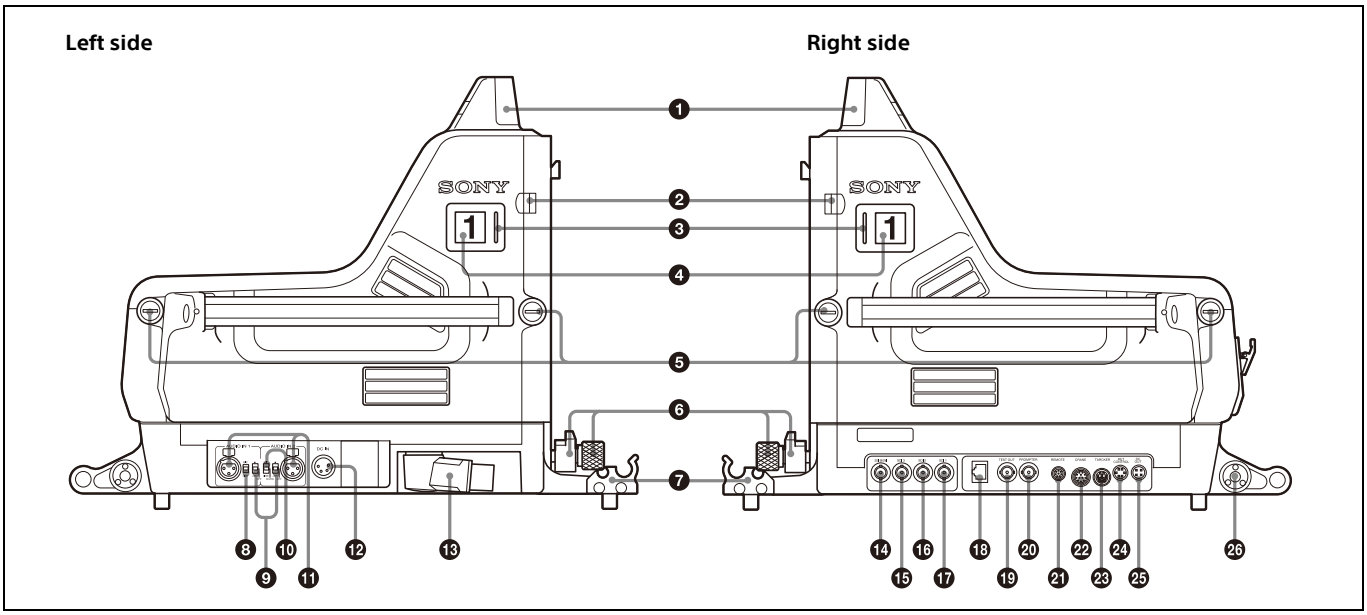


a) Signal transfer up to a maximum of 4 km is possible with the HDCU5000/5500. However, the actual transfer distance may vary depending on the system configuration of the cameras, the type of optical fiber cables used, the image format, and the options configured in the CCU.

b) Set the signal transmission rate for the camera to connect using the following menu item on the camera control unit.
SYSTEM CONFIG → <CAMERA I/F> → FIBER TRANSMIT RATE
For details, refer to the operation manual of the camera control unit.

Locations and Functions of Parts

Right Side and Left Side



❶ Up tally lamp
Lights when the camera receives a red tally signal. When the CALL button on the MSU-1000/1500 Master Setup Unit or the RCP-3000/1000 series Remote Control Panel is pressed, the lamp lights if previously off or goes off if previously on. The brightness of the lamp can be adjusted by menu operation. Setting the UP TALLY switch on the rear panel to OFF will keep the lamp from lighting.
To display the camera number, attach a supplied number plate (0 to 9) or select the desired number in the menu.

❷ Safety lock
Locks the side panel to prevent accidental opening. To open the side panel, loosen the side panel lock screws, slide the safety lock towards the lens, and open the panel. The side panel locks automatically when closed.

❸ Side tally lamp
Use as a tally. You can switch the function using the menu.

❹ Camera number
The unit uses electronic paper (e-ink) type camera numbers.
You can set the camera number using the menu.

Note

The operating temperature range of the camera number setting is 0 °C to 45 °C (32 °F to 113 °F). The setting may not be configurable if the temperature range is exceeded. Check the temperature when configuring.

❺ Side panel lock screws
These screws secure the side panel. Turn clockwise until tight to lock the panel.

❻ Lens lock and knob
These lock the lens. To attach or remove a lens, turn the knob counterclockwise until the lens lock is horizontal. To secure the lens, turn the knob clockwise until the lens lock is vertical.

Note

To attach a large lens, remove the pin from the bayonet mount of the lens.

❼ Cable clamp
To secure the fiber optic cable.

❽ AUDIO IN 1 switch
Set this switch according to the device connected to the AUDIO IN 1 connector.
MIC: When an external microphone is connected
LINE: When a line-level (0 dBu) signal source is connected

❾ Microphone power switches
For the microphones connected to the AUDIO IN 1 and 2 connectors, respectively.
OFF: When the connected microphone requires no external power.
+48 V: When the connected microphone requires an external power source. A power of +48 V is supplied to the microphone.
(No function has been assigned to the uppermost position. No power is supplied to the microphone.)

Note

When supplying a power of +12 V, contact a Sony service representative or a Sony representative.

❿ AUDIO IN 2 switch
Set this switch according to the device connected to the AUDIO IN 2 connector.
MIC: When an external microphone is connected
AES/EBU: When a digital audio signal is connected (The signal must be in synchronization with the camera output).

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

⓫ **AUDIO IN 1 and 2 connectors (XLR 3-pin)**
To input microphone or line signals.

⓬ **DC IN connector (4-pin)**
Connect to a DC power source (10.5 V to 17 V) when using the camera as a standalone unit.

Note

Power delivery to an external device, such as a viewfinder or lens, connected to the unit is limited to 3.5 A. Check the power consumption of the device to be connected.

⓭ **CCU (Camera Control Unit) connector (optical/electrical multi-connector)**
Connect to the CAMERA connector of the HDCU5000/5500 Camera Control Unit using an optical/electrical composite cable. Power, video, audio, and control signals are passed between the camera and HDCU5000/5500 using just one cable.

⓮ **SDI-MONI (serial digital interface) connector (BNC-type)**
For HD SDI or SD SDI signal output.

For details about signal settings, see "Setting the Camera Outputs" (page 18).

⓯ **SDI 3 (serial digital interface 3) connector (BNC-type)**
For HD PROMPTER signal output. Available only when connecting a camera control unit with an HD PROMPTER input connector.

⓰ **SDI 2 (serial digital interface 2) connector (BNC-type)**
For HD SDI signal, 3G Level A/B SDI signal, 6G SDI signal, and 12G SDI signal output. Also for HD TRUNK signal and UHD TRUNK signal input.
During standalone operation, can be used for inputting an HD SDI return signal.

For details about signal settings, see "Setting the Camera Outputs" (page 18).

⓱ **SDI 1 (serial digital interface 1) connector (BNC-type)**
For HD SDI signal, 3G Level A/B SDI signal, 6G SDI signal, 12G SDI signal, HD PROMPTER signal, and UHD PROMPTER signal output.

For details about signal settings, see "Setting the Camera Outputs" (page 18).

⓲ **NETWORK TRUNK connector (RJ-48 8-pin)**
Connects a device connected to the CCU's NETWORK TRUNK connector to the network.

⓳ **TEST OUT (test signal output) connector (BNC-type)**
To output the analog signal.
This also supplies the VBS signal, an HD signal nearly equal to the signal output from the VF connector, an HD-SYNC signal, or an SD-SYNC signal depending on which of these you have selected in the menu.

For details about signal settings, see "Setting the Camera Outputs" (page 18).

⓴ **PROMPTER connector (BNC-type)**
To output the signal input from the camera control unit's PROMPTER INPUT connector. If the connected camera control unit has two prompter inputs, the signal of prompter 1 is output. In standalone status, this is used for GENLOCK input.

㉑ **REMOTE connector (8-pin)**
To connect the camera to an optional MSU-1000/1500 Master Setup Unit, RCP-3000/1000 series Remote Control Panel, or RM-series Remote Control Unit via a CCA cable. The connected unit may then control the camera.

Note

When the camera is connected to a CCU, do not connect any device to this connector.

㉒ **CRANE connector (12-pin)**
For external interface, such as viewfinder and external data.

㉓ **TRACKER connector (12-pin)**
For communication between the camera operator and the tracker, and also for intercom channels 1 and 2. It also supplies the up tally signal and the program audio signal.

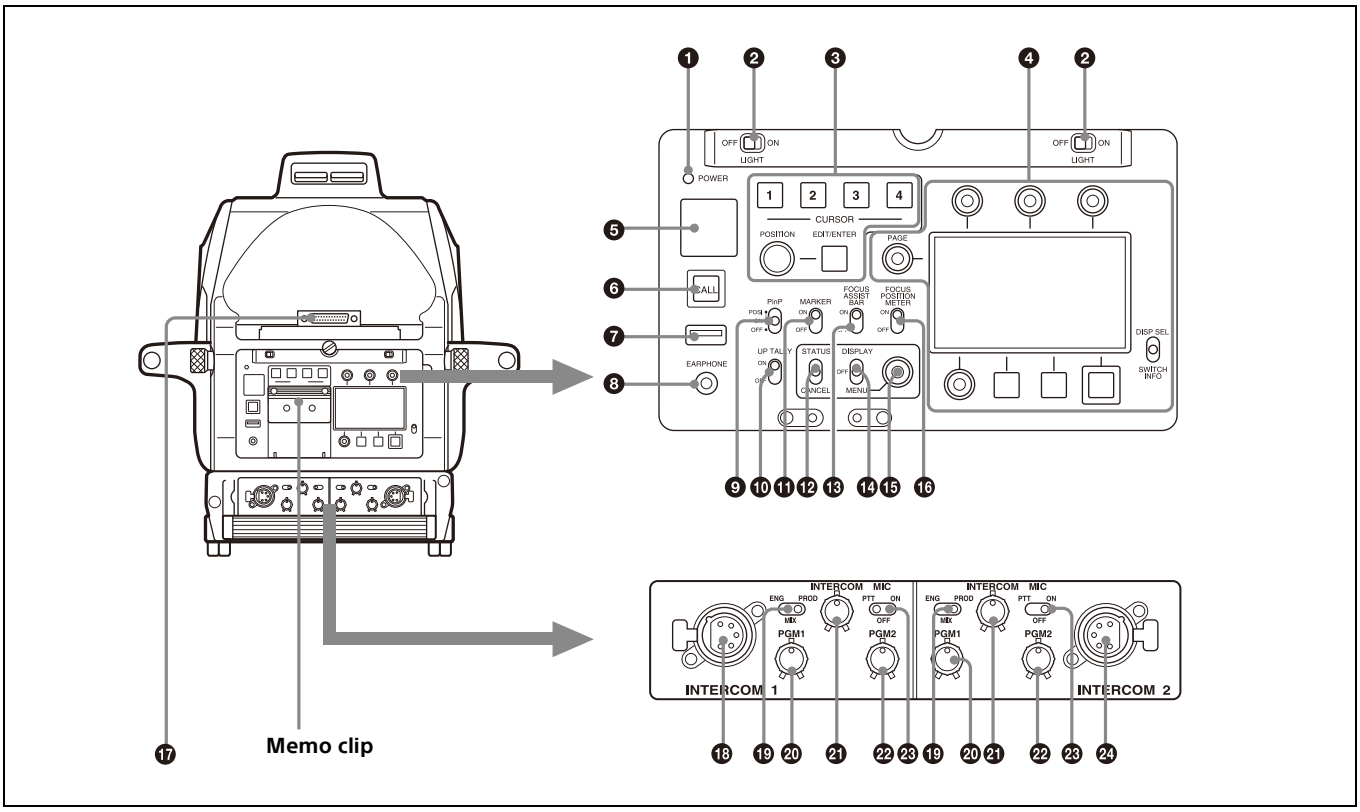
㉔ **RET (return video) CONTROL connector (6-pin)**
For connection to a CAC-6 Return Video Selector.

㉕ **DC OUT (DC power supply output) connector (4-pin)**
To supply power to the script light of the BKP-7911 Script Holder.

㉖ **Accessory bracket**
To secure optional accessories such as the BKP-7911 Script Holder.

For more information on attaching an accessory, see the accessory's operation manual.

Rear



❶ POWER indicator
This indicator lights up or goes off as follows to indicate the power supply status:

Green: Power is being supplied to the camera.

Red: Power is being supplied to the camera, but the CAM PW button of the MSU-1000/1500 Master Setup Unit or RCP-3000/1000 series Remote Control Panel is set to OFF.

Yellow: Power is being supplied to the camera, but the VF PW button of the MSU-1000/1500 Master Setup Unit is set to OFF, and power is not being supplied to the viewfinder.

Off: Power is not being supplied to the camera.

❷ LIGHT switch
When set to ON, a light illuminates the operation panel. There are two LIGHT switches on the left and right sides of the operation panel.

❸ Box cursor control block
Sets the box cursor display in the viewfinder.
For details about operation, see *"Setting Box Cursors" (page 15)*.

❹ ASSIGNABLE SWITCH control block
Use to configure and execute various functions while checking the screen display.
For details about operation, see *"Operations in the ASSIGNABLE SWITCH Control Block" (page 16)*.

❺ Rear tally lamp
This lamp lights red when a red tally signal is applied. The lamp lights green when a green tally signal is applied. You can display the camera number selected with the menu.

When red and green tally signals are applied simultaneously, the left half lights red and the right half lights green.

❻ CALL button
- When this button is pressed, the red tally lamp of the RCP-3000/1000 series Remote Control Panel or the MSU-1500/1000 series Master Setup Unit will light. Use to call the operator of the RCP or MSU.
- When the CALL button on the RCP-3000/1000 series Remote Control Panel or the MSU-1000/1500 is pressed, this button will light up.

❼ USB connector (for connecting a USB drive)
Connect a USB drive to save or load the settings data file.

For details, see "Using a USB Drive" (page 72).

❽ EARPHONE jack (4-pole mini jack)
Connect to a headset, or earphones with microphone (3-pole/4-pole earphones), to input/output the intercom audio signal.
For 4-pole earphones, the intercom line is linked to the INTERCOM1 setting.
Turn the microphone function on/off using HEADSET MIC *(page 39)* in the OPERATION menu. The default setting is OFF.

❾ PinP (picture-in-picture) switch
Turns the PinP function ON/OFF.

ON: PinP is displayed on the viewfinder screen.

OFF: PinP will not be displayed.

POSI: Changes the position of the PinP display.

⑩ UP TALLY switch
Set whether or not the camera's up tally lamp and the lens's tally lamp will light when the camera receives a red tally signal.

ON: The tally lamps will light.

OFF: The tally lamps will not light.

⑪ MARKER switch
To control the display of the marker as follows:

ON: Displays a marker selected from the menu on the viewfinder screen.

OFF: The marker will not be displayed.

⑫ STATUS/CANCEL switch

STATUS: When no menu is displayed on the viewfinder screen, the status information of this camera is displayed.

CANCEL: When a menu is displayed on the viewfinder screen, you can cancel any changed settings or return the display to the previous menu.

⑬ FOCUS ASSIST BAR switch
Turns the focus indicator ON/OFF.

ON: Displays the focus indicator on the viewfinder screen.

OFF: The focus indicator is not displayed.

⑭ DISPLAY switch
The functions of the DISPLAY switch are as follows:

ON: Text and messages describing the camera settings and operating status may be displayed on the viewfinder screen.

OFF: Status messages will not appear on the viewfinder screen.

MENU: Displays the setup menu on the viewfinder screen.

⑮ MENU SELECT knob
To select settings from menus displayed on the viewfinder screen (by rotating the knob) and to confirm settings (by pushing the button).

⑯ FOCUS POSITION METER switch
Turns the focus position meter ON/OFF.

ON: Displays the focus position meter on the viewfinder screen.

OFF: The focus position meter is not displayed.

⑰ VF (viewfinder) connector (D-sub 25-pin)
Connect to the CAMERA connector on the viewfinder.

⑱ INTERCOM 1 connector (XLR 5-pin)
Connects to an XLR 5-pin headset. Communication via the engineer line is also supported when the CAM PW button of the MSU-1000/1500 or RCP-3000/1000 series connected to the HDCU5000/5500 is OFF and the POWER indicator is lit in red.

⑲ ENG/PROD (intercom engineer/producer line select) switch
To switch intercom channel 1 or 2 between producer and engineer lines.

ENG: Use the engineer line.

PROD: Use the producer line.

MIX: Receive mixed PROD/ENG audio. Select the intercom talk line from the menu.

The default intercom line setting is ENG.

⑳ PGM1 (program audio 1) volume knob
Adjust the program audio 1 output level.

㉑ INTERCOM volume adjustment knob
Adjust the intercom output level.

㉒ PGM2 (program audio 2) volume knob
Adjust the program audio 2 output level.

㉓ MIC (intercom microphone) switch
Turns the headset microphone ON/OFF.

PTT: While the switch is flipped to this position, the headset microphone is turned on.

ON: The headset microphone is turned on.

OFF: The headset microphone is turned off.

㉔ INTERCOM 2 connector (XLR 5-pin)
Connects to an XLR 5-pin headset.

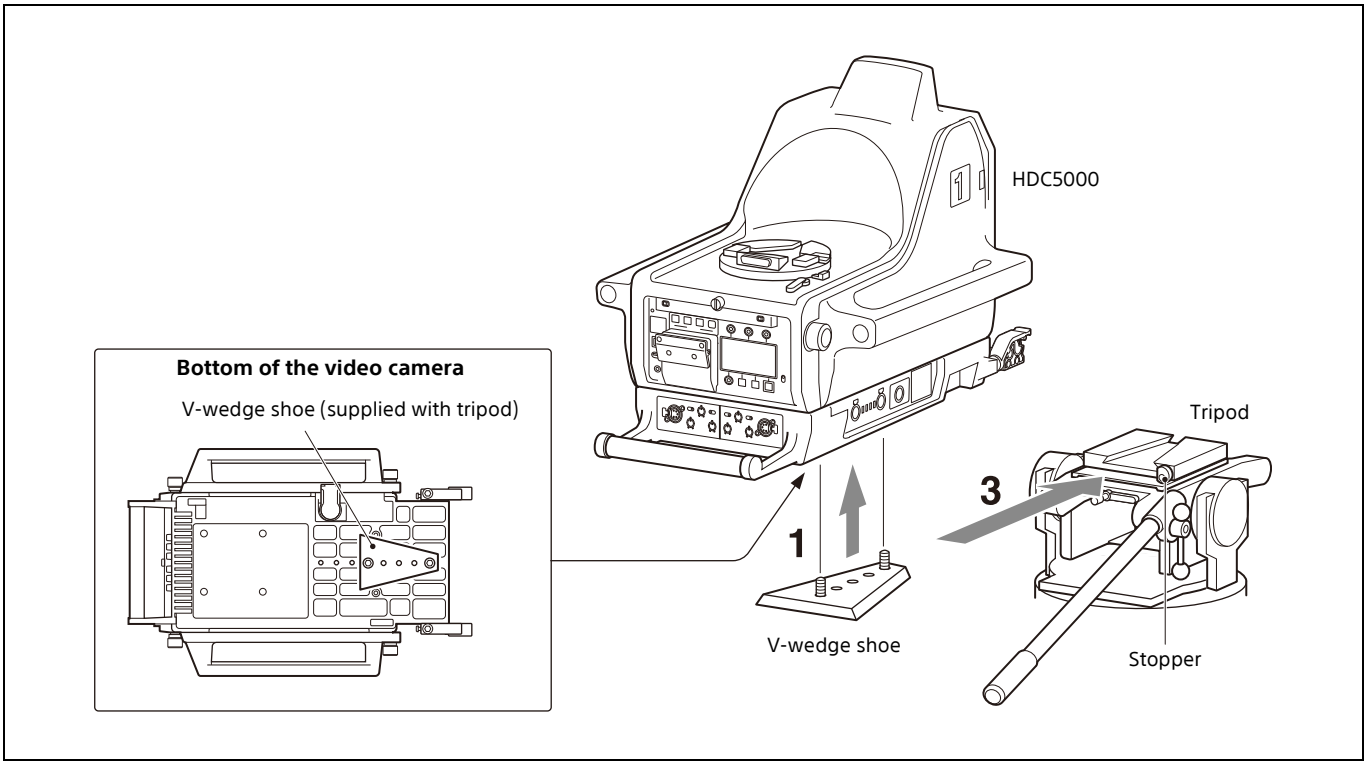
Attaching Accessories

Mounting the Camera to a Tripod

Several types of tripods are available. Select an appropriate tripod according to the type of lens to be used, and mount the camera to the tripod as described below. For details, refer to the instruction manual of the tripod.
For detailed information on choosing an appropriate tripod for different camera and lens combinations, contact a Sony service representative, a Sony representative or a tripod manufacturer. The instructions below give an example of just one type of attachment. Before attaching, choose a tripod cam plate appropriate for your lens type and lens weight.

Caution

Firmly attach the V-wedge shoe to the camera, and mount the camera to the tripod securely. Otherwise the camera may fall down.

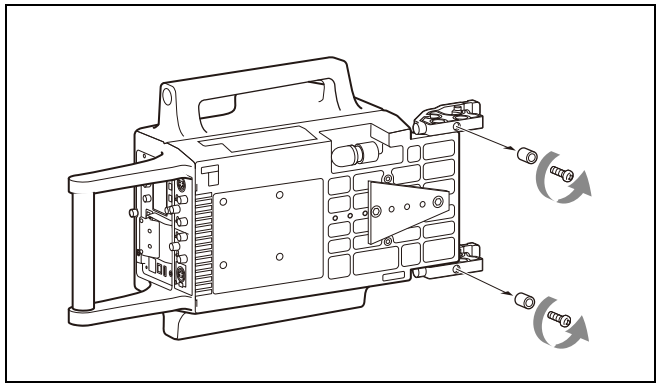


1 **Attach the V-wedge shoe (supplied with the tripod) to the bottom of the camera with the two screws.**
The position where the shoe should be attached is decided considering the balance of the weight of the camera and lens.

2 **Check that the pan-lock and tilt-lock levers of the tripod are securely locked.**

3 **Mount the camera to the tripod holding it by the handles on each side.**

4 **Lock the camera to the tripod with the stopper on the tripod.**



Note

If the feet on the bottom of the camera interfere with mounting the tripod, remove them as illustrated.

Attaching a Lens

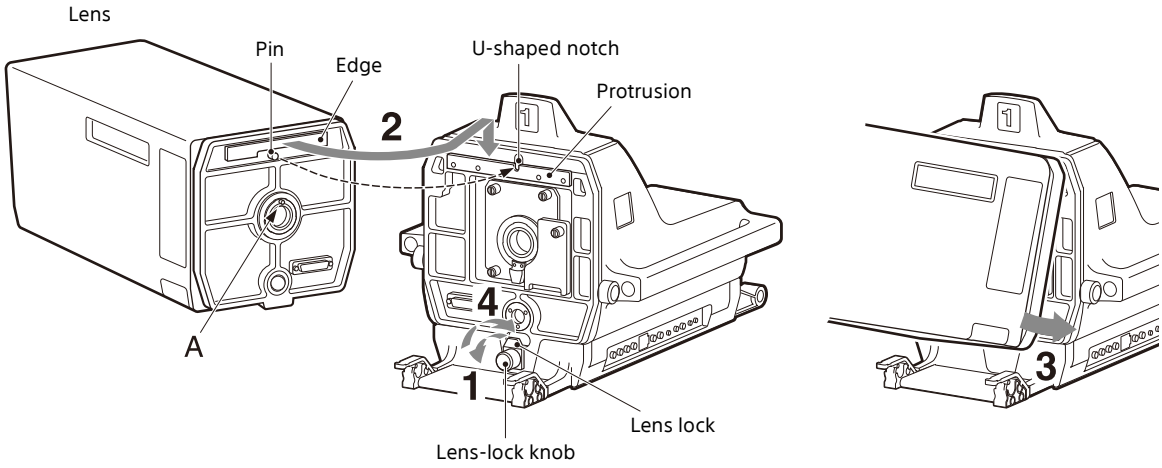
Attach a hanger-mount-type lens recommended by Sony. For details on the lens, refer to the instruction manual supplied with the lens.

To attach, proceed as follows:

Notes

Be sure to check the following three points before attaching the lens:

- That the pan-lock and tilt-lock levers on the tripod are fixed.
- When attaching a lens that is operated by a push rod for zooming and focusing, remove the push rod.
- That there is not a pin at part A on the lens shown in the figure below (if there is, remove it). If the pin cannot be removed, consult your Sony representative.



1 Loosen the lens-lock knob and turn the lens lock counterclockwise to the horizontal position.

2 Align the pin on the lens with the U-shaped notch, then hook the edge of the lens on the protrusion of the camera.

3 Couple the lens to the camera.

4 Turn the lens lock clockwise, then fasten the lens-lock knob.

Attaching the 7.4-inch Type Viewfinder

For details on attaching a viewfinder, refer to the operating instructions supplied with the viewfinder.

To attach, proceed as follows:

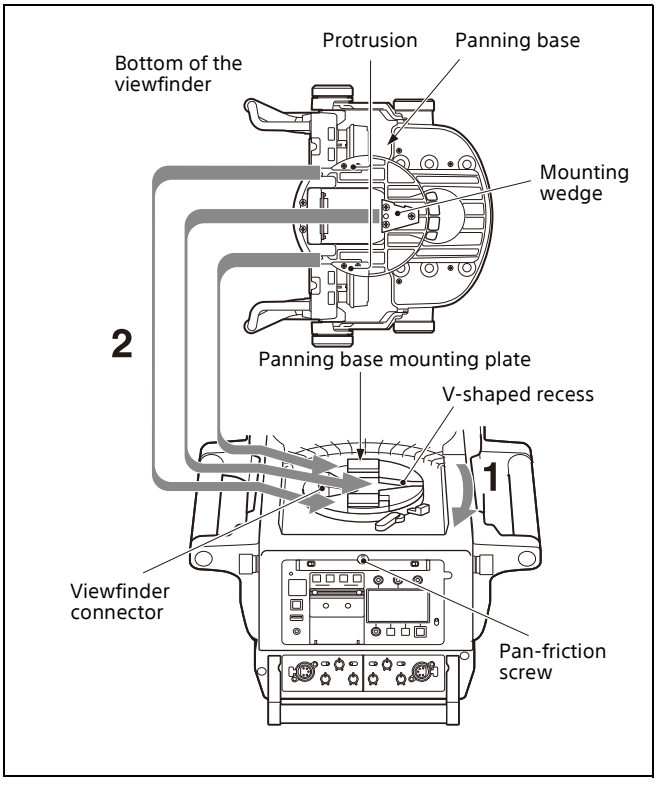
Notes

- Before attaching the viewfinder, be sure that the VF connector on the panning base mount plate of the HDC5000 is positioned at a right angle to the control panel of the camera as shown below.
- When attaching the viewfinder to the camera or removing it from the camera, be sure to lock the viewfinder in its standard position.
- When removing the viewfinder from the camera, be sure to secure the tripod with its tilt-lock mechanism and hold the viewfinder firmly. Be careful not to fall or drop the viewfinder and camera.

For how to change the position of the viewfinder attached to the camera, refer to the operating instructions of the viewfinder.

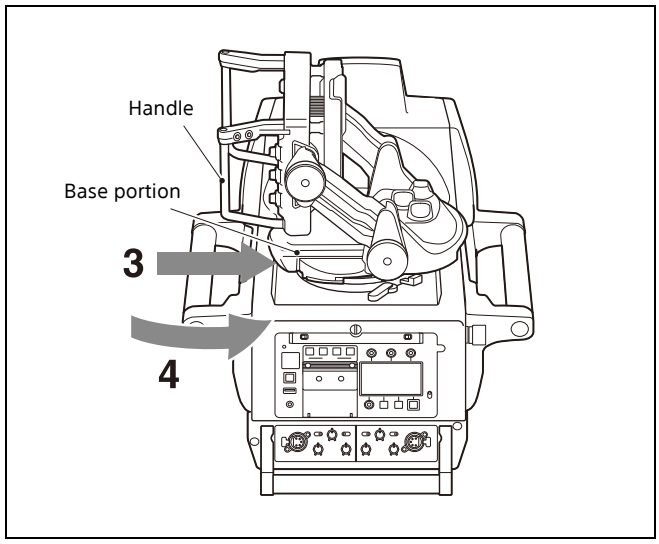
1 Turn the panning base mounting plate of the camera fully to the right, as illustrated in the figure below.

2 Hold the viewfinder so that the protrusion of the panning base located at the bottom is positioned as illustrated and insert the mounting wedge of the viewfinder into the V-shaped recess of the camera's panning base mounting plate.



3 Press the base portion and insert the viewfinder fully into the panning base mounting plate.
Pull the handle and check to ensure that the viewfinder is securely locked.

4 Turn the viewfinder to a random position.



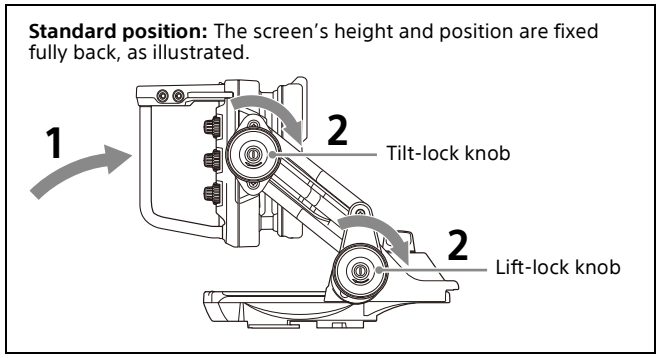
Note

Make sure that the viewfinder is securely locked. If the viewfinder is not properly attached to the camera, it may fall and cause injuries.

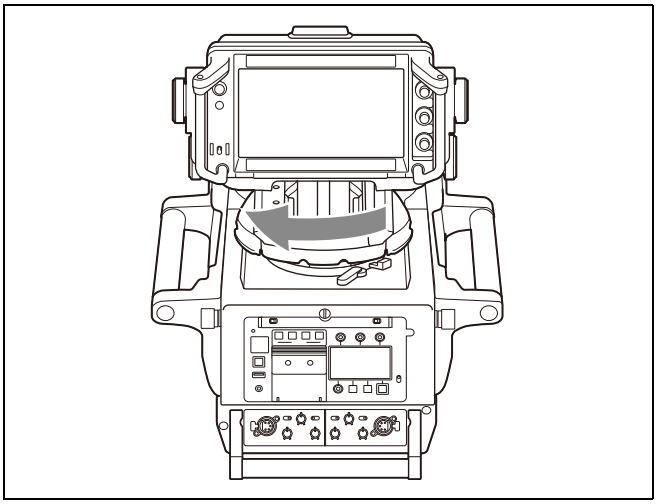
To remove the viewfinder

1 Return the viewfinder screen to the standard position.

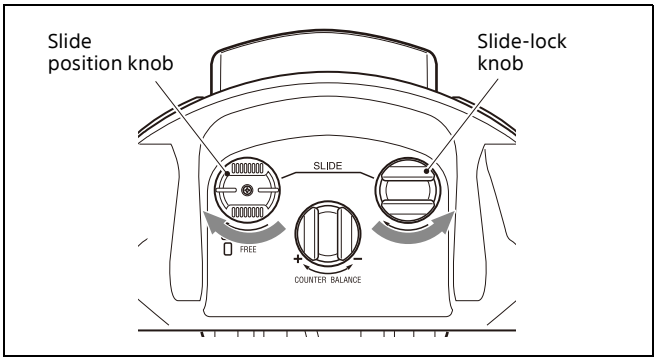
2 Fix the viewfinder screen in the standard position by turning the tilt-lock knob and lift-lock knob in the direction of the arrow indicated on each knob (toward the lock position).



3 **Turn the viewfinder fully clockwise.**

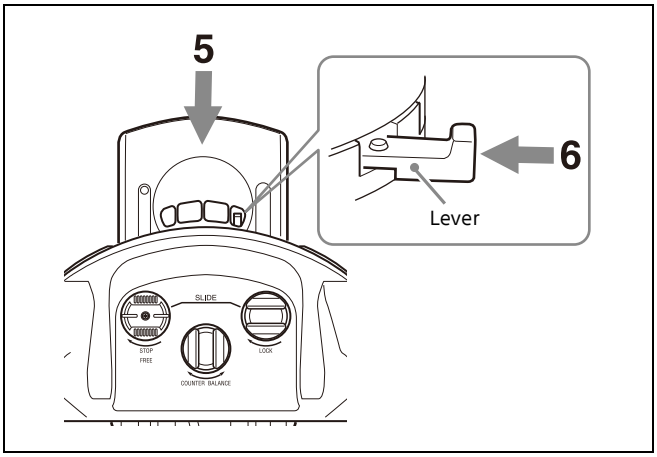


4 **Turn the slide position knob clockwise to ▯ FREE, and turn the slide-lock knob counterclockwise to release the lock of the slide position.**



5 **Slide the viewfinder so that the lever is seen through the slit in the panning base mounting plate (see illustration in step 6). Then turn the slide position knob counterclockwise to ▭ STOP to secure the slide position.**

6 **While pressing the lever, pull the handle of the viewfinder toward you then lift the viewfinder to remove it.**



Adjustments and Settings for Shooting

Setting the Focus Assist Functions

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

Adding the VF detail signal

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

1 **Turn on the camera.**

2 **Set the DISPLAY switch to MENU while holding the MENU SELECT knob pressed.**
The camera enters Menu mode, and “TOP” is displayed at the upper right corner of the screen.

3 **Turn the MENU SELECT knob to align the arrow marker (➡) to “TOP” and press the MENU SELECT knob.**
The TOP MENU screen appears.

```
<TOP MENU>

➡USER
 USER MENU CUSTOMIZE
 ALL
  OPERATION
  PAINT
  MAINTENANCE
  FILE
  DIAGNOSIS
```

4 **Turn the MENU SELECT knob to align the arrow marker (➡) to OPERATION and press the MENU SELECT knob.**
The CONTENTS page of the OPERATION menu is displayed.

```
   CONTENTS        00  TOP
↓↓
➡01.<VF DISPLAY>
 02.<'!'IND>
 03.<VF MARKER>
 04.<VF DETAIL>
 05.<DYNAMIC FOCUS>
 06.<FOCUS POSITION METER1>
 07.<FOCUS POSITION METER2>
 08.<FOCUS ASSIST>
 09.<ZEBRA>
 10.<CURSOR>
 11.<VF DYNAMIC CONTRAST>
 12.<BOX CURSOR FILE>
 13.<SPIRIT LEVEL>
 14.<VF OUT>
```

5 **Turn the MENU SELECT knob to align the arrow marker (➡) to <VF DETAIL> and press the MENU SELECT knob.**

The <VF DETAIL> page is displayed.

```
<VF DETAIL>          ➡ 04 TOP

VF DETAIL  :  ON     (25%)
 CRISP     :   0
 FREQUENCY:  9M
 FLICKER   :  OFF
 AREA      :  70%
 ZOOM LINK:  ON   100%
COLOR DETAIL :  ON  BLUE
 PEAK COLOR  :  ON
 CHROMA LEVEL: 100%
RETURN DISABLE: OFF
```

6 **Turn the MENU SELECT knob to align the arrow marker (➡) to the item to be set and press the MENU SELECT knob.**

To use the VF detail signal

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

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

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

FREQUENCY: Change the detection band of sharp edges.

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

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

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

To use the color detail

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

You can adjust the coloring with the menu items below.

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

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

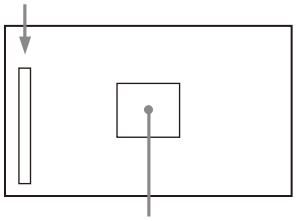
7 **Turn the MENU SELECT knob to display the desired setting and press the MENU SELECT knob.**

8 **To finish the adjustment, set the DISPLAY switch to OFF to exit Menu mode.**

Displaying the focus assist indicators

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

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



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

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

1 **Display the CONTENTS page of the OPERATION menu (referring to steps 1 to 4 in "Adding the VF detail signal").**

2 **Turn the MENU SELECT knob to align the arrow marker (➡) to <FOCUS ASSIST> and press the MENU SELECT knob.**

The <FOCUS ASSIST> page is displayed.

```
<FOCUS ASSIST>    ➡ 08 TOP

INDICATOR  : (OFF)
 MODE      : BOX   BTM
 LEVEL     : 3     QUICK
 GAIN      : 50
 OFFSET    : 50
AREA MARKER:  ON
 SIZE      : MIDDLE
 POSITION  : CENTER
 POSITION H: 50
 POSITION V: 50
```

3 **Turn the MENU SELECT knob to align the arrow marker (➡) to the item to be set and press the MENU SELECT knob.**

To use the level indicator

Setting the FOCUS ASSIST BAR switch to ON displays the level indicator on a viewfinder. You can set the display format with the menu items below.

MODE: Set the type and position of the indicator.

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

GAIN: Set the sensitivity of the indicator.[1)]

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

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

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

To use the area marker

Setting AREA MARKER to ON displays the detection area of the focus as a marker on a viewfinder screen. You can set the size and position of the detection area with the menu items below.

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

POSITION: Roughly set the position of the detection area.

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

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

4 Turn the MENU SELECT knob to display the desired setting and press the MENU SELECT knob.

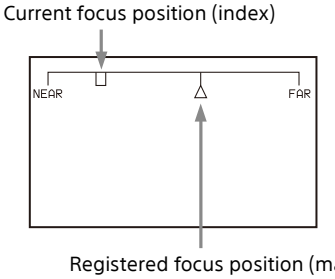
5 To finish the adjustment, set the DISPLAY switch to OFF to exit Menu mode.

Notes

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

Setting the Focus Position Meter Function

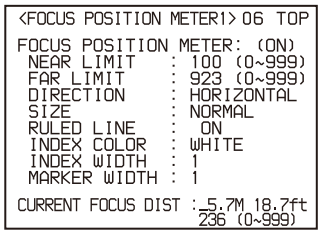
The focus position meter function allows you to graphically display the registered focus position (marker) and the current focus position (index) graphically on the viewfinder screen.



You can set the focus to the registered point easily by adjusting the focus until the index position overlaps the marker position (adjusted state). In the adjusted state, you can display a color frame and marker name on the viewfinder screen.

1 Display the CONTENTS page of the OPERATION menu (referring to steps 1 to 4 in "Adding the VF detail signal").

2 Turn the MENU SELECT knob to align the arrow marker (➡) to <FOCUS POSITION METER1> or <FOCUS POSITION METER2>, and press the MENU SELECT knob.
The <FOCUS POSITION METER1> page or <FOCUS POSITION METER2> page is displayed.



3 Turn the MENU SELECT knob to align the arrow marker (➡) to the item to be set and press the MENU SELECT knob.

To use the focus position meter
Setting the FOCUS POSITION METER switch to ON displays the focus position meter on the viewfinder screen.
You can set the display format with the <FOCUS POSITION METER1> page items below.

NEAR LIMIT: Sets the NEAR edge of the focus position meter.

FAR LIMIT: Sets the FAR edge of the focus position meter.

The focus position range to display varies depending on the NEAR LIMIT and FAR LIMIT settings. The full range is displayed by setting NEAR LIMIT to 0 and FAR LIMIT to 999.

DIRECTION: Selects whether to display the meter horizontally at the top of the screen or vertically on the right edge of the screen.

SIZE: Sets the size of the meter.

RULED LINE: Turns the display of guide lines on the meter on/off.

INDEX COLOR: Sets the color of the index.

INDEX WIDTH: Sets the width of the index.

MARKER WIDTH: Sets the width of the marker.

To set the adjustment sensitivity and display content
You can set the adjustment sensitivity and configure the display in the adjusted state using ADJUSTED SIGN on the <FOCUS POSITION METER2> page.

SENSE: Sets the adjustment sensitivity. Increasing the value increases the sensitivity (making determination of adjusted state more precise).

NAME DISP: Turns the display of the marker name in the adjusted state on/off (DISPLAY screen only).

FRAME DISP: Turns the display of a color frame (adjustment frame) on the screen in the adjusted state on/off.

FRAME WIDTH: Sets the width of the adjustment frame.

To configure the marker display settings
You can set the marker display using MARKER CONFIG on the <FOCUS POSITION METER2> page.

REG: Registers a marker at the index position.

DISP: Turns the marker display on/off.

COLOR: Sets the color of the marker. This also sets the color of the adjustment frame.

NAME: Sets the name of the marker.

POS: Adjusts the marker position manually.

4 Turn the MENU SELECT knob to display the desired setting and press the MENU SELECT knob.

5 To finish the adjustment, set the DISPLAY switch to OFF to exit Menu mode.

Marker registration

You can register markers for the focus position meter by assigning <FOCUS POSITION METER> to the RE1, RE2, and RE3 knobs of the ASSIGNABLE SWITCH control block. For details, see *"Operations in the ASSIGNABLE SWITCH Control Block" (page 16)*. Setting a switch to ON registers a marker at the current index position (same function as REG on the <FOCUS POSITION METER2> page). Setting a switch to OFF turns the marker display off (same as setting DISP on the <FOCUS POSITION METER2> page to OFF).

To register a marker for the focus position meter using the VF OUT switch

Set VF OUT SW to FOCUS POSITION METER on the <SWITCH ASSIGN> page in the OPERATION menu.

Setting the VF Dynamic Contrast Function

Emphasizing the contrast in the image on the viewfinder screen makes it easier to check the focusing condition for high brightness areas and for subjects with low contrast levels.
The function ON/OFF can also be operated via the switches on the back panel.

1 **Turn on the camera.**

2 **Set the DISPLAY switch to MENU while holding the MENU SELECT knob pressed.**
The camera enters Menu mode, and "TOP" is displayed at the upper right corner of the screen.

3 **Turn the MENU SELECT knob to align the arrow marker (➡) to "TOP" and press the MENU SELECT knob.**
The TOP MENU screen appears.

```
<TOP MENU>

➡USER
 USER MENU CUSTOMIZE
 ALL
 ·OPERATION
 ·PAINT
 ·MAINTENANCE
 ·FILE
 ·DIAGNOSIS
```

4 **Turn the MENU SELECT knob to align the arrow marker (➡) to OPERATION and press the MENU SELECT knob.**
The CONTENTS page of the OPERATION menu is displayed.

```
    CONTENTS        00  TOP
↓↓
 01.<VF DISPLAY>
 02.<'!'IND>
 03.<VF MARKER>
 04.<VF DETAIL>
 05.<DYNAMIC FOCUS>
 06.<FOCUS POSITION METER1>
 07.<FOCUS POSITION METER2>
➡08.<FOCUS ASSIST>
 09.<ZEBRA>
 10.<CURSOR>
 11.<BOX CURSOR FILE>
 12.<VF DYNAMIC CONTRAST>
 13.<SPIRIT LEVEL>
 14.<VF OUT>
```

5 **Turn the MENU SELECT knob to align the arrow marker (➡) to <VF DYNAMIC CONTRAST> and press the MENU SELECT knob.**
The <VF DYNAMIC CONTRAST> page is displayed.

```
<VF DYNAMIC CONTRAST>  12 TOP

 DYNAMIC CONTRAST: OFF
  GAIN    :  30%
  FILTER  : NARROW
  MODE    : HIGHLIGHT
```

6 **Turn the MENU SELECT knob to align the arrow marker (➡) to the item to be set and press the MENU SELECT knob.**

To use the VF dynamic contrast signal
Set DYNAMIC CONTRAST to ON to add the contrast signal in the image. You can adjust the GAIN in the range of 0 to 100%.
You can adjust the characteristics of the contrast signal with the menu items below.

FILTER: Adjust the selection range of the contrast extraction target pixel.

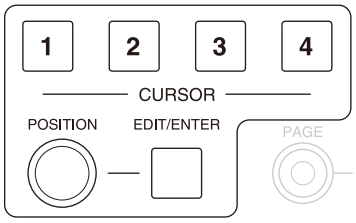
MODE: Selection of contrast signal addition mode. LINEAR adjusts the contrast of the entire image. HIGHLIGHT emphasizes the contrast of the high brightness range. FOGGY emphasizes the contrast of the image which is hazy and in low contrast.

7 **Turn the MENU SELECT knob to display the desired setting and press the MENU SELECT switch.**

8 **To finish the adjustment, set the DISPLAY switch to OFF to exit Menu mode.**

Setting Box Cursors

You can register a box cursor that is displayed on the viewfinder screen using the box cursor control block. Up to four box cursors can be registered.

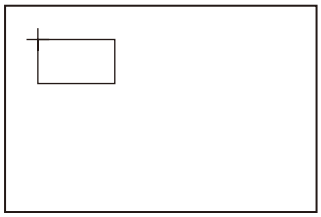


Setting a box cursor

1 **Press the EDIT/ENTER button when the EDIT/ENTER button is not lit.**
The EDIT/ENTER button lights up.

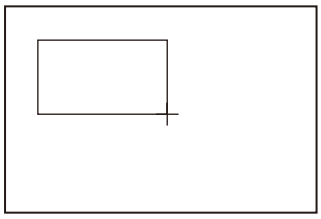
2 **Press one of the CURSOR buttons (1 to 4) in which to register a cursor.**
All the CURSOR buttons start flashing, and a cross-hair icon appears at the top left of the box cursor to register.

3 **Move the cross-hair icon using the POSITION knob to set the top left point of the box cursor.**

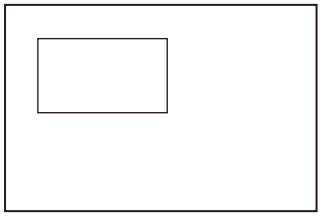


4 **Press the EDIT/ENTER button.**
The position of the box cursor is set, and a cross-hair mark appears at the diagonal position.

5 **Move the cross-hair mark positioned diagonally using the POSITION knob to set the size of the box cursor.**



6 **Press the EDIT/ENTER button.**
The box cursor is set.



The CURSOR button light goes out.

Displaying a registered box cursor

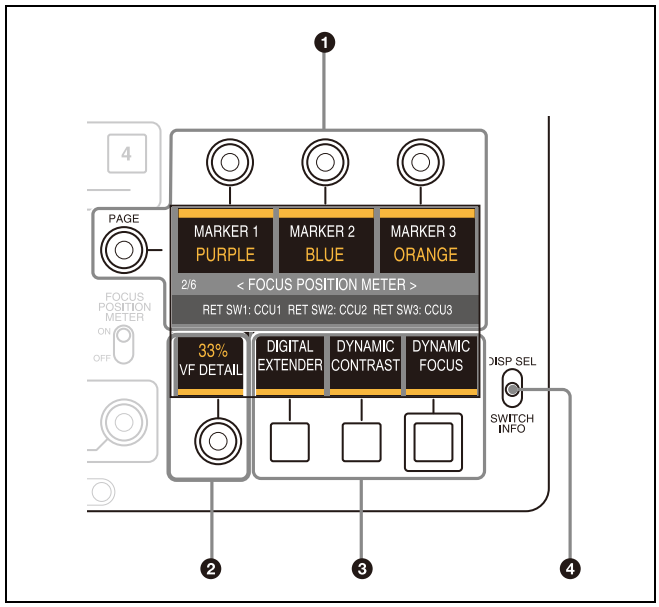
Press a CURSOR button to display the registered box cursor.
You can display multiple box cursors at the same time.
To remove a displayed box cursor, press the corresponding CURSOR button again.

Operations in the ASSIGNABLE SWITCH Control Block

You can check and set various functions, and execute functions assigned to SW1, SW2, and SW3 using the ASSIGNABLE SWITCH control block.
You can also switch between the following display screens.

- Switch Information screen: Displays the settings of the various functions (refer to the following diagram).
- RETURN screen: Displays the RETURN picture.
- HD PROMPTER screen: Displays the HD PROMPTER picture.
- DISPLAY OFF screen (display off state)

The ASSIGNABLE SWITCH control block has the following layout.



❶ RE1, RE2, RE3 control block
Displays the RE1, RE2, RE3 knobs (from left to right) and the screen for displaying the functions assigned to each knob.
You can switch the functions assigned to the knobs by turning the PAGE knob.
The functions assigned to the RE1, RE2, and RE3 knobs switch in the following order as you turn the PAGE knob.

1/6 <RETURN>
↓
2/6 <FOCUS POSITION METER>
↓
3/6 <TALLY BRIGHTNESS>
↓
4/6 <REAR PANEL BRIGHTNESS>
↓
5/6 <FILTER LOCAL>
↓
6/6 <SWITCH ASSIGN>

If a setting can be changed, the value itself is displayed orange. Values that are not displayed orange cannot be changed.

You can turn the function assigned to each knob on/off by pressing the RE1, RE2, and RE3 knobs.
For functions that can be turned on/off, an orange bar appears on the screen.

You can check and set the settings for functions by turning the RE1, RE2, and RE3 knobs.
For details about the functions that can be assigned, see *"Functions configurable using RE1, RE2, and RE3" (page 17)*.

❷ RE4 control block
The VF DETAIL function is pre-assigned (fixed). Turn the RE4 knob to change the VF DETAIL LEVEL setting.
You can also switch the VF DETAIL function on/off by pressing the RE4 knob.

❸ SW1, SW2, SW3 control block

Displays the SW1, SW2, SW3 buttons (from left to right) and the screen for displaying the settings of each button.
The functions assigned to SW1, SW2, and SW3 are displayed on the screen.
Press a button to execute the assigned function. The button lights up during execution. Press the button again, turning the button light off, to stop the function.
You can change the assignments using SWITCH ASSIGN in the OPERATION menu or the SWITCH ASSIGN function as described in *"Functions configurable using RE1, RE2, and RE3" (page 17)*.

❹ DISP SEL/SWITCH INFO switch

You can switch screens using the DISP SEL/SWITCH INFO switch as follows.

Switch operation	Displayed screen	Screen after switching
Set to SW INFO position	Switch Information screen	RETURN screen, HD PROMPTER screen, or DISPLAY OFF (display off state) screen, whichever was last displayed
	RETURN screen, HD PROMPTER screen, or DISPLAY OFF (display off state) screen	Switch Information screen
Set to DISP SEL position	Switch Information screen	RETURN screen, HD PROMPTER screen, or DISPLAY OFF (display off state) screen, whichever was last displayed
	RETURN screen	HD PROMPTER screen
	HD PROMPTER screen	DISPLAY OFF (display off state) screen
	DISPLAY OFF (display off state) screen	RETURN screen
Set and hold in DISP SEL position	All screens	Viewfinder screen*1

*1) Use the viewfinder screen displayed by this operation for monitoring the image.
The viewfinder screen display can be canceled by setting the switch to the DISP SEL position or SW INFO position.

Functions configurable using RE1, RE2, and RE3

1/6 <RETURN>

	RE1	RE2	RE3
Function	RET 1 SW	RET 2 SW	RET 3 SW
Action when knob is pressed	RET1 SW >ON/OFF	RET2 SW >ON/OFF	RET3 SW >ON/OFF
Action when knob is turned	Change RET1 SEL	Change RET2 SEL	Change RET3 SEL

2/6 <FOCUS POSITION METER>

	RE1	RE2	RE3
Function	MARKER 1	MARKER 2	MARKER 3
Action when knob is pressed	FOCUS POSITION METER MKR 1 >ON/OFF	FOCUS POSITION METER MKR 2 >ON/OFF	FOCUS POSITION METER MKR 3 >ON/OFF
Action when knob is turned	Change FOCUS POSITION METER MKR 1 >COLOR	Change FOCUS POSITION METER MKR 2 >COLOR	Change FOCUS POSITION METER MKR 3 >COLOR

3/6 <TALLY BRIGHTNESS>

	RE1	RE2	RE3
Function	UP TALLY	UP TALLY NO	SIDE TALLY
Action when knob is pressed	–	–	–
Action when knob is turned	Change UP TALLY >TALLY BRIGHTNESS	Change UP TALLY >NUMBER BRIGHTNESS	Change SIDE TALLY >BRIGHTNESS

4/6 <REAR PANEL BRIGHTNESS>

	RE1	RE2	RE3
Function	LIGHT	DISPLAY	REAR TALLY
Action when knob is pressed	–	–	–
Action when knob is turned	Change REAR PANEL >LIGHT	Change REAR PANEL >DISPLAY	Change REAR PANEL >REAR TALLY

5/6 <FILTER LOCAL>

	RE1	RE2	RE3
Function	ND FILTER	CC FILTER	FILTER LOCAL
Action when knob is pressed	–	–	FILTER LOCAL SW >ON/OFF
Action when knob is turned	Change ND FILTER when FILTER LOCAL is ON	Change CC FILTER when FILTER LOCAL is ON	–

6/6 <SWITCH ASSIGN>

	RE1	RE2	RE3
Function	–	–	–
Action when knob is pressed	–	–	–
Action when knob is turned	Change SWITCH ASSIGN >ASSIGNABLE 1 (function assigned to SW1)	Change SWITCH ASSIGN >ASSIGNABLE 2 (function assigned to SW2)	Change SWITCH ASSIGN >ASSIGNABLE 3 (function assigned to SW3)

Setting the Camera Outputs

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

Note

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

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

- <OUTPUT FORMAT>
- <TEST OUT>
- <SDI OUT>

Set the following menu items to the settings shown in the table.

For details about menu operations and the USER menu, see "Menu Operations" (page 20).

Outputting the signal being shot (camera picture)

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

To output as HD SDI

Menu page	Item	Setting
<SDI OUT>	SDI-MONI OUT	MAIN

To output as SD SDI

Menu page	Item	Setting
<SDI OUT>	SDI-MONI OUT	SD-SDI
	DOWN CONVERTER SELECT	MAIN

To output as VBS

Menu page	Item	Setting
<TEST OUT>	OUTPUT	VBS
	DOWN CONVERTER SELECT	MAIN

Constantly outputting a return video

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

To output as HD SDI

Menu page	Item	Setting
<SDI OUT>	SDI-MONI OUT	RET

To output as SD SDI

Menu page	Item	Setting
<SDI OUT>	SDI-MONI OUT	SD-SDI
	DOWN CONVERTER SELECT	RET

To output as VBS

Menu page	Item	Setting
<TEST OUT>	OUTPUT	VBS
	DOWN CONVERTER SELECT	RET

Outputting the same image as a viewfinder

- With HD SDI, you can obtain a signal that includes the same information as that being displayed on the viewfinder screen according to the settings of the VF MARKER, CHARACTER, VF DETAIL, ZEBRA, etc. The ON/OFF or other settings for adding information are common to those for the viewfinder. The output is synchronized with switching among Y, R, G, and B or switching to a return signal.
- With SD SDI or VBS, the output is synchronized only with switching between a return signal and the camera image. It does not correspond to switching among Y, R, G, and B. Information other than CHARACTER (such as VF MARKER, VF DETAIL, ZEBRA) cannot be added to the output.

Note

With the settings for outputting the same image as a viewfinder, the output is 1080i, even if the format setting is 720P.

To output as HD SDI

Menu page	Item	Setting
<SDI OUT>	SDI-MONI OUT	VF

To output as SD SDI

Menu page	Item	Setting
<SDI OUT>	SDI-MONI OUT	SD-SDI
	DOWN CONVERTER SELECT	VF

To output as VBS

Menu page	Item	Setting
<TEST OUT>	OUTPUT	VBS
	DOWN CONVERTER SELECT	VF

Outputting in 1.5G/3G/6G/12G SDI

The SDI 1 output and SDI 2 output form 1.5G/3G/6G/12G SDI output.

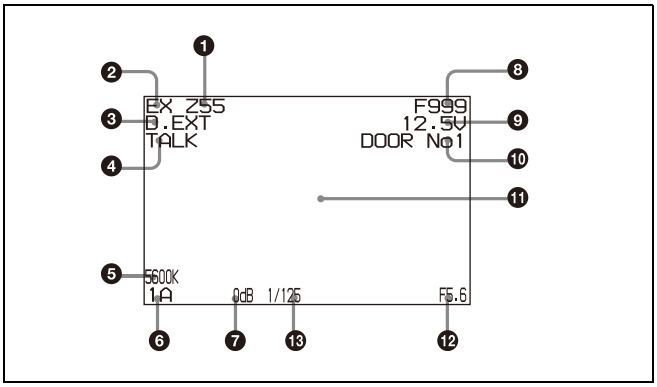
For details, see "SDI-1 and SDI-2 output formats (system with frequency setting of 1/1.001 (525))" (page 56) and "SDI-1 and SDI-2 output formats (system with frequency setting of 1/1.000 (625))" (page 61).

Viewfinder Screen Status Display

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

When the DISPLAY switch is set to ON

Items set to ON using the menu or related switches will be displayed on the upper and lower edges of the screen.



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

❷ Lens extender
"EX" is displayed when a lens extender is in use.

❸ Digital extender
"D.EXT" is displayed when a digital extender is in use.

❹ TALK indicator
Displayed when the intercom microphone is set to ON.

❺ 5600K mode
Displayed when 5600K is set to ON.

❻ Filter
Displays the type of filter currently selected. The number (1, 2, 3, 4, or 5) indicates the ND filter, and the letter (A, B, C, or D) is for the CC filter selection.

❼ Gain value
Displays the video gain value (dB) set with the GAIN switch.

❽ Focus position
Shows the focus position of a zoom lens as a numeric value (0 to 999 (infinity)).

Note

This is only displayed when a lens supporting serial data communication is attached.

❾ Battery voltage
Displays the input voltage.

❿ Focus position meter marker name
Displays the marker name of the focus position meter.

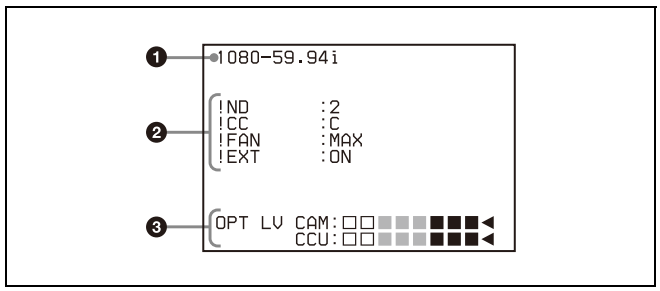
⓫ Setting change / adjustment process message area
This area is only used when the MESSAGE item of the menu is set to other than OFF.

⓬ F value
Indicates the lens F (iris opening) value.

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

When the STATUS/CANCEL switch is set to STATUS

When the STATUS/CANCEL switch is set to STATUS with the DISPLAY switch set to ON, the status display changes to show the following items.



❶ Format indicator
The current video format is displayed.

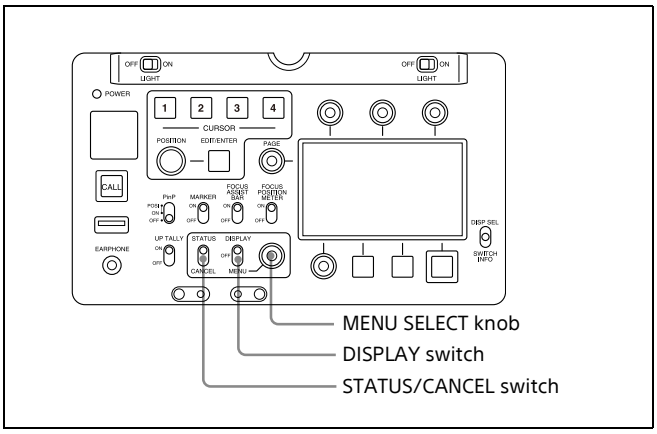
❷ '!' display area
This area is used to display non-standard status, using the <'!' IND> function. Display options can be set, using the menu.

For details, see <'!' IND> (page 31) in the OPERATION menu.

❸ Light sensor level indicators
This area shows the light sensor levels in segments.
CAM: Light sensor level at the CCU connector *(page 6)* of the camera
CCU: Light sensor level at the CAMERA connector of the CCU

Menu Operations

The menus displayed on the viewfinder screen enable various settings of the camera.
The following controls are used to operate the menus.



Starting Menu Operations

To display a menu page

Set the DISPLAY switch from OFF to MENU.
The menu page that was last operated will be displayed. (If it is the first time, the CONTENTS page of the OPERATION menu will be displayed.)

To display the TOP MENU screen

If you set the DISPLAY switch from OFF to MENU while holding the MENU SELECT knob pressed, "TOP" is displayed at the upper right corner of the screen. Selecting it displays the TOP MENU screen, which lists the available menus, and you can select the menus on this screen.

TOP MENU screen

```
<TOP MENU>

➡USER
 USER MENU CUSTOMIZE
 ALL
  OPERATION
  PAINT
  MAINTENANCE
  FILE
  DIAGNOSIS
```

To disable the "TOP" indication

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

Available menus

USER menu

This menu can include menu pages selected from among the OPERATION, PAINT, MAINTENANCE, FILE, and DIAGNOSIS menus, for convenience. Changing, adding, and deleting pages can be performed with the USER MENU CUSTOMIZE menu.

USER MENU CUSTOMIZE menu

This menu allows you to edit the USER menu.

For details, see "Editing the USER Menu" (page 22).

ALL menu

This menu permits you to control all items of the OPERATION menu, PAINT menu, MAINTENANCE menu, FILE menu, and DIAGNOSIS menu as a single menu.

OPERATION menu

This menu contains items for camera operators to operate the camera. It mainly permits viewfinder, intercom, and switch settings.

PAINT menu

This menu contains items for making detailed image adjustments while using a waveform monitor to monitor the waveforms output from the camera. Support of a video engineer is usually required to use this menu.
Although you can also use an external remote control panel or master setup unit to set the items on this menu, the menu is effective when using the camera by itself outdoors.

MAINTENANCE menu

This menu contains items for performing camera maintenance operations, such as changing the system or setting infrequently used "paint" items.

FILE menu

This menu is for performing file operations, such as writing or clearing the reference file.

DIAGNOSIS menu

This menu enables you to confirm the self-diagnostic information.

To select a menu on the TOP MENU screen

1 **Turn the MENU SELECT knob to align the arrow marker (➡) with the desired menu.**

2 **Press the MENU SELECT knob.**
The CONTENTS page or the last operated page of the selected menu is displayed.

Selecting Pages

When selecting a page from a CONTENTS page

Example: CONTENTS page of the OPERATION menu

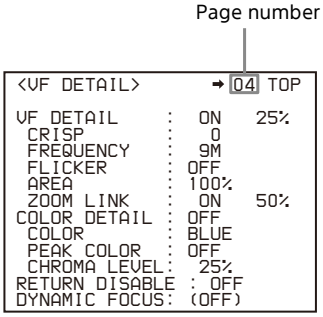
If the screen can be scrolled, arrows will indicate the direction of scrolling.

➡ marker

```
   CONTENTS        00  TOP
 01.<VF DISPLAY>
 02.<'!'IND>
 03.<VF MARKER>
➡04.<VF DETAIL>
 05.<DYNAMIC FOCUS>
 06.<FOCUS POSITION METER1
 07.<FOCUS POSITION METER2
 08.<FOCUS ASSIST>
 09.<ZEBRA>
 10.<CURSOR>
 11.<BOX CURSOR FILE>
 12.<VF DYNAMIC CONTRAST>
 13.<SPIRIT LEVEL>
 14.<VF OUT>
```

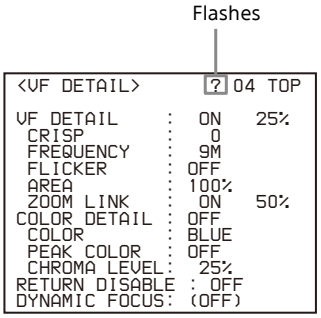
Turn the MENU SELECT knob to align the arrow marker (➡) to the page to be set and press the MENU SELECT knob.

The selected page is displayed.



To change the displayed page

1 Check that the arrow marker (➡) is located at the left of the page number, then press the MENU SELECT knob.
The arrow marker (➡) changes to a flashing "?" mark.

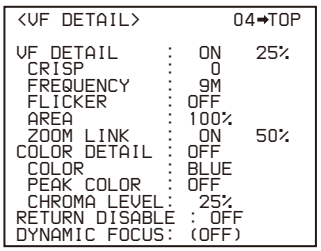


2 Turn the MENU SELECT knob to flip through the pages.

3 When the desired page is displayed, press the MENU SELECT knob.
The "?" mark changes back to the arrow marker (➡), and operations with the displayed page are enabled.

To return to the TOP MENU screen

Align the arrow marker (➡) with "TOP" at the top right of the menu page then press the MENU SELECT knob.



The TOP MENU screen appears.

Setting Menu Items

If a "?" mark is flashing at the left of the page number, press the MENU SELECT knob to change it to the arrow marker (➡). Setting on the displayed page is enabled.

1 Turn the MENU SELECT knob to align the arrow marker (➡) with the desired item.

2 Press the MENU SELECT knob.
The arrow marker (➡) will change to a flashing "?" mark.

3 Turn the MENU SELECT knob to change the setting value.
When the knob is rotated quickly, the values will change quickly; when rotated slowly, the values will change slowly.

To reset a changed value

If you press the STATUS/CANCEL switch toward CANCEL before pressing the MENU SELECT knob, the setting will be returned to its previous value.

To interrupt settings

Set the DISPLAY switch to OFF to turn off the menu screen display.
The setting operation can be restarted by setting the DISPLAY switch back to MENU.

4 Press the MENU SELECT knob.
The "?" mark changes back to the arrow marker (➡), and the new setting will be registered.

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

To specify a character string

When you press the MENU SELECT knob with the arrow marker (➡) pointing to an item for which a character string, such as a file ID, is to be specified, a cursor and the list of selectable characters are displayed.
The displayed cursor can be moved by turning the MENU SELECT knob.

1 Set the cursor to the position where you wish to enter a character, then press the MENU SELECT knob.
Another cursor appears on the character list.

2 Set the cursor to the character to be entered and press the MENU SELECT knob.
Repeat steps **1** and **2**.

By selecting INS on the line below the character list, you can enter a space at the cursor position.
Selecting DEL deletes the character at the cursor position.
You can return to step **1** without changing the character by selecting RET.

If you enter the permitted maximum number of characters (up to the stop mark at the right end of the line), the cursor moves to ESC on the line below the character list.

To register the new string you have set, select END and press the MENU SELECT knob.

To restore the previous string, select ESC and press the MENU SELECT knob.

To return a menu item to its standard value

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

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

To end menu operations

Set the DISPLAY switch to OFF.

Editing the USER Menu

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

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

Menu page	USER menu No.	Source menu / page No.	
<VF OUT>	U01	OPERATION	14
<VF DETAIL>	U02	OPERATION	04
<FOCUS ASSIST>	U03	OPERATION	08
<VF DISPLAY>	U04	OPERATION	01
<‘!’ IND>	U05	OPERATION	02
<VF MARKER>	U06	OPERATION	03
<CURSOR>	U07	OPERATION	10
<ZEBRA>	U08	OPERATION	09
<SWITCH ASSIGN>	U09	OPERATION	15
<HEADSET MIC>	U10	OPERATION	18
<OUTPUT FORMAT>	U11	MAINTENANCE	M11
<TEST OUT>	U12	MAINTENANCE	M12
<SDI OUT>	U13	MAINTENANCE	M13
<ROM VERSION>	U14	DIAGNOSIS	D03

For the items on each page, see the corresponding source menu page in the table in “Menu List” (page 25).

The USER MENU CUSTOMIZE menu allows you to configure a USER menu that consists only of pages and items that you need, by your adding, deleting or replacing pages.

Editing by items

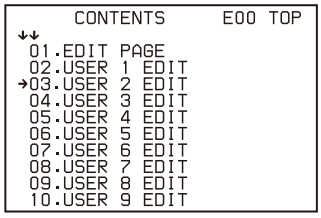
The USER MENU CUSTOMIZE menu allows you to add a new page to the USER menu and add desired items to the page. While the EDIT page contains factory-preset items, the USER 1 EDIT to USER 19 EDIT pages are all blank in their initial state. You can register up to 10 items, including blank lines, on each of these pages.

To add items to a page

Proceed as follows.

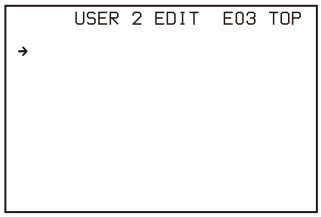
1 **Set the DISPLAY switch from OFF to MENU while holding the MENU SELECT knob pressed.**
The TOP MENU screen appears.

2 **Turn the MENU SELECT knob to move the arrow marker (➞) to USER MENU CUSTOMIZE, and press the MENU SELECT knob.**
If this is the first time the USER MENU CUSTOMIZE menu has been displayed, the CONTENTS page of the menu appears.

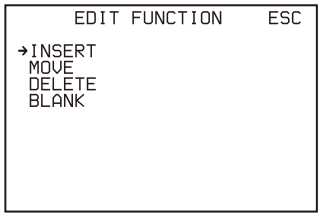


If the USER MENU CUSTOMIZE menu has been used before, the page last accessed appears.

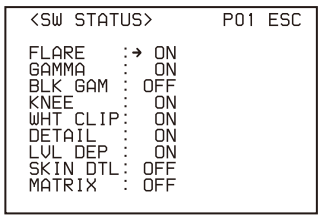
3 **If the CONTENTS page is displayed, turn the MENU SELECT knob to move the arrow marker (➞) to any of USER 1 EDIT to USER 19 EDIT, and press the MENU SELECT knob to display the page.**
If a different page is displayed, turn the MENU SELECT knob until the desired page appears, then press the MENU SELECT knob to select the page.
Example: When you select the USER 2 EDIT page



4 **Move the arrow marker (➞) to the item to be added (this operation is unnecessary if no item exists on the page, as shown in the figure in the previous step), and press the MENU SELECT knob.**
The EDIT FUNCTION screen appears.



5 **Move the arrow marker (➞) to INSERT, and press the MENU SELECT knob.**
The page with the last item added appears.



6 **Add the items.**

① Turn the MENU SELECT knob until the page that has the desired items appears, and press the MENU SELECT knob.

② Turn the MENU SELECT knob to align the arrow marker (➡) to the desired item, and press the MENU SELECT knob.

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

7 **Add the remaining items by repeating steps 4 to 6.**
You can add up to 10 items on one page.

To delete items from a page

Proceed as follows.

1 **Move the arrow marker (➡) to the item to be deleted, and press the MENU SELECT knob.**
The EDIT FUNCTION screen appears.

2 **Select DELETE, and press the MENU SELECT knob.**
The previously displayed page appears again, and the message "DELETE OK? YES➡NO" appears at the upper right.

3 **To delete, turn the MENU SELECT knob to move the arrow marker (➡) to YES, and press the MENU SELECT knob.**

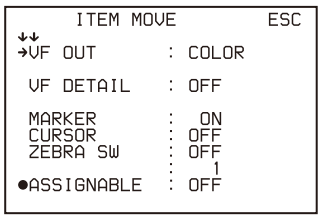
To change the order of items on a page

Proceed as follows.

1 **Move the arrow marker (➡) to the item to be moved, and press the MENU SELECT knob.**
The EDIT FUNCTION screen appears.

2 **Select MOVE, and press the MENU SELECT knob.**
The previously displayed page appears again.

3 **Turn the MENU SELECT knob to move the arrow marker (➡) to the position where you want to move the item, and press the MENU SELECT knob.**



The item selected in step **1** moves to the position above the item that you selected in step **3**.
In the above example, "ASSIGNABLE" is moved to the top and the other items are moved down one line.

To insert a blank line

Proceed as follows.

1 **Turn the MENU SELECT knob to move the arrow marker (➡) to the item above which you wish to insert a blank line.**
The EDIT FUNCTION screen appears.

2 **Select BLANK, and press the MENU SELECT knob.**
The previously displayed page appears again, and a blank line is inserted above the specified item.

Note

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

Editing by pages

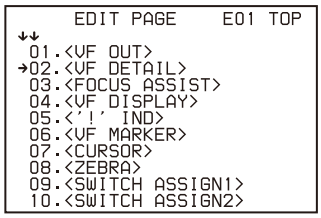
You can add a page to the USER menu, delete a page from the USER menu, or replace pages, using EDIT PAGE of the USER MENU CUSTOMIZE menu.

To add a page

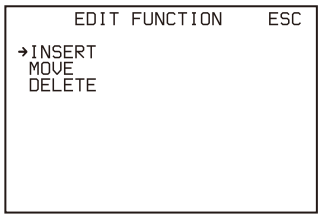
Proceed as follows.

1 **Select USER MENU CUSTOMIZE on the TOP MENU screen.**
If this is the first time the USER MENU CUSTOMIZE menu has been displayed, the CONTENTS page of the menu appears.
If the USER MENU CUSTOMIZE menu has been used before, the page last accessed appears.

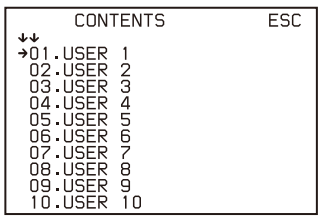
2 **If the CONTENTS page is displayed, turn the MENU SELECT knob to move the arrow marker (➡) to EDIT PAGE, and press the MENU SELECT knob to display the EDIT PAGE screen.**
If a different page is displayed, turn the MENU SELECT knob until the EDIT PAGE screen appears, and press the MENU SELECT knob to select the page.



3 **Turn the MENU SELECT knob to move the arrow marker (➡) to where you wish to add the page, and press the MENU SELECT knob.**
The EDIT FUNCTION screen appears.



4 **Select INSERT, and press the MENU SELECT knob.**
The selection screen appears.



5 **Turn the MENU SELECT knob to move the arrow marker (➡) to the desired page, and press the MENU SELECT knob.**
This adds the new item above the item selected in step **3**.

To cancel addition of a page

Before pushing the MENU SELECT knob in step **5**, turn the MENU SELECT knob to move the arrow marker (➡) to ESC at the top right of the screen, and press the MENU SELECT knob.

The EDIT PAGE screen appears again.

To delete a page

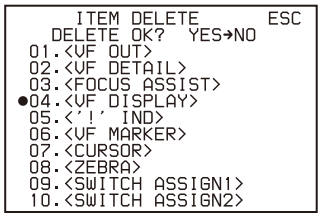
Proceed as follows.

1 **On the EDIT PAGE screen of the USER MENU CUSTOMIZE menu, move the arrow marker (➡) to the page to be deleted, and press the MENU SELECT knob.**

The EDIT FUNCTION screen appears.

2 **Select DELETE, and press the MENU SELECT knob.**

The previously displayed screen appears again, and the message "DELETE OK? YES➡NO" appears at the upper right.



3 **To delete, turn the MENU SELECT knob to move the arrow marker (➡) to YES, and press the MENU SELECT knob.**

To move a page

Proceed as follows.

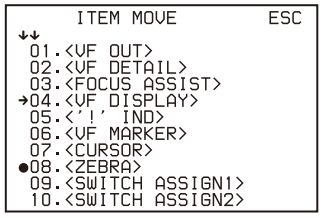
1 **Display the EDIT PAGE screen of the USER MENU CUSTOMIZE menu, turn the MENU SELECT knob to move the arrow marker (➡) to the page that you wish to move, and press the MENU SELECT knob.**

The EDIT FUNCTION screen appears.

2 **Select MOVE, and press the MENU SELECT knob.**

The EDIT PAGE screen appears again.

3 **Turn MENU SELECT knob to move the arrow marker (➡) to the position to which you wish to move the page.**



4 **Press the MENU SELECT knob.**

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

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

Menu List

This section shows the menus to be displayed on the viewfinder screen in tables.

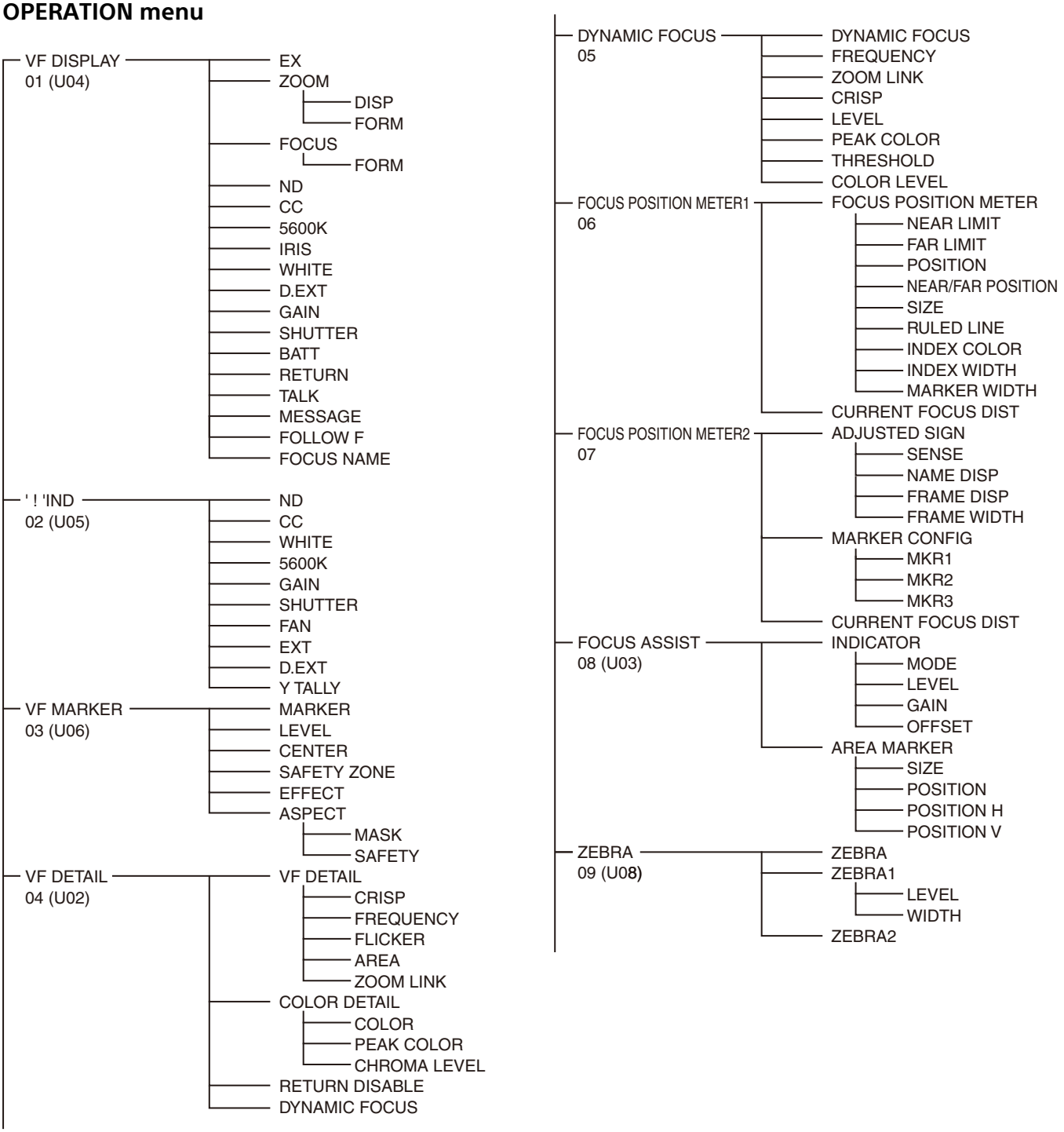
- For the pages that have been registered in the USER menu at the factory, the USER menu page numbers are indicated in parenthesis in the No. column of the tables.
- A CONTENTS page (numbered 00) is also provided for each menu.
- Some menu items are displayed by installing optional camera operating software.

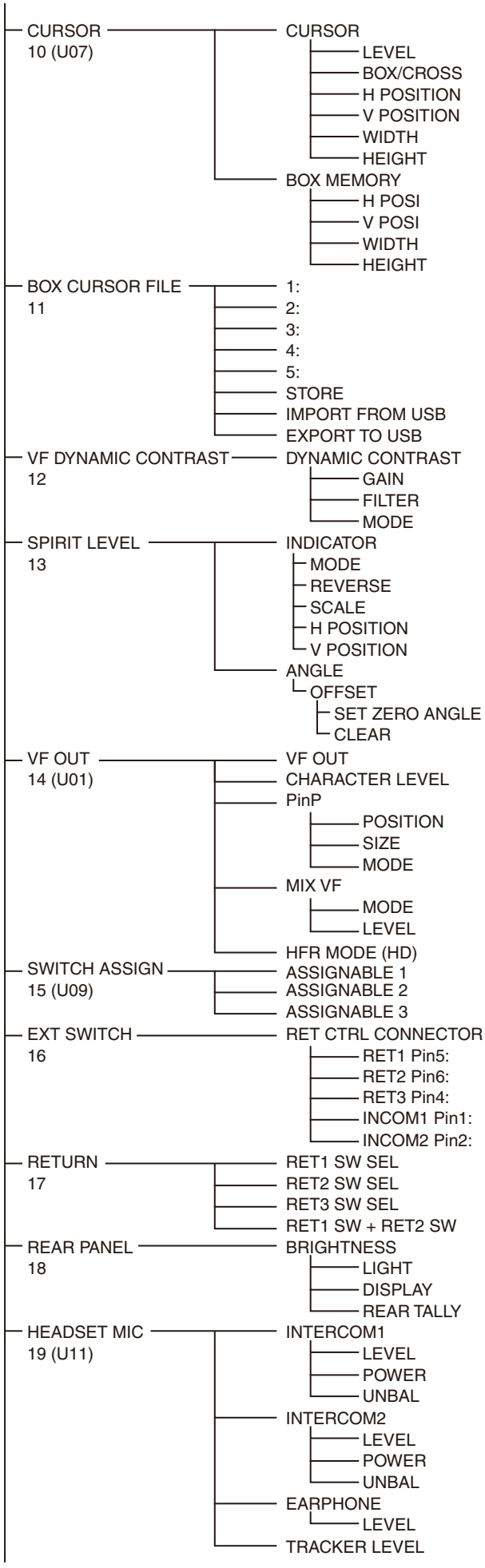
Legend

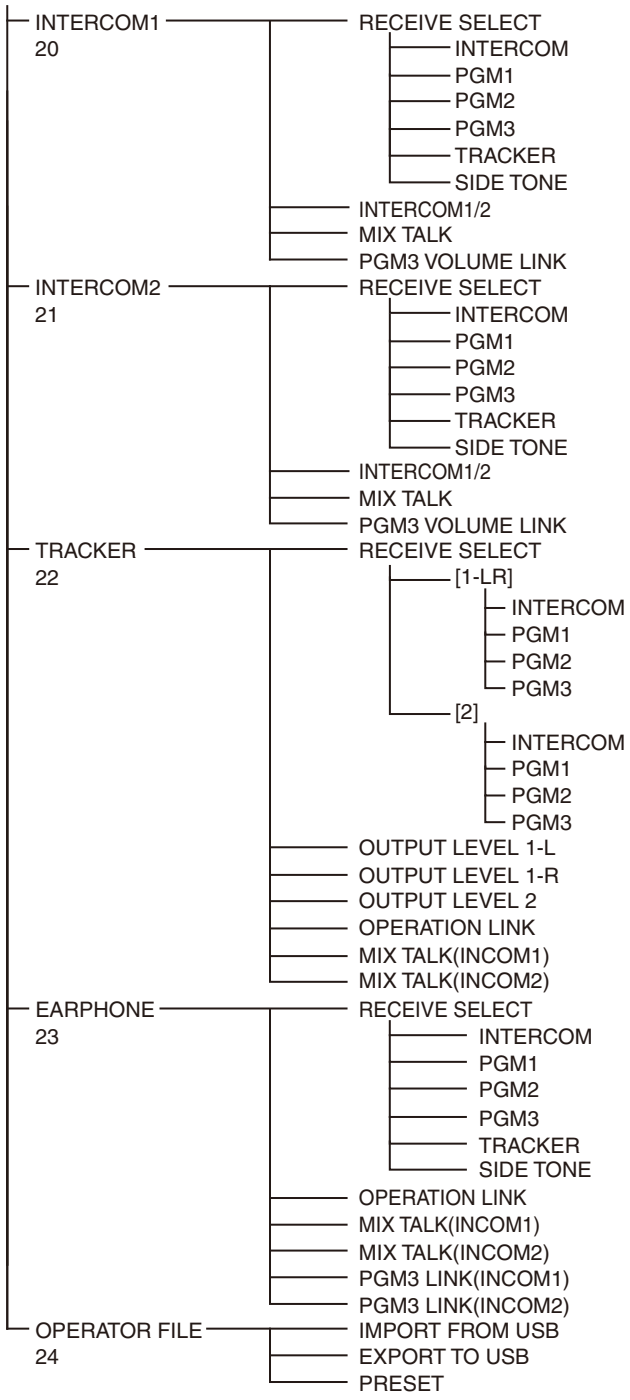
CCU: HDCU5000/5500 Camera Control Unit, or HDCU3500 Camera Control Unit with HKCU-FB50 installed
Underlined values (e.g. ON, OFF, 0): Default settings
Execute using ENTER: Execute by pressing the MENU SELECT knob.

Menu Tree

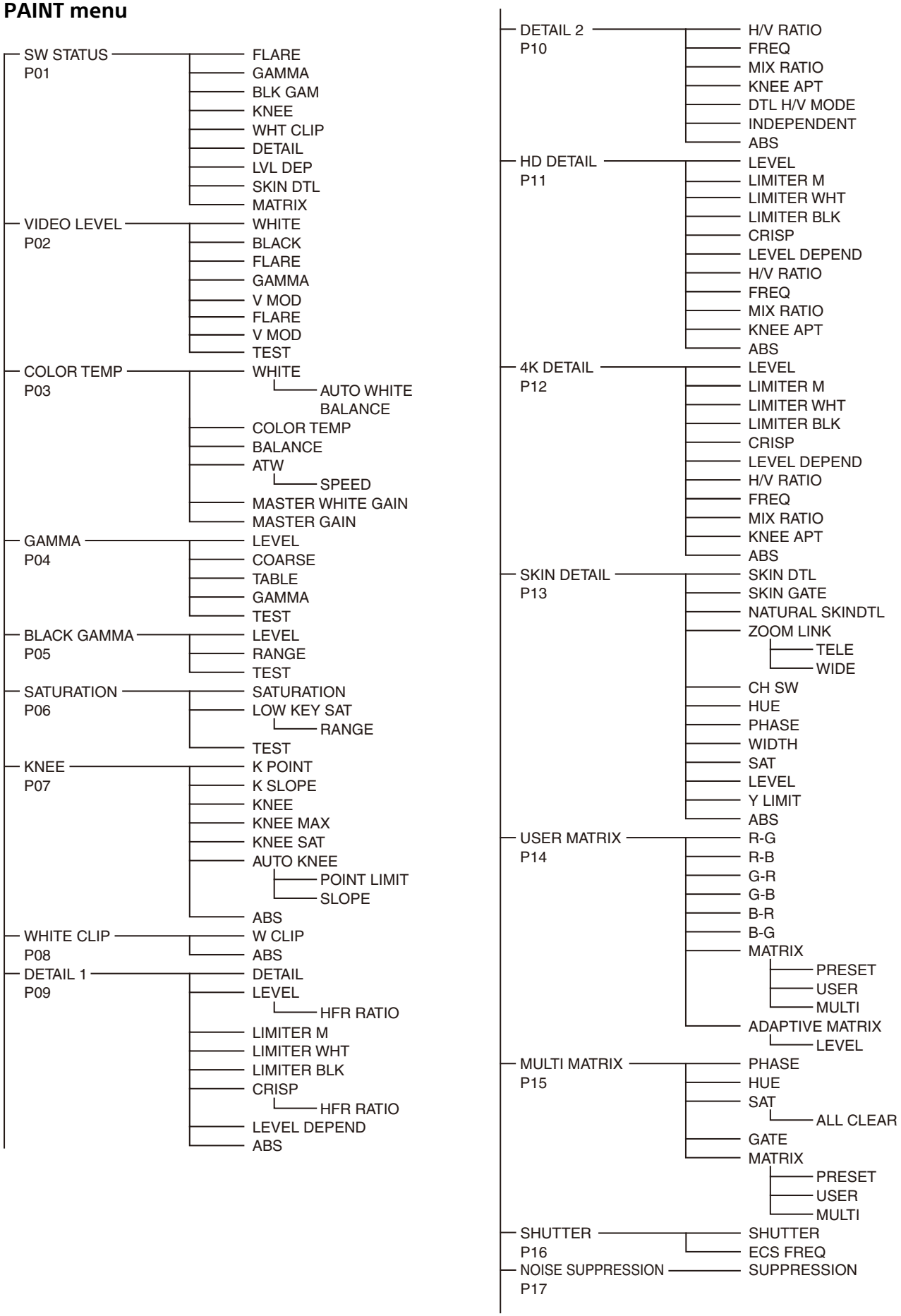
OPERATION menu

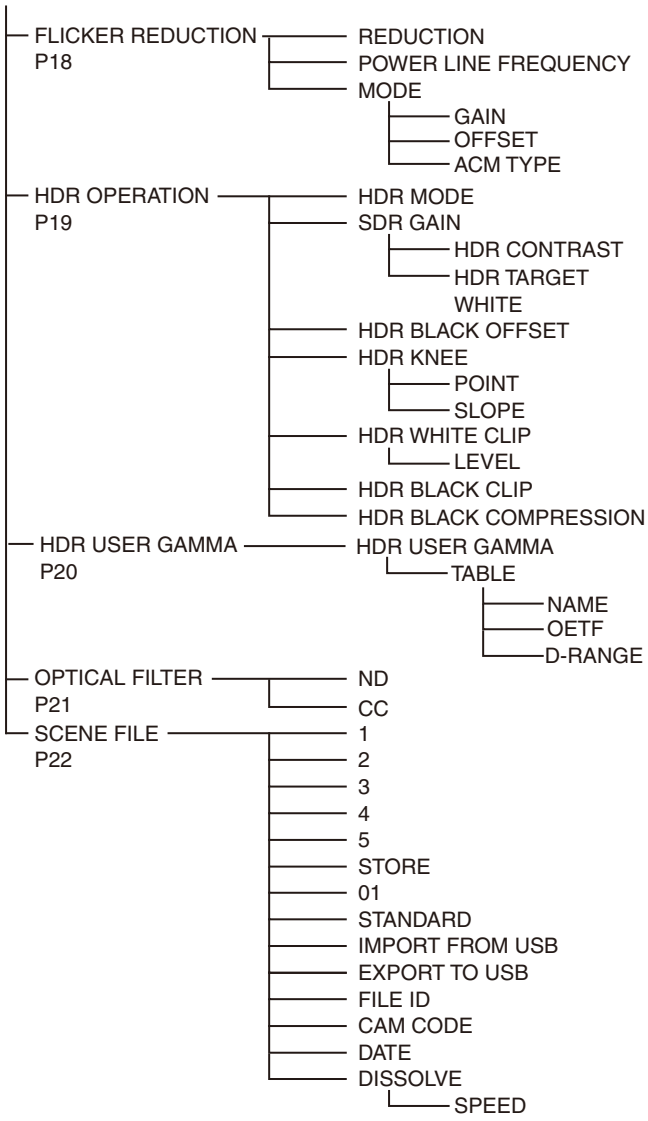



CURSOR
10 (U07)
CURSOR
LEVEL
BOX/CROSS
H POSITION
V POSITION
WIDTH
HEIGHT
BOX MEMORY
H POSI
V POSI
WIDTH
HEIGHT
BOX CURSOR FILE
11
1:
2:
3:
4:
5:
STORE
IMPORT FROM USB
EXPORT TO USB
VF DYNAMIC CONTRAST
12
DYNAMIC CONTRAST
GAIN
FILTER
MODE
SPIRIT LEVEL
13
INDICATOR
MODE
REVERSE
SCALE
H POSITION
V POSITION
ANGLE
OFFSET
SET ZERO ANGLE
CLEAR
VF OUT
14 (U01)
VF OUT
CHARACTER LEVEL
PinP
POSITION
SIZE
MODE
MIX VF
MODE
LEVEL
HFR MODE (HD)
SWITCH ASSIGN
15 (U09)
ASSIGNABLE 1
ASSIGNABLE 2
ASSIGNABLE 3
EXT SWITCH
16
RET CTRL CONNECTOR
RET1 Pin5:
RET2 Pin6:
RET3 Pin4:
INCOM1 Pin1:
INCOM2 Pin2:
RETURN
17
RET1 SW SEL
RET2 SW SEL
RET3 SW SEL
RET1 SW + RET2 SW
REAR PANEL
18
BRIGHTNESS
LIGHT
DISPLAY
REAR TALLY
HEADSET MIC
19 (U11)
INTERCOM1
LEVEL
POWER
UNBAL
INTERCOM2
LEVEL
POWER
UNBAL
EARPHONE
LEVEL
TRACKER LEVEL

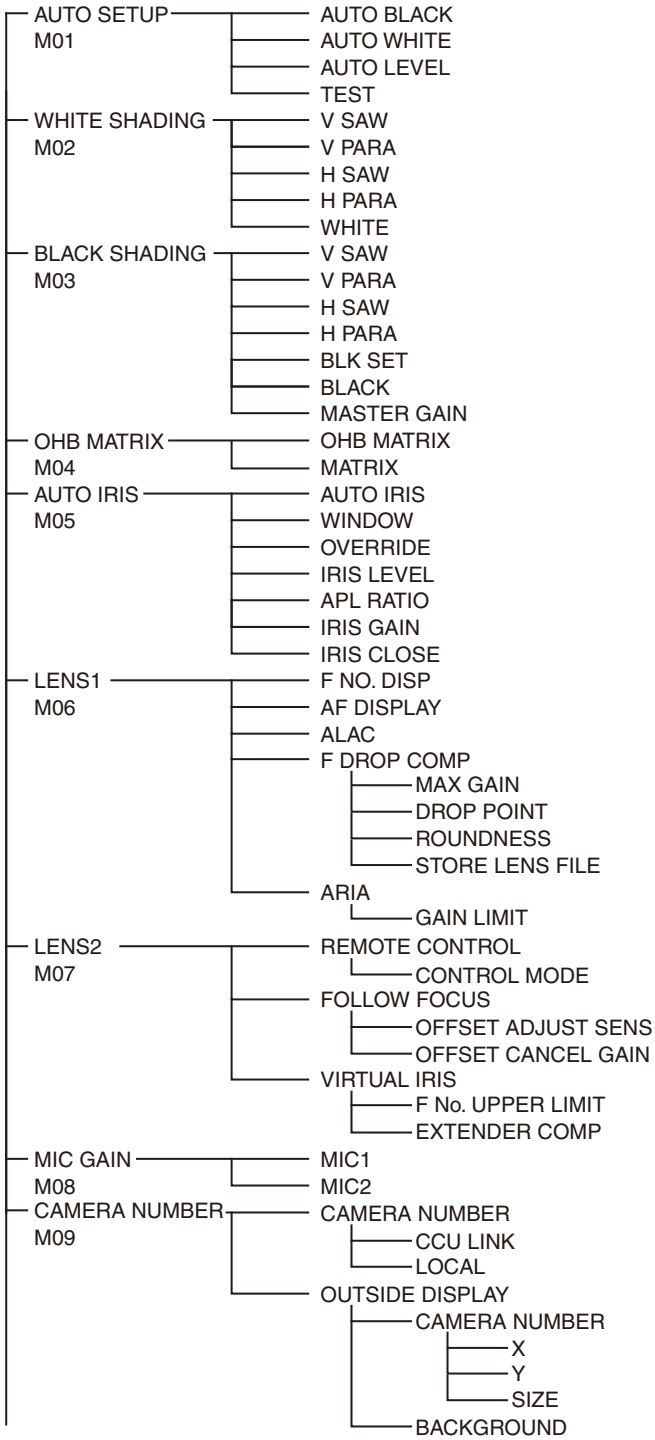

INTERCOM1
20
RECEIVE SELECT
INTERCOM
PGM1
PGM2
PGM3
TRACKER
SIDE TONE
INTERCOM1/2
MIX TALK
PGM3 VOLUME LINK
INTERCOM2
21
RECEIVE SELECT
INTERCOM
PGM1
PGM2
PGM3
TRACKER
SIDE TONE
INTERCOM1/2
MIX TALK
PGM3 VOLUME LINK
TRACKER
22
RECEIVE SELECT
[1-LR]
INTERCOM
PGM1
PGM2
PGM3
[2]
INTERCOM
PGM1
PGM2
PGM3
OUTPUT LEVEL 1-L
OUTPUT LEVEL 1-R
OUTPUT LEVEL 2
OPERATION LINK
MIX TALK(INCOM1)
MIX TALK(INCOM2)
EARPHONE
23
RECEIVE SELECT
INTERCOM
PGM1
PGM2
PGM3
TRACKER
SIDE TONE
OPERATION LINK
MIX TALK(INCOM1)
MIX TALK(INCOM2)
PGM3 LINK(INCOM1)
PGM3 LINK(INCOM2)
OPERATOR FILE
24
IMPORT FROM USB
EXPORT TO USB
PRESET

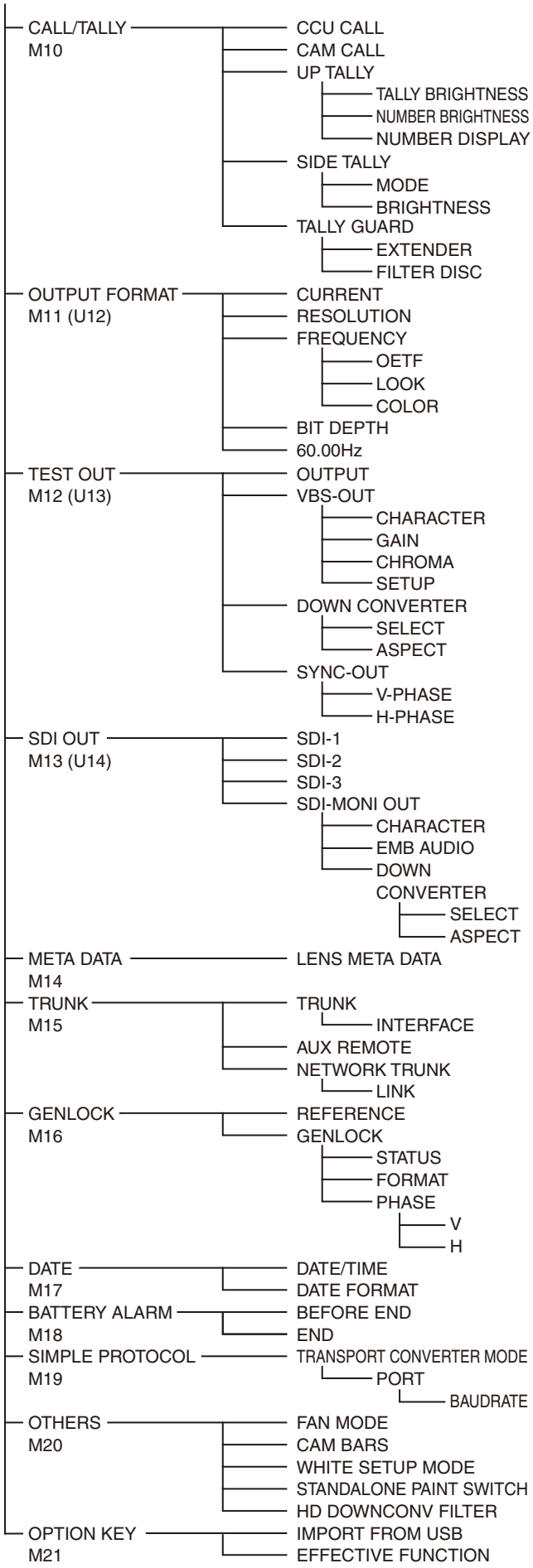
PAINT menu


SW STATUS
P01
FLARE
GAMMA
BLK GAM
KNEE
WHT CLIP
DETAIL
LVL DEP
SKIN DTL
MATRIX
VIDEO LEVEL
P02
WHITE
BLACK
FLARE
GAMMA
V MOD
FLARE
V MOD
TEST
COLOR TEMP
P03
WHITE
AUTO WHITE BALANCE
COLOR TEMP
BALANCE
ATW
SPEED
MASTER WHITE GAIN
MASTER GAIN
GAMMA
P04
LEVEL
COARSE
TABLE
GAMMA
TEST
BLACK GAMMA
P05
LEVEL
RANGE
TEST
SATURATION
P06
SATURATION
LOW KEY SAT
RANGE
TEST
KNEE
P07
K POINT
K SLOPE
KNEE
KNEE MAX
KNEE SAT
AUTO KNEE
POINT LIMIT
SLOPE
ABS
WHITE CLIP
P08
W CLIP
ABS
DETAIL 1
P09
DETAIL
LEVEL
HFR RATIO
LIMITER M
LIMITER WHT
LIMITER BLK
CRISP
HFR RATIO
LEVEL DEPEND
ABS
DETAIL 2
P10
H/V RATIO
FREQ
MIX RATIO
KNEE APT
DTL H/V MODE
INDEPENDENT
ABS
HD DETAIL
P11
LEVEL
LIMITER M
LIMITER WHT
LIMITER BLK
CRISP
LEVEL DEPEND
H/V RATIO
FREQ
MIX RATIO
KNEE APT
ABS
4K DETAIL
P12
LEVEL
LIMITER M
LIMITER WHT
LIMITER BLK
CRISP
LEVEL DEPEND
H/V RATIO
FREQ
MIX RATIO
KNEE APT
ABS
SKIN DETAIL
P13
SKIN DTL
SKIN GATE
NATURAL SKINDTL
ZOOM LINK
TELE
WIDE
CH SW
HUE
PHASE
WIDTH
SAT
LEVEL
Y LIMIT
ABS
USER MATRIX
P14
R-G
R-B
G-R
G-B
B-R
B-G
MATRIX
PRESET
USER
MULTI
ADAPTIVE MATRIX
LEVEL
MULTI MATRIX
P15
PHASE
HUE
SAT
ALL CLEAR
GATE
MATRIX
PRESET
USER
MULTI
SHUTTER
P16
SHUTTER
ECS FREQ
NOISE SUPPRESSION
P17
SUPPRESSION

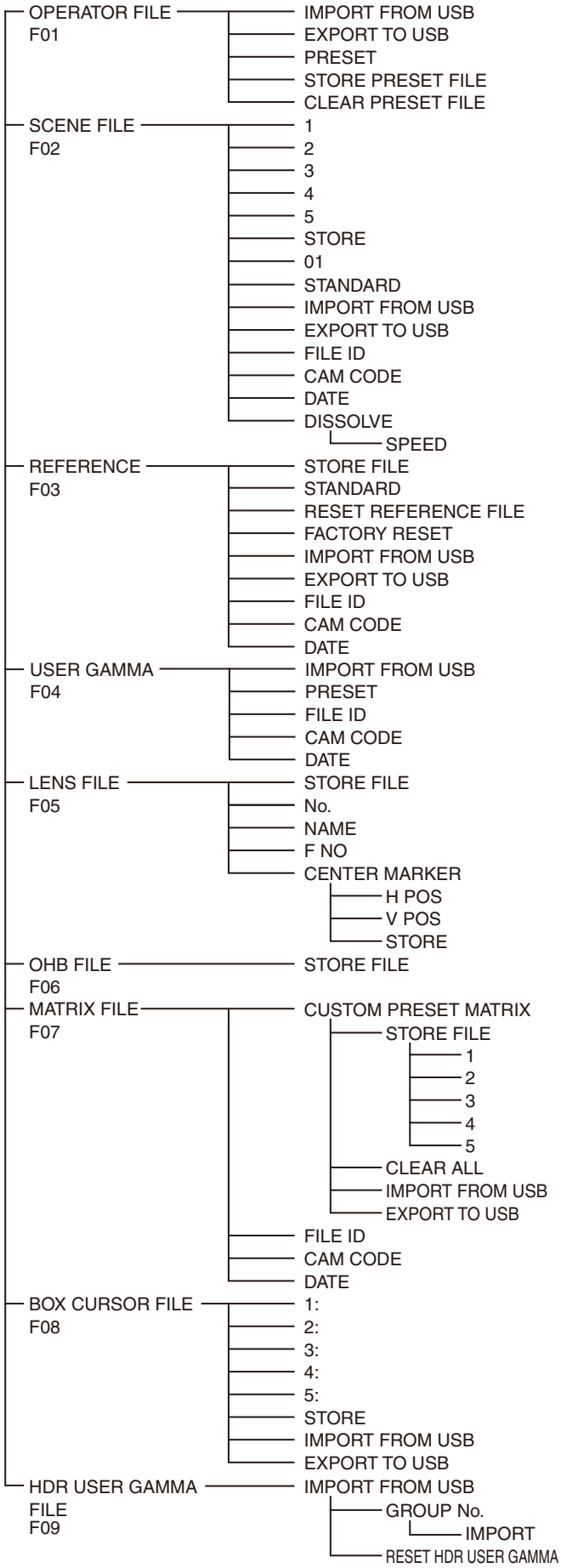


MAINTENANCE menu

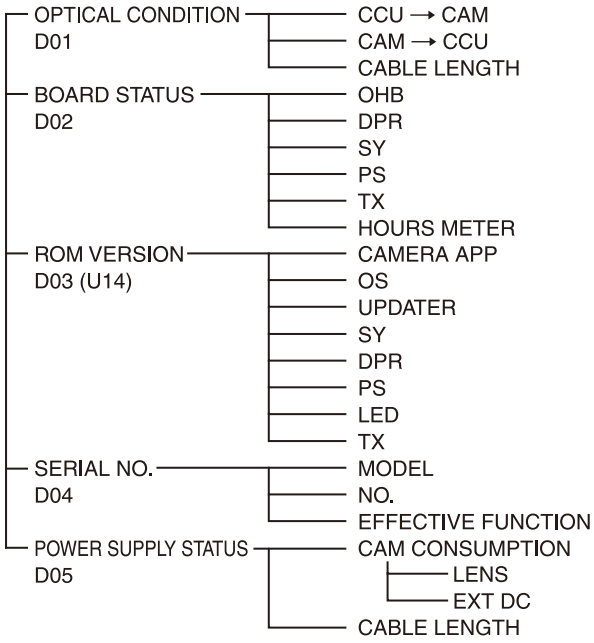



CALL/TALLY
M10
CCU CALL
CAM CALL
UP TALLY
TALLY BRIGHTNESS
NUMBER BRIGHTNESS
NUMBER DISPLAY
SIDE TALLY
MODE
BRIGHTNESS
TALLY GUARD
EXTENDER
FILTER DISC
OUTPUT FORMAT
M11 (U12)
CURRENT
RESOLUTION
FREQUENCY
OETF
LOOK
COLOR
BIT DEPTH
60.00Hz
TEST OUT
M12 (U13)
OUTPUT
VBS-OUT
CHARACTER
GAIN
CHROMA
SETUP
DOWN CONVERTER
SELECT
ASPECT
SYNC-OUT
V-PHASE
H-PHASE
SDI OUT
M13 (U14)
SDI-1
SDI-2
SDI-3
SDI-MONI OUT
CHARACTER
EMB AUDIO
DOWN CONVERTER
SELECT
ASPECT
META DATA
M14
LENS META DATA
TRUNK
M15
TRUNK
INTERFACE
AUX REMOTE
NETWORK TRUNK
LINK
GENLOCK
M16
REFERENCE
GENLOCK
STATUS
FORMAT
PHASE
V
H
DATE
M17
DATE/TIME
DATE FORMAT
BATTERY ALARM
M18
BEFORE END
END
SIMPLE PROTOCOL
M19
TRANSPORT CONVERTER MODE
PORT
BAUDRATE
OTHERS
M20
FAN MODE
CAM BARS
WHITE SETUP MODE
STANDALONE PAINT SWITCH
HD DOWNCONV FILTER
OPTION KEY
M21
IMPORT FROM USB
EFFECTIVE FUNCTION

FILE menu


OPERATOR FILE
F01
IMPORT FROM USB
EXPORT TO USB
PRESET
STORE PRESET FILE
CLEAR PRESET FILE
SCENE FILE
F02
1
2
3
4
5
STORE
01
STANDARD
IMPORT FROM USB
EXPORT TO USB
FILE ID
CAM CODE
DATE
DISSOLVE
SPEED
REFERENCE
F03
STORE FILE
STANDARD
RESET REFERENCE FILE
FACTORY RESET
IMPORT FROM USB
EXPORT TO USB
FILE ID
CAM CODE
DATE
USER GAMMA
F04
IMPORT FROM USB
PRESET
FILE ID
CAM CODE
DATE
LENS FILE
F05
STORE FILE
No.
NAME
F NO
CENTER MARKER
H POS
V POS
STORE
OHB FILE
F06
STORE FILE
MATRIX FILE
F07
CUSTOM PRESET MATRIX
STORE FILE
1
2
3
4
5
CLEAR ALL
IMPORT FROM USB
EXPORT TO USB
FILE ID
CAM CODE
DATE
BOX CURSOR FILE
F08
1:
2:
3:
4:
5:
STORE
IMPORT FROM USB
EXPORT TO USB
HDR USER GAMMA FILE
F09
IMPORT FROM USB
GROUP No.
IMPORT
RESET HDR USER GAMMA

DIAGNOSIS menu



OPERATION Menu

OPERATION Page name Page No.	Item	Settings	Description
<VF DISPLAY> 01 (U04)	EX	**ON**, OFF, 3S	
	ZOOM	ON, **OFF**, 3S	
	DISP	**LEFT**, RIGT	
	FORM	**999**, mm	Sets the ZOOM display format. **999**: Displayed in the range 0 to 999 (no units). **mm**: Displayed in millimeters.
	FOCUS	ON, **OFF**, 3S	Valid only when a serial lens is used.
	FORM	**999**, m, ft	Sets the FOCUS display format. **999**: Displayed in the range 0 to 999 (no units). **m**: Displayed in meters. **ft**: Displayed in feet.
	ND	**ON**, OFF, 3S	
	CC	**ON**, OFF, 3S	
	5600K	**ON**, OFF, 3S	
	IRIS	**ON**, OFF, 3S	
	WHITE	ON, **OFF**, 3S	
	D.EXT	**ON**, OFF, 3S	
	GAIN	**ON**, OFF, 3S	
	SHUTTER	**ON**, OFF, 3S	
	BATT	ON, **OFF**, 3S	
	RETURN	**ON**, OFF, 3S	
	TALK	**ON**, OFF, 3S	
	MESSAGE	**ALL**, WRN, AT, OFF	**ALL:** Displays all messages. **WRN:** Displays warning messages and higher. **AT:** Displays Auto Setup messages and higher.
	FOLLOW F	ON, **OFF**, 3S	
	FOCUS NAME	OFF, 1S, 3S, 5S, **ON**	Sets whether to show/hide the marker name and sets the display time.
<'!' IND> 02 (U05)	ND	**ON**, OFF	[IND]: Turns the '!' display area *(see page 19)* on/off. [NORMAL]: Specifies the conditions under which the '!' indication is not to be displayed even if [IND] is ON. (By specifying the standard or normal conditions here, non-standard or abnormal conditions can be found with the '!' indication on the viewfinder screen.) Example: With the default setting of ND, the '!' indication is displayed when an ND filter other than 1 is selected. ---: When a CCU is connected (cannot be changed)
		1, 2, 3, 4, 5, 6, 7, 8, 9 (combination allowed)	
	CC	**ON**, OFF	
		B, C, D (combination allowed)	
	WHITE	**ON**, OFF, ---	
		P, **A**, **B** (combination allowed)	
	5600K	**ON**, OFF, ---	
		ON, **OFF**	
	GAIN	**ON**, OFF, ---	
		L, M, H (combination allowed)	
	SHUTTER	**ON**, OFF, ---	
		ON, **OFF**	
	FAN	**ON**, OFF	
		AUTO1, AUTO2, MIN, MAX	
	EXT	**ON**, OFF	
	D.EXT	**ON**, OFF	
	Y TALLY	**ON**, OFF	

OPERATION			
Page name Page No.	**Item**	**Settings**	**Description**
<VF MARKER> 03 (U06)	MARKER	**ON**, OFF	Sets the display of all markers on/off.
		WHITE, BLACK, DOT	
	LEVEL	MIN, 1 to 10, **4**	
	CENTER	ON, **OFF**	
		1, 2, 3, 4	**1:** Full cross **2:** Full cross with a hole **3:** Center **4:** Center with a hole
	SAFETY ZONE	ON, **OFF**	
		80.0, **90.0**, 92.5, 95.0%	
	EFFECT	ON, **OFF**	
	ASPECT	ON, **OFF**	
		16:9, 15:9, 14:9, 13:9, **4:3**	**(4.3):** If VF SCAN is set to 4:3 on the HDLA side when HDLA is attached (cannot be changed)
	MASK	ON, **OFF**	**(ON):** If VF SCAN is set to 4:3 on the HDLA side when HDLA is attached (cannot be changed)
		0 to 15, **12**	Sets the darken level outside the aspect area.
	SAFETY	ON, **OFF**	For the safety marker in Aspect mode.
		80.0, **90.0**, 92.5, 95.0%	
<VF DETAIL> 04 (U02)	VF DETAIL	**ON**, OFF, (ON), (OFF)	Settings in ( ): When HDLA is attached (cannot be changed)
		0 to 100%, (0 to 100%), **25%**	
	CRISP	–99 to +99, **0**	
	FREQUENCY	**9M**, 14M, 18M	
	FLICKER	ON, **OFF**	
	AREA	10 to 100%, **100%**	
	ZOOM LINK	**ON**, OFF	
		0 to 100%, **50%**	
	COLOR DETAIL	ON, **OFF**	
		YELLOW, RED, **BLUE**	
	COLOR	ON, **OFF**	
	PEAK COLOR	ON, **OFF**	
	CHROMA LEVEL	100%, 50%, **25%**, 0%	
	RETURN DISABLE	ON, **OFF**	Selects whether to set VF DETAIL to OFF for RETURN display.
	DYNAMIC FOCUS	**OFF**, ON, (OFF)	

OPERATION			
Page name **Page No.**	**Item**	**Settings**	**Description**
<DYNAMIC FOCUS> 05	DYNAMIC FOCUS	**OFF**, ON, (OFF)	Turn the dynamic focus function on/off. **(OFF):** Displayed for formats other than 4K/HDR format.
	FREQUENCY	**EXTRA-LOW**, LOW, MID, HIGH, (AUTO)	Sets the bandwidth of the 4K resolution high-frequency signal to detect. **(AUTO):** Displayed when ZOOM LINK is set to ON.
	ZOOM LINK	ON, **OFF**	
		MODE1, MODE2, MODE3, MODE4	Sets characteristics according to the zoom position.
		0 to 100%, **50%** (5% increments)	Sets the level at the WIDE position mark.
	CRISP	**0** to 99%	Adjust to eliminate minute components of the detected signal.
	LEVEL	**LOW**, MIDDLE, HIGH, VERY-HIGH	Sets the brightness level of the marking signal.
	PEAK COLOR	OFF, RED, BLUE, GREEN, BROWN, PURPLE, **YELLOW**	
	THRESHOLD	**0** to 99%	Sets the threshold level for adding color specified using PEAK COLOR.
	COLOR LEVEL	0 to 99%, **50%**	Sets the saturation of the color of the PEAK COLOR indicator.
<FOCUS POSITION METER1> 06	FOCUS POSITION METER	**OFF**, ON	Shows/hides the focus position meter.
	NEAR LIMIT	**0** to 999	Sets the NEAR edge of the focus position meter.
	FAR LIMIT	0 to **999**	Sets the FAR edge of the focus position meter.
	POSITION	**TOP**, RIGHT, BOTTOM, LEFT	Sets the display position of the focus position meter. **TOP:** Displayed at the top of the screen. **RIGHT:** Displayed on the right side of the screen. **BOTTOM:** Displayed at the bottom of the screen. **LEFT:** Displayed on the left side of the screen.
	NEAR/FAR POSITION	**NORMAL**, REVERSE	Sets the near/far display orientation of the focus position meter. Set to REVERSE to flip the NEAR edge and FAR edge.
	SIZE	**NORMAL**, HALF	Sets the display size of the focus position meter.
	RULED LINE	**OFF**, ON	Shows/hides ruled lines.
	INDEX COLOR	BLACK, **WHITE**	Sets the index color.
	INDEX WIDTH	**1** to 5	Sets the index width.
	MARKER WIDTH	**1** to 9	Sets the width of the marker axis portion.
	CURRENT FOCUS DIST		Displays the current focus distance (display only).

OPERATION			
Page name Page No.	**Item**	**Settings**	**Description**
<FOCUS POSITION METER2> 07	ADJUSTED SIGN		
	SENSE	1 to 5, **2**	Sets the adjustment sensitivity. Increasing the value increases the sensitivity.
	NAME DISP	OFF, 1S, 3S, 5S, **ON**	Sets whether to show/hide the marker name and sets the display time.
	FRAME DISP	OFF, 1S, 3S, 5S, **ON**	Sets whether to show/hide the adjustment frame and sets the display time.
	FRAME WIDTH	1 to 5, **2**	Sets the width of the adjustment frame.
	MARKER CONFIG		
	[REG] MKR1, 2, 3	Execute using ENTER.	Registers a marker at the current focus position. (Cannot be registered here if marker registration has been assigned to a dedicated switch.)
	[DISP] MKR1, 2, 3	**OFF**, ON	Shows/hides markers. (Cannot be changed here if marker registration has been assigned to a dedicated switch.)
	[COLOR] MKR1, 2, 3	**RED**, **GREEN**, **BLUE**, YELLOW, ORANGE, PURPLE, GRAY, BLACK, WHITE	Sets the color of the triangular part of the marker. MKR1 default value is RED, MKR2 default value is GREEN, and MKR3 default value is BLUE.
	[NAME] MKR1, 2, 3	Max. 8 characters (Default value: MARKER 1 to 3)	Sets the text of the marker name. See *"To specify a character string" (page 21)*.
	[POS] MKR1, 2, 3	**0** to 999	Sets the position of the marker.
	CURRENT FOCUS DIST		Displays the current focus distance (display only).
<FOCUS ASSIST> 08 (U03)	INDICATOR	ON, **OFF**	
	MODE	**BOX**, B&W, COL	
		BTM, LEFT, TOP, RIGHT	
	LEVEL	MIN, 1 to 10, **4**	
		QUICK, SMOOTH	
	GAIN	0 to 99, **50**	
	OFFSET	0 to 99, **50**	
	AREA MARKER	ON, **OFF**	
	SIZE	SMALL, **MIDDLE**, LARGE	
	POSITION	LEFT, **CENTER**, RIGHT	
	POSITION H	0 to 99, **50**	
	POSITION V	0 to 99, **50**	
<ZEBRA> 09 (U08)	ZEBRA	ON, **OFF**	
		1, 2, 1&2	
	ZEBRA1		
	LEVEL	50 to 109%, **70%**	
	WIDTH	0 to 30%, **10%**	
	ZEBRA2	50 to 109%, **100%**	

OPERATION			
Page name Page No.	**Item**	**Settings**	**Description**
<CURSOR> 10 (U07)	CURSOR	**OFF**, ON	Displayed only if HDLA attached.
	LEVEL	**WHITE**, BLACK, DOT	
		MIN, 1 to 10, **4**	
	BOX/CROSS	**BOX**, CROSS	
	H POSITION	0 to 99, **50**	Displayed only if HDLA attached.
	V POSITION	0 to 99, **50**	
	WIDTH	0 to 99, **50**	
	HEIGHT	0 to 99, **50**	
	BOX MEMORY	1/2/3/4: **OFF**, ON	
	H POSI	1/2/3/4: 0 to 99, **50**	
	V POSI	1/2/3/4: 0 to 99, **50**	
	WIDTH	1/2/3/4: 0 to 99, **50**	
	HEIGHT	1/2/3/4: 0 to 99, **50**	
<BOX CURSOR FILE> 11	1:		BOX CURSOR FILE selection FILE name input. Align the cursor to the left of the number to select the BOX CURSOR FILE. Align the cursor to the right of the number to enter the BOX CURSOR FILE name. See *"To specify a character string" (page 21).*
	2:		
	3:		
	4:		
	5:		
	STORE		Stores a BOX CURSOR FILE name in the camera.
	IMPORT FROM USB		Transfers BOX CURSOR FILE from a USB drive to the camera.
	EXPORT TO USB		Transfers BOX CURSOR FILE from the camera to a USB drive.
<VF DYNAMIC CONTRAST> 12	DYNAMIC CONTRAST	**OFF**, ON	Turns on/off the contrast adjustment function for the picture displayed in the viewfinder.
	GAIN	0 to 100%, **30%**	Sets the intensity of contrast enhancement.
	FILTER	**NARROW**, MIDDLE, WIDE	Sets the frequency response of the filter for enhancing contrast.
	MODE	LINEAR, **HIGHLIGHT**, FOGGY	Sets the mode for contrast enhancement. **LINEAR:** Enhances overall brightness. **HIGHLIGHT:** Enhances high-brightness areas. **FOGGY:** Enhances low-brightness areas.
<SPIRIT LEVEL> 13	INDICATOR	ON, **OFF**	
	MODE	**1**, 2	Switches the display method of the indicator.
	REVERSE	**OFF**, ON	Inverts the movement of the indicator horizontally.
	SCALE	50% to 150%, **100%**	Adjusts the horizontal width of the indicator.
	H POSITION	0 to 99, **50**	
	V POSITION	0 to 99, **97**	
	ANGLE		Displays the inclination angle (display only).
	OFFSET	−90 to +90, **0**	
	SET ZERO ANGLE	Execute using ENTER.	Designates the current angle as level (0°).
	CLEAR	Execute using ENTER.	Sets OFFSET to 0.

<table>
<tr><th colspan="4">OPERATION</th></tr>
<tr><th>Page name
Page No.</th><th colspan="2">Item</th><th>Settings</th><th>Description</th></tr>
<tr><td><VF OUT>
14 (U01)</td><td colspan="2">VF OUT</td><td><u>COLOR</u>, Y, R, G, B,
(COLOR), (Y), (R), (G), (B), (R+G),
(R+B), (G+B)</td><td>Settings in ( ): When HDLA is attached (cannot be changed)</td></tr>
<tr><td></td><td colspan="2">CHARACTER LEVEL</td><td>1 to 5, <u>4</u></td><td></td></tr>
<tr><td></td><td colspan="2">PinP</td><td><u>OFF</u>, RETURN, HD PROMPTER</td><td></td></tr>
<tr><td></td><td></td><td>POSITION</td><td><u>1</u>, 2, 3, 4</td><td></td></tr>
<tr><td></td><td></td><td>SIZE</td><td>1/2.5, <u>1/3</u>, 1/4</td><td></td></tr>
<tr><td></td><td></td><td>MODE</td><td>PinP OFF: ---
PinP RETURN: 1, 2, 3, 4
PinP HD PROMPTER: 1, 2</td><td>: Main picture, : Return picture, : HD Prompter picture
PinP: OFF
<table><tr><th>Mode</th><th>RET SW OFF</th><th>RET SW ON</th></tr><tr><td>---</td><td></td><td>  </td></tr></table>PinP: RETURN
<table><tr><th>Mode</th><th>RET SW OFF</th><th>RET SW ON</th></tr><tr><td>1</td><td>  </td><td>  </td></tr><tr><td>2</td><td>  </td><td>  </td></tr><tr><td>3</td><td></td><td>  </td></tr><tr><td>4</td><td></td><td>  </td></tr></table>PinP: HD PROMPTER
<table><tr><th>Mode</th><th>RET SW OFF</th><th>RET SW ON</th></tr><tr><td>1</td><td>  </td><td>  </td></tr><tr><td>2</td><td>  </td><td>  </td></tr></table>Cannot be used during standalone operation.</td></tr>
<tr><td></td><td colspan="2">MIX VF</td><td><u>OFF</u>, ON</td><td>Turns on/off the function that makes the return video semi-transparent and displays it together with the camera image in the viewfinder.</td></tr>
<tr><td></td><td></td><td>MODE</td><td><u>MAIN&RET</u>, MAIN, RET</td><td>MAIN&RET: Displays semi-transparent return video when displaying the camera image. Displays semi-transparent camera image when displaying the return video.
MAIN: Displays semi-transparent return video when displaying the camera image. No mixing is applied when displaying the return video.
RET: Displays semi-transparent camera image when displaying the return video. No mixing is applied when displaying the camera image.</td></tr>
<tr><td></td><td></td><td>LEVEL</td><td>0 to 99, <u>10</u></td><td>Percentage mix of return video and camera image (%)</td></tr>
<tr><td></td><td colspan="2">HFR MODE (HD)</td><td><u>ACCUMULATE</u>, SINGLE</td><td>Output images as follows to the viewfinder when in HD HFR format.
ACCUMULATE: Accumulated image
SINGLE: Single image</td></tr>
</table>

OPERATION			
Page name Page No.	**Item**	**Settings**	**Description**
<SWITCH ASSIGN> 15 (U09)	ASSIGNABLE 1	OFF, VTR, S/S, VF DETAIL, EXTENDER, D.EXTENDER, VF ASSIGN1, VF ASSIGN2, DYNAMIC CONTRAST, **DYNAMIC FOCUS**, FAN MAX, STABILIZER, FLAG	**Note** When you turn D.EXTENDER ON or OFF, noise may be generated. This is not a malfunction. D.EXTENDER does not operate when 4K or 2× speed format is selected.
	ASSIGNABLE 2	OFF, VTR, S/S, VF DETAIL, EXTENDER, D.EXTENDER, VF ASSIGN1, VF ASSIGN2, **DYNAMIC CONTRAST**, DYNAMIC FOCUS, FAN MAX, STABILIZER, FLAG	
	ASSIGNABLE 3	OFF, VTR, S/S, VF DETAIL, **EXTENDER**, D.EXTENDER, VF ASSIGN1, VF ASSIGN2, DYNAMIC CONTRAST, DYNAMIC FOCUS, FAN MAX, STABILIZER, FLAG	
<EXT SWITCH> 16 *1 *1: See *page 41*.	RET CTRL CONNECTOR		
	RET1 Pin5:	OFF, **RETURN1 SW**, RETURN2 SW, RETURN3 SW, INCOM1, INCOM2, EXTENDER, D.EXTENDER, 5600K, VF DETAIL, MIX VF, SPIRIT LEVEL INDICATOR, FOCUS ASSIST INDICATOR, PinP, VF ASSIGN SW1, VF ASSIGN SW2, RET1 SW TOGGLE, RET2 SW TOGGLE, RET3 SW TOGGLE, VTR S/S, TALLY R, TALLY G, TALLY Y, FAN MAX, CURSOR ALL OFF, DYNAMIC FOCUS, FLAG, AWB, CALL, ZOOM(T), ZOOM(W), DYNAMIC CONTRAST, FOCUS POSITION METER	This function works when each pin of the RET CTRL connector contacts with GND (pin 3). TALLY R, TALLY G, and TALLY Y are available only when using the camera as a standalone device, and make the tally lamp light. VTR S/S is available only when using the camera as a standalone device, and makes the R tally lamp light. VTR S/S signal is embedded in the video.
	RET2 Pin6:	OFF, RETURN1 SW, **RETURN2 SW**, RETURN3 SW, INCOM1, INCOM2, EXTENDER, D.EXTENDER, 5600K, VF DETAIL, MIX VF, SPIRIT LEVEL INDICATOR, FOCUS ASSIST INDICATOR, PinP, VF ASSIGN SW1, VF ASSIGN SW2, RET1 SW TOGGLE, RET2 SW TOGGLE, RET3 SW TOGGLE, VTR S/S, TALLY R, TALLY G, TALLY Y, FAN MAX, CURSOR ALL OFF, DYNAMIC FOCUS, FLAG, AWB, CALL, ZOOM(T), ZOOM(W), DYNAMIC CONTRAST, FOCUS POSITION METER	
	RET3 Pin4:	OFF, RETURN1 SW, RETURN2 SW, **RETURN3 SW**, INCOM1, INCOM2, EXTENDER, D.EXTENDER, 5600K, VF DETAIL, MIX VF, SPIRIT LEVEL INDICATOR, FOCUS ASSIST INDICATOR, PinP, VF ASSIGN SW1, VF ASSIGN SW2, RET1 SW TOGGLE, RET2 SW TOGGLE, RET3 SW TOGGLE, VTR S/S, TALLY R, TALLY G, TALLY Y, FAN MAX, CURSOR ALL OFF, DYNAMIC FOCUS, FLAG, AWB, CALL, ZOOM(T), ZOOM(W), DYNAMIC CONTRAST, FOCUS POSITION METER	

OPERATION			
Page name Page No.	**Item**	**Settings**	**Description**
<EXT SWITCH> 16 *1 *1: See *page 41*.	INCOM1 Pin1:	OFF, RETURN1 SW, RETURN2 SW, RETURN3 SW, **INCOM1**, INCOM2, EXTENDER, D.EXTENDER, 5600K, VF DETAIL, MIX VF, SPIRIT LEVEL INDICATOR, FOCUS ASSIST INDICATOR, PinP, VF ASSIGN SW1, VF ASSIGN SW2, RET1 SW TOGGLE, RET2 SW TOGGLE, RET3 SW TOGGLE, VTR S/S, TALLY R, TALLY G, TALLY Y, FAN MAX, CURSOR ALL OFF, DYNAMIC FOCUS, FLAG, AWB, CALL, ZOOM(T), ZOOM(W), DYNAMIC CONTRAST, FOCUS POSITION METER	This function works when each pin of the RET CTRL connector contacts with GND (pin 3). TALLY R, TALLY G, and TALLY Y are available only when using the camera as a standalone device, and make the tally lamp light. VTR S/S is available only when using the camera as a standalone device, and makes the R tally lamp light. VTR S/S signal is embedded in the video.
	INCOM2 Pin2:	OFF, RETURN1 SW, RETURN2 SW, RETURN3 SW, INCOM1, **INCOM2**, EXTENDER, D.EXTENDER, 5600K, VF DETAIL, MIX VF, SPIRIT LEVEL INDICATOR, FOCUS ASSIST INDICATOR, PinP, VF ASSIGN SW1, VF ASSIGN SW2, RET1 SW TOGGLE, RET2 SW TOGGLE, RET3 SW TOGGLE, VTR S/S, TALLY R, TALLY G, TALLY Y, FAN MAX, CURSOR ALL OFF, DYNAMIC FOCUS, FLAG, AWB, CALL, ZOOM(T), ZOOM(W), DYNAMIC CONTRAST, FOCUS POSITION METER	
<RETURN> 17	RET1 SW SEL RET2 SW SEL RET3 SW SEL	**CCU RET1**, **CCU RET2**, **CCU RET3**, CCU RET4, CCU RET5, CCU RET6, CCU RET7, CCU RET8	Sets the return video to display when a return switch is pressed. The settings that are available increase according to the connected CCU units. RET1 SW SEL default value is CCU RET1, RET2 SW SEL default value is CCU RET2, and RET3 SW SEL default value is CCU RET3.
	RET1 SW + RET2 SW	**RET1 SW**, RET3 SW	Changes operation when you press both the RET1 button and RET2 button at the same time. **RET1 SW:** Function as the RET1 button. **RET3 SW:** Function as the RET3 button.
<REAR PANEL> 18	BRIGHTNESS		
	LIGHT	MIN, 1 to 100, **20**	
	DISPLAY	MIN, 1 to 100, **50**	**Note** The display becomes much darker when set to 10 or lower.
	REAR TALLY	MIN, 1 to 100, **50**	

OPERATION			
Page name Page No.	**Item**	**Settings**	**Description**
<HEADSET MIC> 19 (U11)	INTERCOM1	**DYNAMIC**, CARBON, MANUAL	
	LEVEL	–60 dBu, –50 dBu, –40 dBu, –30 dBu, –20 dBu, **(–60 dBu)**, (–20 dBu)	Settings in ( ): With DYNAMIC or CARBON (cannot be changed) For DYNAMIC, set to –60 dBu (fixed). For CARBON, set to –20 dBu (fixed).
		–6, **0**, 6 dB	Input gain
	POWER	ON, OFF, (ON), **(OFF)**	Settings in ( ): With DYNAMIC or CARBON (cannot be changed)
	UNBAL	**ON**, OFF, (ON), (OFF)	Settings in ( ): With CARBON (cannot be changed)
	INTERCOM2	**DYNAMIC**, CARBON, MANUAL	
	LEVEL	–60 dBu, –50 dBu, –40 dBu, –30 dBu, –20 dBu, **(–60 dBu)**, (–20 dBu)	Settings in ( ): With DYNAMIC or CARBON (cannot be changed) For DYNAMIC, set to –60 dBu (fixed). For CARBON, set to –20 dBu (fixed).
		–6, **0**, 6 dB	Input gain
	POWER	ON, OFF, (ON), **(OFF)**	Settings in ( ): With DYNAMIC or CARBON (cannot be changed)
	UNBAL	**ON**, OFF, (ON), (OFF)	Settings in ( ): With CARBON (cannot be changed)
	EARPHONE	ON, **OFF**	
	LEVEL	–34 dBu, **–40 dBu**, –46 dBu	
	TRACKER LEVEL	**0 dBu**, –20 dBu	Sets the input signal level to the tracker.
	(Blank)	–6, **0**, 6 dB	Sets the gain of the input signal to the tracker.
<INTERCOM1> 20	RECEIVE SELECT	**SEPARATE**, MIX	Sets the headset audio. **SEPARATE:** Set L and R separately. **MIX:** Set L and R to the same settings.
	INTERCOM	---, **LEFT**, RIGHT, BOTH	When the Line select / Receive MIX select switch on the operation panel is set to MIX, menu items ENG and PROD appear instead of this item (the setting values are same as this item).
	PGM1	---, LEFT, **RIGHT**, BOTH	
	PGM2	---, LEFT, **RIGHT**, BOTH	
	PGM3	**---**, LEFT, RIGHT, BOTH	
	TRACKER	---, **LEFT**, RIGHT, BOTH	
	SIDE TONE	MUTE, 1 to 99, **50**	
	INTERCOM1/2	**SEPARATE**, MIX	Set to MIX for intercom communication between intercom 1 and intercom 2. When set to MIX, you can receive audio from the other party if the following condition is satisfied. • When the intercom line of the other party (ENG/PROD) can be received
	MIX TALK	**ENG**, PROD	When the Line select / Receive MIX select switch on the operation panel is set to MIX, this sets the TALK destination.
	PGM3 VOLUME LINK	**PGM1**, PGM2, MENU	Sets the method for controlling PGM volume. **PGM1:** Determined by the PGM1 control of intercom 1. **PGM2:** Determined by the PGM2 control of intercom 1. **MENU:** Determined by menu setting.
	(Blank)	0% to **50%** to 100%	Displayed only when PGM3 VOLUME LINK is set to MENU.

OPERATION			
Page name Page No.	**Item**	**Settings**	**Description**
<INTERCOM2> 21	RECEIVE SELECT	**SEPARATE**, MIX	Sets the headset audio. **SEPARATE:** Set L and R separately. **MIX:** Set L and R to the same settings.
	INTERCOM	---, **LEFT**, RIGHT, BOTH	When the Line select / Receive MIX select switch on the operation panel is set to MIX, menu items ENG and PROD appear instead of this item (the setting values are same as this item).
	PGM1	---, LEFT, **RIGHT**, BOTH	
	PGM2	---, LEFT, **RIGHT**, BOTH	
	PGM3	**---**, LEFT, RIGHT, BOTH	
	TRACKER	**---**, LEFT, RIGHT, BOTH	
	SIDE TONE	MUTE, 1 to 99, **50**	
	INTERCOM1/2	**SEPARATE**, MIX	Set to MIX for intercom communication between intercom 1 and intercom 2. When set to MIX, you can receive audio from the other party if the following condition is satisfied. • When the intercom line of the other party (ENG/PROD) can be received
	MIX TALK	**ENG**, PROD	When the Line select / Receive MIX select switch on the operation panel is set to MIX, this sets the TALK destination.
	PGM3 VOLUME LINK	**PGM1**, PGM2, MENU	Sets the method for controlling PGM volume. **PGM1:** Determined by the PGM1 control of intercom 2. **PGM2:** Determined by the PGM2 control of intercom 2. **MENU:** Determined by menu setting.
	(Blank)	0% to **50%** to 100%	Displayed only when PGM3 VOLUME LINK is set to MENU.
<TRACKER> 22	RECEIVE SELECT	**SEPARATE**, MIX	Sets the headset audio. **SEPARATE:** Set L and R separately. **MIX:** Set L and R to the same settings.
	[1-LR]		
	INTERCOM	---, **LEFT**, RIGHT, BOTH	When the INTERCOM1 Line select / Receive MIX select switch on the operation panel is set to MIX, menu items ENG and PROD appear instead of this item (the setting values are same as this item).
	PGM1	---, LEFT, **RIGHT**, BOTH	
	PGM2	---, LEFT, **RIGHT**, BOTH	
	PGM3	**---**, LEFT, RIGHT, BOTH	
	[2]		
	INTERCOM	ON, **OFF**	When the INTERCOM1 Line select / Receive MIX select switch on the operation panel is set to MIX, menu items ENG and PROD appear instead of this item (the setting values are same as this item).
	PGM1	ON, **OFF**	
	PGM2	ON, **OFF**	
	PGM3	ON, **OFF**	
	OUTPUT LEVEL 1-L	**0 dBu**, –6 dBu, –12 dBu, –18 dBu, –20 dBu, –24 dBu	
	OUTPUT LEVEL 1-R		
	OUTPUT LEVEL 2		
	OPERATION LINK	**INCOM1**, INCOM2	Selects which intercom to link to the headset microphone on/off control, Line select / Receive MIX switch, MIX TALK setting, and each volume adjustment.
	MIX TALK(INCOM1)	**ENG**, PROD	Same as MIX TALK on the <INTERCOM1> page. (Displayed when OPERATION LINK is set to INCOM1)
	MIX TALK(INCOM2)	**ENG**, PROD	Same as MIX TALK on the <INTERCOM2> page. (Displayed when OPERATION LINK is set to INCOM2)

OPERATION			
Page name Page No.	**Item**	**Settings**	**Description**
<EARPHONE> 23	RECEIVE SELECT	**SEPARATE**, MIX	Sets the headset audio. **SEPARATE:** Set L and R separately. **MIX:** Set L and R to the same settings.
	INTERCOM	---, **LEFT**, RIGHT, BOTH	When the intercom Line select / Receive MIX select switch selected by OPERATION LINK on the operation panel is set to MIX, menu items ENG and PROD appear instead of this item (the setting values are same as this item).
	PGM1	---, LEFT, **RIGHT**, BOTH	
	PGM2	---, LEFT, **RIGHT**, BOTH	
	PGM3	**---**, LEFT, RIGHT, BOTH	
	TRACKER	---, **LEFT**, RIGHT, BOTH	
	SIDE TONE	MUTE, 1 to 99, **50**	
	OPERATION LINK	**INCOM1**, INCOM2	Selects which intercom to link to the headset microphone on/off control, Line select / Receive MIX switch, MIX TALK setting, and each volume adjustment.
	MIX TALK(INCOM1)	**ENG**, PROD	Same as MIX TALK on the <INTERCOM1> page. (Displayed when OPERATION LINK is set to INCOM1)
	MIX TALK(INCOM2)	**ENG**, PROD	Same as MIX TALK on the <INTERCOM2> page. (Displayed when OPERATION LINK is set to INCOM2)
	PGM3 LINK(INCOM1)	**PGM1**, PGM2, MENU	Same as PGM3 VOLUME LINK on the <INTERCOM1> page. (Displayed when OPERATION LINK is set to INCOM1)
	(Blank)	0% to **50%** to 100%	
	PGM3 LINK(INCOM2)	**PGM1**, PGM2, MENU	Same as PGM3 VOLUME LINK on the <INTERCOM2> page. (Displayed when OPERATION LINK is set to INCOM2)
	(Blank)	0% to **50%** to 100%	
<OPERATOR FILE> 24	IMPORT FROM USB	Execute using ENTER.	Reads the operator file from a USB drive.
	EXPORT TO USB	Execute using ENTER.	Writes the current settings of the operator file items to a USB drive.
	PRESET	Execute using ENTER.	Sets the operator file items to the preset values in internal memory.

*1 Observe the following points.

- When you turn D.EXTENDER ON or OFF, noise may be generated. This is not a malfunction. D.EXTENDER does not operate when 4K or 2× speed format is selected.
- TALLY R, TALLY G, and TALLY Y are enabled only in standalone mode.
- When HDLA is attached VF DETAIL, SPIRIT LEVEL INDICATOR, and FOCUS ASSIST INDICATOR do not function.
- VTR S/S is available only when using the camera as a standalone device, and adds the REC signal to the SDI signal. Pressing this button repeatedly toggles recording on/off. While recording, the tally lamp lights in red.
- An ":N/A" suffix is displayed for disabled items.

PAINT Menu

PAINT			
Page name Page No.	**Item**	**Settings**	**Description**
<SW STATUS> P01	FLARE	**ON**, OFF	
	GAMMA	**ON**, OFF	
	BLK GAM	ON, **OFF**	
	KNEE	**ON**, OFF	
	WHT CLIP	**ON**, OFF	
	DETAIL	**ON**, OFF	
	LVL DEP	**ON**, OFF	
	SKIN DTL	ON, **OFF**	
	MATRIX	ON, **OFF**	
<VIDEO LEVEL> P02	WHITE	R/G/B: –99 to +99, **0**	R, G, B, and M (master) values can be independently set. (M cannot be set for WHITE.)
	BLACK	R/G/B/M: –99 to +99, **0.0**	
	FLARE	R/G/B: –99 to +99, **0**	
	GAMMA	M: –99.9 to +99.9, **0**	
	V MOD		
	FLARE	**ON**, OFF	
	V MOD	**ON**, OFF	
	TEST	**OFF**, SAW, 10STEP	
<COLOR TEMP> P03	WHITE	R/G/B: –99 to +99, **0**	
	AUTO WHITE BALANCE	Execute using ENTER.	
	COLOR TEMP	0 K to 65535 K, **3200 K**	
	BALANCE	–99 to +99, **0**	
	ATW	ON, **OFF**	
	SPEED	1, **2**, 3, 4, 5	
	MASTER WHITE GAIN	–6 dB to +12 dB, **0.0 dB**	Sets gain using continuous variable control.
	MASTER GAIN	–6, –3, **0**, 3, 6, 9, 12 dB	Sets gain in step value changes.
<GAMMA> P04	LEVEL	R/G/B/M: –99 to +99, **0**	R, G, B, and M (master) values can be independently set.
	COARSE	0.35 to 0.90 (0.05 steps), **0.45**	
	TABLE	**STANDARD**, HYPER, USER	
		1, 2, 3, 4, **5**, 6, 7	With STANDARD or USER selected (only 1 to 5 are available for USER) **1:** Equivalent to a camcorder **2:** ×4.5 gain **3:** ×3.5 gain **4:** Equivalent to SMPTE-240M **5:** Equivalent to ITU-R709 **6:** ×5.0 gain **7:** ×5.0–709
		1, 2, 3, **4**	With HYPER selected **1:** 325% to 100% **2:** 460% to 100% **3:** 325% to 109% **4:** 460% to 109%
	GAMMA	**ON**, OFF	
	TEST	**OFF**, SAW, 10STEP	
<BLACK GAMMA> P05	LEVEL	R/G/B/M: –99 to +99, **0**	R, G, B, and M (master) values can be independently set.
	RANGE	LOW, L.MID, H.MID, **HIGH**	
		ON, **OFF**	
	TEST	**OFF**, SAW, 10STEP	

PAINT			
Page name Page No.	**Item**	**Settings**	**Description**
<SATURATION> P06	SATURATION	–99 to +99, **0**	
		ON, **OFF**	
	LOW KEY SAT	–99 to +99, **0**	
	RANGE	LOW, L.MID, H.MID, **HIGH**	
		ON, **OFF**	
	TEST	**OFF**, SAW, 10STEP	
<KNEE> P07	K POINT	R/G/B/M: –99 to +99, **0**	R, G, B, and M (master) values can be independently set. Absolute values are displayed in ABS mode except for M (master).
	K SLOPE	R/G/B/M: –99 to +99, **0**	
	KNEE	**ON**, OFF	
	KNEE MAX	ON, **OFF**	
	KNEE SAT	–99 to +99, **0**	
		ON, **OFF**	
	AUTO KNEE	**OFF**, AUTO, (OFF)	**(OFF):** Displayed only for 4K/HDR format.
	POINT LIMIT	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	SLOPE	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	ABS		Highlighted: ABS (Absolute) mode
<WHITE CLIP> P08	W CLIP	–99 to +99, **0**	
		ON, OFF	
	ABS		Highlighted: ABS (Absolute) mode
<DETAIL 1> P09	DETAIL	**ON**, OFF	
	LEVEL	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	HFR RATIO	0 to 199%, **100%**	Adjustment value in HFR format mode
	LIMITER [M]	–99 to +99, **0**	
	LIMITER [WHT]	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	LIMITER [BLK]	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	CRISP	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	HFR RATIO	0 to 199%, **100%**	Adjustment value in HFR format mode
	LEVEL DEPEND	–99 to +99, **0**	Absolute value is displayed in ABS mode.
		ON, OFF	
	ABS		Highlighted: ABS (Absolute) mode
<DETAIL 2> P10	H/V RATIO	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	FREQ	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	MIX RATIO	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	KNEE APT	–99 to +99, **0**	Absolute value is displayed in ABS mode.
		ON, **OFF**	
	DTL H/V MODE	**H/V**, V Only	
	INDEPENDENT	ON, **OFF**	
	ABS		Highlighted: ABS (Absolute) mode

PAINT			
Page name Page No.	**Item**	**Settings**	**Description**
<HD DETAIL> P11	LEVEL	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	LIMITER [M]	–99 to +99, **0**	
	LIMITER [WHT]	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	LIMITER [BLK]	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	CRISP	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	LEVEL DEPEND	–99 to +99, **0**	Absolute value is displayed in ABS mode.
		ON, OFF	
	H/V RATIO	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	FREQ	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	MIX RATIO	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	KNEE APT	–99 to +99, **0**	Absolute value is displayed in ABS mode.
		ON, **OFF**	
	ABS		Highlighted: ABS (Absolute) mode
<4K DETAIL> P12	LEVEL	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	LIMITER [M]	–99 to +99, **0**	
	LIMITER [WHT]	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	LIMITER [BLK]	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	CRISP	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	LEVEL DEPEND	–99 to +99, **0**	Absolute value is displayed in ABS mode.
		ON, OFF	
	H/V RATIO	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	FREQ	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	MIX RATIO	–99 to +99, **0**	Absolute value is displayed in ABS mode.
	KNEE APT	–99 to +99, **0**	Absolute value is displayed in ABS mode.
		ON, **OFF**	
	ABS		Highlighted: ABS (Absolute) mode
<SKIN DETAIL> P13	SKIN DTL	ON, **OFF**	
	SKIN GATE	**OFF**, 1, 2, 3, (MAT)	**1**, **2**, **3:** The skin gate function can be turned on for the specified channel only. **(MAT):** Displayed when GATE of <MULTI MATRIX> is ON.
	NATURAL SKINDTL	**OFF**, ON	
	ZOOM LINK	**OFF**, ON	
	TELE	0 to **99**	
	WIDE	**0** to 99	
	CH SW	1: (ON), 2/3: ON, **OFF**	Sets the skin tone detail function independently for each channel. (Channel 1 is always set to ON.) Absolute values are indicated for LEVEL only in ABS mode.
	HUE	1/2/3: Execute using ENTER.	
	PHASE	1/2/3: **0** to 359	
	WIDTH	1/2/3: 0 to 90, **29**	
	SAT	1/2/3: –99 to +99, **–89**	
	LEVEL	1/2/3: –99 to +99, **0**	
	Y LIMIT	1/2/3: **0** to 99	
	ABS		Highlighted: ABS (Absolute) mode

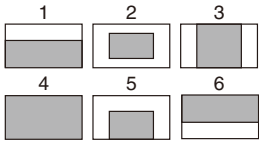
PAINT			
Page name Page No.	**Item**	**Settings**	**Description**
<USER MATRIX> P14	R-G	–99 to +99, **0**	
	R-B	–99 to +99, **0**	
	G-R	–99 to +99, **0**	
	G-B	–99 to +99, **0**	
	B-R	–99 to +99, **0**	
	B-G	–99 to +99, **0**	
	MATRIX	ON, **OFF**	
	PRESET	**---**, ON, OFF	
		---, SMPTE-240M, **ITU-709**, SMPTE-WIDE, NTSC, EBU, ITU-601, CUSTOM1, CUSTOM2, CUSTOM3, CUSTOM4, CUSTOM5	
	USER	**---**, ON, OFF	
	MULTI	**---**, ON, OFF	
	ADAPTIVE MATRIX	**OFF**, ON	
	LEVEL	0 to 7, **0**	
<MULTI MATRIX> P15	PHASE	**0**, 23, 45, 68, 90, 113, 135, 158, 180, 203, 225, 248, 270, 293, 315, 338	Selects an axis (angle) at PHASE for which the multimatrix adjustment is to be made, and sets HUE and SAT. (HUE and SAT can be adjusted independently for 16 axes.)
	HUE	–99 to +99, **0**	
	SAT	–99 to +99, **0**	
	ALL CLEAR	Execute using ENTER.	
	GATE	ON, **OFF**, (SKIN)	**(SKIN):** Displayed when SKIN GATE of <SKIN DETAIL> is ON.
	MATRIX	ON, **OFF**	
	PRESET	**---**, ON, OFF	
		---, SMPTE-240M, ITU-709, SMPTE-WIDE, NTSC, EBU, ITU-601, CUSTOM1, CUSTOM2, CUSTOM3, CUSTOM4, CUSTOM5	
	USER	**---**, ON, OFF	
	MULTI	**---**, ON, OFF	

PAINT			
Page name Page No.	**Item**	**Settings**	**Description**
<SHUTTER> P16	SHUTTER	ON, **OFF**, (ON), (OFF)	Settings in ( ): When a remote control unit/panel or a CCU is not connected (cannot be changed)
		When imaging frequency is 60.00 Hz or 59.94 Hz: **1/100**, 1/125, 1/250, 1/500, 1/1000, 1/2000 When imaging frequency is 50 Hz: 1/60, **1/125**, 1/250, 1/500, 1/1000, 1/2000 When imaging frequency is 30.00 Hz or 29.97 Hz: 1/40, 1/60, 1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/2000 When imaging frequency is 25 Hz: 1/33, 1/50, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 When imaging frequency is 24 Hz or 23.98 Hz: 1/32, 1/48, 1/96, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000	Step shutter selection
	ECS FREQ	When imaging frequency is 60.00 Hz: 60.13 Hz to 4600 Hz When imaging frequency is 59.94 Hz: **60.07** Hz to 4600 Hz When imaging frequency is 50 Hz: 50.12 Hz to 4600 Hz When imaging frequency is 30.00 Hz: 30.02 Hz to 2700 Hz When imaging frequency is 29.97 Hz: 29.99 Hz to 2700 Hz When imaging frequency is 25 Hz: 25.02 Hz to 2300 Hz When imaging frequency is 24 Hz: 24.02 Hz to 2200 Hz When imaging frequency is 23.98 Hz: 23.99 Hz to 2200 Hz	
<NOISE SUPPRESSION> P17	SUPPRESSION	**0** to 100%	
		ON, **OFF**	
<FLICKER REDUCTION> P18	REDUCTION	ON, **OFF**, (OFF)	**(OFF):** Displayed for normal speed formats other than HFR. **Note** When you turn REDUCTION ON or OFF, noise may be generated. This is not a malfunction.
	POWER LINE FREQUENCY	**50 Hz**, 60 Hz	Specifies the frequency of the lighting power source.
	MODE	**STANDARD**, ACM, (OFF)	**STANDARD:** Corrects flicker without adding an image. **ACM:** Corrects flicker by adding images. **(OFF):** Displayed for normal speed formats other than HFR.
	GAIN	–99 to +99, **0**	Enabled only when STANDARD is selected. Sets the correction gain.
	OFFSET	**0** to 99	Enabled only when STANDARD is selected. Sets the brightness level that invokes correction.
	ACM TYPE	**1**, 2, 3, 4	Enabled only when ACM is selected. Selects the combination of frames to add. More frames are added as the value increases.

PAINT			
Page name Page No.	**Item**	**Settings**	**Description**
<HDR OPERATION> P19	HDR MODE	**OFF**, LIVE HDR	Displays the CCU setting.
	SDR GAIN	0.0 to –15.0 dB, **–6.0 dB**	Enabled only when LIVE HDR is selected. Gain setting applied to the SDR output.
	HDR CONTRAST	100 to 566%, **200%**	Enabled only when LIVE HDR is selected (display only). Sets the percentage in HDR which is equivalent to 100% brightness in SDR. Varies depending on SDR GAIN.
	HDR TARGET WHITE	99 to 765nit, **228nit**	Enabled only when LIVE HDR is selected (display only). Sets the number of nits in HDR which is equivalent to 100% brightness in SDR. Varies depending on SDR GAIN and HDR LOOK.
	HDR BLACK OFFSET	–30.0 to 30.0, **0.0**	Enabled only when LIVE HDR is selected. HDR output black offset
	HDR KNEE	**OFF**, ON	Enabled only when LIVE HDR is selected. KNEE setting applied for HDR
	POINT	–99 to 99, **0**	
	SLOPE	–99 to 99, **0**	
	HDR WHITE CLIP	**OFF**, ON	Enabled only when LIVE HDR is selected.
	LEVEL	–99 to 99, **0**	
	HDR BLACK CLIP	**OFF**, ON	Enabled only when LIVE HDR is selected. Sets whether to clip at 0% and lower in the HDR output. Set to OFF (fixed) when <OUTPUT FORMAT> → FREQUENCY → OETF is set to S-Log3.
	HDR BLACK COMPRESSION	**OFF**, ON	Enabled only when LIVE HDR is selected. Sets whether to compress low-luminance areas in the HDR output.
<HDR USER GAMMA> P20	HDR USER GAMMA	**OFF**, ON	Turns the HDR user gamma function on/off (function which allows you to apply a user-created curve to HDR output).
	TABLE	**1** to 5	Selects the number of the curve to apply to HDR output.
	NAME		Displays the name of the selected curve.
	OETF		Displays the OETF corresponding to the selected curve. If this does not match the configured OETF, the intended picture will not be obtained.
	D-RANGE		Displays the dynamic range corresponding to the selected curve.
<OPTICAL FILTER> P21	ND	**1**, 2, 3, 4, 5	Sets the ND filter to use.
	CC	A, **B**, C, D	Sets the CC filter to use.

PAINT			
Page name **Page No.**	**Item**	**Settings**	**Description**
<SCENE FILE> P22	1		Stores and reads scene files (paint data): When storing a file in camera memory, specify the number before executing STORE. When reading, only specify the number.
	2		
	3		
	4		
	5		
	STORE	Execute using ENTER.	
	01	**01** to 32	
	STANDARD	Execute using ENTER.	Reads the standard paint data.
	IMPORT FROM USB	Execute using ENTER.	Loads 32 scene files from a USB drive to internal memory.
	EXPORT TO USB	Execute using ENTER.	Writes 32 scene files in the camera's memory to a USB drive.
	FILE ID	Max. 14 characters	Enters a comment for the scene files to be written to a USB drive. See *"To specify a character string" (page 21).*
	CAM CODE	Camera code	Display only
	DATE	Date	Display only
	DISSOLVE	**OFF**, ON	Switches scene files seamlessly.
	SPEED	0.2 to 2.8 (0.2 steps), 3 to 10 (1 steps), **0.2**	

MAINTENANCE Menu

MAINTENANCE			
Page name Page No.	**Item**	**Settings**	**Description**
<AUTO SETUP> M01	AUTO BLACK	Execute using ENTER.	
	AUTO WHITE	Execute using ENTER.	
	AUTO LEVEL	Execute using ENTER.	
	TEST	**OFF**, SAW, 10STEP	
<WHITE SHADING> M02	V SAW	R/G/B: –99 to +99, **0**	R, G, and B values can be independently set.
	V PARA	R/G/B: –99 to +99, **0**	
	H SAW	R/G/B: –99 to +99, **0**	
	H PARA	R/G/B: –99 to +99, **0**	
	WHITE	R/G/B: –99 to +99, **0**	
<BLACK SHADING> M03	V SAW	R/G/B: –99 to +99, **0**	R, G, and B values can be independently set. M (master) value can also be set for BLACK.
	V PARA	R/G/B: –99 to +99, **0**	
	H SAW	R/G/B: –99 to +99, **0**	
	H PARA	R/G/B: –99 to +99, **0**	
	BLK SET	R/G/B: –99 to +99, **0**	
	BLACK	R/G/B: –99 to +99, **0** M: –99.9 to +99.9, **0.0**	
	MASTER GAIN	–6, –3, **0**, 3, 6, 9, 12 dB	Sets gain in step value changes.
<OHB MATRIX> M04	OHB MATRIX	**ON**, OFF	
	MATRIX	ON, **OFF**	
<AUTO IRIS> M05	AUTO IRIS	ON, **OFF**, (ON), (OFF)	Settings in ( ): When a remote control unit/panel or a CCU is not connected (cannot be changed)
	WINDOW	**1**, 2, 3, 4, 5, 6	Selects the auto iris windows:  The shaded parts indicate the area where light detection occurs.
	OVERRIDE	–99 to 99, **0**, ---	Sets the override to temporarily change the reference value for brightness of the automatic iris level in the range of ±2 steps: –99: Two steps to fully closed iris. 99: Two steps to fully opened iris. ---: OFF The setting returns to "---" when the power is turned off.
	IRIS LEVEL	–99 to +99, **0**	±4 steps
	APL RATIO	–99 to +99, **65**	
	IRIS GAIN	–99 to +99, **0**	
	IRIS CLOSE	ON, **OFF**	

MAINTENANCE			
Page name **Page No.**	**Item**	**Settings**	**Description**
<LENS1> M06	F NO. DISP	**CONTROL**, RETURN	Selects the iris indication on the panel when AUTO IRIS is off: **CONTROL:** Displays the value from the camera. **RETURN:** Displays the value returned from the lens. (When AUTO IRIS is on, the value returned from the lens is always displayed.)
	AF DISPLAY	ON, **OFF**	
	ALAC	**AUTO**, OFF	With AUTO selected, the status is displayed at the right. (ACTIVE): Compensation is in progress. (WAIT): Waiting for completion of lens initialization. (STOP): Compensation is turned off for a non-applicable lens.
	F DROP COMP	**OFF**, ON, (OFF)	Turns F drop compensation on/off. During compensation, the compensation gain is displayed on the right. (OFF): For when a serial lens is not attached.
	MAX GAIN	**0.0** to 24.0 dB	Maximum compensation value
	DROP POINT	0 to 99, **50**	Compensation start point
	ROUNDNESS	**0.0** to 12.0 dB	Roundness of the compensation curve.
	STORE LENS FILE	Execute using ENTER.	Saves settings to a lens file.
	ARIA	AUTO, **OFF**	With AUTO selected, the status is displayed at the right. (ACTIVE): Compensation is in progress. (WAIT): Waiting for completion of lens initialization. (STOP): Compensation is turned off for a non-applicable lens.
	GAIN LIMIT	0 to 12 dB, **OFF**	Sets the maximum gain to compensate for F drop (No limit when set to OFF).

MAINTENANCE			
Page name Page No.	**Item**	**Settings**	**Description**
<LENS2> M07	REMOTE CONTROL	**OFF**, ON, (OFF)	Lens remote control from MSU/RCP on/off setting. Same function as the Active button on the Zoom/ Focus Control screen of the MSU/RCP. (OFF): When lens is not supported
	CONTROL MODE	**ZOOM&FOCUS**, FOCUS, FOLLOW FOCUS	**ZOOM&FOCUS:** Control ZOOM and FOCUS from an MSU/RCP (control by lens demand is not supported) **FOCUS:** Control FOCUS from an MSU/RCP. ZOOM is controlled by lens demand. **FOLLOW FOCUS:** FOCUS is controlled by lens demand, but can be adjusted (offset fine adjustment) from an MSU/RCP. ZOOM is controlled by lens demand. **Note** Settings other than FOLLOW FOCUS cannot be modified when the offset is not 0 and REMOTE CONTROL is OFF. To change settings, set REMOTE CONTROL to ON.
	FOLLOW FOCUS		
	OFFSET ADJUST SENS	1, 2, **3**, 4, 5	Sets the sensitivity of superimposing the offset of the MSU.
	OFFSET CANCEL GAIN	1, 2, **3**, 4, 5	Sets the sensitivity of canceling the offset on the demand side.
	VIRTUAL IRIS	ON, **OFF**	Turns the following function on/off. • If you attempt to open the lens higher than the F value set using F No. UPPER LIMIT, the iris is locked in position and the image is brightened using digital gain instead.
	F No. UPPER LIMIT	F2.0 to **F4.0** to F5.6	Sets the maximum position for opening the lens (F value).
	EXTENDER COMP.	ON, **OFF**	• When the built-in lens extender function of a lens is turned on, the lens automatically sets the F value of the iris to 1/2. Set the lens extender compensation to ON if the lens supports compensation that will maintain the same brightness as before the extender function was turned on. Consequently, the F value set using F No. UPPER LIMIT is also applied when the lens extender function is turned on. • If a lens is attached that does not support compensation as described above, set the lens extender compensation to OFF.
<MIC GAIN> M08	MIC1	20, 30, 40, 50, **60** dB	Can be modified only in standalone operation.
	MIC2	20, 30, 40, 50, **60** dB	

MAINTENANCE			
Page name Page No.	**Item**	**Settings**	**Description**
<CAMERA NUMBER> M09	CAMERA NUMBER	**---**, 1 to 96	Sets the camera number. **Note** During system operation (when configured to send SYSCAM number using the MSU) or CCU operation, the value is displayed in parentheses and cannot be changed.
	CCU LINK	**OFF**, ON	Turns the link with the CCU No. on/off. When on, you can set the camera number from the CCU.
	LOCAL	**OFF**, ON	Sets number not linked to a system.
	OUTSIDE DISPLAY		
	CAMERA NUMBER	**OFF**, ON	Turns the camera number display on the side panel on/off.
	X	–100 to 100, **0**	Sets the text position of the camera number (0: center position)
	Y	–100 to 100, **0**	Sets the text position of the camera number (0: center position)
	SIZE	0 to 150, **100**	Sets the text size of the camera number.
	BACKGROUND	BLACK, WHITE, LOGO	Sets the background color. **LOGO:** Set imported logo as the background.
		READ LOGO	Import logo data (BMP file) to use for the background color. To import logo data into the camera, prepare monochrome 200×200 pixel data. Change the file name of the data to “logo.bmp”, copy the file to a USB drive, connect the drive to the unit, and then select READ LOGO in the menu.
		DELETE LOGO	Deletes the configured logo data.
<CALL/TALLY> M10	CCU CALL	OFF, **ON**	Selects whether TALLY lights for CALL signal.
	CAM CALL	**OFF**, ON	
	UP TALLY	OFF, **ON**	
	TALLY BRIGHTNESS	0 to 100, **50**	
	NUMBER BRIGHTNESS	0 to 100, **50**	
	NUMBER DISPLAY	**AUTO**, OFF, ON	
	SIDE TALLY		Sets the display mode of the LED on the side panel.
	MODE	OFF, **TALLY**, LIGHT	**TALLY:** Function as a tally. **LIGHT:** Function as a light.
	BRIGHTNESS	0 to 100, **50**	Sets the brightness of the LED.
	TALLY GUARD		Selects whether to prevent changes while TALLY is lit.
	EXTENDER	**OFF**, ON	
	FILTER DISC	**OFF**, ON	

MAINTENANCE			
Page name Page No.	**Item**	**Settings**	**Description**
<OUTPUT FORMAT> M11 (U12)	CURRENT	Display only	Displays the current format.
	RESOLUTION	3840×2160, **1920×1080**	Not displayed when a CCU is connected. System format settings (The selectable system formats vary depending on camera operating software options.)
	FREQUENCY	60.00P, **59.94P**, 50P, 30P, 29.97P, 25P, 24P, 23.98P, 59.94P(2×), 50P(2×), 59.94i(444), 50i(444), 29.97PsF(444), 25PsF(444), 24PsF(444), 23.98PsF(444)	
	OETF	**SDR**, S-Log3, HLG, S-Log3(Cinema)	Not displayed when a CCU is connected. Sets the camera OETF. When S-Log3(Cinema) is selected, functions in cinema mode with the following set to OFF (fixed): • DETAIL, SKIN DETAIL, SATURATION, MATRIX, OHB MATRIX, LOW KEY SATURATION, AUTO KNEE, BLACK GAMMA, WHITE CLIP, HDR BLACK OFFSET, HDR KNEE, HDR WHITE CLIP, HDR BLACK CLIP, HDR BLACK COMPRESSION BLACK setting is not applied to S-Log3 output, only to SDR.
	LOOK	-----, Live, Mild, Natural	Not displayed when a CCU is connected. Sets the Look of the HDR output. "----" when OETF is set to SDR or S-Log3(Cinema).
	COLOR	**BT.709**, BT.2020, S-Gamut3, S-Gamut3.Cine	Not displayed when a CCU is connected. Camera color space setting Set to BT.709 (fixed) when OETF is set to SDR. BT.709 or BT.2020 can be selected when OETF is set to S-Log3 or HLG. BT.2020, S-Gamut3, or S-Gamut3.Cine can be selected when OETF is set to S-Log3(Cinema).
	BIT DEPTH	**10bit**, 12bit	Not displayed when a CCU is connected. Can be selected for RGB 444 only.
	60.00Hz	**DISABLE**, ENABLE	Not displayed when a CCU is connected. Sets whether to enable formats for shooting at 60.00 Hz.
<TEST OUT> M12 (U13)	OUTPUT	Display only	Displays the current format.
	VBS-OUT		Displayed when OUTPUT is set to VBS.
	CHARACTER	ON, **OFF**	
	GAIN	–99 to +99, **0**	
	CHROMA	–99 to +99, **0**	
	SETUP	**OFF**, ON	
	DOWN CONVERTER		Displayed when OUTPUT is set to VBS.
	SELECT	**MAIN**, RET, VF	
	ASPECT	**SQ**, EC	Displayed when OUTPUT is set to VBS (NTSC).
	SYNC-OUT		Displayed when OUTPUT is set to SD-SYNC or HD-SYNC.
	V-PHASE	–999 to +999, **0**	
	H-PHASE	–999 to +999, **0**	

MAINTENANCE			
Page name **Page No.**	**Item**	**Settings**	**Description**
<SDI OUT> M13 (U14)	SDI-1	See *"SDI-1 and SDI-2 output formats (system with frequency setting of 1/1.001 (525))" (page 56)* and *"SDI-1 and SDI-2 output formats (system with frequency setting of 1/1.000 (625))" (page 61).*	Sets the SDI-1 and SDI-2 output formats.
	SDI-2		
	SDI-3		
	SDI-MONI OUT	MAIN, **VF**, RET, SD-SDI, OFF	
	CHARACTER	ON, **OFF**	Displayed when SDI-MONI OUT is not set to VF.
	EMB AUDIO	**OFF**, MIC, PGM	
	DOWN CONVERTER		Displayed when SDI-MONI OUT is set to SD-SDI.
	SELECT	**MAIN**, RET, VF	
	ASPECT	**SQ**, EC	
<META DATA > M14	LENS META DATA	ON, OFF	Select whether to embed lens information in SDI OUT.
<TRUNK> M15	TRUNK	**ON**, OFF	
	INTERFACE	**232c**, 422A	
	AUX REMOTE		Display only
	NETWORK TRUNK		Display only
	LINK		
<GENLOCK> M16	REFERENCE	Synchronization status	Display only
	GENLOCK	**ENABLE**, DISABLE	Not displayed when a CCU is connected.
	STATUS		
	FORMAT		
	PHASE		
	V	–1024 to 1023, **0**	
	H	–1700 to 1700, **0**	
<DATE> M17	DATE/TIME	2000 to 2035/01 to 12/00 to 31 00 to 23 : 00 to 59	
	DATE FORMAT	1 Y/Mn/D, 2 Mn/D, 3 D/M/Y 4 D/M, **5 M/D/Y**, 6 M/D	**Y:** Year **Mn:** Month (numeric) **M:** Month (English abbreviation) **D:** Day
<BATTERY ALARM> M18	BEFORE END	**11.5** to 17.0 V	
	END	**11.0** to 11.5 V	
<SIMPLE PROTOCOL> M19 Displayed only in standalone operation.	TRANSPORT CONVERTER MODE	**DISABLE**, ENABLE	Enables transport conversion mode to enable camera control using transmission lines/networks with high latency, such as wireless transmission. **Note** When transport conversion mode is enabled, the WHITE BAL and other switches on the unit do not function.
	PORT	**REMOTE(RS-422A)**, CRANE(RS-422A), CRANE(RS-232C)	Sets the port to enable for transport conversion mode.
	BAUDRATE	9.6kbps to 843.75kbps, **115.2kbps**	Communication speed
<OTHERS> M20	FAN MODE	OFF, **AUTO1**, AUTO2, MIN, MAX	**AUTO1:** Normal rotation **AUTO2:** Slow rotation
	CAM BARS	ON, **OFF**, (OFF)	**(OFF):** Displayed only for 4K/HDR format.
	WHITE SETUP MODE	AWB, **A.LVL**	
	STANDALONE PAINT SWITCH	**OFF**, ON	When set to ON, disables operation of the unit's switches, such as the WHITE BAL switch, even when a CCU or control panel is not connected.
	HD DOWNCONV FILTER	**1**, 2, 3, 4, 1(V0.3), 1(V0.6), (4)	**(4):** Displayed only for 4K/HDR format.

MAINTENANCE			
Page name Page No.	**Item**	**Settings**	**Description**
<OPTION KEY> M21	IMPORT FROM USB	Execute using ENTER.	Reads the install key from a USB drive.
	EFFECTIVE FUNCTION		Displayed only when option function is installed.

SDI-1 and SDI-2 output formats (system with frequency setting of 1/1.001 (525))

Standard state

OUTPUT FORMAT			SDI OUT			
			SDI-1		SDI-2	
RESOLUTION	FREQUENCY	OETF	Settings	Output formats	Settings	Output formats
1920×1080	59.94P	Other than SDR	**OFF** HD/3G-A/HDR HD/3G-A/SDR HD/3G-B/HDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i –	**OFF** HD/3G-A/HDR HD/3G-A/SDR HD/3G-B/HDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i – – –
		SDR	**OFF** HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i –	**OFF** HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i – – –
3840×2160	59.94P	Other than SDR	**OFF** 4K/12G/HDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/59.94P 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i –	**OFF** 4K/12G/HDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/59.94P 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i – – –
		SDR	**OFF** 4K/12G/SDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/59.94P 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i –	**OFF** 4K/12G/SDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/59.94P 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i – – –
	29.97P	Other than SDR	**OFF** 4K/6G/HDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/29.97P 1920×1080/29.97PsF –	**OFF** 4K/6G/HDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/29.97P 1920×1080/29.97PsF – – –
		SDR	**OFF** 4K/6G/SDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/29.97P 1920×1080/29.97PsF –	**OFF** 4K/6G/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/29.97P 1920×1080/29.97PsF – – –
	23.98P	Other than SDR	**OFF** 4K/6G/SDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/23.98P 1920×1080/23.98PsF –	**OFF** 4K/6G/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/23.98P 1920×1080/23.98PsF – – –
		SDR	**OFF** 4K/6G/SDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/23.98P 1920×1080/23.98PsF –	**OFF** 4K/6G/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/23.98P 1920×1080/23.98PsF – – –

*1 Available for selection only when NETWORK TRUNK >DATA RATE of the CCU is set to 100 Mbps.

*2 Available for selection only when a CCU is connected.

*3 Available for selection only in standalone operation.

When HZC-PSF50/PSF50M/PSF50W is installed

OUTPUT FORMAT			SDI OUT			
			SDI-1		SDI-2	
RESOLUTION	FREQUENCY	OETF	Settings	Output formats	Settings	Output formats
1920×1080	29.97PsF	Other than SDR	**OFF** HD/1.5G/HDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/29.97PsF 1920×1080/29.97PsF –	**OFF** HD/1.5G/HDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/29.97PsF 1920×1080/29.97PsF – – –
		SDR	**OFF** HD/1.5G/SDR UHD PROMPTER	 1920×1080/29.97PsF –	**OFF** HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/29.97PsF – – –
	23.98PsF	Other than SDR	**OFF** HD/1.5G/HDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/23.98PsF 1920×1080/23.98PsF –	**OFF** HD/1.5G/HDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/23.98PsF 1920×1080/23.98PsF – – –
		SDR	**OFF** HD/1.5G/SDR UHD PROMPTER	 1920×1080/23.98PsF –	**OFF** HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/23.98PsF – – –
	29.97PsF(444) (HZC-UG50 is required)	SDR (fixed)	**OFF** HD/3G-B/SDR UHD PROMPTER	 1920×1080/29.97PsF(444) –	**OFF** HD/3G-B/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/29.97PsF(444) – – –
	23.98PsF(444) (HZC-UG50 is required)	SDR (fixed)	**OFF** HD/3G-B/SDR UHD PROMPTER	 1920×1080/23.98PsF(444) –	**OFF** HD/3G-B/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/23.98PsF(444) – – –

*1 Available for selection only when NETWORK TRUNK >DATA RATE of the CCU is set to 100 Mbps.

*2 Available for selection only when a CCU is connected.

*3 Available for selection only in standalone operation.

When HZC-HFR50/HFR50M/HFR50W/HFR50P is installed

OUTPUT FORMAT			SDI OUT			
			SDI-1		SDI-2	
RESOLUTION	FREQUENCY	OETF	Settings	Output formats	Settings	Output formats
1920×1080	59.94P(2×)	Other than SDR	**OFF** HD/12G/HDR/HFR HD/3G-A/HDR/HFR HD/3G-B/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/59.94P/Link A-B 1920×1080/59.94P/Link A 1920×1080/59.94P/Link A 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i –	**OFF** HD/12G/HDR/HFR HD/3G-A/HDR/HFR HD/3G-B/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN[*1, *2] HD TRUNK IN[*2] HD RETURN IN[*3]	 1920×1080/59.94P/Link A-B 1920×1080/59.94P/Link B 1920×1080/59.94P/Link B 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i – – –
		SDR	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR/HFR HD/3G-B/SDR/HFR HD/3G-B/SDR/HFR(i) HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/59.94P/Link A-B 1920×1080/59.94P/Link A 1920×1080/59.94P/Link A 1920×1080/59.94i/Link A-B 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i –	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR/HFR HD/3G-B/SDR/HFR HD/3G-B/SDR/HFR(i) HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN[*1, *2] HD TRUNK IN[*2] HD RETURN IN[*3]	 1920×1080/59.94P/Link A-B 1920×1080/59.94P/Link B 1920×1080/59.94P/Link B 1920×1080/59.94i/Link A-B 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i – – –
	59.94P(3×)	Other than SDR	**OFF** HD/12G/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/59.94P/Link A-C 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i –	**OFF** HD/12G/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN[*1, *2] HD TRUNK IN[*2] HD RETURN IN[*3]	 1920×1080/59.94P/Link A-C 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i – – –
		SDR	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/59.94P/Link A-C 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i –	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN[*1, *2] HD TRUNK IN[*2] HD RETURN IN[*3]	 1920×1080/59.94P/Link A-C 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i – – –
	59.94P(4×)	Other than SDR	**OFF** HD/12G/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/59.94P/Link A-D 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i –	**OFF** HD/12G/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN[*1, *2] HD TRUNK IN[*2] HD RETURN IN[*3]	 1920×1080/59.94P/Link A-D 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i – – –
		SDR	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/59.94P/Link A-D 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i –	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN[*1, *2] HD TRUNK IN[*2] HD RETURN IN[*3]	 1920×1080/59.94P/Link A-D 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i – – –
	59.94P(6×)	All	**OFF**		**OFF**	
	59.94P(8×)	All	**OFF**		**OFF**	

OUTPUT FORMAT			SDI OUT			
			SDI-1		SDI-2	
RESOLUTION	FREQUENCY	OETF	Settings	Output formats	Settings	Output formats
3840×2160	59.94P(2×)	Other than SDR	**OFF** 4K/12G/HDR/HFR 4K/12G/HDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/59.94P/Link A 3840×2160/59.94P 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i –	**OFF** 4K/12G/HDR/HFR 4K/12G/HDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/59.94P/Link B 3840×2160/59.94P 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i – –
		SDR	**OFF** 4K/12G/SDR/HFR 4K/12G/SDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/59.94P/Link A 3840×2160/59.94P 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i –	**OFF** 4K/12G/SDR/HFR 4K/12G/SDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/59.94P/Link B 3840×2160/59.94P 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i – –

*1 Available for selection only when NETWORK TRUNK >DATA RATE of the CCU is set to 100 Mbps.

*2 Available for selection only when a CCU is connected.

*3 Available for selection only in standalone operation.

When HZC-DFR50/DFR50M/DFR50W is installed

OUTPUT FORMAT			SDI OUT			
			SDI-1		SDI-2	
RESOLUTION	FREQUENCY	OETF	Settings	Output formats	Settings	Output formats
1920×1080	59.94P(2×)	Other than SDR	**OFF** HD/12G/HDR/HFR HD/3G-A/HDR/HFR HD/3G-B/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/59.94P/Link A-B 1920×1080/59.94P/Link A 1920×1080/59.94P/Link A 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i –	**OFF** HD/12G/HDR/HFR HD/3G-A/HDR/HFR HD/3G-B/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/59.94P/Link A-B 1920×1080/59.94P/Link B 1920×1080/59.94P/Link B 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i – – –
		SDR	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR/HFR HD/3G-B/SDR/HFR HD/3G-B/SDR/HFR(i) HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/59.94P/Link A-B 1920×1080/59.94P/Link A 1920×1080/59.94P/Link A 1920×1080/59.94i/Link A-B 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i –	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR/HFR HD/3G-B/SDR/HFR HD/3G-B/SDR/HFR(i) HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/59.94P/Link A-B 1920×1080/59.94P/Link B 1920×1080/59.94P/Link B 1920×1080/59.94i/Link A-B 1920×1080/59.94P 1920×1080/59.94P 1920×1080/59.94i – – –

*1 Available for selection only when NETWORK TRUNK >DATA RATE of the CCU is set to 100 Mbps.

*2 Available for selection only when a CCU is connected.

*3 Available for selection only in standalone operation.

When HZC-UG50/UG50M/UG50W is installed

OUTPUT FORMAT			SDI OUT			
			SDI-1		SDI-2	
RESOLUTION	FREQUENCY	OETF	Settings	Output formats	Settings	Output formats
1920×1080	59.94i(444)	SDR (fixed)	**OFF** HD/3G-B/SDR UHD PROMPTER	1920×1080/59.94i(444) –	**OFF** HD/3G-B/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	1920×1080/59.94i(444) – – –
	29.97PsF(444) (HZC-PSF50 is required)	SDR (fixed)	**OFF** HD/3G-B/SDR UHD PROMPTER	1920×1080/29.97PsF(444) –	**OFF** HD/3G-B/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	1920×1080/29.97PsF(444) – – –
	23.98PsF(444) (HZC-PSF50 is required)	SDR (fixed)	**OFF** HD/3G-B/SDR UHD PROMPTER	1920×1080/23.98PsF(444) –	**OFF** HD/3G-B/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	1920×1080/23.98PsF(444) – – –

*1 Available for selection only when NETWORK TRUNK >DATA RATE of the CCU is set to 100 Mbps.

*2 Available for selection only when a CCU is connected.

*3 Available for selection only in standalone operation.

SDI-1 and SDI-2 output formats (system with frequency setting of 1/1.000 (625))

Standard state

OUTPUT FORMAT			SDI OUT			
			SDI-1		SDI-2	
RESOLUTION	FREQUENCY	OETF	Settings	Output formats	Settings	Output formats
1920×1080	50P	Other than SDR	**OFF** HD/3G-A/HDR HD/3G-A/SDR HD/3G-B/HDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/50P 1920×1080/50P 1920×1080/50P 1920×1080/50P 1920×1080/50i –	**OFF** HD/3G-A/HDR HD/3G-A/SDR HD/3G-B/HDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/50P 1920×1080/50P 1920×1080/50P 1920×1080/50P 1920×1080/50i – – –
		SDR	**OFF** HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/50P 1920×1080/50P 1920×1080/50i –	**OFF** HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/50P 1920×1080/50P 1920×1080/50i – – –
3840×2160	50P	Other than SDR	**OFF** 4K/12G/HDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/50P 1920×1080/50P 1920×1080/50P 1920×1080/50i –	**OFF** 4K/12G/HDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/50P 1920×1080/50P 1920×1080/50P 1920×1080/50i – – –
		SDR	**OFF** 4K/12G/SDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/50P 1920×1080/50P 1920×1080/50P 1920×1080/50i –	**OFF** 4K/12G/SDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/50P 1920×1080/50P 1920×1080/50P 1920×1080/50i – – –
	25P	Other than SDR	**OFF** 4K/6G/HDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/25P 1920×1080/25PsF –	**OFF** 4K/6G/HDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/25P 1920×1080/25PsF – – –
		SDR	**OFF** 4K/6G/SDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/25P 1920×1080/25PsF –	**OFF** 4K/6G/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/25P 1920×1080/25PsF – – –
	24P	Other than SDR	**OFF** 4K/6G/SDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/24P 1920×1080/24PsF –	**OFF** 4K/6G/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/24P 1920×1080/24PsF – – –
		SDR	**OFF** 4K/6G/SDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/24P 1920×1080/24PsF –	**OFF** 4K/6G/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/24P 1920×1080/24PsF – – –

*1 Available for selection only when NETWORK TRUNK >DATA RATE of the CCU is set to 100 Mbps.

*2 Available for selection only when a CCU is connected.

*3 Available for selection only in standalone operation.

When HZC-PSF50/PSF50M/PSF50W is installed

OUTPUT FORMAT			SDI OUT			
			SDI-1		SDI-2	
RESOLUTION	FREQUENCY	OETF	Settings	Output formats	Settings	Output formats
1920×1080	25PsF	Other than SDR	**OFF** HD/1.5G/HDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/25PsF 1920×1080/25PsF –	**OFF** HD/1.5G/HDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/25PsF 1920×1080/25PsF – – –
		SDR	**OFF** HD/1.5G/SDR UHD PROMPTER	 1920×1080/25PsF –	**OFF** HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/25PsF – – –
	24PsF	Other than SDR	**OFF** HD/1.5G/HDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/24PsF 1920×1080/24PsF –	**OFF** HD/1.5G/HDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/24PsF 1920×1080/24PsF – – –
		SDR	**OFF** HD/1.5G/SDR UHD PROMPTER	 1920×1080/24PsF –	**OFF** HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/24PsF – – –
	25PsF(444) (HZC-UG50 is required)	SDR (fixed)	**OFF** HD/3G-B/SDR UHD PROMPTER	 1920×1080/25PsF(444) –	**OFF** HD/3G-B/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/25PsF(444) – – –
	24PsF(444) (HZC-UG50 is required)	SDR (fixed)	**OFF** HD/3G-B/SDR UHD PROMPTER	 1920×1080/24PsF(444) –	**OFF** HD/3G-B/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/24PsF(444) – – –

*1 Available for selection only when NETWORK TRUNK >DATA RATE of the CCU is set to 100 Mbps.

*2 Available for selection only when a CCU is connected.

*3 Available for selection only in standalone operation.

When HZC-HFR50/HFR50M/HFR50W/HFR50P is installed

OUTPUT FORMAT			SDI OUT			
			SDI-1		SDI-2	
RESOLUTION	FREQUENCY	OETF	Settings	Output formats	Settings	Output formats
1920×1080	50P(2×)	Other than SDR	**OFF** HD/12G/HDR/HFR HD/3G-A/HDR/HFR HD/3G-B/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/50P/Link A-B 1920×1080/50P/Link A 1920×1080/50P/Link A 1920×1080/50P 1920×1080/50P 1920×1080/50i –	**OFF** HD/12G/HDR/HFR HD/3G-A/HDR/HFR HD/3G-B/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN[*1, *2] HD TRUNK IN[*2] HD RETURN IN[*3]	 1920×1080/50P/Link A-B 1920×1080/50P/Link B 1920×1080/50P/Link B 1920×1080/50P 1920×1080/50P 1920×1080/50i – – –
		SDR	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR/HFR HD/3G-B/SDR/HFR HD/3G-B/SDR/HFR(i) HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/50P/Link A-B 1920×1080/50P/Link A 1920×1080/50P/Link A 1920×1080/50i/Link A-B 1920×1080/50P 1920×1080/50P 1920×1080/50i –	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR/HFR HD/3G-B/SDR/HFR HD/3G-B/SDR/HFR(i) HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN[*1, *2] HD TRUNK IN[*2] HD RETURN IN[*3]	 1920×1080/50P/Link A-B 1920×1080/50P/Link B 1920×1080/50P/Link B 1920×1080/50i/Link A-B 1920×1080/50P 1920×1080/50P 1920×1080/50i – – –
	50P(3×)	Other than SDR	**OFF** HD/12G/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/50P/Link A-C 1920×1080/50P 1920×1080/50P 1920×1080/50i –	**OFF** HD/12G/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN[*1, *2] HD TRUNK IN[*2] HD RETURN IN[*3]	 1920×1080/50P/Link A-C 1920×1080/50P 1920×1080/50P 1920×1080/50i – – –
		SDR	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/50P/Link A-C 1920×1080/50P 1920×1080/50P 1920×1080/50i –	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN[*1, *2] HD TRUNK IN[*2] HD RETURN IN[*3]	 1920×1080/50P/Link A-C 1920×1080/50P 1920×1080/50P 1920×1080/50i – – –
	50P(4×)	Other than SDR	**OFF** HD/12G/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/50P/Link A-D 1920×1080/50P 1920×1080/50P 1920×1080/50i –	**OFF** HD/12G/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN[*1, *2] HD TRUNK IN[*2] HD RETURN IN[*3]	 1920×1080/50P/Link A-D 1920×1080/50P 1920×1080/50P 1920×1080/50i – – –
		SDR	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/50P/Link A-D 1920×1080/50P 1920×1080/50P 1920×1080/50i –	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN[*1, *2] HD TRUNK IN[*2] HD RETURN IN[*3]	 1920×1080/50P/Link A-D 1920×1080/50P 1920×1080/50P 1920×1080/50i – – –
	50P(6×)	All	**OFF**		**OFF**	
	50P(8×)	All	**OFF**		**OFF**	

OUTPUT FORMAT			SDI OUT			
			SDI-1		SDI-2	
RESOLUTION	FREQUENCY	OETF	Settings	Output formats	Settings	Output formats
3840×2160	50P(2×)	Other than SDR	**OFF** 4K/12G/HDR/HFR 4K/12G/HDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/50P/Link A 3840×2160/50P 1920×1080/50P 1920×1080/50P 1920×1080/50i –	**OFF** 4K/12G/HDR/HFR 4K/12G/HDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/50P/Link B 3840×2160/50P 1920×1080/50P 1920×1080/50P 1920×1080/50i – –
		SDR	**OFF** 4K/12G/SDR/HFR 4K/12G/SDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 3840×2160/50P/Link A 3840×2160/50P 1920×1080/50P 1920×1080/50P 1920×1080/50i –	**OFF** 4K/12G/SDR/HFR 4K/12G/SDR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR HD TRUNK IN*2 HD RETURN IN*3	 3840×2160/50P/Link B 3840×2160/50P 1920×1080/50P 1920×1080/50P 1920×1080/50i – –

*1 Available for selection only when NETWORK TRUNK >DATA RATE of the CCU is set to 100 Mbps.

*2 Available for selection only when a CCU is connected.

*3 Available for selection only in standalone operation.

When HZC-DFR50/DFR50M/DFR50W is installed

OUTPUT FORMAT			SDI OUT			
			SDI-1		SDI-2	
RESOLUTION	FREQUENCY	OETF	Settings	Output formats	Settings	Output formats
1920×1080	50P(2×)	Other than SDR	**OFF** HD/12G/HDR/HFR HD/3G-A/HDR/HFR HD/3G-B/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/50P/Link A-B 1920×1080/50P/Link A 1920×1080/50P/Link A 1920×1080/50P 1920×1080/50P 1920×1080/50i –	**OFF** HD/12G/HDR/HFR HD/3G-A/HDR/HFR HD/3G-B/HDR/HFR HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/50P/Link A-B 1920×1080/50P/Link B 1920×1080/50P/Link B 1920×1080/50P 1920×1080/50P 1920×1080/50i – – –
		SDR	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR/HFR HD/3G-B/SDR/HFR HD/3G-B/SDR/HFR(i) HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD PROMPTER	 1920×1080/50P/Link A-B 1920×1080/50P/Link A 1920×1080/50P/Link A 1920×1080/50i/Link A-B 1920×1080/50P 1920×1080/50P 1920×1080/50i –	**OFF** HD/12G/SDR/HFR HD/3G-A/SDR/HFR HD/3G-B/SDR/HFR HD/3G-B/SDR/HFR(i) HD/3G-A/SDR HD/3G-B/SDR HD/1.5G/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	 1920×1080/50P/Link A-B 1920×1080/50P/Link B 1920×1080/50P/Link B 1920×1080/50i/Link A-B 1920×1080/50P 1920×1080/50P 1920×1080/50i – – –

*1 Available for selection only when NETWORK TRUNK >DATA RATE of the CCU is set to 100 Mbps.

*2 Available for selection only when a CCU is connected.

*3 Available for selection only in standalone operation.

When HZC-UG50/UG50M/UG50W is installed

OUTPUT FORMAT			SDI OUT			
			SDI-1		SDI-2	
RESOLUTION	FREQUENCY	OETF	Settings	Output formats	Settings	Output formats
1920×1080	50i(444)	SDR (fixed)	**OFF** HD/3G-B/SDR UHD PROMPTER	1920×1080/50i(444) – –	**OFF** HD/3G-B/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	1920×1080/50i(444) – – –
	25PsF(444) (HZC-PSF50 is required)	SDR (fixed)	**OFF** HD/3G-B/SDR UHD PROMPTER	1920×1080/25PsF(444) – –	**OFF** HD/3G-B/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	1920×1080/25PsF(444) – – –
	24PsF(444) (HZC-PSF50 is required)	SDR (fixed)	**OFF** HD/3G-B/SDR UHD PROMPTER	1920×1080/24PsF(444) – –	**OFF** HD/3G-B/SDR UHD(12G) TRUNK IN*1, *2 HD TRUNK IN*2 HD RETURN IN*3	1920×1080/24PsF(444) – – –

*1 Available for selection only when NETWORK TRUNK >DATA RATE of the CCU is set to 100 Mbps.

*2 Available for selection only when a CCU is connected.

*3 Available for selection only in standalone operation.

FILE Menu

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

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

FILE			
Page name Page No.	**Item**	**Settings**	**Description**
<OPERATOR FILE> F01	IMPORT FROM USB	Execute using ENTER.	Reads the operator file from a USB drive.
	EXPORT TO USB	Execute using ENTER.	Writes the current settings of the operator file items to a USB drive.
	PRESET	Execute using ENTER.	Sets the operator file items to the preset values in internal memory.
	STORE PRESET FILE	Execute using ENTER.	Stores the current settings of the operator file items in the operator file in internal memory.
	CLEAR PRESET FILE	Execute using ENTER.	Restores the operator file items stored in memory in the unit to the preset values.
<SCENE FILE> F02	1		Stores and reads scene files (paint data): When storing a file in camera memory, specify the number before executing STORE. When reading, only specify the number.
	2		
	3		
	4		
	5		
	STORE	Execute using ENTER.	
	01	**01** to 32	
	STANDARD	Execute using ENTER.	Reads the standard paint data.
	IMPORT FROM USB	Execute using ENTER.	Loads 32 scene files from a USB drive to internal memory.
	EXPORT TO USB	Execute using ENTER.	Writes 32 scene files in the camera's memory to a USB drive.
	FILE ID	Max. 14 characters	Enters a comment for the scene files to be written to a USB drive. See *"To specify a character string" (page 21).*
	CAM CODE	Camera code	Display only
	DATE	Date	Display only
	DISSOLVE	**OFF**, ON	Switches scene files seamlessly.
	SPEED	0.2 to 2.8 (0.2 steps), 3 to 10 (1 steps), **0.2**	
<REFERENCE> F03	STORE FILE	Execute using ENTER.	Stores the current settings of the reference file items in the reference file in internal memory.
	STANDARD	Execute using ENTER.	Reads the standard values in the reference file in internal memory.
	RESET REFERENCE FILE	Execute using ENTER.	Resumes the factory-preset reference file.
	FACTORY RESET	Execute using ENTER.	Resets all settings to the factory defaults.
	IMPORT FROM USB	Execute using ENTER.	Loads a reference file from a USB drive.
	EXPORT TO USB	Execute using ENTER.	Writes the current settings of the reference file items as a reference file to a USB drive.
	FILE ID	Max. 14 characters	Enters a comment in the reference file to be written to a USB drive. See *"To specify a character string" (page 21).*
	CAM CODE	Camera code	Display only
	DATE	Date	Display only

FILE			
Page name Page No.	**Item**	**Settings**	**Description**
<USER GAMMA> F04 Displayed only when HZC-UG50 is installed	IMPORT FROM USB	Execute using ENTER.	Reads the user gamma file from a USB drive.
	PRESET	Execute using ENTER.	Sets the user gamma file items to the preset values in internal memory.
	FILE ID	Max. 14 characters	Inserted in the user gamma file to be written to a USB drive. Enter a comment. See *"To specify a character string" (page 21).*
	CAM CODE	Camera code	Display only
	DATE	Date	Display only
<LENS FILE> F05	STORE FILE	Execute using ENTER.	The center marker is not included.
	No.	1 to 17, **1**	1 to 16: When using a non-serial lens (When using a large lens, this setting depends on the internal setting of the lens.) 17: When using a serial lens
	NAME		Changeable only when using a non-serial lens.
	F NO	F1.0 to F3.4, **F1.7**	Changeable only when using a non-serial lens.
	CENTER MARKER		Sets and stores the center marker position: H POS: Increasing the value moves the position to the right. V POS: Increasing the value moves the position downwards.
	H POS	–48 to +48, **0**	
	V POS	–27 to +27, **0**	
	STORE	Execute using ENTER.	
<OHB FILE> F06	STORE FILE	Execute using ENTER.	Stores the offset values of items specific to the CMOS image sensor (once stored, the values do not need to be stored again if the sensor is reinstalled).
<MATRIX FILE> F07	CUSTOM PRESET MATRIX		Stores and reads preset files: When storing a preset file in camera memory, specify the file number.
	STORE FILE	Execute using ENTER.	
	1		
	2		
	3		
	4		
	5		
	CLEAR ALL	Execute using ENTER.	Clears all the files.
	IMPORT FROM USB	Execute using ENTER.	Loads five preset files from a USB drive to internal memory.
	EXPORT TO USB	Execute using ENTER.	Writes five preset files in the camera's memory to a USB drive.
	FILE ID	Max. 14 characters	Enters a comment for the preset files to be written to a USB drive. See *"To specify a character string" (page 21).*
	CAM CODE	Camera code	Display only
	DATE	Date	Display only
<BOX CURSOR FILE> F08	1:		BOX CURSOR FILE selection FILE name input. Align the cursor to the left of the number to select the BOX CURSOR FILE. Align the cursor to the right of the number to enter the BOX CURSOR FILE name. See *"To specify a character string" (page 21).*
	2:		
	3:		
	4:		
	5:		
	STORE		Stores a BOX CURSOR FILE name in the camera.
	IMPORT FROM USB		Transfers BOX CURSOR FILE from a USB drive to the camera.
	EXPORT TO USB		Transfers BOX CURSOR FILE from the camera to a USB drive.

FILE			
Page name Page No.	**Item**	**Settings**	**Description**
<HDR USER GAMMA FILE> F09	IMPORT FROM USB		
	GROUP No.		Insert a USB drive into the unit to display the HDR user gamma group files on the USB drive, then select the file you want to import.
	IMPORT		Imports the selected HDR user gamma group file.
	RESET HDR USER GAMMA		Resets HDR user gamma curves (1 to 5) to the defaults.

DIAGNOSIS Menu

This menu is for viewing only; camera settings cannot be made using this menu.
However, some items set the conditions for viewing.

DIAGNOSIS Page name Page No.	Item	Indication	Description
<OPTICAL CONDITION> D01	CCU → CAM	GREEN, YELLOW, RED, NG, NO SIGNAL	Displayed only when a CCU is connected.
	CAM → CCU	GREEN, YELLOW, RED, NG, NO SIGNAL	
	CABLE LENGTH	x.x km	Displays the camera cable length. (Displayed only when a CCU is connected.)
<BOARD STATUS> D02	OHB	OK, NG	
	DPR	OK, NG	
	SY	OK, NG	
	PS	OK, NG	
	TX	OK, NG	
	HOURS METER	xxxx H	Displays the total working time.
<ROM VERSION> D03 (U14)	CAMERA APP	Vx.xx	
	OS	Vx.xx	
	UPDATER	Vx.xx	
	SY	Vx.xx	
	DPR	Vx.xx	
	PS	Vx.xx	
	LCD	Vx.xx	
	TX	Vx.xx	
<SERIAL NO.> D04	MODEL	HDC5000	
	NO.	xxxxxxx	
	EFFECTIVE FUNCTION		Displayed if any option is installed.
<POWER SUPPLY STATUS> D05 **Note** This display has a margin of error for the display of the electric supply state of the camera. Use only as a guide.	CAM CONSUMPTION	0% to 100%	Displays camera power consumption.
	LENS	x.x A (0 to 100%)	Displays the lens connector current and power consumption.
	EXT DC	x.x A (0 to 100%)	Displays the EXT DC connector current and power consumption.
	CABLE LENGTH	x.x km	Displays the cable length that a CCU measured. (Displayed only when a CCU is connected.)

Appendix

Precautions

Note on laser beams

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

Do not subject to severe shocks

Damage to the case or internal components may result.

When finished using

Set the power switch to OFF.

Operation and storage environment

Store in a level place with air conditioning.
If the unit gets wet, make sure it is completely dry before storage.
Avoid use or storage in the following places:

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

Condensation

If 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.

Components with limited service life

- 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 this part is guaranteed. For details on parts replacement, contact your dealer.
- 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.

Camera CMOS image sensor phenomena

Note

The following phenomena that may occur in images are specific to image sensors. They do not indicate a malfunction.

White flecks

Although the image sensors are produced with high-precision technologies, fine white flecks may be generated on the screen in rare cases, caused by cosmic rays, etc. This is related to the principle of image sensors and is not a malfunction.
The white flecks especially tend to be seen in the following cases:

- When operating at a high environmental temperature
- When you have raised the gain (sensitivity)

Flicker

If shooting under lighting produced by fluorescent lights, sodium lamps, mercury-vapor lamps, or LEDs, the screen may flicker or colors may vary.

To prevent electromagnetic interference from portable communications devices

The use of portable telephones and other communications devices near this camera can result in malfunctions and interference with audio and video signals.
It is recommended that the portable communications devices near this camera be powered off.

LCD panel

The LCD panel fitted to this unit is manufactured with high precision technology, giving a functioning pixel ratio of at least 99.99%. Thus a very small proportion of pixels may be “stuck”, either always off (black), always on (red, green, or blue), or flashing. In addition, over a long period of use, because of the physical characteristics of the liquid crystal display, such “stuck” pixels may appear spontaneously. These problems are not a malfunction.

Do not place this product close to medical devices

This product (including accessories) has magnet(s) which may interfere with pacemakers, programmable shunt valves for hydrocephalus treatment, or other medical devices. Do not place this product close to persons who use such medical devices. Consult your doctor before using this product if you use any such medical device.

Connections to the Internet

This product is used with a leased line or intranet connection. Do not connect to an external network, as security issues may occur.

Care of the unit

If the body of the unit is dirty, clean it with a soft, dry cloth. In extreme cases, use a cloth moistened in a little neutral detergent, then wipe dry.
Do not use organic solvents such as alcohol or thinners, as these may cause discoloration or other damage to the finish of the unit.
Refrain from cleaning using pressurized air devices, such as an air duster, as these may cause dust to enter the optical parts and damage the interior of the unit.

Error Messages

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

Note

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

Message	Meaning
TEMP WARNING	The internal temperature is abnormally high.
FAN STOP	The built-in fan is not rotating properly.
SET CORRECT SYSTEM DATE	The time/date of the internal clock have not been set.
OHB BLOCK NG!	A problem was detected in the optical block.
NO USB FLASH DRIVE	A USB drive operation was attempted with no USB drive connected.
USB FLASH DRIVE ERROR	An error occurred during access to a USB drive.
FORMAT ERROR!	A USB drive operation was attempted with an unformatted USB drive.
WRITE PROTECTED	File writing was attempted with a write-protected USB drive.
FILE ERROR	An error occurred while reading a file from a USB drive.
OTHER MODEL'S FILE	You attempted to read a file of other models having no compatibility.
FILE NOT FOUND	The file you attempted to read does not exist in the USB drive.
ZOOM/FOCUS CONTROL:RCP/MSU	Zoom and focus controlled from RCP/MSU. Zoom and focus demand for lens control is disabled.

Using a USB Drive

You can connect a USB drive to the USB connector to save and load the settings data file.

Series	Product
USM-QX series	USM8GQX, USM16GQX, USM32GQX, USM64GQX, USM128GQX
USM-T series (Japan only)	USM8GT, USM16GT, USM32GT, USM64GT, USM128GT
USM-U series	USM4GU, USM8GU, USM16GU, USM32GU, USM64GU, USM128GU
USM-X series (discontinued)	USM8X, USM16X, USM32X, USM64X
USM-W3 series (discontinued)	USM8W3, USM16W3, USM32W3, USM64W3, USM128W3
USM-R series	USM4GR, USM8GR, USM16GR, USM32GR, USM64GR
USM-W series	USM8W, USM16W, USM32W, USM64W
USM-M1 series	USM8M1, USM16M1, USM32M1, USM64M1
USM-SA3 series	USM16SA3, USM32SA3, USM64SA3
USM-SA2 series	USM16SA2, USM32SA2, USM64SA2
USM-SA1 series (discontinued)	USM8SA1, USM16SA1, USM32SA1, USM64SA1
USM-CA1 series (discontinued)	USM16CA1, USM32CA1, USM64CA1
USM-L series (discontinued)	USM1GL, USM2GL, USM4GL, USM8GL, USM16GL, USM32GL
USM-LX series (discontinued)	USM1GLX, USM2GLX, USM4GLX, USM8GLX, USM16GLX, USM32GLX, USM64GLX
USM-N series (discontinued)	USM4GN, USM8GN, USM16GN, USM32GN
USM-P series (discontinued)	USM4GP, USM8GP, USM16GP, USM32GP, USM64GP
USM-M series (discontinued)	USM4GM, USM8GM, USM16GM, USM32GM
USM-Q series (discontinued)	USM8GQ, USM16GQ, USM32GQ, USM64GQ
USM-S series (discontinued)	USM4GS, USM8GS, USM16GS
USM-V series (discontinued)	USM4GV, USM8GV

Notes

- USB drives other than those recommended may not be recognized when connected to the USB connector.
- USB drives must be formatted with the FAT16 or FAT32 file system. Recommended Sony USB drives are preformatted, and can be used without any prior setup.

Specifications

General	
Power requirements	240 V AC, 1.7 A (max.) 180 V/240 V DC, 1.05 A (max.) 12 V DC, 10 A (max.)
Operating temperature	–20 °C to +45 °C (–4 °F to +113 °F)
Storage temperature	–20 °C to +60 °C (–4 °F to +140 °F)
Mass	Approx. 21 kg (46 lb 5 oz) (camera body only)
External dimensions	See *page 75*.
Imaging element	
Imaging element	2/3 inch CMOS sensor with global shutter
Form	3-chip, RGB
Effective resolution	3840 (horizontal) × 2160 (vertical)
Electrical characteristics	
Sensitivity	F10.0 with 1080/59.94P F11.0 with 1080/50P (at 2000 lx with 89.9% reflectance)
Noise level	–62 dB
Horizontal resolution	2000 TV lines (at center of screen) 5% or higher modulation
Geometric distortion	Negligible (not including lens distortion)
Optical system specifications	
Spectral system	F1.4 prism
Built-in filters	ND filters 1: CLEAR 2: 1/4ND 3: 1/8ND 4: 1/16ND 5: 1/64ND Color temperature conversion filters A: Cross filter B: 3200K (clear) C: 4300K D: 6300K
Input connectors	
DC IN	XLR 4-pin (1) 10.5 V to 17 V DC
RET CONTROL	6-pin (1)
AUDIO IN 1, AUDIO IN 2	XLR 3-pin, female (1 each) When AUDIO IN switch is set to MIC: –60 dBu (can be selected up to –20 dBu by menu operation), balanced When AUDIO IN switch is set to LINE: 0 dBu, balanced

Output connectors	
TEST OUT	BNC type (1) 1.0 Vp-p, 75 Ω terminated
PROMPTER	BNC type (1) 1.0 Vp-p, 75 Ω terminated
VF	D-sub 25-pin (1)
DC OUT	4-pin (1) 10.5 V to 17 V DC 1.5 A (max.) (This may be limited by the imposed load or input conditions.)
SDI 1, SDI 2, SDI 3	BNC type (1 each)
SDI-MONI	BNC type (1)
Input/output connectors	
CCU	Optical/electrical multi connector (1)
TRACKER	12-pin (1)
REMOTE	8-pin multi connector (1)
INTERCOM 1, INTERCOM 2	XLR 5-pin, female (1 each)
CRANE	12-pin multi connector (1)
Lens	36-pin multi connector (1)
USB	USB 2.0 Type A 4-pin (1) (for connecting USB drive)
NETWORK TRUNK	RJ-45 type 8-pin (1)
Supplied accessories	
Front cover (1)	
Number plate for up tally (1)	
Cable clamp (2)	
Before Using This Unit (1)	
Operating Instructions (CD-ROM) (1)	
Optional accessories	
Camera Operating Software	HZC-DFR50/DFR50M/DFR50W HZC-QFR50/QFR50M/QFR50W HZC-HFR50/HFR50M/HFR50W/HFR50P HZC-PSF50/PSF50M/PSF50W HZC-UG50/UG50M/UG50W
HD Electronic Viewfinder	HDVF-EL70 (7.4-inch type, color)
BKP-7911 Script Holder (with script light)	
CAC-6 Return Video Selector	
Related equipment	
HDCU5000/5500 Camera Control Unit	
MSU-3000/1000 series Master Setup Unit	
RCP-3000/1000 series Remote Control Panel	
HZC-CSM10 Camera System Management Software	
CNA-1 Camera Control Network Adapter	

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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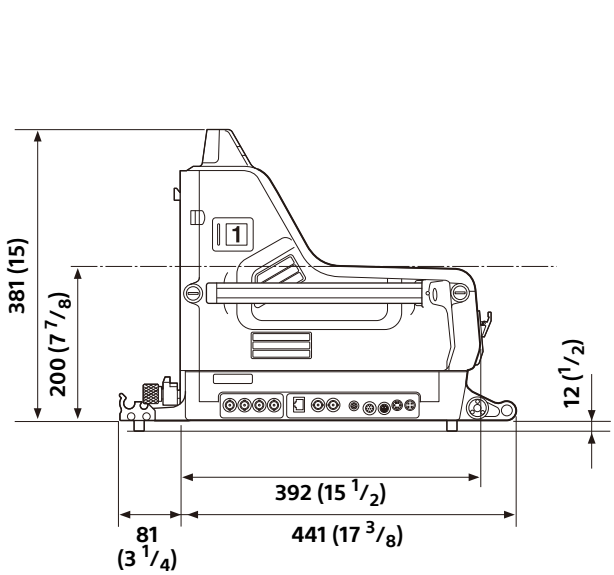
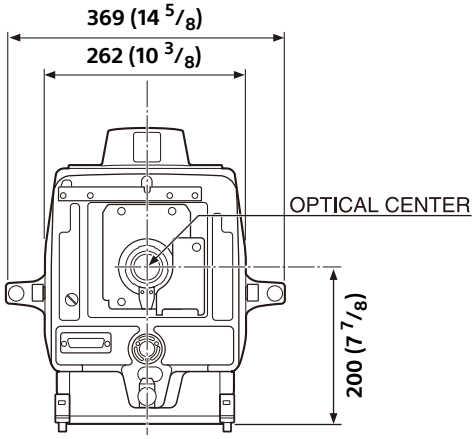
External Dimensions

Unit: mm (inches)





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