SONY

HD COLOR CAMERA

HDC1000R

OPERATION MANUAL English

1st Edition (Revised 1)

WARNING

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

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

AVERTISSEMENT

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

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

WARNUNG

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

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

For the customers in the U.S.A.

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

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

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

For the customers in Europe

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

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

This product is intended for use in the following Electromagnetic Environments:
E1 (residential), E2 (commercial and light industrial), E3 (urban outdoors), E4 (controlled EMC environment, ex. TV studio).

The manufacturer of this product is Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.
The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

Pour les clients en Europe

Ce produit portant la marque CE est conforme à la fois à la Directive sur la compatibilité électromagnétique (EMC) et à la Directive sur les basses tensions émises par la Commission de la Communauté Européenne.
La conformité à ces directives implique la conformité aux normes européennes suivantes:

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

Ce produit est prévu pour être utilisé dans le senvironnements électromagnétiques suivants : E1 (résidentiel), E2 (commercial et industrie légère), E3 (urbain extérieur) et E4 (environnement EMC contrôlé, ex. studio de télévision).

Le fabricant de ce produit est Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japon.
Le représentant autorisé pour EMC et la sécurité des produits est Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Allemagne. Pour toute question concernant le service ou lagarantie, veuillez consulter les adresses indiquées dans les documents de service ou de garantie séparés.

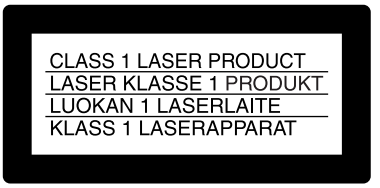
Für Kunden in Europa

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

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

  Für die folgenden elektromagnetischen Umgebungen:
  E1 (Wohnbereich), E2 (kommerzieller und in beschränktem Maße industrieller Bereich), E3 (Stadtbereich im Freien) und E4 (kontrollierter EMV-Bereich, z.B. Fernsehstudio).

Der Hersteller dieses Produkts ist Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.
Der autorisierte Repräsentant für EMV und Produktsicherheit ist Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Deutschland. Bei jeglichen Angelegenheiten in Bezug auf Kundendienst oder Garantie wenden Sie sich bitte an die in den separaten Kundendienst- oder Garantiedokumenten aufgeführten Anschriften.



This HD Color Camera is classified as a CLASS 1 LASER PRODUCT.

Laser diode properties
Wave length: 1310±40 nm
Emission duration: Pulse Modulation
Laser output power: 141^{+37}_{-29} µW
Standard: IEC60825-1(2001)

Daten der Laserdiode
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Laser utgangseffekt: 141^{+37}_{-29} µW
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CAUTION
The use of optical instruments with this product will increase eye hazard.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

For the State of California, USA only
Perchlorate Material - special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate
Perchlorate Material : Lithium battery contains perchlorate.

For the Customers in Taiwan only

廢電池請回收

Table of Contents

Overview

The HDC1000R is a 2/3-type high-definition video camera for studio and OB-van use for 2,200,000 pixels. It incorporates the latest pickup elements and digital signal-processing LSI to yield higher picture quality and higher stability in image creation while maintaining conventional popular functions and operability.

Features

High picture quality and high performance

The new 2/3-type Progressive IT CCD for 2,200,000 pixels conforms to driving formats up to 1080/59.94P, achieving high sensitivity and low smear. In addition, the 14-bit A/D converter and a unique signal-processing LSI provide picture quality of optimal grade.

Multiple formats

The HDC1000R covers 1080/50i and 59.94i interlace,1080/23.98PsF, 24PsF, 25PsF, and 29.97PsF Progressive Scan (PsF) systems. It also covers 720/50P and 59.94P systems. Signal output of 1080/50P and 59.94P from the camera head is possible via the Dual Link interface.

Newly designed unit with low center of gravity

The basic design has been reworked. The stylish appearance with low-slung design permits the viewfinder to be mounted at a low position, making the viewfinder position closer to the optical axis of the lens for highly efficient operations.

Auto Lens Aberration Compensation function

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

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

Focus assist functions

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

VF detail

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

Focus assist indicator

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

"Memory Stick" 1) operation

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

1) Memory Stick and MEMORY STICK™ are trademarks of Sony Corporation.

Various color-reproduction functions

Selection of multiple gamma tables

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

HZC-UG444 User Gamma Application Software

Installing the HZC-UG444 User Gamma Application Software enables the camera to support CvpFileEditor™ and RGB4:4:4 outputs.

For details, refer to the HZC-UG444 Operation Manual.

Multimatrix color correction

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

Knee saturation

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

Low key saturation

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

Versatile detail control functions

Skin-tone detail function

This function allows control (emphasis or suppression) of the detail level for just a certain hue or chroma area in the image, by creating a detail gate signal from color components of your specified hue, such as skin tones. The detail levels of three hues can be adjusted independently at the same time.

Detail boost-frequency control

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

H/V ratio control

The ratio between horizontal and vertical detail can be adjusted.

White/black limiter

The white and black details can be limited independently.

Easy menu-based setting

Selections and settings for viewfinder display items, safety-zone marker [2] or center marker, [3] screen size marker, etc. can be made quickly and easily, using setup menus displayed on the viewfinder screen or an external monitor.

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

Wide variety of viewfinder display options

Along with items such as operation messages, a zebra pattern,[4] a safety-zone marker, and a center marker, camera settings may also be displayed on the viewfinder screen. Furthermore, there are other indicators arranged above and below the viewfinder, such as a tally lamp, battery warning indicator, and an indicator to tell you that one or more settings are other than standard. This makes it simple to check the status of the camera.

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

Optical digital transmission

The camera uses electro-optical coding cable for 1.5-gigabit digital optical transmission between the camera and a Camera Control Unit.

Prevention of electrical shock

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

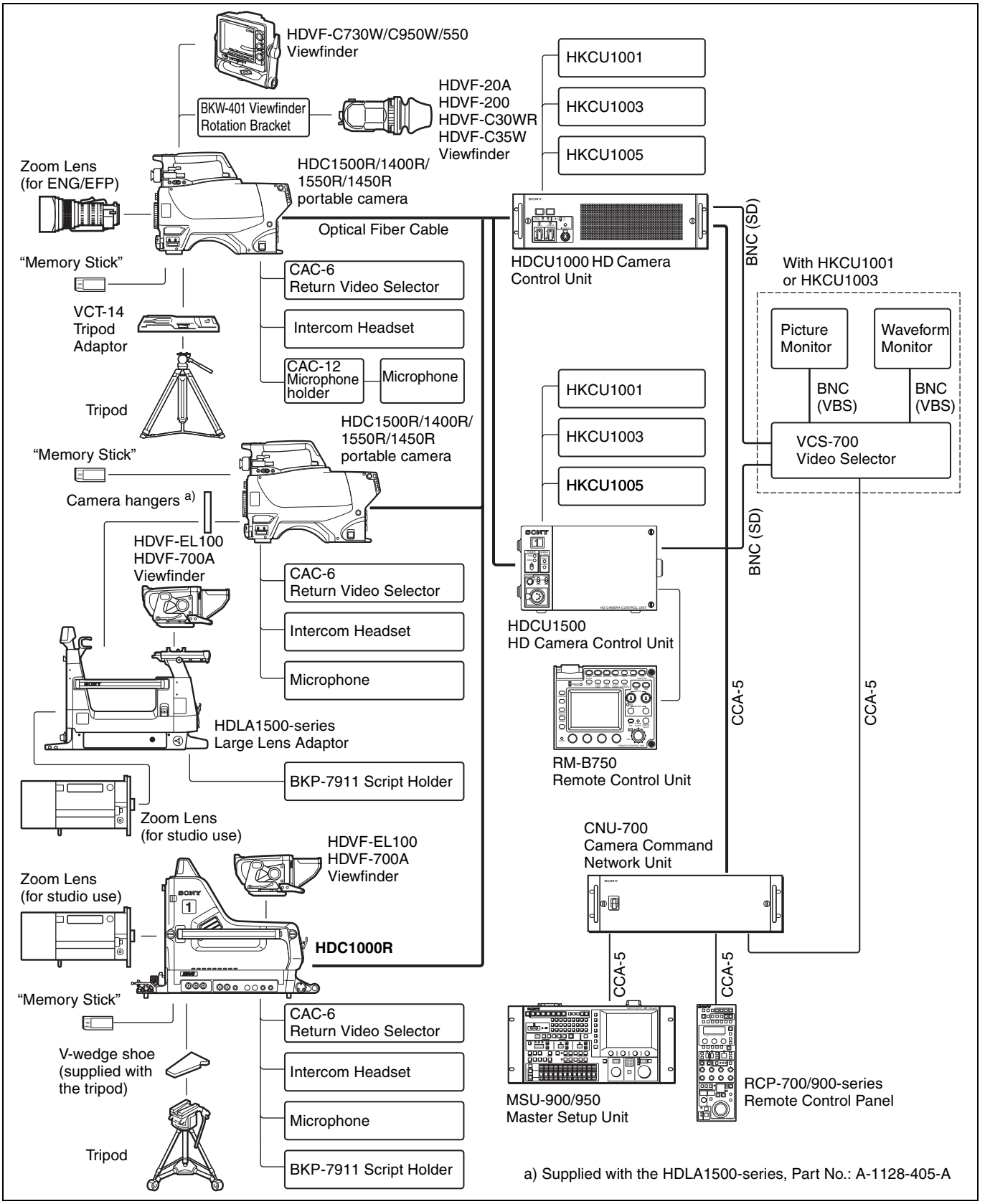
Basic System Configuration

Examples of devices and parts that may be used with the HDC1000R are shown on the next page.

Note

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

Connection example



a) Supplied with the HDLA1500-series, Part No.: A-1128-405-A

Precautions

Note on laser beams

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

Do not subject to severe shocks

Damage to the case or internal components may result.

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

Dew condensation

If you move the camera from a very cold place to a warm place, or use it in a damp location, dew may form on the lens or inside the camera.
The camera has no built-in dew indicator. If you find dew on the body or lens, switch the camera off and wait for the dew to disappear for about one hour.

Phenomena Specific to CCD Image Sensors

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

White flecks

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

The white flecks especially tend to be seen

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

This product has a compensation function and the problem may be alleviated by automatic black balance adjustment.

Smear

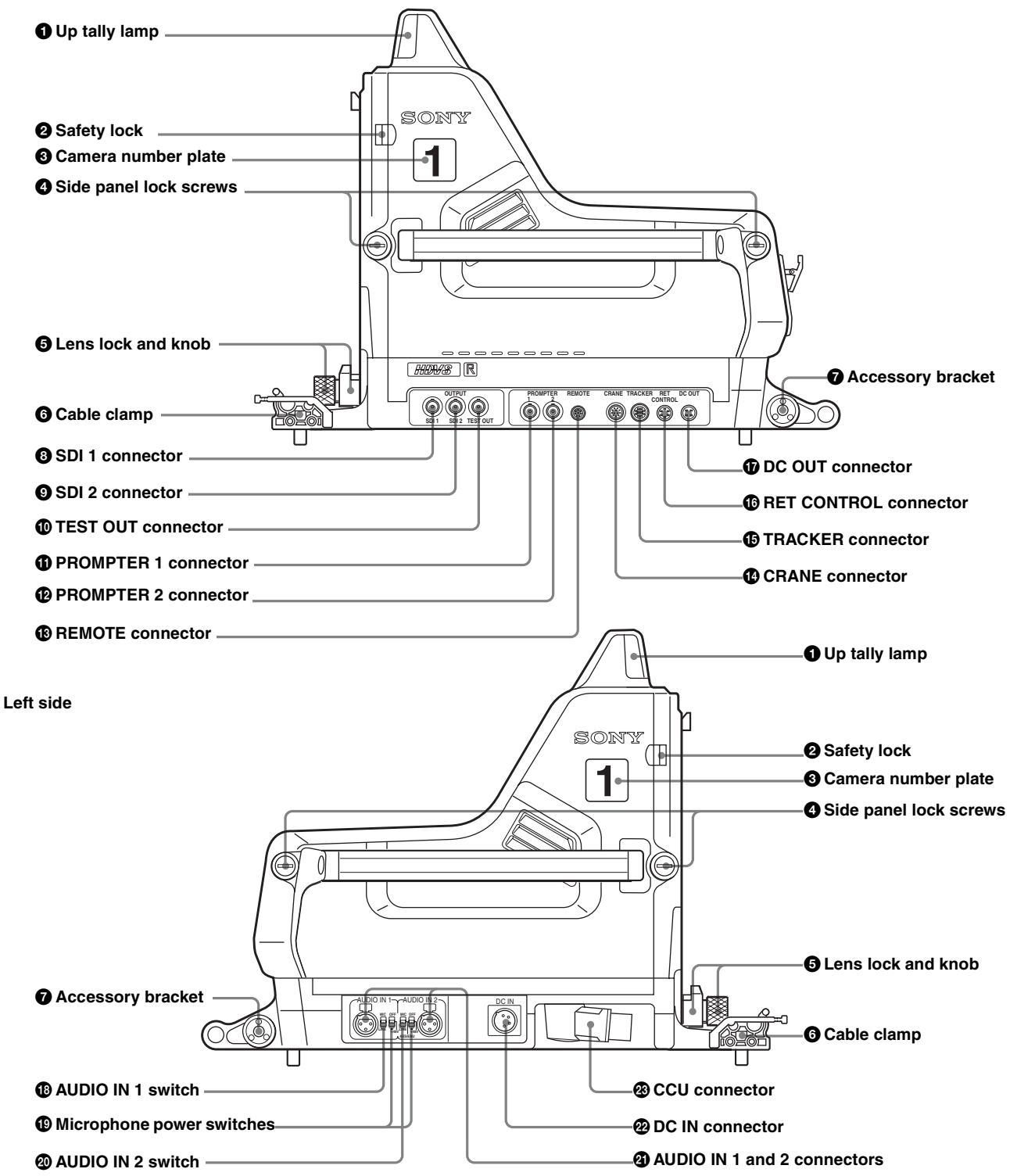
When an extremely bright object, such as a strong spotlight or flashlight, is being shot, vertical tails may be produced on the screen, or the image may be distorted.

Aliasing

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

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-900/950 Master Setup Unit or the RCP-700/900-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 on 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 Camera number plate
Attach a light gray number plate (supplied) to display the camera number.

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

❺ 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.

❻ Cable clamp
To secure the fiber optic cable.

❼ 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.

❽ SDI 1 connector (BNC type)
To output the HD-SDI signals.

For details on the output signals, see "Setting the Camera Outputs" (page 22).

❾ SDI 2 connector (BNC type)
To output the HD-SDI or SD-SDI signals.

For details on the output signals, see "Setting the Camera Outputs" (page 22).

❿ 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 on the menu.

For details on the output signals, see "Setting the Camera Outputs" (page 22).

⓫ PROMPTER 1 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, a signal of prompter 1 is output.

⓬ PROMPTER 2 connector (BNC type)
To output the signal input from the camera control unit's PROMPTER 2 INPUT connector. This is enabled only for the unit which has the PROMPTER 2 input.

⓭ REMOTE connector (8-pin)
To connect the camera to an optional MSU-900/950 Master Setup Unit, or RCP-700/900-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.

⓮ CRANE connector (12-pin)
For interface with a viewfinder or external data.

⓯ TRACKER connector (10-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.

⓰ RET (return video) CONTROL connector (6-pin)
To connect a CAC-6 Return Video Selector.

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

⓲ AUDIO IN 1 switch
Set this switch according to the device connected to the AUDIO IN 1 connector.
MIC: When connecting a microphone
LINE: When connecting the signal of line level (0 dBu)

⓳ 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 uppwermost position. No power is supplied to the microphone.)

Note

To supply a power of +12 V, modification of the camera is required.

⑳ AUDIO IN 2 switch
Set this switch according to the device connected to the AUDIO IN 2 connector.
MIC: When connecting a microphone
AES/EBU: When connecting a digital audio signal synchronized with a camera signal
LINE: When connecting the signal for line level (0 dBu)

㉑ AUDIO IN 1 and 2 connectors (XLR 3-pin)
To input microphone or line signals.

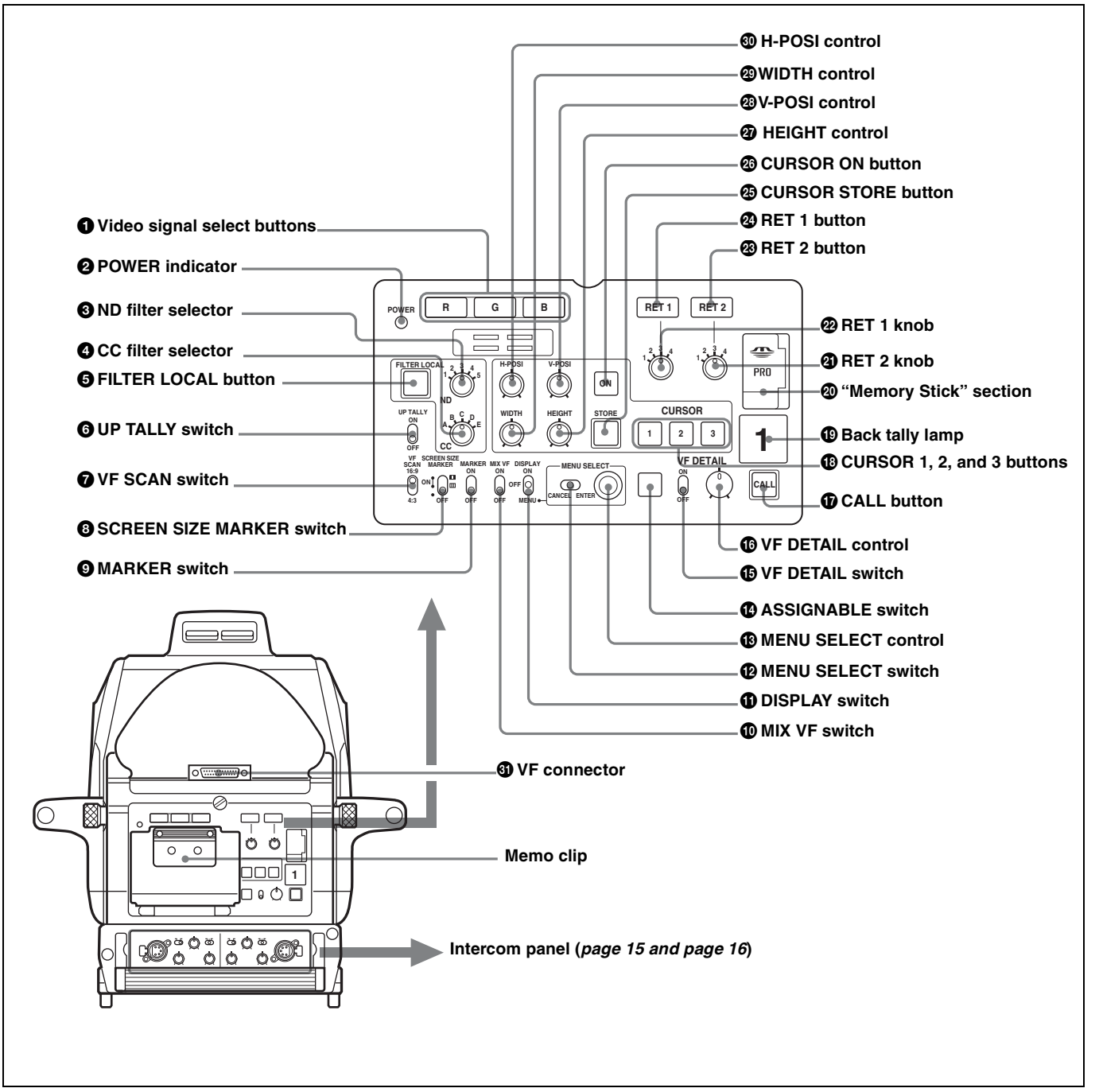
㉒ DC IN connector (4-pin)
Connect to a DC power source (10.5 to 17 V) when using the camera as a standalone unit.

Note

In standalone status, power supply from this unit is limited to 6.5 A. Check the power consumption of the device to be connected.

㉓ CCU (camera control unit) connector (electro-optical multi-connector)
Connect to the CAMERA connector of the HDCU1000/1500 Camera Control Unit using an electro-optical composite cable. Power, video, audio, and control signals are passed between the camera and the control unit using just one cable.

Rear Panel



❶ Video signal select buttons

Select the video output signal (R, G, or B) to the viewfinder.

The R, G, and B buttons may be pressed individually or in combination. The signal corresponding to each pressed button will be output. When two buttons are pressed, the output will consist of those two signals mixed together. When all three buttons are pressed, the output to the viewfinder will be the Y signal.

When no buttons is pressed, the output will be a color signal if the viewfinder is a color model, and it will be the Y signal if the viewfinder is a monochrome model.

The video output to the monitor connected to the TEST OUT connector of the camera will also depend on the setting of these buttons (however, this output is in monochrome in all situations).

❷ 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-900/950 Master Setup Unit or RCP-700/900-series Remote Control Panel is set to OFF.
Yellow: Power is being supplied to the camera, but the VF PW button of the MSU-900/950 Master Setup Unit or RCP-700/900-series Remote Control Panel is set to OFF, and power is not being supplied to the viewfinder.
Off: Power is not being supplied to the camera.

❸ ND filter selector
When the FILTER LOCAL button is lit up, this selector may be used to select an ND filter.

Selector position	Selected filter
1	Clear
2	1/4ND
3	1/8ND
4	1/16ND
5	1/64ND

❹ CC (color temperature conversion) filter selector
When the FILTER LOCAL button is lit up, this selector may be used to select a color temperature conversion filter appropriate to the light source illuminating the subject.

Selector position	Selected filter
A	Cross filter
B	3200K (clear)
C	4300K
D	6300K
E	8000K

❺ FILTER LOCAL (filter local control) button
Pressing this button enables selecting of a color temperature conversion filter using the CC filter selector or an ND filter using the ND filter selector. Pressing the button again gives control of the filters to the MSU-900/950 Master Setup Unit or RCP-700/900-series Remote Control Panel.

❻ UP TALLY switch
Set whether or not the camera's Up Tally lamp and the lens' 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.

❼ VF (viewfinder) SCAN switch
To control the viewfinder screen display.
16:9: To set the viewfinder display to 16:9 aspect ratio.
4:3: To set the viewfinder display to 4:3 aspect ratio.

❽ SCREEN SIZE MARKER switch
To control the display of the screen size marker as follows:
ON (▮): Areas outside the specified ratio area will be darkened.
ON (▯): The screen size marker (white lines) will be displayed.
OFF: The screen size marker will not be displayed.

❾ MARKER switch
To control the display of the marker as follows:
ON: A marker selected from the menu will be displayed on the viewfinder screen.
OFF: The marker will not be displayed.

❿ MIX VF (mix viewfinder) switch
You can see the mixed signal of the camera's output signal and the return video signal on the viewfinder screen.
ON: This function is enabled. You can see the mixed signal of the camera's output signal and the selected return video signal (return video 1 or 2) on the viewfinder screen when you press the RET 1 or RET 2 button.
OFF: This function is disabled.

⓫ 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: Menus for camera settings will be displayed on the viewfinder screen.

⓬ MENU SELECT switch
The functions of the MENU SELECT switch are as follows:
ENTER: Confirm the menu or page selected using the MENU SELECT control, or confirm setting values.
CANCEL: Cancel menu setting values or return to the previous menu.

⓭ MENU SELECT control
To select menu items or change setting values in the menus displayed on the viewfinder screen.

⓮ ASSIGNABLE switch
You can assign a function, such as lens extender ON/OFF, using the menu.

⓯ VF DETAIL (viewfinder detail adjustment) switch
ON: Emphasizes the contours of the image on the viewfinder screen. When the switch is set to this position, you can adjust the amount of detail using the VF DETAIL control.
OFF: Disables contour emphasis.

⑯ VF DETAIL (viewfinder detail) control
Adjust the amount of detail of the picture on the viewfinder screen when the VF DETAIL switch is set to ON. This has no effect on the output signal of the camera.

⑰ CALL button
- Press to call the operator of the HDCU1000/1500 Camera Control Unit, the MSU-900/950 Master Setup Unit, or the RCP-700/900-series Remote Control Panel. When pressed, the camera's red tally lamp will light up if previously off, and turn off if previously on. The CALL button on the MSU-900/950 Master Setup Unit or RCP-700/900-series Remote Control Panel will light up, and their buzzer will sound.
- When the CALL button on the RCP-700/900-series Remote Control Panel or the MSU-900/950 is pressed, this button will light up.

⑱ CURSOR (cursor memory) 1, 2, and 3 buttons
To store the size and position of the box cursor displayed on the viewfinder screen.
Three different box cursor settings may be stored in memory using buttons 1, 2, and 3. Pressing one of these buttons will cause a cursor of the stored size to be displayed in the stored position.

Note
When one of the CURSOR buttons is lit up, the H-POSI, V-POSI, WIDTH, and HEIGHT buttons will be disabled.

⑲ Back tally lamp
This lamp lights red when the red tally signal is supplied. When the CALL button on the MSU-900/950 Master Setup Unit or the RCP-700/900-series Remote Control Panel is pressed, the lamp lights if previously off or goes off if previously on.
The lamp lights green when the green tally siganl is supplied.
You can display the camera number selected with the menu.

⑳ "Memory Stick" section
Insert a "Memory Stick" to the slot.
The access lamp lights while writing or reading data to/from a "Memory Stick."

Note
When the access lamp is lit, do not insert/remove the "Memory Stick" or turn off the camera.

㉑ RET 2 knob
This knob selects from the four return signals from the CCU.
By pressing in the RET 2 button, you can view the selected return video signal in the viewfinder.

㉒ RET 1 knob
This knob selects from the four return signals from the CCU.
By pressing in the RET 1 button, you can view the selected return video signal in the viewfinder. The signal supplied from the TEST OUT connector will also be switched.

㉓ RET 2 button
By pressing in this button, you can view the return video signal selected by the RET 2 knob, in the viewfinder. Pressing this button again will switch the viewfinder and monitor screen display back to the camera's video signal.

㉔ RET 1 button
By pressing in this button, you can view the return video signal selected by the RET 1 knob, in the viewfinder. Pressing this button again will switch the viewfinder and monitor screen display back to the camera's video signal.

Note
If both the RET 1 and RET 2 buttons are pressed, RET 1 will be displayed.

㉕ CURSOR STORE button
Press this button to store the size and position of the box cursor in memory.

Note
If the CURSOR ON button is not lit, box cursor information will not be stored.

㉖ CURSOR ON button
When this button is pressed, the button will light up and the box cursor will be displayed on the viewfinder screen. When the button is pressed again, the light will go off and the box cursor will disappear.

㉗ HEIGHT control
Adjust the height of the box cursor displayed on the viewfinder screen within the effective resolution area.

㉘ V-POSI (vertical position) control
Adjust the vertical position of the box cursor displayed on the viewfinder screen within the effective resolution area.

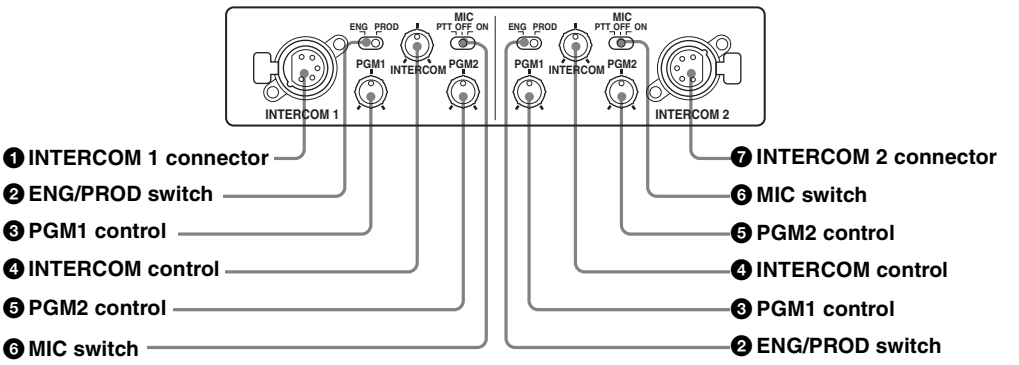
㉙ WIDTH control
Adjust the width of the box cursor displayed on the viewfinder screen within the effective resolution area.

㉚ H-POSI (horizontal position) control
Adjust the horizontal position of the box cursor displayed on the viewfinder screen within the effective resolution area.

㉛ VF (viewfinder) connector (D-sub 25-pin)
Connect to the CAMERA connector on the viewfinder.

Intercom Panel

For JN3 (USA, Canada, and other countries) models



❶ INTERCOM 1 connector (XLR 5-pin)
Connects to an XLR 5-pin headset. The INTERCOM 1 connector can be used for communication via the engineer line even when the power to the camera has been turned off from the HDCU1000/1500 Camera Control Unit and the POWER indicator is lit in red.

❷ 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.

❸ PGM (program audio) 1 control
Adjust the program audio 1 output level.

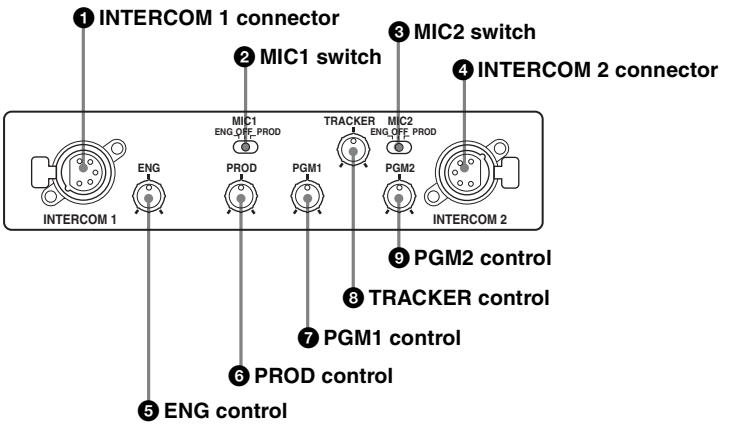
❹ INTERCOM control
Adjust the intercom output level.

❺ PGM (program audio) 2 control
Adjust the program audio 2 output level.

❻ MIC (microphone) switch
Turn the headset microphone on or 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.

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

For CED (Europe) model



❶ INTERCOM 1 connector (XLR 5-pin)
Connects to an XLR 5-pin headset. The INTERCOM 1 connector can be used for communication via the engineer line even when the power to the camera has been turned off from the HDCU1000/1500 Camera Control Unit and the POWER indicator is lit in red.

❷ MIC1 (intercom microphone 1) switch
Select the talk line for intercom 1.
ENG: To talk over the engineer line
OFF: To turn off the headset microphone for intercom line 1
PROD: To talk over the producer line

❸ MIC2 (intercom microphone 2) switch
Select the talk line for intercom 2.
ENG: To talk over the engineer line
OFF: To turn off the headset microphone for intercom line 2
PROD: To talk over the producer line

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

❺ ENG (engineer line) control
Adjust the intercom audio level of the engineer line.

❻ PROD (producer line) control
Adjust the intercom audio level of the producer line.

❼ PGM (program audio) 1 control
Adjust the program audio 1 output level.

❽ TRACKER control
Adjust the intercom audio level at the TRACKER connector (*page 10*) on the connector panel when using the connector for intercom.

❾ PGM (program audio) 2 control
Adjust the program audio 2 output level.

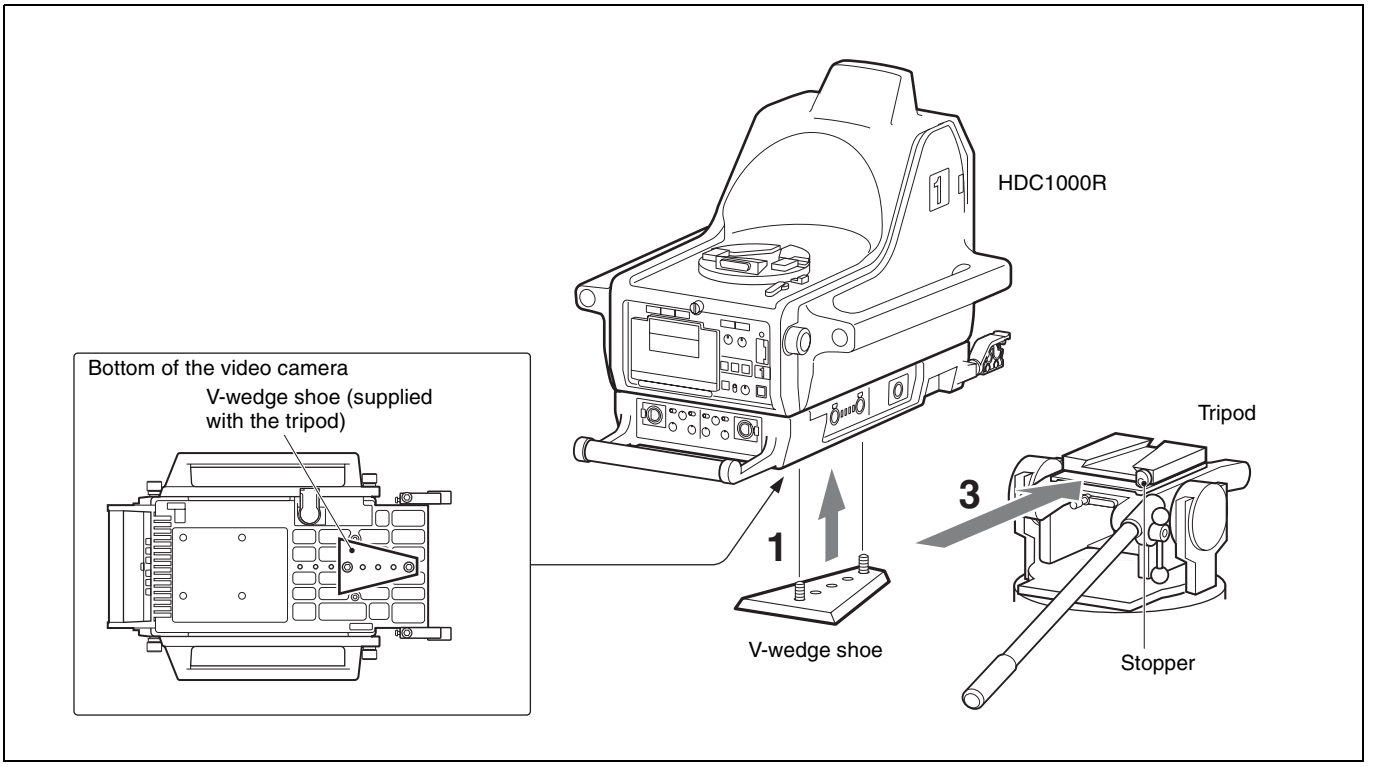
Attaching Accessories

Mounting the Camera to the 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:

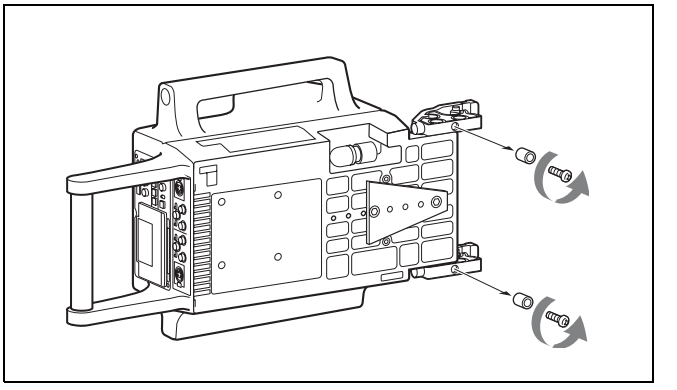
Caution

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 illustsrated.

Attaching the Lens to the Camera

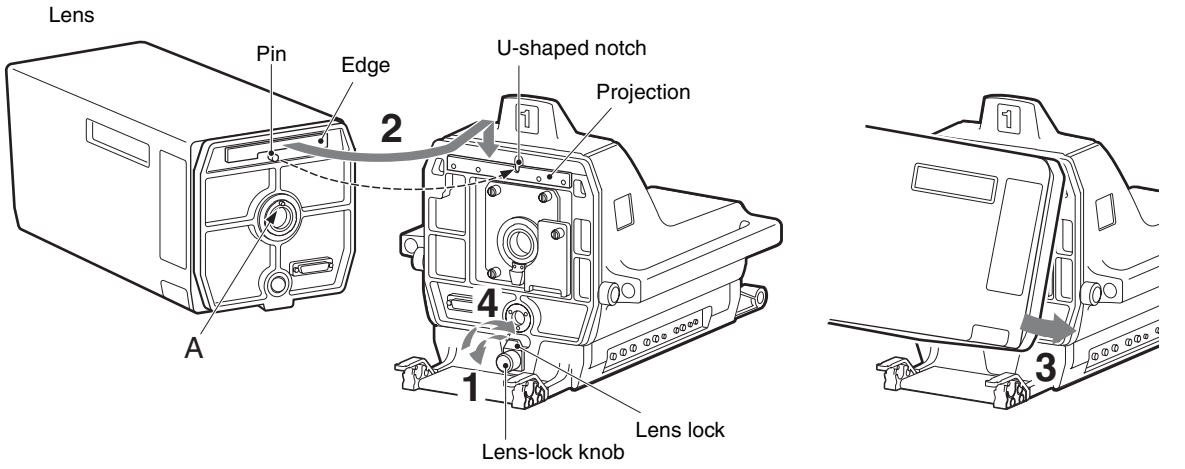
Attach a hanger-mount-type lens recommended by Sony. For details on the lens, refer to the instruction manual furnished with the lens.

To attach, proceed as follows:

Note

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

- That the pan-lock and tilt-lock levers on the tripod are fixed.
- 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 projection of the camera.

3 Couple the lens to the camera.

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

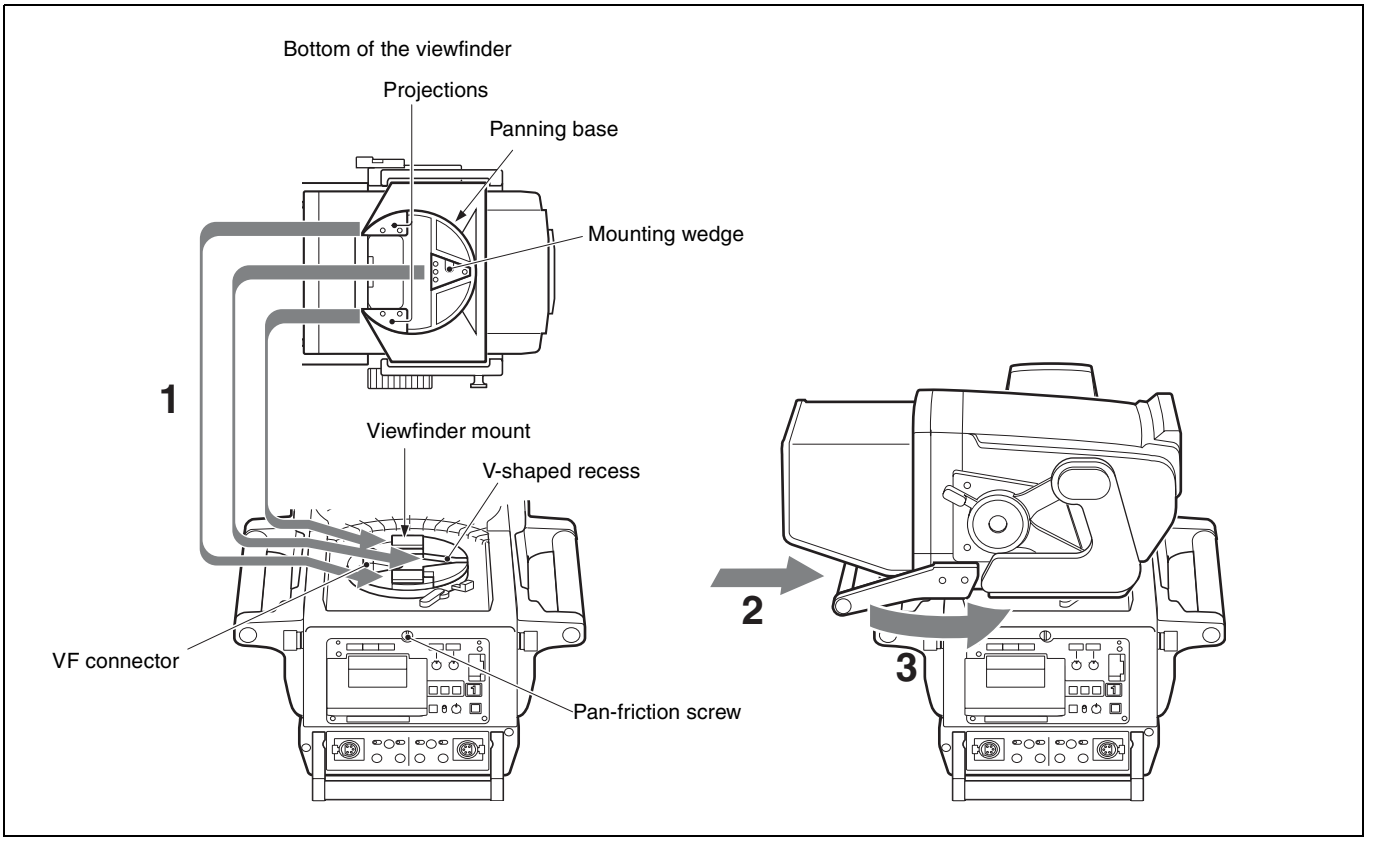
Attaching the 7- or 9-Type Viewfinder

For details on attaching a viewfinder, refer to the instruction manual furnished with the viewfinder.

Proceed as follows:

Note

Be sure that the VF connector on the viewfinder mount is positioned at a right angle to the control panel of the camera as shown below.



1 Place the viewfinder on the viewfinder mount of the camera so that the mounting wedge on the bottom of the viewfinder enters the V-shaped recess on the viewfinder mount and that the projections on the bottom of the viewfinder are placed at the position shown in the figure above.

2 Push the viewfinder by the handle so that the panning base is securely held by the viewfinder mount.

Pull the handle to check that the viewfinder is fixed to the camera.

3 Turn the viewfinder counterclockwise.

Caution

Attach the viewfinder to the camera securely, or the viewfinder may fall down.

Adjusting the pan-friction of the viewfinder

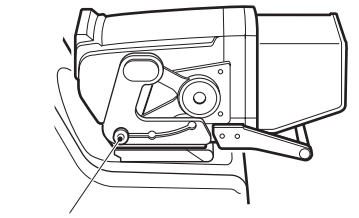
You can adjust the friction for panning the viewfinder with the pan-friction screw. The friction increases as the screw is turned clockwise, while the friction decreases as the screw is turned counterclockwise.

Detaching the viewfinder

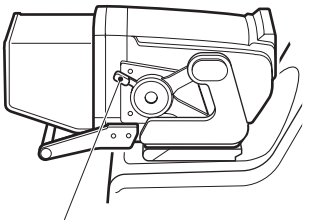
Before detaching the viewfinder, check the following two points:

- That the lift-release knob of the viewfinder is at its lowest position
- That the locking lever is fixed

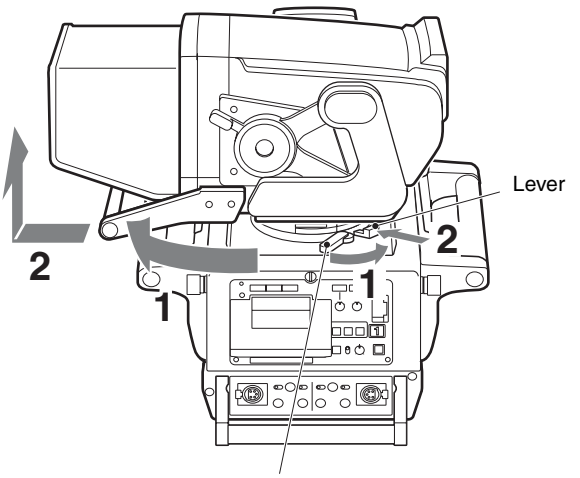
Proceed as follows:



The lift-release knob is placed at this position.



The locking lever is placed at the right-most position.



1 Turn the pan-lock lever on the camera counterclockwise, and turn the viewfinder mount clockwise 90 degree.

2 Pull the handle of the viewfinder while pushing the lever, and lift up the viewfinder.

Setting the Focus Assist Function

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 the DISPLAY switch to MENU while pressing the MENU SELECT switch toward ENTER.

The camera enters Menu mode, and “TOP” is displayed at the upper right corner of the screen.

3 Rotate the MENU SELECT knob to align the arrow marker (➡) to “TOP” , then press the MENU SELECT switch toward ENTER.

The TOP MENU screen is displayed.

```
<TOP MENU>

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

4 Rotate the MENU SELECT knob to align the arrow marker to OPERATION , then press the MENU SELECT switch toward ENTER.

The CONTENTS page of the OPERATION menu is displayed.

```
    CONTENTS        00  TOP
↓↓
➡01.<VF DISPLAY>
 02.<'!'IND>
 03.<VF MARKER>
 04.<VF DETAIL>
 05.<FOCUS ASSIST>
 06.<ZEBRA>
 07.<CURSOR>
 08.<VF OUT>
 09.<SWITCH ASSIGN1>
 10.<HEAD SET>
```

5 Rotate the MENU SELECT knob to align the arrow marker to <VF DETAIL>, then press the MENU SELECT switch toward ENTER.

The <VF DETAIL> page is displayed.

```
<VF DETAIL>          ➡ 04 TOP

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

6 Rotate the MENU SELECT knob to align the arrow marker to the item to be set, then press the MENU SELECT switch toward ENTER.

To use the VF detail signal

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

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

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

FREQUENCY: Change the detection band of sharp edges.

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

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

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

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

To use the color detail

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

You can adjust the coloring with the menu items below.

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

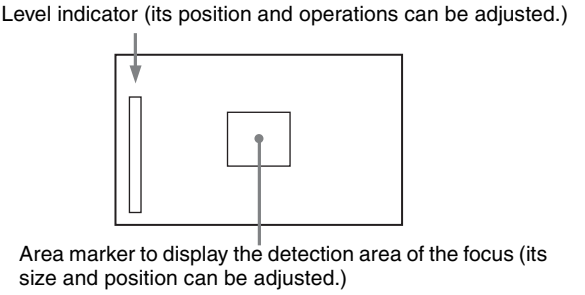
CHROMA LEVEL: To reduce the chroma components of the video signal (only for video signals on the viewfinder).

7 Rotate the MENU SELECT knob to display the desired setting, then press the MENU SELECT switch toward ENTER.

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.



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

1 Display the CONTENTS page of the OPERATION menu (referring to step **1** to **4** in "Adding the VF Detail Signal").

2 Rotate the MENU SELECT knob to align the arrow marker (➡) to <FOCUS ASSIST>, then press the MENU SELECT switch toward ENTER.

The <FOCUS ASSIST> page is displayed.

```
<FOCUS ASSIST>     ➡ 05 TOP

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

3 Rotate the MENU SELECT knob to align the arrow marker to the item to be set, then press the MENU SELECT switch toward ENTER.

To use the level indicator

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

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

MODE: Set the type and position of the indicator.

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

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

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

1) Normally, the sensitivity of the indicator is automatically set to the optimum value in conjunction with the AREA MARKER SIZE set

value. Use this setting when an optimum sensitivity value cannot be obtained, depending on the shooting environment.

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

To use the area marker

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

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

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

4 Rotate the MENU SELECT knob to display the desired setting, then press the MENU SELECT switch toward ENTER.

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

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 to the USER menu at the factory.

- <POWER SAVE>
- <OUTPUT FORMAT>
- <TEST OUT>
- <SDI-2 OUT>
- <DOWN CONVERTER>

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

For details on menu operations and the USER menu, see "Menu Operations" on page 25.

Outputting the signal being shot by the camera

The same textual information as those displayed on the viewfinder can be added to the output signal by setting CHARACTER to "ON" on the <SDI-2 OUT> or <TEST OUT> page.

To output as HD-SDI

Menu page	Item	Setting
<POWER SAVE>	SDI-2 OUT	ACTIVE
<SDI-2 OUT>	OUTPUT	MAIN

To output as SD-SDI

Menu page	Item	Setting
<POWER SAVE>	SDI-2 OUT	ACTIVE
	DOWN CONVERTER	ACTIVE
<DOWN CONVERTER>	OUTPUT SIGNAL	MAIN
<SDI-2 OUT>	OUTPUT	SD-SDI

To output as VBS

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

Constantly outputting a return signal

- When a camera control unit is connected, one of the signals being supplied to the camera control unit can be selected and output it from the camera.
- The last selected return signal is output.
- The same textual information as those displayed on the viewfinder can be added to the output signal by setting CHARACTER to “ON” on the <SDI-2 OUT> or <TEST OUT> page.

To output as HD-SDI

Menu page	Item	Setting
<POWER SAVE>	SDI-2 OUT	ACTIVE
<SDI-2 OUT>	OUTPUT	RET

To output as SD-SDI

Menu page	Item	Setting
<POWER SAVE>	SDI-2 OUT	ACTIVE
	DOWN CONVERTER	ACTIVE
<DOWN CONVERTER>	OUTPUT SIGNAL	RET
<SDI-2 OUT>	OUTPUT	SD-SDI

To output as VBS

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

Outputting the same image as that on the viewfinder

- With HD-SDI, you can obtain a signal that includes the same information as that being displayed on the viewfinder 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 that on the viewfinder, the output will be obtained in 1080i, even if the format setting is 720P.

To output as HD-SDI

Menu page	Item	Setting
<POWER SAVE>	SDI-2 OUT	ACTIVE
<SDI-2 OUT>	OUTPUT	VF

To output as SD-SDI

Menu page	Item	Setting
<POWER SAVE>	SDI-2 OUT	ACTIVE
	DOWN CONVERTER	ACTIVE
<DOWN CONVERTER>	OUTPUT SIGNAL	VF
<SDI-2 OUT>	OUTPUT	SD-SDI

To output as VBS

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

Outputting via Dual Link

The SDI-1 output is assigned to Link A and SDI-2 output is to Link B.

Note

This function cannot be used when a camera control unit is connected.

To output in 1080/59.94P or 1080/50P

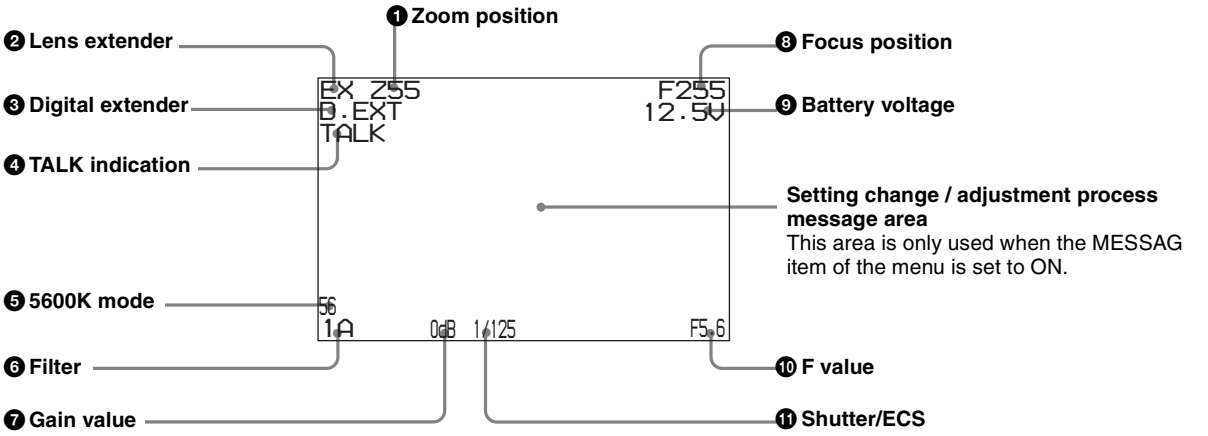
Menu page	Item	Setting
<OUTPUT FORMAT>	ACTIVE LINE	1080
	(Format)	59.94P or 50P
<POWER SAVE>	SDI-2 OUT	ACTIVE
<SDI-2 OUT>	OUTPUT	LINK-B

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). Shows how close it is to the telephoto side.

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 indication
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, D, or E) is for the CC filter.

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 255 (infinity)).

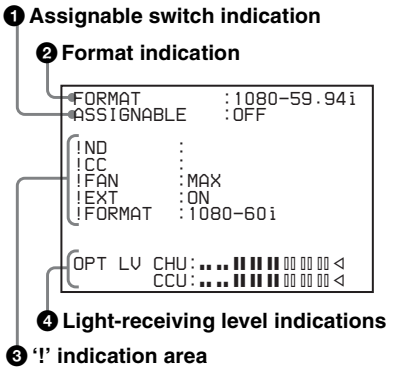
❾ Battery voltage
Displays the input voltage.

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

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

When you set the MENU SELECT switch to CANCEL

The status display is changed to show the following items:



❶ Assignable switch indication
The function assigned to the assignable switch *(page 13)* is inidcated.

For the functions that can be assigned, see OPERATION menu <SWITCH ASSIGN1> (page 35).

❷ Format indication
The current video format is displayed.

❸ '!' indication area
This area can be used to display abnormal statuses using the <'!' IND> function.

For details, see OPERATION menu <'!' IND> (page 33).

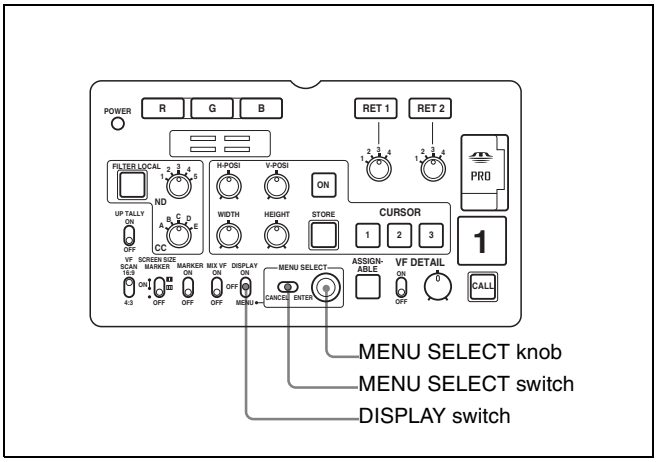
❹ Light-receiving level indications
This area shows the light-receiving levels in segments.
CHU: Light-receiving level at the CCU connector *(page 11)* of the camera
CCU: Light-receiving level at the CAMERA connector of the CCU

Note

If a camera control unit other than an HDCU1000/1500 is connected, correct indications may not be obtained.

Menu Operations

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



Starting Menu Operations

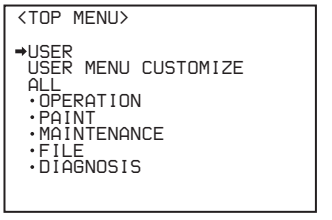
To display a menu page

Move the DISPLAY switch from OFF to MENU.
The menu page that 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

While pressing the MENU SELECT switch toward ENTER, set the DISPLAY switch from OFF to MENU, and "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



To disable the "TOP" indication
Turn the power once off then on again, or set the DISPLAY switch from OFF to MENU while pressing the MENU SELECT switch toward CANCEL. This disables the TOP selection.

Availabel menus

USER menu

This menu can include menu pages selected from OPERATION, PAINT, MAINTENANCE, FILE, and DIAGNOSIS menus for convenience. Changing, adding, and deleting pages can be perfomed 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 28).

ALL menu

This menu permits you to control all items of the OPERATION menu, PAINT menu, MAINTENANCE menu, FILE menu and DIAGNOSIS menu as one 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, this 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 Rotate the MENU SELECT knob to align the arrow marker (➡) with the desired menu.

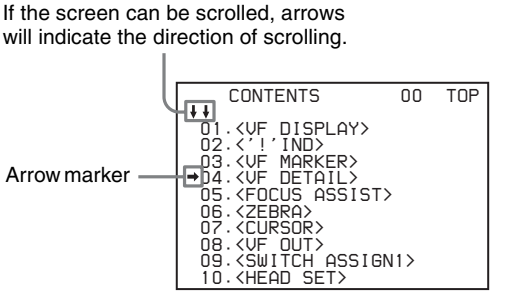
2 Press the MENU SELECT switch toward ENTER.

The CONTENTS page or the last operated page of the selected menu is displayed.

Selecting Pages

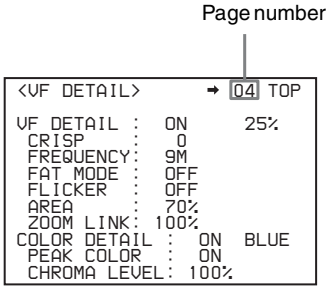
When selecting a page from a CONTENTS page

Example: CONTENTS page of the OPERATION menu



Rotate the MENU SELECT knob to align the arrow marker (➡) with the desired page, then press the MENU SELECT switch toward ENTER.

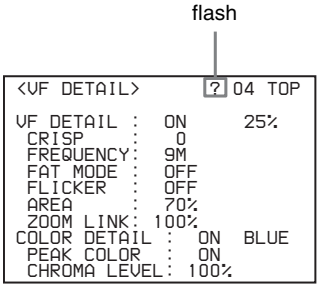
The selected page is displayed.



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 switch toward ENTER.

The arrow marker (➡) changes to a flashing "**?**" mark.

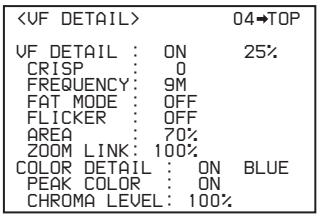


2 Rotate the MENU SELECT knob to flip the pages.

3 When the page you want to set is displayed, press the MENU SELECT switch toward ENTER.

The "**?**" mark will change 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, and press the MENU SELECT switch toward ENTER.



The TOP MENU screen is resumed.

Setting the Menu Items

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

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

2 Press the MENU SELECT switch toward ENTER.

The arrow marker (➡) will change to a flashing "**?**" mark.

3 Rotate 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 MENU SELECT switch toward CANCEL, before pressing the MENU SELECT switch toward ENTER, 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 can be restarted by setting the DISPLAY switch back to MENU.

4 Press the MENU SELECT switch toward ENTER.

The "**?**" mark will change back to the arrow marker (➡), and the new setting will be saved.

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

To specify a character string

When you press the MENU SELECT switch toward ENTER 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 rotating the MENU SELECT knob.

1 Set the cursor to the position where you wish to enter a character, then press the MENU SELECT switch toward ENTER.

Another cursor appears on the character list.

2 Set the cursor to the character to be entered and press the MENU SELECT switch toward ENTER.

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 switch toward ENTER.

To restore the previous string, select ESC and press the MENU SELECT switch toward ENTER.

To return a menu item to its standard value

Select the menu item to be returned to its standard value then press the MENU SELECT switch toward ENTER and hold it 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 pressing the MENU SELECT switch toward ENTER and holding it 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 in the factory-set USER menu:

Menu page title	USER menu No.	Source menu / page No.	
<VF OUT>	U01	OPERATION	08
<VF DETAIL>	U02	OPERATION	04
<FOCUS ASSIST>	U03	OPERATION	05
<VF DISPLAY>	U04	OPERATION	01
<'!' IND>	U05	OPERATION	02
<VF MARKER>	U06	OPERATION	03
<CURSOR>	U07	OPERATION	07
<ZEBRA>	U08	OPERATION	06
<SWITCH ASSIGN1>	U09	OPERATION	09
<POWER SAVE>	U10	MAINTENANCE	M13
<LENS FILE>	U11	OPERATION	17
<HEAD SET>	U12	OPERATION	10
<INTERCOM LEVEL>	U13	OPERATION	11
<MIC GAIN>	U14	MAINTENANCE	M06
<OUTPUT FORMAT>	U15	MAINTENANCE	M09
<TEST OUT>	U16	MAINTENANCE	M11
<SDI-2 OUT>	U17	MAINTENANCE	M12
<DOWN CONVERTER>	U18	MAINTENANCE	M10
<TRUNK>	U19	MAINTENANCE	M14
<UP TALLY>	U20	MAINTENANCE	M07
<ROM VERSION>	U21	DIAGNOSIS	D04

For the items on each page, see the corresponding source menu page in the table in "Menu List" (page 32).

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

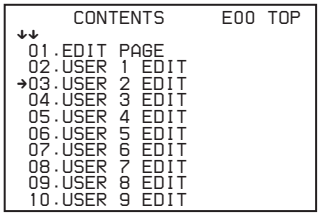
Proceed as follows.

1 While pressing the MENU SELECT switch toward ENTER, move the DISPLAY switch from OFF to MENU.

The TOP MENU screen appears.

2 Turn the MENU SELECT knob to move the arrow marker (➡) to "USER MENU CUSTOMIZE", then press the MENU SELECT switch toward ENTER.

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

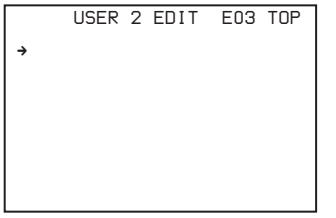


If the USER MENU CUSTOMIZE menu has been used before, the last accessed page appears.

3 If the CONTENTS page is displayed, turn the MENU SELECT knob to move the arrow marker (➡) to one of USER 1 EDIT to USER 19 EDIT, then press the MENU SELECT switch toward ENTER to display the page.

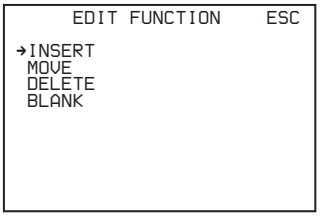
If a different page is displayed, turn the MENU SELECT knob until the desired page appears, then press the MENU SELECT switch toward ENTER.

Example: When you select the USER 2 EDIT page



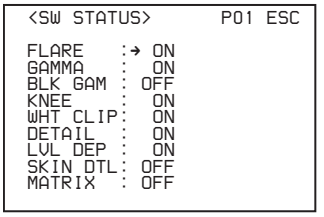
4 Move the arrow marker (➡) to the item to be added (this operation is unnecessary, if no item exists on the page as shown in the figure for step **3**), then press the MENU SELECT switch toward ENTER.

The EDIT FUNCTION screen appears.



5 Move the arrow marker (➡) to “INSERT”, and press the MENU SELECT switch toward ENTER.

The page for the last added item appears.



6 Add the items.

① Turn the MENU SELECT knob until the page that has the desired items appears, then press the MENU SELECT switch toward ENTER.
Turn the MENU SELECT knob to move the arrow marker (➡) to the desired item, then press the MENU SELECT switch toward ENTER.

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 switch toward ENTER.

The EDIT FUNCTION screen appears.

2 Select “DELETE,” and press the MENU SELECT switch toward ENTER.

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 switch toward ENTER.

To change the order of items on a page

Proceed as follows:

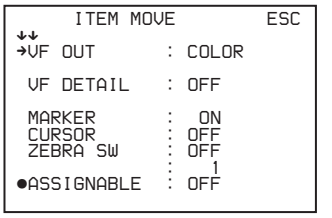
1 Turn the MENU SELECT knob to move the arrow marker (➡) to the item to be moved, then press the MENU SELECT switch toward ENTER.

The EDIT FUNCTION screen appears.

2 Select MOVE, then press the MENU SELECT switch toward ENTER.

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, then press the MENU SELECT switch toward ENTER.



The item selected in step **1** moves to the position 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 want to insert a blank line.

The EDIT FUNCTION screen appears.

2 Select “BLANK”, and press the MENU SELECT switch toward ENTER.

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

To add a page

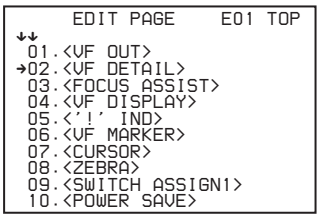
Proceed as follows:

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 menu has been used before, the last accessed page appears.

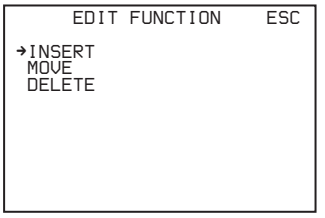
2 If the CONTENTS page is displayed, turn the MENU SELECT knob to move the arrow marker (➡) to "EDIT PAGE", then press the MENU SELECT switch toward ENTER to display the EDIT PAGE screen.

If a different page is displayed, turn the MENU SELECT knob until the EDIT PAGE screen appears, then press the MENU SELECT switch toward ENTER to select the page.



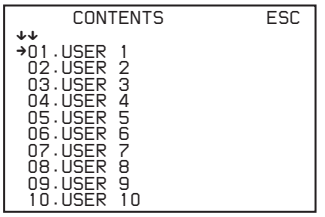
3 Turn the MENU SELECT knob to move the arrow marker (➡) to where you want to add the page, then press the MENU SELECT switch toward ENTER.

The EDIT FUNCTION screen appears.



4 Select INSERT, and press the MENU SELECT switch toward ENTER.

The selection screen appears.



5 Turn the MENU SELECT knob to move the arrow marker (➡) to the desired page, then press the MENU SELECT switch toward ENTER.

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

To cancel adding a page
Before pressing the MENU SELECT switch toward ENTER in step **5**, turn the MENU SELECT knob to move the arrow marker (➡) to "ESC" at the top right of the screen, then press the MENU SELECT switch toward ENTER.
The EDIT PAGE screen appears again.

To delete a page

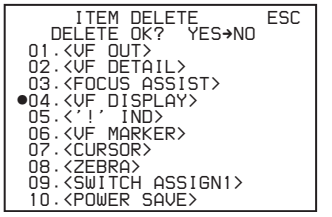
Proceed as follows:

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 switch toward ENTER.

The EDIT FUNCTION screen appears.

2 Select DELETE, and press the MENU SELECT switch toward ENTER.

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 switch toward ENTER.

To move a page

Proceed as follows:

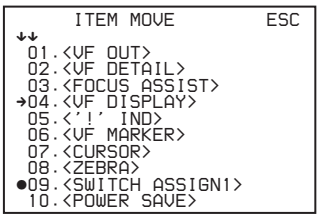
1 Display the EDIT PAGE screen of the USER MENU CUSTOMIZE menu. Turn the MENU SELECT knob to move the arrow marker (➡) to the page that you want to move.

The EDIT FUNCTION screen appears.

2 Select MOVE, then press the MENU SELECT switch toward ENTER.

The EDIT PAGE screen appears again.

3 Turn MENU SELECT knob to move the arrow marker (➡) to the position to where you want to move the page selected in step **1**.



4 Press the MENU SELECT switch toward ENTER.

The page selected in step **1** is moved to the position selected in step **3**.
In the above example, <SWITCH ASSIGN1> moves to the “04” position, and the <VF DISPLAY> and following pages move down one line.

Menu List

This section shows the menus to be displayed on the viewfinder 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.

Notes

CCU: HDCU1000/1500 Camera Control Unit

Execute by ENTER: Execute by pushing on the MENU SELECT switch to ENTER.

OPERATION Menu

Page title	No.	Item	Default	Settings	Remarks
<VF DISPLAY>	01 (U04)	EX	ON	ON, OFF	
		ZOOM	OFF	ON, OFF	
		DISP	LEFT	LEFT, RIGT	
		FOCUS	OFF	ON, OFF	
		ND	ON	ON, OFF	
		CC	ON	ON, OFF	
		5600K	ON	ON, OFF	
		IRIS	ON	ON, OFF	
		WHITE	OFF	ON, OFF	
		D.EXT	ON	ON, OFF	
		GAIN	ON	ON, OFF	
		SHUTT	ON	ON, OFF	
		BATT	OFF	ON, OFF	
		RETURN	ON	ON, OFF	
		TALK	ON	ON, OFF	
		MESSAG	ALL	ALL, WRN, AT, OFF	ALL: To display all messages WRN: To display warning messages and higher AT: To display Auto Setup information and higher

Page title	No.	Item	Default	Settings	Remarks
<'!' IND>	02 (U05)	ND	[IND] ON	ON, OFF	[IND]: Set whether to be included in the status indications on the viewfinder *(see page 25)*. [NORMAL]: Specify 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.) e.g.: With the default setting of ND, the '!' indication is displayed when an ND filter other than 1 is selected. – – –: When CCU connected (cannot be changed)
			[NORMAL] 1 – – – –	1, 2, 3, 4, 5 (combination allowed)	
		CC	[IND] ON	ON, OFF	
			[NORMAL] – B – – –	A, B, C, D, E (combination allowed)	
		WHITE	[IND] ON	ON, OFF, – – –	
			[NORMAL] – A B	P, A, B (combination allowed)	
		5600K	[IND] ON	ON, OFF, – – –	
			[NORMAL] OFF	ON, OFF	
		SHUTT	[IND] ON	ON, OFF, – – –	
			[NORMAL] OFF	ON, OFF	
		FAN	[IND] ON	ON, OFF	
			[NORMAL] AUTO1	AUTO1, AUTO2, MIN, MAX	
		EXT	[IND] ON	ON, OFF	
		FORMAT	[IND] ON	ON, OFF	
			[NORMAL] 59.94i	59.94i, 29.97PsF, 50i, 25PsF, 24PsF, 23.98PsF, 59.94P, 50P	
<VF MARKER>	03 (U06)	MARKER	ON	ON, OFF	Except MASK
			WHITE	WHITE, BLACK, DOT	
		CENTER	OFF	ON, OFF	
			1	1, 2, 3, 4	1: Entire cross 2: Entire cross with a hole 3: Center 4: Center with a hole
		SAFETY ZONE	OFF	ON, OFF	
			90.0%	80.0, 90.0, 92.5, 95.0%	
		EFFECT	OFF	ON, OFF, (FOCUS)	(FOCUS): Displayed when INDICATOR of <FOCUS ASSIST> is ON.
		ASPECT	OFF	ON, OFF	
			4:3	16:9, 15:9, 14:9, 13:9, 4:3	
		MASK	OFF	ON, OFF	
			12	0 to 15	Set the level to darken outside the aspect area.
		SAFETY	OFF	ON, OFF, (AREA)	For the safety marker in Aspect mode. (AREA): Displayed when AREA MARKER of <FOCUS ASSIST> is ON.
			90.0%	80.0, 90.0, 92.5, 95.0%	

Page title	No.	Item	Default	Settings	Remarks
<VF DETAIL>	04 (U02)	VF DETAIL	ON	ON, OFF	
			25%	0 to 100%	
		CRISP	0	–99 to 99	
		FREQUENCY	9M	9M, 14M, 18M	
		FAT MODE	OFF	ON, OFF	
		FLICKER	OFF	ON, OFF	
		AREA	100%	100%, 70%, 60%, 50%, 40%	
		ZOOM LINK	100%	0%, 25%, 50%, 75%, 100%	
		COLOR DETAIL	OFF	ON, OFF	
			BLUE	BLUE, RED, YELLOW	
		PEAK COLOR	OFF	ON, OFF	
		CHROMA LEVEL	25%	100%, 50%, 25%, 0%	
<FOCUS ASSIST>	05 (U03)	INDICATOR	OFF	ON, OFF, (EFFECT)	(EFFECT): Displayed when EFFECT of <VF MARKER> is ON.
		MODE	BOX	BOX, B&W, COL	
			BOTTOM	BOTTOM, LEFT, TOP, RIGHT	
		LEVEL	3	1 to 5	
			QUICK	QUICK, SMOOTH	
		GAIN	50	0 to 99	
		OFFSET	50	0 to 99	
		AREA MARKER	OFF	ON, OFF, (ASPECT)	(ASPECT): Displayed when ASPECT SAFETY of <VF MARKER> is ON.
		SIZE	MIDDLE	SMALL, MIDDLE, LARGE	
		POSITION	CENTER	LEFT, CENTER, RIGHT	
		POSITION H	50	0 to 99	
		POSITION V	50	0 to 99	
<ZEBRA>	06 (U08)	ZEBRA	OFF	ON, OFF	
			1	1, 2, 1&2	
		ZEBRA1 LEVEL	70%	50 to 109%	
		WIDTH	10%	0 to 30%	
		ZEBRA2	100%	50 to 109%	
<CURSOR>	07 (U07)	CURSOR	OFF	ON, OFF	Display only
			WHITE	WHITE, BLACK, DOT	
		BOX/CROSS	BOX	BOX, CROSS	
		H POSITION	50	0 to 99	Display only
		V POSITION	50	0 to 99	Display only
		WIDTH	50	0 to 99	Display only
		HEIGHT	50	0 to 99	Display only
<VF OUT>	08 (U01)	VF OUT	COLOR	COLOR, Y, R, G, B	Display only
		RET MIX VF	OFF	ON, OFF	Display only
		MIX DIRECTION	RET	MAIN, RET	
		MIX VF MODE	Y-MIX	Y-MIX, WIRE(W), WIRE(B)	
		MIX VF LEVEL	80%	0 to 80%	

Page title	No.	Item	Default	Settings	Remarks
<SWITCH ASSIGN1>	09 (U09)	ASSIGNABLE	OFF	OFF, EXTENDER, 5600K, FAN MAX, D.EXTENDER	**Note** When you turn D.EXTENDER ON or OFF, noise may be generated. This is not a malfunction.
		RE.ROTATION	STD	STD, RVS	Specify operation mode of the MENU SELECT knob. STD: Clockwise rotation moves ➡ down or increases values on the menu screen. RVS: Counterclockwise rotation moves ➡ down or increases values on the menu screen.
<HEAD SET>	10 (U12)	INTERCOM1 MIC	CARBON	DYNAMIC, CARBON, MANUAL	
		LEVEL	(–20 dB)	–60 dB, –50 dB, –40 dB, –30 dB, –20 dB, (–60 dB), (–50 dB), (–40 dB), (–30 dB), (–20 dB)	Settings in ( ): With DYNAMIC or CARBON (cannot be changed)
			0 dB	–6 dB, 0 dB, 6 dB	Input gain
		POWER	(ON)	ON, OFF, (ON), (OFF)	Settings in ( ): With DYNAMIC or CARBON (cannot be changed)
		UNBAL	(ON)	ON, OFF, (ON), (OFF)	Settings in ( ): With CARBON (cannot be changed)
		INTERCOM2 MIC	CARBON	DYNAMIC, CARBON, MANUAL	
		LEVEL	(–20 dB)	–60 dB, –50 dB, –40 dB, –30 dB, –20 dB, (–60 dB), (–50 dB), (–40 dB), (–30 dB), (–20 dB)	Settings in ( ): With DYNAMIC or CARBON (cannot be changed)
			0 dB	–6 dB, 0 dB, 6 dB	Input gain
		POWER	(ON)	ON, OFF, (ON), (OFF)	Settings in ( ): With DYNAMIC or CARBON (cannot be changed)
		UNBAL	(ON)	ON, OFF, (ON), (OFF)	Settings in ( ): With CARBON (cannot be changed)
<INTERCOM LEVEL>	11 (U13)	SIDE TONE			
		INTERCOM1	50	MU, 1 to 99	
		INTERCOM2	50	MU, 1 to 99	
<RECEIVE SEL1>	12	INTERCOM1 RECEIVE SELECT	SEPARATE	SEPARATE, MIX	
		INTERCOM	LEFT	- - - , LEFT, RIGHT, BOTH	JN3 model only
		ENG	LEFT	- - - , LEFT, RIGHT, BOTH	CED model only
		PROD	LEFT	- - - , LEFT, RIGHT, BOTH	CED model only
		PGM1	RIGHT	- - - , LEFT, RIGHT, BOTH	
		PGM2	RIGHT	- - - , LEFT, RIGHT, BOTH	
		TRACKER	LEFT	- - - , LEFT, RIGHT, BOTH	

Page title	No.	Item	Default	Settings	Remarks
<RECEIVE SEL2>	13	INTERCOM2 RECEIVE SELECT	SEPARATE	SEPARATE, MIX	
		INTERCOM	LEFT	- - - , LEFT, RIGHT, BOTH	JN3 model only
		ENG	LEFT	- - - , LEFT, RIGHT, BOTH	CED model only
		PROD	LEFT	- - - , LEFT, RIGHT, BOTH	CED model only
		PGM1	RIGHT	- - - , LEFT, RIGHT, BOTH	
		PGM2	RIGHT	- - - , LEFT, RIGHT, BOTH	
		TRACKER	- - -	- - - , LEFT, RIGHT, BOTH	
<RECEIVE SEL3>	14	TRACKER RECEIVE SELECT	SEPARATE	SEPARATE, MIX	
		INTERCOM	LEFT	- - - , LEFT, RIGHT, BOTH	JN3 model only
		ENG	LEFT	- - - , LEFT, RIGHT, BOTH	CED model only
		PROD	LEFT	- - - , LEFT, RIGHT, BOTH	CED model only
		PGM1	RIGHT	- - - , LEFT, RIGHT, BOTH	
		PGM2	RIGHT	- - - , LEFT, RIGHT, BOTH	
<RECEIVE SEL4>	15	EARPHONE RECEIVE SELECT	SEPARATE	SEPARATE, MIX	
		INTERCOM	LEFT	- - - , LEFT, RIGHT, BOTH	JN3 model only
		ENG	LEFT	- - - , LEFT, RIGHT, BOTH	CED model only
		PROD	LEFT	- - - , LEFT, RIGHT, BOTH	CED model only
		PGM1	RIGHT	- - - , LEFT, RIGHT, BOTH	
		PGM2	RIGHT	- - - , LEFT, RIGHT, BOTH	
		TRACKER	LEFT	- - - , LEFT, RIGHT, BOTH	
<OPERATOR FILE>	16	READ (MS→CAM)		Execute by ENTER.	To read the operator file from a “Memory Stick”
		WRITE (CAM→MS)		Execute by ENTER.	To write the current settings of the operator file items to a “Memory Stick”
		PRESET		Execute by ENTER.	To set the operator file items to the preset values in internal memory
		FILE ID		alphanumerics (max.16 characters)	Enter a comment for the operator file to be written to a “Memory Stick.” *See “To specify a character string” on page 27.*
		CAM CODE		Camera code	Display only
		DATE		Date	Display only
<LENS FILE>	17 (U11)	FILE	1	1 to 17	1 to 16: When using a non-serial lens 17: When using a serial lens
			xxxx...	Lens file name	Changeable only when using a non-serial lens
			F.xx	F-stop number of the lens	Changeable only when using a non-serial lens
		CENTER MARKER			To set and store the center marker position: H POS: Increasing the value moves it to the right. V POS: Increasing the value moves it downwards.
		H POS	0	–20 to 20	
		V POS	0	–20 to 20	
		STORE		Execute by ENTER.	

PAINT Menu

Menu page	No.	Item	Default	Settings	Remarks
<SW STATUS>	P01	FLARE	ON	ON, OFF	
		GAMMA	ON	ON, OFF	
		BLK GAM	OFF	ON, OFF	
		KNEE	ON	ON, OFF	
		WHT CLIP	ON	ON, OFF	
		DETAIL	ON	ON, OFF	
		LVL DEP	ON	ON, OFF	
		SKIN DTL	OFF	ON, OFF	
		MATRIX	OFF	ON, OFF	
<VIDEO LEVEL>	P02	WHITE	[R] [G] [B] [M] 0 0 0	–99 to 99	R, G, B, and M (master) values can be independently set. (M cannot be set for WHITE or FLARE.)
		BLACK	0 0 0 0	–99 to 99	
		FLARE	0 0 0	–99 to 99	
		GAMMA	0 0 0 0	–99 to 99	
		V MOD	0 0 0 0	–99 to 99	
		FLARE	ON	ON, OFF	
		V MOD	ON	ON, OFF	
		D. SHAD	OFF	ON, OFF	Selectable only with a lens which supports dynamic shading
		TEST	OFF	OFF, SAW, 3STEP, 10STEP	
<COLOR TEMP>	P03	WHITE	[R] [G] [B] 0 0 0	–99 to 99	
		AUTO WHITE BALANCE		Execute by ENTER.	
		COLOR TEMP	3200K	0K to 65535K	
		BALANCE	0	–99 to 99	
		MASTER	0.0 dB	–3.0 to 12.0 dB	
<GAMMA>	P04	LEVEL	[R] [G] [B] [M] 0 0 0 0	–99 to 99	R, G, B, and M (master) values can be independently set.
		COARSE	0.45	0.35 to 0.90 (0.05 steps)	
		TABLE	STANDARD	STANDARD, HYPER	
			5	1, 2, 3, 4, 5, 6, 7	With STANDARD selected 1: equivalent to a camcorder 2: 4.5-times gain 3: 3.5-times gain 4: equivalent to SMPTE-240M 5: equivalent to ITU-R709 6: 5.0-times gain 7: 5.0-times gain - 709
			4	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	ON, OFF	
		TEST	OFF	OFF, SAW, 3STEP, 10STEP	

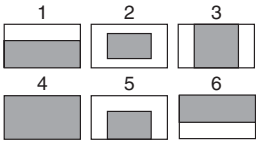
Menu page	No.	Item	Default	Settings	Remarks
<BLACK GAMMA>	P05	LEVEL	[R] [G] [B] [M] 0 0 0 0	–99 to 99	R, G, B, and M (master) values can be independently set.
		RANGE	HIGH	LOW, L.MID, H.MID, HIGH	
			OFF	ON, OFF	
		TEST	OFF	OFF, SAW, 3STEP, 10STEP	
<SATURATION>	P06	SATURATION	0	–99 to 99	
			OFF	ON, OFF	
		LOW KEY SAT	0	–99 to 99	
		RANGE	HIGH	LOW, L.MID, H.MID, HIGH	
			OFF	ON, OFF	
		TEST	OFF	OFF, SAW, 3STEP, 10STEP	
<KNEE>	P07	K POINT	[R] [G] [B] [M] 0 0 0 0	–99 to 99	R, G, B, and M (master) values can be independently set. Absolute values are displayed in ABS mode except for M (master).
		K SLOPE	0 0 0 0	–99 to 99	
		KNEE	ON	ON, OFF	
		KNEE MAX	OFF	ON, OFF	
		KNEE SAT	0	–99 to 99	
			OFF	ON, OFF	
		AUTO KNEE	OFF	OFF, AUTO	
		POINT LIMIT	0	–99 to 99	Absolute value is displayed in ABS mode.
		SLOPE	0	–99 to 99	Absolute value is displayed in ABS mode.
		ABS			Highlighted: ABS (Absolute) mode
<WHITE CLIP>	P08	W CLIP	[R] [G] [B] [M] 0 0 0 0	–99 to 99	R, G, B, and M (master) values can be independently set. Absolute values are displayed in ABS mode except for M (master).
			ON	ON, OFF	
		ABS			Highlighted: ABS (Absolute) mode
<DETAIL 1>	P09	DETAIL	ON	ON, OFF	
		LEVEL	0	–99 to 99	Absolute value is displayed in ABS mode.
		LIMITER M	0	–99 to 99	
		LIMITER WHT	0	–99 to 99	Absolute value is displayed in ABS mode.
		LIMITER BLK	0	–99 to 99	Absolute value is displayed in ABS mode.
		CRISP	0	–99 to 99	Absolute value is displayed in ABS mode.
		LVL DEP	0	–99 to 99	Absolute value is displayed in ABS mode.
			ON	ON, OFF	
		ABS			Highlighted: ABS (Absolute) mode

Menu page	No.	Item	Default	Settings	Remarks
<DETAIL 2>	P10	H/V RATIO	0	–99 to 99	Absolute value is displayed in ABS mode.
		FREQ	0	–99 to 99	Absolute value is displayed in ABS mode.
		MIX RATIO	0	–99 to 99	Absolute value is displayed in ABS mode.
		KNEE APERTURE	0	–99 to 99	Absolute value is displayed in ABS mode.
			OFF	ON, OFF	
		ABS			Highlighted: ABS (Absolute) mode
<SKIN DETAIL>	P11	SKIN DTL	OFF	ON, OFF	
		SKIN GATE	OFF	OFF, 1, 2, 3, (MAT)	1, 2, 3: Skin gate can be set to ON for the specified channel only (MAT): Displayed when GATE of <MULTI MATRIX> is ON.
		ABS			Highlighted: ABS (Absolute) mode
		CH SW	[1] (ON) [2] OFF [3] OFF	ON, OFF	Skin tone detail function can be independently set for each channel (channel 1 is always ON). Absolute values are indicated for LEVEL only in ABS mode.
		HUE	AUTO AUTO AUTO	Execute by ENTER.	
		PHASE	0 0 0	0 to 359	
		WIDTH	29 29 29	0 to 90	
		SAT	–89 –89 –89	–99 to 99	
		LEVEL	0 0 0	–99 to 99	
<USER MATRIX>	P12	R-G	0	–99 to 99	
		R-B	0	–99 to 99	
		G-R	0	–99 to 99	
		G-B	0	–99 to 99	
		B-R	0	–99 to 99	
		B-G	0	–99 to 99	
		MATRIX	OFF	ON, OFF	
		PRESET	- -	ON, OFF, - -	- - : Displayed when MATRIX is OFF (cannot be changed)
			- -	SMPTE-240M, ITU-709, SMPTE-WIDE, NTSC, EBU, ITU-601, - -	
		USER	- -	ON, OFF, - -	
		MULTI	- -	ON, OFF, - -	
<MULTI MATRIX>	P13	PHASE	0	0, 23, 45, 68, 90, 113, 135, 158, 180, 203, 225, 248, 270, 293, 315, 338	Select an axis (angle) at PHASE for which the multimatrix adjustment to be made, and set HUE and SAT. (HUE and SAT can be adjusted independently for 16 axes.)
		HUE	0	–99 to 99	
		SAT	0	–99 to 99	
		ALL CLEAR		Execute by ENTER.	
		GATE	OFF	ON, OFF, (SKN)	(SKN): Displayed when SKIN GATE of <SKIN DETAIL> is ON.
		MATRIX	OFF	ON, OFF	
		PRESET	- -	ON, OFF, - -	- - : Displayed when MATRIX is OFF (cannot be changed)
			- -	SMPTE-240M, ITU-709, SMPTE-WIDE, NTSC, EBU, ITU-601, - -	
		USER	- -	ON, OFF, - -	
		MULTI	- -	ON, OFF, - -	

Menu page	No.	Item✓	Default	Settings	Remarks
<SHUTTER>	P14	SHUTTER	OFF	ON, OFF, (ON), (OFF)	Settings in ( ): When a remote control unit/panel or a CCU is not connected (cannot be changed)
			JN3 model: 1/100 (sec) CED model: 1/60 (sec)	59.94i: 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 50i: 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 29.97PsF: 1/40, 1/60, 1/100, 1/120, 1/125, 1/250, 1/500, 1/1000, 1/2000 25PsF: 1/33, 1/50, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 24P/23.98P: 1/32, 1/48, 1/96, 1/125, 1/250, 1/500, 1/1000 59.94P: 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 50P: 1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000	Step shutter setting
		ECS FREQ	JN3 model: 60.00 Hz CED model: 50.00 Hz	59.94i: 60.00 to 4300 Hz 50i: 50.00 to 4700 Hz 29.97PsF: 30.00 to 2700 Hz 25PsF: 25.00 to 2300 Hz 24PsF/23.98PsF: 24.00 to 2200 Hz 59.94P: 59.96 to 4600 Hz 50P: 50.03 to 4600 Hz	
<NOISE SUP>	P15	NOISE SUP	0%	0 to 100%	
			OFF	ON, OFF	
<SCENE FILE>	P16	1			To store and read 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 by ENTER.	
		STANDARD		Execute by ENTER.	To read the standard paint data
		READ (MS→CAM)		Execute by ENTER.	To load five scene files from a “Memory Stick” to internal memory
		WRITE (CAM→MS)		Execute by ENTER.	To write five scene files in the camera’s memory to a “Memory Stick”
		FILE ID		Max.16 characters	Enter a comment for the scene files to be written to a “Memory Stick.” *See “To specify a character string” on page 27.*
		CAM CODE		Camera code	Display only
		DATE		Date	Display only

MAINTENANCE Menu

Menu page	No.	Item	Default	Settings	Remarks
<AUTO SETUP>	M01	AUTO BLACK		Execute by ENTER.	
		AUTO WHITE		Execute by ENTER.	
		AUTO LEVEL		Execute by ENTER.	
		AUTO WHITE SHADING		Execute by ENTER.	
		AUTO BLACK SHADING		Execute by ENTER.	
		TEST	OFF	OFF, SAW, 3STEP, 10STEP	
<WHITE SHADING>	M02	V SAW	[R] [G] [B] 0 0 0	–99 to 99	R, G, and B values can be independently set.
		V PARA	0 0 0	–99 to 99	
		H SAW	0 0 0	–99 to 99	
		H PARA	0 0 0	–99 to 99	
		WHITE	0 0 0	–99 to 99	
		AUTO WHITE SHADING		Execute by ENTER.	
		WHITE SHAD MODE	RB	RGB, RB	
		3D WHITE SHAD	ON	ON, OFF	
<BLACK SHADING>	M03	V SAW	[R] [G] [B] [M] 0 0 0	–99 to 99	R, G, and B values can be independently set. M (master) value can also be set for BLACK.
		V PARA	0 0 0	–99 to 99	
		H SAW	0 0 0	–99 to 99	
		H PARA	0 0 0	–99 to 99	
		BLK SET	0 0 0	–99 to 99	
		BLACK	0 0 0 0	–99 to 99	
		MASTER GAIN	0 dB	–3, 0, 3, 6, 9, 12 dB	
		AUTO BLACK SHADING		Execute by ENTER.	
		2D BLACK SHAD	ON	ON, OFF	
<OHB MATRIX>	M04	PHASE	0	0, 23, 45, 68, 90, 113, 135, 158, 180, 203, 225, 248, 270, 293, 315, 338	To select an axis (angle) at PHASE for which the OHB matrix adjustment is to be made, and set HUE and SAT (HUE and SAT can be adjusted independently for 16 axes).
		HUE	0	–99 to 99	
		SAT	0	–99 to 99	
		ALL CLEAR		Execute by ENTER.	To clear the HUE and SAT values for all PHASE settings
		OHB MATRIX	OFF	ON, OFF	
		MATRIX	OFF	ON, OFF	

Menu page	No.	Item	Default	Settings	Remarks
<AUTO IRIS>	M05	AUTO IRIS	OFF	ON, OFF, (ON), (OFF)	Settings in ( ): When a remote control unit/panel or a CCU is not connected (cannot be changed)
		WINDOW	1	1, 2, 3, 4, 5, 6	Select the auto iris windows:  The shaded parts indicate the area where light detection occurs.
		OVERRIDE	- -	–99 to 99, - -	To set the override to temporarily change the reference value for brightness of the automatic iris level in the range of ±2 steps: –99: two steps to fully closed iris 99: two steps to fully open iris - - : OFF The setting returns to - - when the power is turned off.
		IRIS LEVEL	0	–99 to 99	±4 steps
		APL RATIO	65	–99 to 99	
		IRIS GAIN	0	–99 to 99	
		IRIS CLOSE	OFF	ON, OFF	
<MIC GAIN>	M06 (U14)	MIC1	60 dB	20, 30, 40, 50, 60 dB	
		MIC2	60 dB	20, 30, 40, 50, 60 dB	
<UP TALLY>	M07 (U20)	TALLY BRIGHTNESS	50	0 to 100	
		NUMBER BRIGHTNESS	50	0 to 100	
		CAMERA NUMBER	- -	- -, 1 to 96	
		NUMBER DISPLAY	AUTO	ON, OFF, AUTO	AUTO: to correspond to the UP TALLY switch setting
<CALL/TALLY>	M08	CCU CALL	ON	ON, OFF	Invalid with CCU connected
		CAM CALL	OFF	ON, OFF	Invalid with CCU connected
<OUTPUT FORMAT>	M09 (U15)	CURRENT	1080-59.94i		Displays the current format.
		ACTIVE LINE	1080	1080, 720	The selectable frame settings are displayed for the selected ACTIVE LINE. (not displayed with CCU connected)
			JN3 model: 59.94i CED model: 50i	1080: 24PsF, 59.94i, 29.97PsF, 23.98PsF, 59.94P, 50i, 25PsF, 50P 720: 59.94P, 50P	
<DOWN CONVERTER>	M10 (U18)	OUTPUT SIGNAL	MAIN	MAIN, RET, VF	
		ASPECT	SQ	SQ, EC	

Menu page	No.	Item	Default	Settings	Remarks
<TEST OUT>	M11 (U16)	OUTPUT	VF	SD-SYNC, HD-SYNC, VF, VBS	
		(PWR SAVE)			Displayed in POWER SAVE mode only
		VBS-OUT			
		CHARACTER	OFF	ON, OFF	
		GAIN	0	–127 to 127	
		CHROMA	0	–127 to 127	
		SETUP	ON	ON, OFF	JN3 model only (displayed when the format is NTSC)
		HD SYNC-OUT			
		V-PHASE	0	–127 to 127	
		H-PHASE	0	–127 to 127	
<SDI-2 OUT>	M12 (U17)	OUTPUT	MAIN	MAIN, VF, LINK-B, RET, SD-SDI	The signal selected for OUTPUT SIGNAL of <DOWN CONVERTER> is output in SD-SDI mode.
		(PWR SAVE)			Displayed in POWER SAVE mode only
		CHARACTER	OFF	ON, OFF	Not displayed if OUTPUT is set to VF or LINK-B
		EMB AUDIO	OFF	ON, OFF	
		(1-MIC1 2-MIC2) (3-AES1 4-AES2)			Displayed when OUTPUT is MAIN or LINK-B
		(1-PGM1 2-PGM2) (3-ENG 4-PROD)			Displayed when OUTPUT is VF, RET or SD-SDI
<POWER SAVE>	M13 (U10)	SDI-2 OUT	PWR SAVE	PWR SAVE, ACTIVE	
		DOWN CONVERTER	ACTIVE	PWR SAVE, ACTIVE	
<TRUNK>	M14 (U19)	TRUNK	ON	ON, OFF	
		IF	232c	232c, 422A	
<GENLOCK>	M15	REFERENCE			Condition of synchronisation (display only)
<DATE>	M16	DATE/TIME	yyyy/mm/dd hh: mm	2000 to 2099 / 01 to 12 / 00 to 31, 00 to 23 : 00 to 59	
<BATTERY ALARM>	M17	BEFORE END	11.5 V	11.5 to 17.0 V	
		END	11.0 V	11.0 to 11.5 V	
<OTHERS 1>	M18	FAN MODE	AUTO1	OFF, AUTO1, AUTO2 , MIN, MAX	AUTO1: Normal rotation AUTO2: Slow rotation
		CAM BARS	OFF	ON, OFF	
		V DTL CREATION	Y	NAM, G, R+G, Y	
		DTL H/V MODE	H/V	H/V, V only	
		TEST 2 MODE	3STEP	3STEP, 10STEP	
		WHITE SETUP MODE	A.LVL	AWB, A.LVL	
		ALAC	AUTO	AUTO, OFF	With AUTO selected, the status is displayed at the right. (ACTIVE): Compensation in progress (WAIT): Waiting for completion of lens initialization (STOP): Compensation is turned off for a non-applicable lens

Menu page	No.	Item✓	Default	Settings	Remarks
<OTHERS 2>	M19	MENU RESUME	OPE & USER	OPE & USER, ALL, OFF	
		DATE TYPE	5 M/D/Y	1 Y/Mn/D 2 Mn/D 3 D/M/Y 4 D/M 5 M/D/Y 6 M/D	Y: Year Mn: Month (numeric) M: Month (character string) D: Day
		FILTER WHT MEM	OFF	ON, OFF	Set to ON to use independent white memory at each CC filter position.
		F NO. DISP	CONTROL	CONTROL, RETURN	Select the iris indication on the panel when AUTO IRIS is off: CONTROL: To display the value from the camera RETURN: To display the value returned from the lens (When AUTO IRIS is on, the value returned from the lens is always displayed.)
<OPTION KEY>	M20	READ (MS→CAM)		Execute by ENTER.	To read the install key from a "Memory Stick."
		INSTALLED OPTION			Displayed only when an option has been installed.

FILE Menu

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

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

Menu page	No.	Item✓	Default	Settings	Remarks
<OPERATOR FILE>	F01	READ (MS→CAM)		Execute by ENTER.	To read the operator file from a "Memory Stick"
		WRITE (CAM→MS)		Execute by ENTER.	To write the current settings of the operator file items to a "Memory Stick"
		PRESET		Execute by ENTER.	To set the operator file items to the preset values in internal memory
		STORE PRESET FILE		Execute by ENTER.	To store the current settings of the operator file items in the operator file in internal memory.
		FILE ID		max.16 characters	Enter a comment for the operator file to be written to a "Memory Stick." *See "To specify a character string" on page 27.*
		CAM CODE		Camera code	Display only
		DATE		Date	Display only

Menu page	No.	Item	Default	Settings	Remarks
<SCENE FILE>	F02	1			To store and read 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 by ENTER.	
		STANDARD		Execute by ENTER.	To read the standard paint data
		READ (MS→CAM)		Execute by ENTER.	To load five scene files from a “Memory Stick” to internal memory
		WRITE (CAM→MS)		Execute by ENTER.	To write five scene files in the camera’s memory to a “Memory Stick”
		FILE ID		Max.16 characters	Enter a comment for the scene files to be written to a “Memory Stick.” *See “To specify a character string” on page 27.*
		CAM CODE		Camera code	Display only
		DATE		Date	Display only
<REFERENCE>	F03	STORE FILE		Execute by ENTER.	To store the current settings of the reference file items in the reference file in internal memory.
		STANDARD		Execute by ENTER.	To read the standard values in the reference file in internal memory.
		ALL PRESET		Execute by ENTER.	To resume the factory-preset reference file
		READ (MS→CAM)		Execute by ENTER.	To load a reference file from a “Memory Stick”
		WRITE (CAM→MS)		Execute by ENTER.	To write the current settings of the reference file items as a reference file to a “Memory Stick”
		FILE ID		Max.16 characters	Enter a comment for the reference file to be written to a “Memory Stick.” *See “To specify a character string” on page 27.*
		CAM CODE		Camera code	Display only
		DATE		Date	Display only
<LENS FILE>	F04	STORE FILE		Execute by ENTER.	
		No.	1	1 to 17	1 to 16: When using a non-serial lens 17: When using a serial lens
		NAME	xxxxx...		Changeable only when using a non-serial lens
		F NO	F1.7	F1.0 to F3.4	Changeable only when using a non-serial lens
		CENTER MARKER			To set and store the center marker position: H POS: Increasing the value moves it to the right. V POS: Increasing the value moves it downwards.
		H POS	0	–20 to 20	
		V POS	0	–20 to 20	
		STORE		Execute by ENTER.	

Menu page	No.	Item	Default	Settings	Remarks
<OHB FILE>	F05	STORE FILE		Execute by ENTER.	To store the offset values of the items specific to the CCD (No repeated store operation is necessary even if the CCD is reattached)
<FILE CLEAR>	F06	PRESET OPERATOR		Execute by ENTER.	
		REFERENCE (ALL)		Execute by ENTER.	
		10 SEC CLEAR	OFF	ON, OFF	To activate/deactivate the function to clear the current menu item. *See "To return a menu item to its standard value" on page 27.*
		OHB WHITE SHAD (ALL)		Execute by ENTER.	
		OHB WHITE SHAD (3D)		Execute by ENTER.	To clear the 3D WHITE SHADING setting only
		OHB BLACK SHAD		Execute by ENTER.	
		OHB ND OFFSET		Execute by ENTER.	
		OHB MATRIX		Execute by ENTER.	
		M.S. FORMAT		Execute by ENTER.	To initialize a "Memory Stick"

DIAGNOSIS Menu

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

Menu page	No.	Item	Indication	Remarks
<OPTICAL LEVEL>	D01	CCU→CAM	GREEN, YELLOW, RED, NG, NO SIGNAL	With CCU connected only
		CAM→CCU	GREEN, YELLOW, RED, NG, NO SIGNAL	With CCU connected only
<BOARD STATUS>	D02	OHB	OK, NG	
		DPR	OK, NG	
		VDA	OK, NG	
		DAP	OK, NG	
		AU	OK, NG	
		AT	OK, NG	
		PS	OK, NG	
		SDI	OK, NG	
<PLD VERSION>	D03	TG	Vx.xx R IT	
		VDA	Vx.xx	
		DAP	Vx.xx	
		AT	Vx.xx	
		SDI	Vx.xx	
		DPR	Vx.xx	
<ROM VERSION>	D04 (U21)	AT	Vx.xx	
		PANEL	Vx.xx	
<SERIAL No>	D05	MODEL	HDCxxxxR	
		NO.	xxxxxxx	
		OPTION		Option(s) are displayed if installed only

Using a “Memory Stick”

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

Usable types of “Memory Stick”

You can use a “Memory Stick,” a “MagicGate Memory Stick,” or a “Memory Stick PRO” with this product. However, the MagicGate[1)] copyright protection is not valid with this product.

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

Note

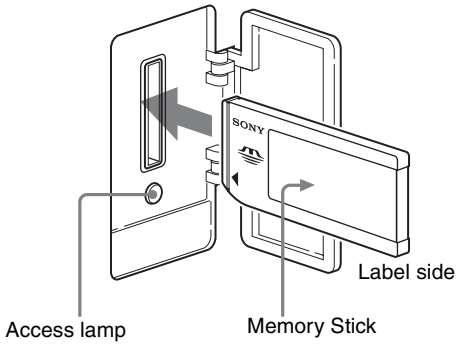
You cannot use a “Memory Stick Duo” or a “Memory Stick PRO Duo” without an appropriate adaptor.

Note on data read/write speed

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

Inserting a “Memory Stick”

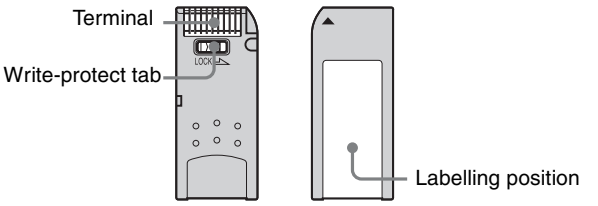
Insert a “Memory Stick” with the label side left into the “Memory Stick” slot until it clicks and the access lamp lights in red.



Access lamp

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

About a “Memory Stick”



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

Notes

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

Precautions

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

- "Memory Stick" and MEMORY STICK are trademarks of Sony Corporation.
- "Memory Stick Duo" and MEMORY STICK DUO are trademarks of Sony Corporation.
- "Memory Stick PRO" and MEMORY STICK PRO are trademarks of Sony Corporation.
- "Memory Stick PRO Duo and MEMORY STICK PRO DUO are trademarks of Sony Corporation.
- "MagicGate" and MAGICGATE are trademarks of Sony Corporation.

Specifications

General

Power requirements	AC 240 V, 1.7 A (max.) DC 180 V, 0.9 A (max.) DC 12 V, 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) (main unit only)
Dimensions	*See page 50.*

Imager

Imager	2/3-type Progressive Scan CCD
Method	3-CCD, RGB
Effective resolution	1920 (horizontal) × 1080 (vertical)

Electrical characteristics

Sensitivity	f10.0 with 1080/59.94i f11.0 with 1080/50i (at 2000 lx with 89.9% reflectivity)
Image S/N	Typical –56 dB/–64 dB (NS MAX)
Horizontal resolution	1000 TV lines (at center of screen) 5 % or higher modulation
Geometric distortion	Negligible (not including lens distortion)

Optical system specifications

Spectral system	F1.4 prism
Built-in filters	Color temperature conversion filters A: cross filter B: 3200K (clear) C: 4300K D: 6300K E: 8000K ND filters 1: clear 2: 1/4 ND 3: 1/8 ND 4: 1/16 ND 5: 1/64 ND

Input connectors

DC IN	XLR 4-pin (1) 10.5 to 17 V DC
RET CONTROL	6-pin (1)

AUDIO IN 1, AUDIO IN 2
XLR 3-pin, female (1 each)
For MIC: –60 dBu (may be selected up to –20 dBu by menu or HDCU1000/1500 operations), balanced
For LINE: 0 dBu, balanced

Output connectors

TEST OUT	BNC type (1) 1.0 Vp-p, 75-ohm terminated
PROMPTER 1, PROMPTER 2	BNC type (1) 1.0 Vp-p, 75-ohm terminated
VF	D-sub 25-pin (1)
DC OUT	4-pin (1) 10.5 to 17 V DC, 500 mA maximum It may be limited depending on the load and input conditions.
SDI 1, SDI 2	BNC type (1 each)

Input/output connectors

CCU	Electro-optical connector (1)
TRACKER	10-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)

Supplied accessories

Angle adjustment brackets (2)
Front cover (1)
Number plates for side panel (2 sets)
Number plates for up-tally lamp (1 set)
Cable clamp (2)
Operation manual (1)

Optional accessories

HD Electronic Viewfinder
HDVF-700A (7-type, monochrome)
HDVF-EL100 (11-type, color)
BKP-7911 Script Holder (with script light)
CAC-6 Return Video Selector
“Memory Stick”

Related equipment

HDCU1000/1500 HD Camera Control Unit
MSU-900/950 Master Setup Unit
RCP-700/900-series Remote Control Panel
VCS-700 Video Selector
CNU-700 Camera Command Network Unit

Connectors for optical/electric composite cables:
- LEMO® PUW.3K.93C.TLCC96 (to the “CAMERA” connector on CCU)
- LEMO® FUW.3K.93C.TLMC96 (to the “CCU” connector on CAMERA)

Caution on the optical/electric composite cable:
For connection between the camera control unit and a camera, be sure to use an optical/electric signal composite cable with the connectors specified in this manual in order to comply with the limit for EMC regulations.

Connecteurs pour les câbles optiques/électriques composites:
- LEMO® PUW.3K.93C.TLCC96 (au connecteur «CAMERA» de l’unité de commande de caméra)
- LEMO® FUW.3K.93C.TLMC96 (au connecteur «CCU» de la caméra)

Attention concernant le câble optique/électrique composite:
Pour la connexion entre l’unité de commande de caméra et une caméra, utilisez un câble optique/électrique composite avec connecteurs spécifiés dans ce manuel pour assurer la conformité avec la réglementation EMC.

Anschlüsse für optische/elektrische FBAS-Kabel:
- LEMO® PUW.3K.93C.TLCC96 (an „CAMERA“-Anschluss an der Kamerasteuereinheit)
- LEMO® FUW.3K.93C.TLMC96 (an „CCU“-Anschluss an der KAMERA)

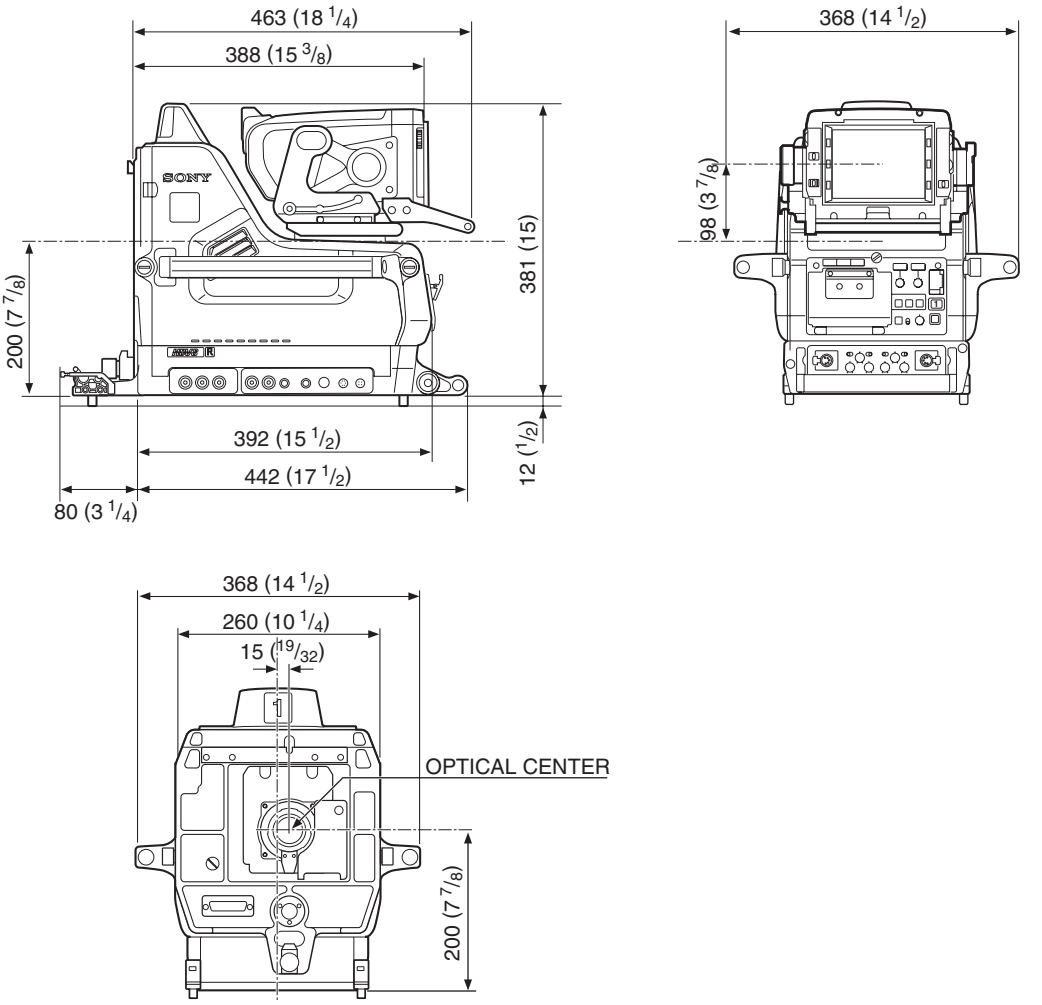
Vorsichtsmaßregeln für optische/elektrische FBAS-Kabel:
Für Verbindung zwischen Kamerasteuereinheit und Kamera verwenden Sie immer ein optisches/elektrisches FBAS-Kabel mit Steckern, wie in dieser Anleitung beschrieben, um die Grenzwerte der geltenden EMV-Vorschriften zu erfüllen.

Design and specifications are subject to change without notice.

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

Dimensions

Unit: mm (inches)



For Customer in China

根据中华人民共和国信息产业部第39号令《电子信息产品污染控制管理办法》及标准中要求的“有毒有害物质或元素名称及含量”等信息，本产品相关信息请参考以下链接:

http://pro.sony.com.cn

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