

Camera Extension Adaptor

Operating Instructions

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

HDCE-500

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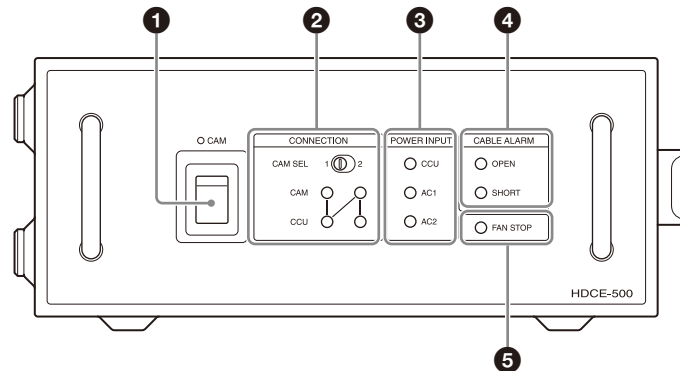
Overview

Use the HDCE-500 Camera Extension Adaptor connected to the following camera.

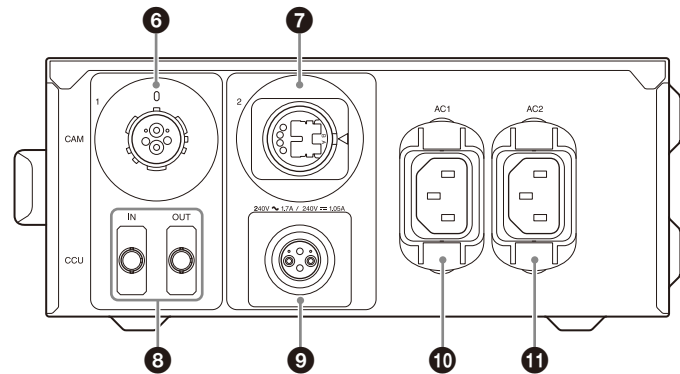
- HDC-5000/3000 series Color Camera
Connect between the HDC-5000/3000 series and the HDCU5500/5000/3500/3100 Camera Control Unit (CCU hereafter), supply power to the camera, and convert the transfer between them from the optical fiber to the single mode fiber.
- HDC-P50A Multi-Purpose Camera
Connect to HDC-P50A and supply power.
Connect between HDC-P50A and HDCU5500/5000, supply power to the camera, and perform optical transmission between the two.

Name and Function of Parts

Front Panel



Rear Panel



1 CAM (camera power) switch and indicator

Turns on and off the camera. Flip it to the upper side to turn on, and to the lower side to turn off. The indicator turns on when the power is supplied to the camera.

2 CAM SEL (camera connector select) switch and CONNECTION indicator

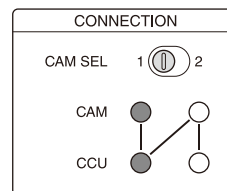
The CAM SEL switch selects the connecting connector of the camera to which power is supplied.

The CAM SEL switch is at 1: the CAM 1 connector (6) becomes effective, and power is supplied to the connected HDC-5000/3000 series camera.

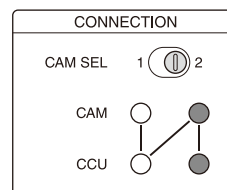
The CAM SEL switch is at 2: the CAM 2 connector (7) becomes effective, and power is supplied to the connected HDC-P50A.

Indicators are arranged in the same way as CAM 1, 2 connectors (6, 7), CCU IN/OUT connectors (8), and CCU 240V connector (9) as seen from the rear, and the indicators turn on when the connectors are effective.

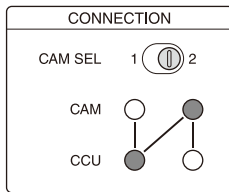
- When the CAM SEL switch is at 1, and the top fiber switch is flipped to the straight side, the left indicators turn on. The CAM 1 connector and CCU IN/OUT connectors are effective.



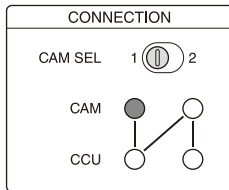
- When the CAM SEL switch is at 2, and the top fiber switch is flipped to the straight side, the right indicators turn on. The CAM 2 connector and CCU 240V connector are effective.



- When the CAM SEL switch is at 2, and the top fiber switch is flipped to the cross side, the top right and bottom left indicators turn on. The CAM 2 connector and CCU IN/OUT connectors are effective.



- When the CAM SEL switch is at 1, and the top fiber switch is flipped to the cross side, the connection is not supported by this unit, and only the top left indicator turns on. All CCU connectors are invalid.



- For the top fiber switch, see "Fiber Switching During Connection to HDC-P50A" (page 6).

Note

When switching between 1 and 2 of the CAM SEL switches, all power inputs from the CCU 240V connector, AC1 IN connector, and AC2 IN connector need to be turned off temporarily. If the CAM SEL switch is switched while there is power input from one of the connectors, the change will not be reflected.

③ POWER INPUT indicator

Shows the power input status of the CCU 240V connector (⑨), AC1 IN connector (⑩), and AC2 IN connector (⑪). If power input is available through multiple connectors, the unit is powered from the connector with the higher priority. Other connectors with power inputs will remain in standby mode. The priority order of the power supply to the unit is CCU 240V connector → AC1 IN connector → AC2 IN connector.

Indicator	Status
Turns on in green	Power is being supplied to the unit
Turns on in orange	Standby
Turns off	No power input

④ CABLE ALARM indicator

OPEN: Turns on in red when no camera is connected to the CAM 1/2 connector that is enabled by the CAM SEL switch. No power is supplied to the camera while the indicator is turned on.

SHORT: Turns on in red when overcurrent occurs on the optical/electric composite cable connected to the CAM 1/2 connector. No power is supplied to the camera while the indicator is turned on.

⑤ FAN STOP indicator

Turns on in red when the fan is stopped.

⑥ CAM 1 (camera 1) connector for HDC-5000/3000 series

Connect to a camera with the optical/electric composite cable. All camera signals such as power, control signals, video signals, and audio signals can be transmitted and received through one optical/electric composite cable.

Note

Transmission errors will occur if dust or particles adhere to the connection ends of the optical/electric composite cable. Be sure to attach the supplied cap when the cable is not connected.

⑦ CAM 2 (camera 2) connector for HDC-P50A

Connect to a camera with the optical/electric composite cable. All camera signals such as power, control signals, video signals, and audio signals can be transmitted and received through one optical/electric composite cable.

Note

Transmission errors will occur if dust or particles adhere to the connection ends of the optical/electric composite cable. Be sure to attach the supplied cap when the cable is not connected.

⑧ CCU IN/OUT (camera control unit input/output) connectors (ST connectors for single mode fiber)

Connect to the CCU or network switch with single-mode fiber cables.

When connecting to the CCU, HKCU-SM50 Single Mode Fiber Connector Kit for CCU or HKCU-SM100 CCU Extension Adaptor is required.

When connecting to the network switch, an ST-LC conversion cable is required.

Note

Transmission errors will occur if dust or particles adhere to the connection ends of the ST connectors. Be sure to attach the supplied caps when the cables are not connected.

⑨ CCU 240V (camera control unit 240V) connector (optical fiber connector)

Connect to the CCU with the optical/electric composite cable.

Note

Transmission errors will occur if dust or particles adhere to the connection ends of the optical/electric composite cable. Be sure to attach the supplied cap when the cable is not connected.

⑩ AC1 IN (AC1 power input) connector

Connect to the AC power supply with the specified power cord. The power cord can be secured to the unit using the separately sold plug holder.

When the power input to the CCU 240V connector is lost, the power input will automatically switch to the AC1 IN connector.

⑪ AC2 IN (AC2 power input) connector

Connect to the AC power supply with the specified power cord. The power cord can be secured to the unit using the separately sold plug holder.

When the power input to the CCU 240V connector and AC1 IN connector is lost, the power input will automatically switch to the AC2 IN connector.

Fiber Switching During Connection to HDC-P50A

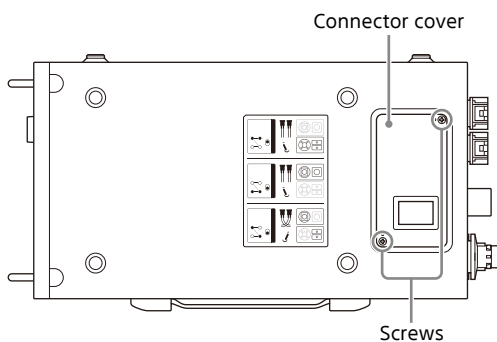
When the unit is shipped from the factory, the unit is set to use the CCU mode (page 8) of HDC-P50A.

To use the IP mode (page 9) of HDC-P50A, remove the connector cover of the unit top, and switch the cable and the switch.

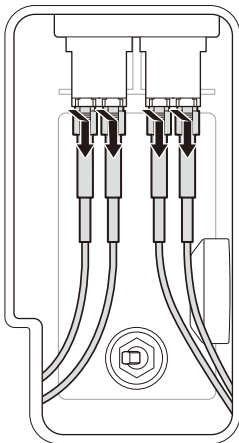
This section explains the procedure to switch from the CCU mode to the IP mode.

- ◆ For the CCU mode/IP mode of HDC-P50A, refer to the operating instructions of HDC-P50A.
- ◆ Follow the same procedure to switch from the IP mode to the CCU mode.

- 1 Remove the screws (two locations) on the top, and remove the connector cover.**

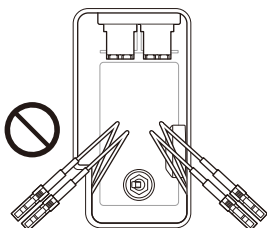


- 2 Press the tabs of the optical fiber cables to remove the cables from the LC connectors.**

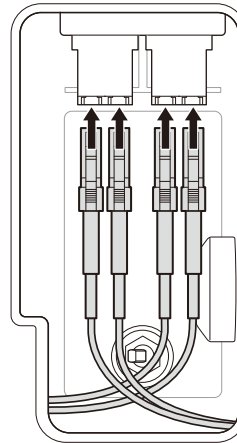


Note

Do not bend the optical fiber cables at an acute angle as this may break the cables.



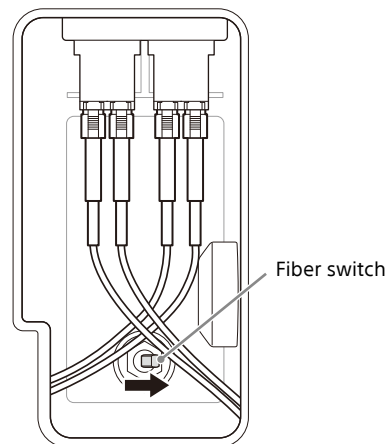
- 3 Cross the optical fiber cables according to the label, and insert the cables into the LC connectors until they click.**



Note

When inserting the cables, make sure of the numbers on the label and insert the cables into the correct positions.

- 4 Flip the fiber switch to the cross side.**

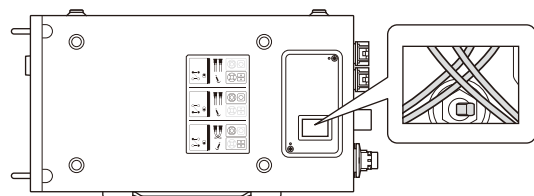


Note

The unit will not function properly if only the cable connections are changed. Be sure to toggle the switch.

- 5 Reattach the connector cover in its original position, and tighten the screws (two locations).**

Through the window of the connector cover, make sure that both the cable and fiber switch are crossed.



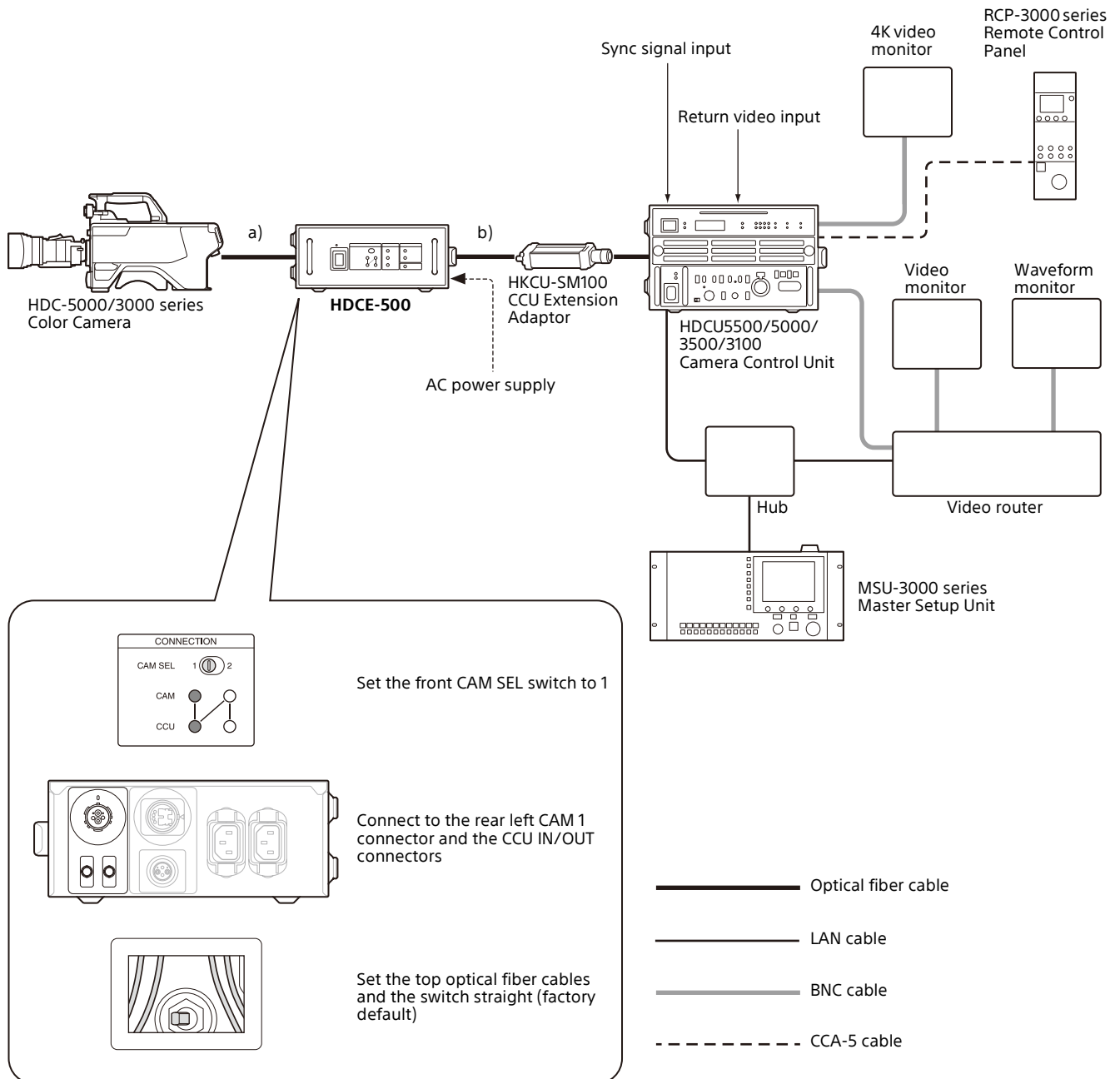
System Configuration Examples

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

Note

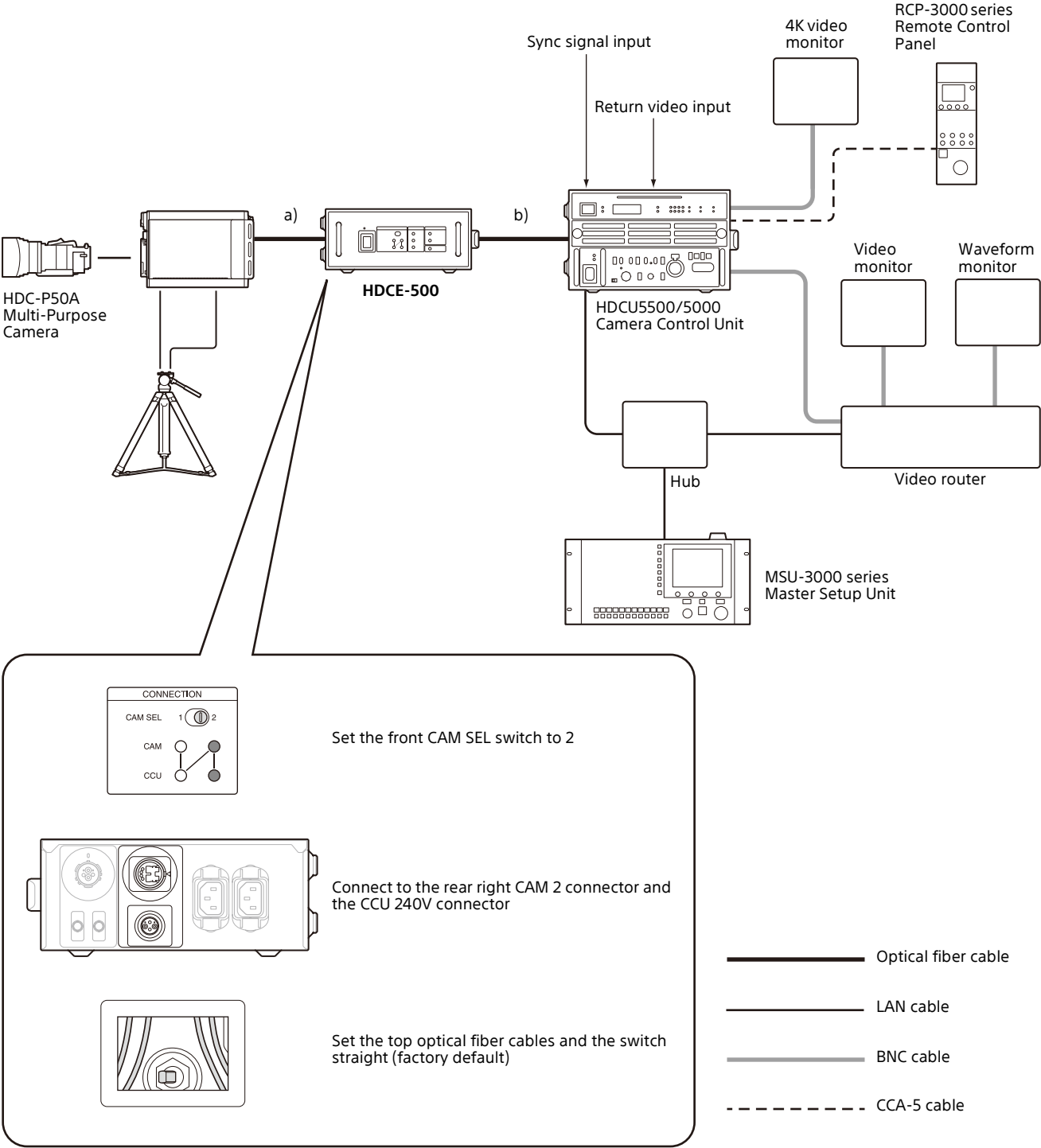
Production of some of the peripherals and related devices shown in the figures may have been discontinued. For advice on choosing devices, please contact your Sony dealer or a Sony service representative.

HDC-5000/3000 Series Connection Example



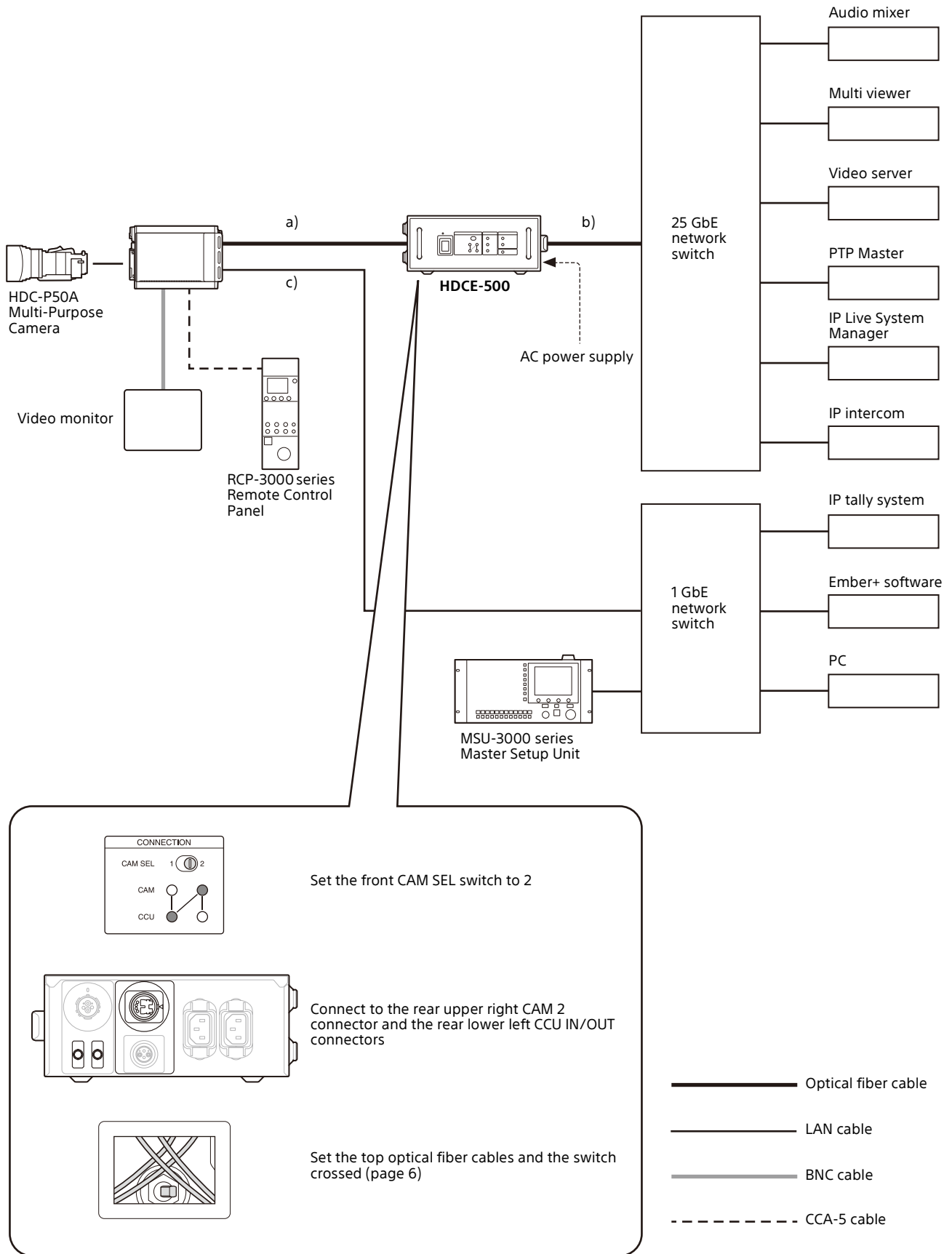
- a) The maximum transmission distance when using an optical/electric composite cable is about 3 km. (The maximum transmission distance varies depending on the format settings of the peripherals and the power supply to the peripherals.)
- b) The maximum transmission distance when using general-purpose single-mode fiber cables is about 10 km.

HDC-P50A (CCU Mode) Connection Example



- a) The maximum transmission distance when using the CCFN-25/50/100/150/200/250 Hybrid Fiber Cable is about 350 m.
- b) The maximum transmission distance when using an optical/electric composite cable is about 2 km including the transmission distance of the Hybrid Fiber Cable a) (about 4 km when the POWER SUPPLY MODE setting for CCU is set to BOOST).

HDC-P50A (IP Mode) Connection Example



- a) The maximum transmission distance when using the CCFN-25/50/100/150/200/250 Hybrid Fiber Cable is about 350 m.
b) The maximum transmission distance when using general-purpose single-mode fiber cables is about 10 km.
When connecting to a network switch, single-mode fiber cables with ST-LC connectors at both ends are required.
c) Connect to the LAN COM connector of HDC-P50A.

Notes on Use

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

The fan is a consumable part that will need periodic replacement.

When operating at room temperature, a normal replacement cycle will be about 5 years. However, this replacement cycle represents only a general guideline and does not imply that the life expectancy of this part is guaranteed. For details on parts replacement, contact your dealer.

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

Use and storage locations

Store in a level, ventilated place. Avoid using or storing the unit in the following places.

- In excessive heat or cold. Operating temperature range is -10°C to $+40^{\circ}\text{C}$ (14°F to 104°F).
Remember that in the summer during warm climates, the temperature inside a car with the windows closed can easily exceed 50°C (122°F).
- In damp or dusty locations
- Locations where the unit may be exposed to rain
- Locations subject to violent vibration
- Near strong magnetic fields
- Close to TV or radio transmitters producing strong electromagnetic fields
- In direct sunlight or close to heaters for extended periods

Do not subject to strong shock

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

Do not cover with cloth

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

Care

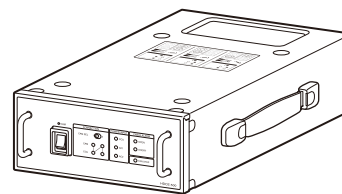
Clean the cabinet and panels by wiping them lightly with a soft, dry cloth. If they are very dirty, use a cloth dampened with a small amount of neutral detergent, then wipe dry. Do not use volatile solvents such as alcohol or thinners, as these may damage the finish.

Note on handling optical fiber cables

If the end of the cable is soiled, it may disrupt transmission. Clean the end with a fiber optic cleaner before connection.

On placement

When using the unit, be sure to place it as shown in the figure below.



To prevent electromagnetic interference from portable communications devices

The use of portable telephones and other communications devices near this unit can result in malfunctions and interference with audio and video signals.

It is recommended that the portable communications devices near this unit be powered off.

Specifications

General

Power requirements	100 V to 240 V AC 50/60 Hz
Current consumption	2.6 A (max)
Operating temperature	-10 °C to +40 °C (14 °F to 104 °F)
Storage temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Dimensions	200 × 83 × 366 mm (7 ⁷ / ₈ × 3 ³ / ₈ × 14 ¹ / ₂ inches) (w/h/d, excluding protrusions)
Mass	Approx. 4.8 kg (10 lb 9.3 oz)

Input/output connectors

CAMERA 1	Optical fiber connector 240 V DC, 0.79 A (max)
CAMERA 2	Optical/electric multi connector 65 V DC, 2.2 A (max)
CCU IN/OUT	ST connectors for single mode fiber
CCU 240V	Optical fiber connector 240 V AC, 1.7 A (max) 180 V to 240 V DC, 1.05 A (max)

Supplied accessories

Operating Instructions CD-ROM (1)
Before Using This Unit (1 set)

Optional accessories

CCFN-25/50/100/150/200/250 Hybrid Fiber Cable
HKCU-SM50 Single Mode Fiber Connector Kit
HKCU-SM100 CCU Extension Adaptor
CCFN-JC1 Cable Coupler
United States and Canada: Plug holder B (2-990-242-01)
Other areas: Plug holder C (3-613-640-01)
United States and Canada: Power cord set (1-551-812-XX)
Other areas: Power cord set (1-782-929-XX)
Service Manual

Related devices

HDC5500/5000/3500/3200/3100/5500V/3500V/F5500/F5500V
Color Camera
HDC-P50A Multi-Purpose Camera
HDCU5500/5000/3500/3100 Camera Control Unit

Notes

- Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.
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Design and specifications are subject to change without notice.

