SONY

CAMERA ADAPTOR

CA-570
CA-570P

MAINTENANCE MANUAL Part 1

1st Edition

Serial No. 18001 and Higher: CA-570 (UC)

Serial No. 38001 and Higher: CA-570 (J)

Serial No. 48001 and Higher: CA-570P (CE)

⚠警告

このマニュアルは，サービス専用です。
お客様が，このマニュアルに記載された設置や保守，点検，修理などを行うと感電や火災，人身事故につながることがあります。
危険をさけるため，サービストレーニングを受けた技術者のみご使用ください。

⚠WARNING

This manual is intended for qualified service personnel only.
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

⚠WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠AVERTISSEMENT

Ce manual est destiné uniquement aux personnes compétentes en charge de l’entretien. Afin de réduire les risques de décharge électrique, d’incendie ou de blessure n’effectuer que les réparations indiquées dans le mode d’emploi à moins d’être qualifié pour en effectuer d’autres. Pour toute réparation faire appel à une personne compétente uniquement.

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Manual Structure

1. Installation

2. Service Overview

Manual Structure

Purpose of this manual

This manual is the maintenance manual part 1 for Camera Adaptor CA-570/570P. This manual is intended for use by trained system and service engineers, and provides the installation and maintenance information that is necessary at the time of primary service.

Relative manuals

Besides this “maintenance manual part 1”, the following manuals are available for this unit.

- **Operation Manual (Supplied with this unit)**
  This manual is necessary for application and operation of this unit.

- **Maintenance Manual Part 2 Volume 1, Volume 2 (Available on request)**
  This manual describes the information items on maintenance, and items that premise the service based on the components parts such as alignment, schematic diagrams, board layouts and spare parts list.
  If this manual is required, please contact your local Sony Sales Office/Service Center.

- **System Manual (Available on request)**
  This manual is necessary for connection and operation of this unit and other peripheral equipments.
  If this manual is required, please contact your local Sony Sales Office/Service Center.

Contents

The following are summaries of all the sections for understanding the contents of this manual.

Section 1 Installation

Describes information about connector input/output signals, instance of configuration and function of internal switches.

Section 2 Service Overview

Describes information about board locations, recommended replacement part, replacement of part and notes on services.

Section 1
Installation

1-1. Checking ROM version

When the CA-570/570P is to be connected to the BVP-550/550P, be sure to check that the ROM version for IC36/AT-95 board of the camera is Ver. 4.00 or higher. If ROM replacement is required, contact your local Sony Sales Office/Service Center.
In the following cases, it is unnecessary to check.

- When connecting the unit to the BVP-950/950P
- When connecting the unit to the camera which is provided with the AT-126 board (such as the BVP-550/550P upgraded by the BKP-5090 or the BVP-570)

ROM Version

IC36/AT-95 board Ver. 4.00 or higher

Note

ROM version can be checked easily on the viewfinder screen. For details, refer to the BVP-550/550P maintenance manual, Section 3 “Setup Menu”.

1-2. Supplied Accessories

Accessory	Sony P/N	Qt’y
Shoulder Belt	A-6772-374-A	1
Cable Holders	3-692-186-01	2
Cable Holder Fixing Screws	7-682-547-09	4
Operation Manual	————	1
Maintenance Manual Part 1	————	1

1-3. Connectors and Cables

1-3-1. Connector Input/Output Signals

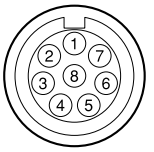
- **PROMTER** *1/**GENLOCK** *2
  BNC 75 Ω 1.0 V p-p

  *1: In connection with CCU
  *2: In connection with VTR

- **TRIAX**
  King type (for CA-570)
  Fischer type (for CA-570P)
- **TEST OUT** *3
  BNC 75 Ω 1.0 V p-p

  *3: Refer to Section 1-4. “Function of Internal Switches, AU-251 Board” for details.

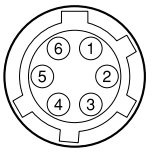
REMOTE (8P FEMALE)



(External view)

No.	Signal	Specifications
1	TX (+)	BVP SERIAL DATA
2	TX (–)	
3	RX (+)	CCU/MSU/RCP/CNU/VCS
4	RX (–)	SERIAL DATA
5	VIDEO (G)	GND for VIDEO
6	POWER (+) OUT	+12 V, 500 mA (MAX)
7	POWER (–) OUT	GND for +12 V
8	VIDEO (X) OUT	VBS 1.0 V p-p, Zo = 75 Ω
	CHASSIS GND	CHASSIS GND

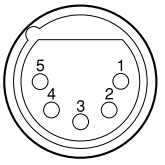
RET CONT (6P FEMALE)



(External view)

No.	Signal	Specifications
1	INCOM 1 MIC ON/OFF IN	Zi ≧ 10 kΩ ON: GND OFF: OPEN
2	INCOM 2 MIC ON/OFF IN	Zi ≧ 10 kΩ ON: GND OFF: OPEN
3	GND	
4	RET 3 ON/OFF IN	Zi ≧ 10 kΩ ON: GND OFF: OPEN
5	RET 1 ON/OFF IN	Zi ≧ 10 kΩ ON: GND OFF: OPEN
6	RET 2 ON/OFF IN	Zi ≧ 10 kΩ ON: GND OFF: OPEN

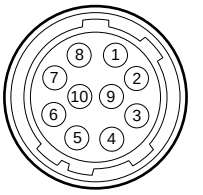
INCOM 1/2 (5P FEMALE)



(External view)

No.	Signal	Specifications
1	INCOM MIC IN (Y)	–20 dBu (CARBON MIC)
2	INCOM MIC IN (X)	–60 dBu (DYNAMIC MIC)
3	GND (PGM)	
4	INCOM RECEIVE OUT	–20 dBu (with INCOM level control set to mechanical center)
5	PGM 1/2 OUT	–20 dBu (with PGM level control set to mechanical center)

TRACKER (10P FEMALE)

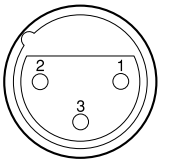


(External view)

No.	Signal	Specifications
1	TRACKER R OUT (X)	TRACKER RECEIVE 0 dBu unbalanced
2	TRACKER T IN (G)	GND for TRACKER T
3	TRACKER R OUT (G)	GND for TRACKER R
4	PGM OUT (X)	–20 dBu unbalanced
5	+12 V (T) OUT	+12 V dc. 500 mA (MAX)
6	PGM OUT (G)	GND for PGM
7	TRACKER T IN (X)	TRACKER TALK
8	TRACKER T IN (Y)	0 dBu/–20 dBu High impedance balanced
9	UP TALLY OUT (G)	GND for UP TALLY
10	UP TALLY OUT (X)	+12 V dc 200 mA (MAX)

(0 dBu = 0.775 Vrms)

AUDIO IN 1/2 (3P MALE)

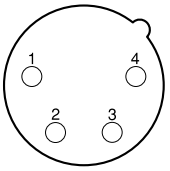


(External view)

No.	Signal	Specifications
1	MIC IN (G)	–60 dBu High impedance balanced
2	MIC IN (X)	
3	MIC IN (Y)	

(0 dBu = 0.775 Vrms)

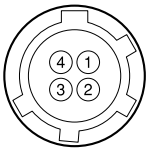
DC IN (4P MALE)



(External view)

No.	Signal	Specifications
1	GND	GND for DC (+)
2	NC	No connection
3	NC	No connection
4	DC (+) IN	DC 10.5 V to 17 V

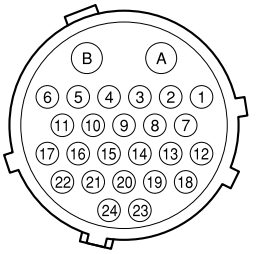
DC OUT (4P FEMALE)



(External view)

No.	Signal	Specifications
1	GND	GND for UNREG
2	NC	No connection
3	NC	No connection
4	UNREG +12 V OUT	+12 V dc, 500 mA (MAX)

VTR (26P MALE)



(External view)

No.	Signal	Specifications
A	POWER (+) IN	UNREG 10.5 V to 17 V, 3 A
B	POWER (–) IN	
1	VBS OUT (X)	VBS 1.0 V p-p, Zo = 75 Ω
2	VBS OUT (G)	
3	Y VIDEO OUT (G)	VS 1.0 V p-p, Zo = 75 Ω
4	Y VIDEO OUT (X)	
5	R-Y VIDEO OUT (X)	Zo = 75 Ω
6	R-Y VIDEO OUT (G)	756 mV p-p (J)
7	B-Y VIDEO OUT (X)	700 mV p-p (UC)
8	B-Y VIDEO OUT (G)	525 mV p-p (CE)
9	MIC OUT (X)	Zo ≦ 600 Ω,
10	MIC OUT (Y)	−60 dBu balanced
11	MIC OUT (G)	
12	VTR START/$\overline{\text{STOP}}$ OUT	START: 5 ±1 Vdc, STOP: 0 $^{+0.2}_{-0.1}$ Vdc, Zo ≦ 10 kΩ
13	BATT IND IN	Zi = 300 Ω *Note 1
14	NC	No connection
15	REC ALARM IN	Zi ≧ 20 kΩ *Note 2
16	NC	No connection
17	GND (SHIELD)	Camera GND
18	PB VIDEO IN (X)	VBS 1 V p-p, Zi = 75 Ω
19	PB VIDEO IN (G)	
20	AUDIO MONITOR IN/ VTR SAVE OUT	SAVE: +4.5 ±0.5 V, STANDBY: +9.0 $^{+1.0}_{-0.5}$ V, Zo ≦ 10 kΩ MONITOR: Zi = 750 Ω
21	NC	No connection
22	CF OUT	Color Framing
23	NC	No connection
24	NC	No connection

(0 dBu = 0.775 Vrms)

Note

VTR connector is disabled when the CCU is connected.

Note1: Specifications of BATT IND Signal

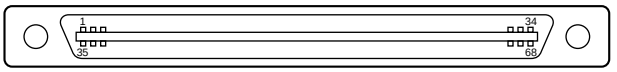
VTR has a battery voltage detection and waring signal generation circuits and it sends the signal shown below to the camera.

Battery Terminal Voltage (VTR internal battery)	17.0—11.1 V dc	11.1—10.8 V dc	10.8 V dc —
Input Signal at Pin 13	0 V	1.0 ±0.2 Hz duty 50 ±10 %	2—3 V dc across 300 Ω
LED on Viewfinder	Stays out	Blinks at 1 Hz	Lights up

Note2: Specifications of REC ALARM Signal

Input Signal at Pin 15	5.0 +1 −0.5 V dc 2.5 ±0.5 V dc 0 ±0.3 V dc			REC ALARM signal 1.0 ±0.2 Hz duty 50 ±10 %	REC RESET signal 10—100 ms	
VTR Action		Power OFF	Power ON	When VTR changes from POWER SAVE to REC START mode, or when the servo is lost	When VTR changes from STANDBY to REC START mode, or in REC mode	At the end of tape or When VTR is put into STOP mode by itself (REC RESET signal does not appear when VTR is put into STOP mode by operating the camera) STOP mode

CAMERA (68P MALE)



(External view)

*: In connection with CCU **: In connection with VTR

No.	Signal	Specifications
1	UNREG GND	GND for UNREG
2	UNREG GND	GND for UNREG
3	VF UNREG GND	GND for VF UNREG
4	LENS UNREG GND	GND for LENS UNREG
5	UNREG OUT	10.5 V to 17 V
6	UNREG OUT	10.5 V to 17 V
7	VF UNREG OUT	10.5 V to 17 V
8	LENS UNREG OUT	10.5 V to 17 V
9	R IN (X)	700 mV p-p ±2 %, DC 0 ±200 mV, Zi ≧ 10 kΩ
10	B IN (X)	700 mV p-p ±2 %, DC 0 ±200 mV, Zi ≧ 10 kΩ
11	VBS IN (G)	GND for VBS VIDEO
12	Y IN (X)	VS 1.0 V p-p, Zi = 1 kΩ
13	B-Y IN (X)	700 m V p-p, with sample 350 mV *
		756 mV p-p (J) 700 mV p-p (UC) 525 mV p-p (CE) } ** 75 % color bars
14	NC	No connection
15	NC	No connection
16	VBS GENLOCK OUT (X)	1.0 V p-p ±6 dB, Zo = 75 Ω
17	RET VIDEO OUT (G)	GND for RET VIDEO
18	MONITOR VIDEO IN (X)	VS 1 Vp-p, Zi = 1 kΩ
19	BATTERY ALARM OUT	Zo = 300 Ω
20	NC	No connection
21	AUDIO CH1 CONT IN	0 V (0 dB) to 7 V (–50 dB or less)
22	MIC 1 IN (Y)	Zi ≧ 600 Ω, –60 dBu balanced
23	NC	No connection
24	SKIN TONE GATE IN	1.0 V p-p
25	TAPE REM OUT	No connection
26	VTR SYNC IN	+5.0 V p-p Negative pulse, Zi ≦ 100 Ω
27	RET EN IN	ENABLE; 0 V, DISABLE; +5 V or OPEN
28	PB REF OUT	PB; +4.5 V, CAM; 0 V or OPEN
29	H CONT OUT	0 V to 5 V, Analog
30	ANALOG GND	
31	DIGITAL HD IN	3.3 V p-p for Digital
32	COM CONT OUT	5 V p-p
33	IIC CLOCK IN (CA)	5 V p-p
34	IIC CLOCK IN (ST)	5 V p-p

No.	Signal	Specifications
35	UNREG GND	GND for UNREG
36	UNREG GND	GND for UNREG
37	VF UNREG GND	GND for VF UNREG
38	LENS UNREG GND	GND for LENS UNREG
39	UNREG OUT	10.5 V to 17 V
40	UNREG OUT	10.5 V to 17 V
41	VF UNREG OUT	10.5 V to 17 V
42	LENS UNREG OUT	10.5 V to 17 V
43	G IN (X)	700 mV p-p ±2 %, DC 0 ±200 mV, Zi ≧ 10 kΩ
44	R/G/B GND	GND for R/G/B VIDEO
45	VBS IN (X)	1.0 V p-p ±10 %, Zi = 75 Ω
46	R-Y IN (X)	700 m V p-p, with sync 350 mV *
		756 mV p-p (J) 700 mV p-p (UC) 525 mV p-p (CE) } ** 75 % color bars
47	Y/R-Y/B-Y GND	GND for Y/R-Y/B-Y
48	NC	No connection
49	NC	No connection
50	VBS GENLOCK OUT (G)	GND for GENLOCK
51	RET VIDEO OUT (X)	1.0 V p-p, Zo = 75 Ω
52	MONITOR VIDEO IN (G)	GND for MONITOR VIDEO
53	VTR START/STOP IN	Zi ≦ 10 kΩ
54	NC	No connection
55	MIC 1 IN (G)	GND for CAM MIC
56	MIC 1 IN (X)	Zi ≧ 600 Ω, –60 dBu balanced
57	NC	No connection
58	NC	No connection
59	AUDIO LEVEL OUT	No connection
60	NC	No connection
61	V RESET OUT/CF IN	V Reset; 0 V to +5 V, CF; 0 V to –5 V
62	REC TALLY OUT	ON; +5 V, OFF; +2.5 V or 0 V, Zo ≧ 20 kΩ
63	VTR SAVE IN	SAVE; +4.5 V, STANDBY; 0 V, Zi ≦ 10 kΩ
64	GND	
65	SD IN/OUT	Serial data for camera control
66	COM DATA IN	5 V p-p
67	IIC DATA IN/OUT (CA)	5 V p-p, 4700 Ω, Pull up
68	IIC DATA IN/OUT (ST)	5 V p-p, 4700 Ω, Pull up

(0 dBu = 0.775 Vrms)

1-3-2. Connection Connector

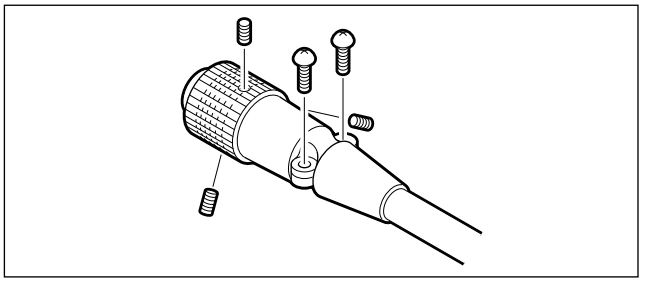
Connection made with the connector panels during installation or service, should be made with the connectors/ complete cable assemblies specified in the following list, or equivalent parts.

Connector Name	Connection Connectors/Cables
PROMPTER/GENLOCK TEST OUT (BNC)	1-569-370-12 Plug, BNC
RET CONT (6P FEMALE)	1-560-078-00 Plug, 6P Male or HIROSE HR10-7PA-6P equivalent
REMOTE (8P FEMALE)	1-766-848-11 Plug, 8P Male or CCA-5 cable assembly (option) ∗2 CCA-5-10 (10 m)/CCA-5-3 (3 m) or REMOTE cable 1-783-372-11 (supplied with RM-B150, 10 m) ∗1 ∗2
INCOM 1/2 (5P FEMALE)	1-508-370-11 XLR, 5P Male or CANNON XLR-5-12C equivalent
AUDIO IN 1/2 (3P MALE)	1-508-084-00 XLR, 3P Female or CANNON XLR-3-11C equivalent
DC IN (4P MALE)	1-508-362-00 XLR, 4P Female or CANNON XLR-4-11C equivalent or Cable assembly (supplied with AC-550) 1-551-577-00
DC OUT (4P FEMALE)	1-566-425-11 Plug, 4P Male or HIROSE HR10A-7P-4P equivalent
VTR (26P MALE)	1-564-184-00 Plug, 26P Female or CCZ cable assembly (option) or CCZ-2 (2 m)/CCZ-10 (10 m)
TRACKER (10P FEMALE)	1-506-522-11 Plug, 10P Male or HIROSE HR10R-10P-10P equivalent

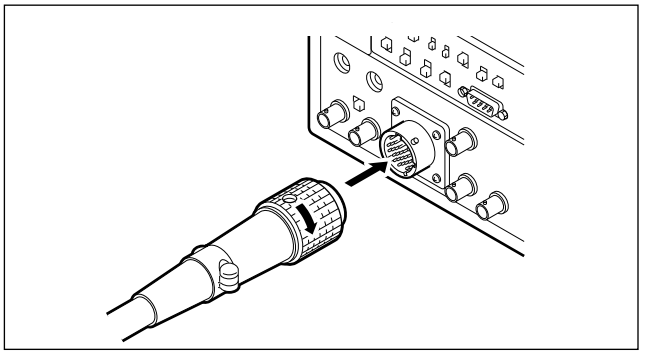
∗1: Use of REMOTE cable enables to monitor video signals.
∗2: If using a cable of length different from a standard product, consult your Sony organization.

1-3-3. Removal of CCZ Connector

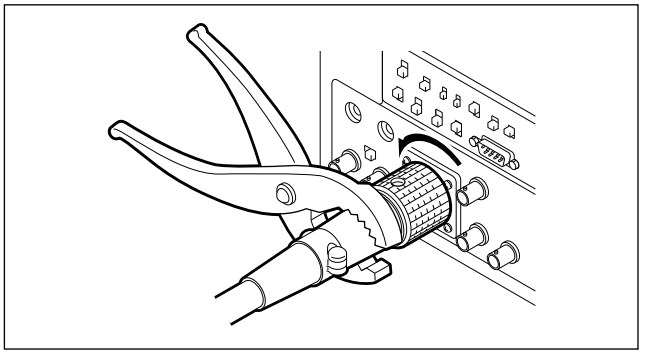
1. Remove the two screws and three setscrews.



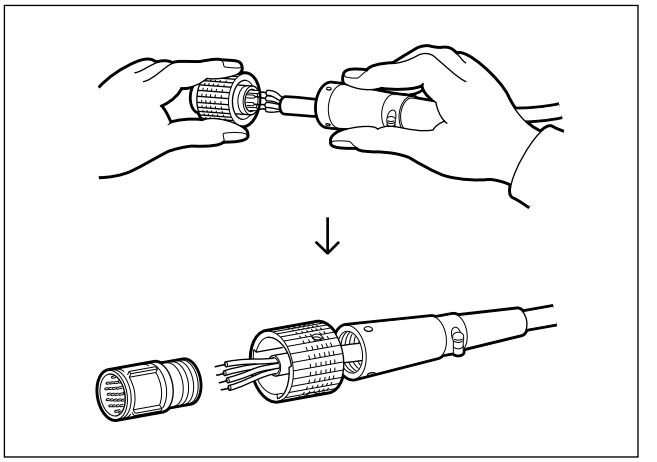
2. Connect the plug to the VTR or camera.



3. Loosen the plug counterclockwise by pliers.

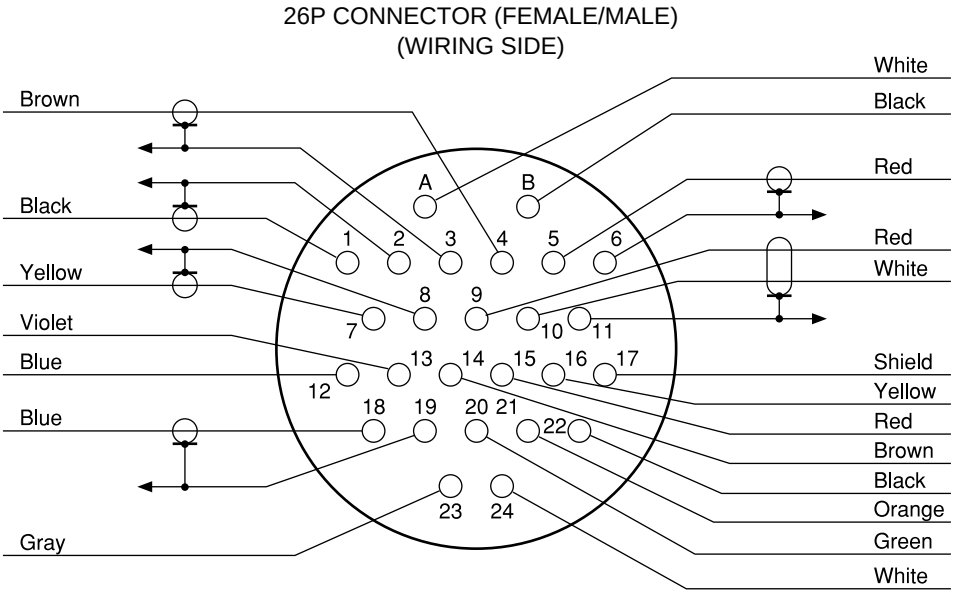


4. Disassemble as illustrated and unsolder.

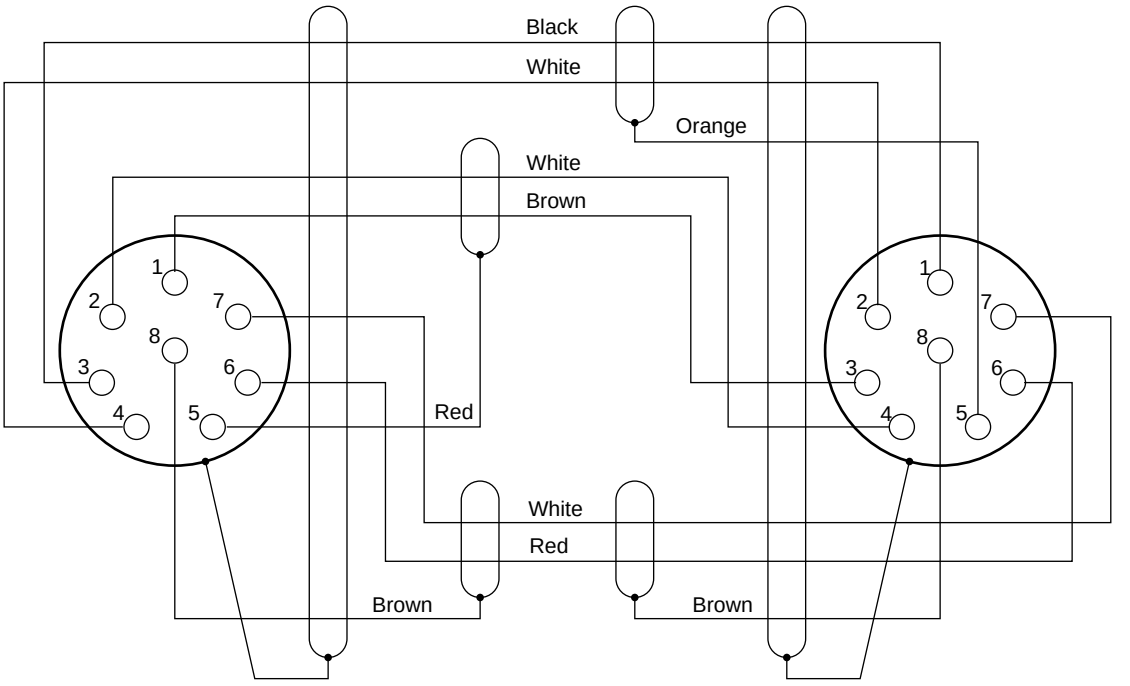


1-3-4. Wiring Diagrams for Cables

CCZ Cable



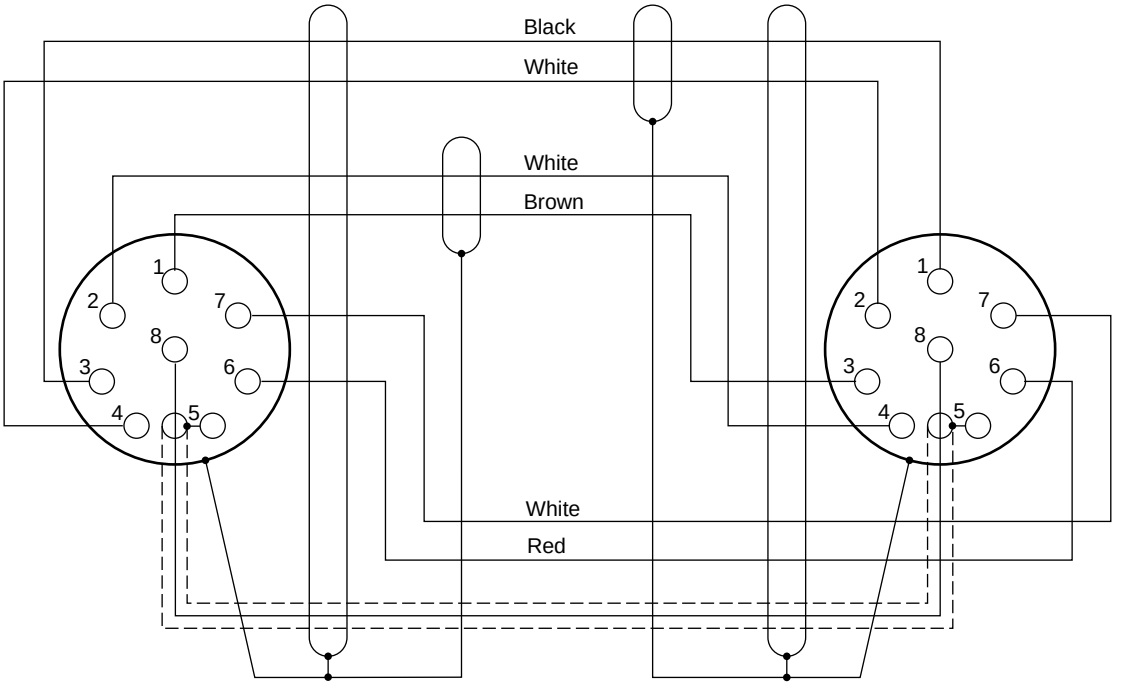
CCA-5 Cable
(Outer sheath color : White)



8P CONNECTOR(MALE)
(WIRING SIDE)

8P CONNECTOR(MALE)
(WIRING SIDE)

REMOTE Cable (supplied with RM-B150)
(Outer sheath color : Black)

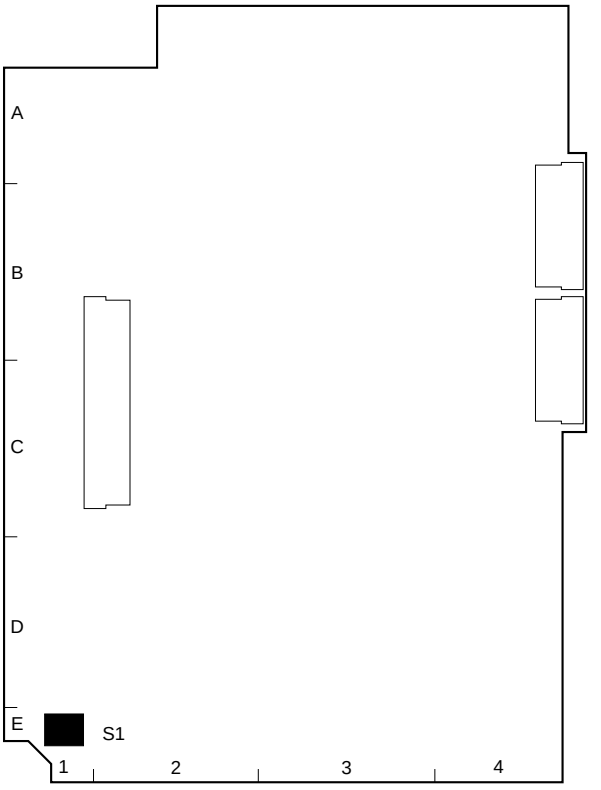


8P CONNECTOR(MALE)
(WIRING SIDE)

8P CONNECTOR(MALE)
(WIRING SIDE)

1-4. Function of Internal Switches

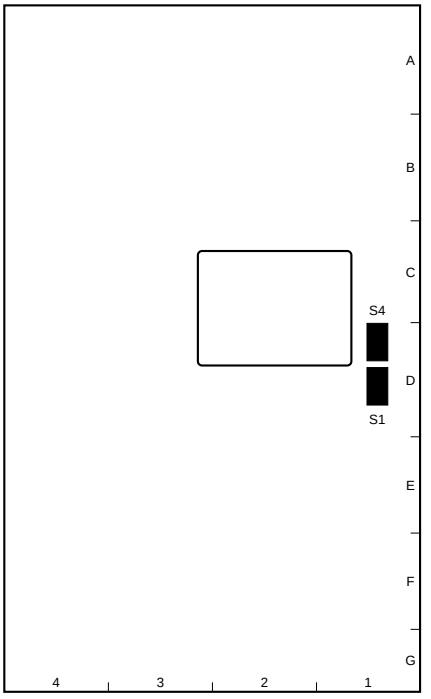
MB-783 board



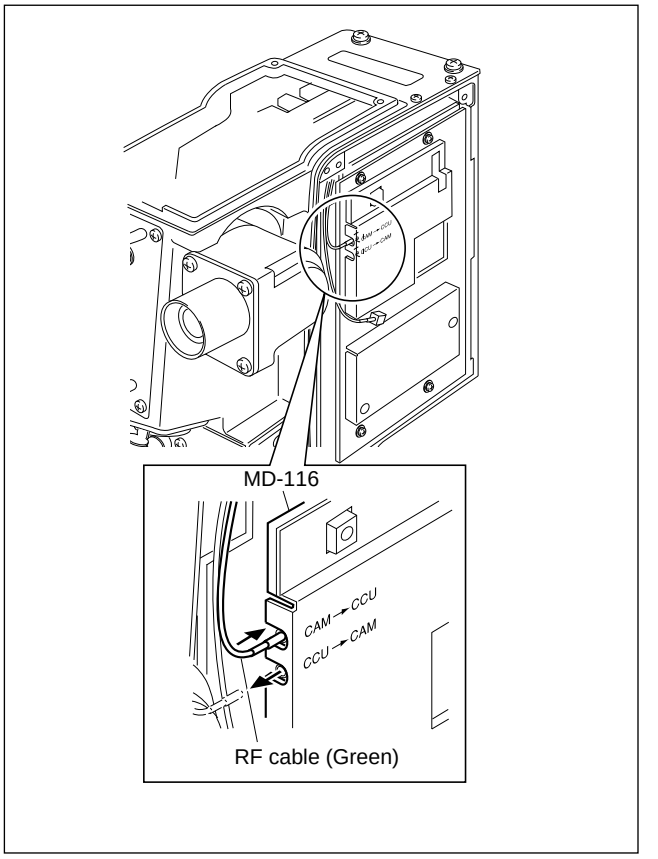
MB-783 BOARD (B SIDE)

Ref.No.	Name	Description	Factory setting
S1-1	PGM	Turns on and off the function to monitor the PGM (program audio) by the earphone ON: Monitoring is enabled OFF: Monitoring is disabled	ON
S1-2	INCOM 2	Turns on and off the function to monitor the NCOM 2 intercom audio by the earphone ON: Monitoring is enabled OFF: Monitoring is disabled	OFF
S1-3	INCOM 1	Turns on and off the function to monitor the INCOM 1 intercom audio by the earphone ON: Monitoring is enabled OFF: Monitoring is disabled	OFF
S1-4	VTR	Turns on and off the function to monitor the VTR playback audio by the earphone while the VTR is playing back ON: Monitoring is enabled OFF: Monitoring is disabled	OFF

DM-116 board



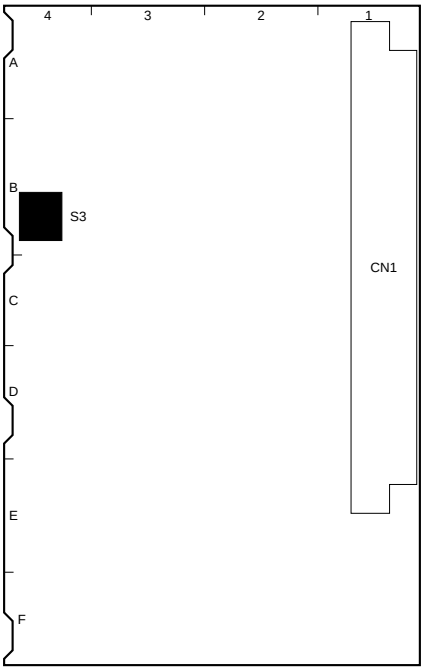
DM-116 BOARD (A SIDE)



RF cable connection

Ref.No.	Name	Description	Factory setting
S1	PROMPT/GEN	Factory use **Note** Do not change this switch from its factory setting	PROMPT
S4	CCU⇨CAM /CAM⇨CCU	Selects the direction to transmit the PROMPTER signal as follows. (This switch is activated only when the unit is connected with the CCU-700A/700AP) CCU⇨CAM: PROMPTER signal is transmitted from the CCU to the unit and is then output at the PROMPTER/GENLOCK connector of the unit CAM⇨CCU: PROMPTER signal is input at the PROMPTER/GENLOCK connector of the unit and is then transmitted to the CCU **Note** When this switch is changed to “CAM⇨CCU” side, be sure to disconnect the RF cable (green) and connect it to a proper connector on the DM-116 board as shown in the figure above In addition, be sure to change the setting of S5 and S6 switches on the DM board of the CCU from TX to RX	CCU⇨CAM

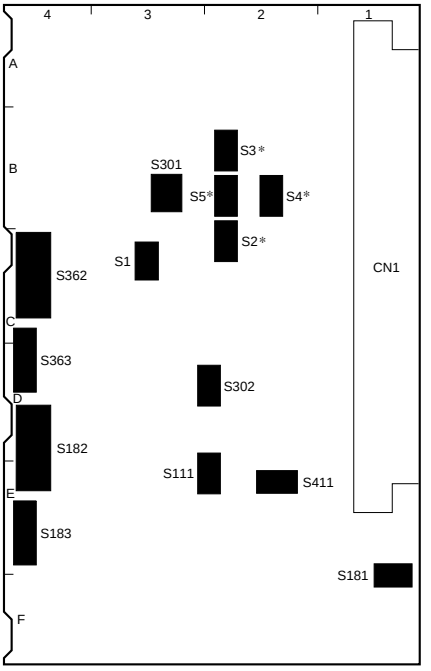
MD-119 board



MD-119 BOARD (A SIDE)

Ref.No.	Name	Description	Factory setting
S3	PROMPTER/ GENLOCK (Panel)	Selects input or output signal at the PROMPTER/GENLOCK connector (BNC) PROMPTER: Select to input or to output a PROMPTER signal when the CCU is connected to the unit S4/DM-116 board selects whether the PROMPTER signal is input (CCU⇨CAM) or is output (CAM⇨CCU) GENLOCK: Select to input a VBS or a GENLOCK signal **Note** Check that the S1/DM-116 board is set to PROMPT side	PROMPTER

AU-237/237P board

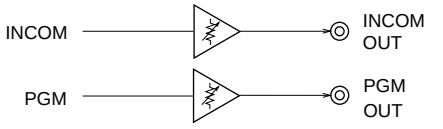
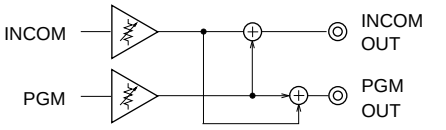
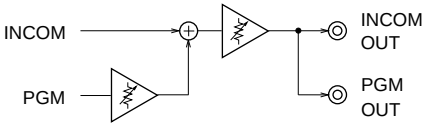


AU-237 BOARD (A SIDE)

Ref.No.	Name	Description	Factory setting
S1	MIX/IND	Not used (Always set to OFF)	OFF
S2*, S4*	INCOM1 PGM MIX	Selects how the INCOM and PGM of the INCOM 1 connector are output (See the table below)	
S3*, S5*	INCOM2 PGM MIX	Selects how the INCOM and PGM of the INCOM 2 connector are output (See the table below)	

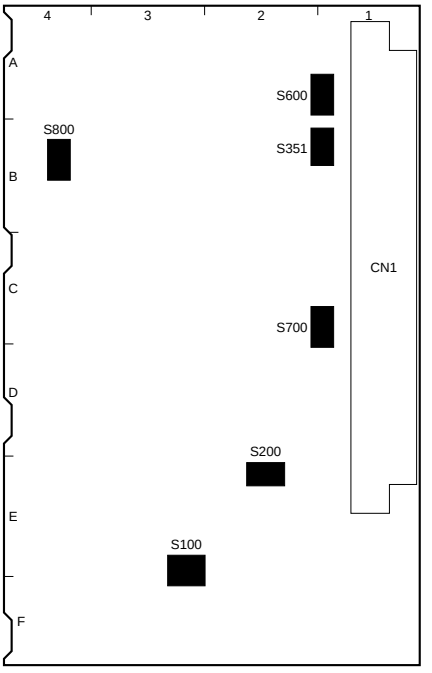
* : AU-237 board only. (The AU-237P board is not equipped with these switches.)

INCOM/PGM MIX mode select switches (AU-237 board only)

INCOM1	S2	S4	Description	
INCOM2	S3	S5		
	IND	IND		INCOM and PGM are output independently
	(Factory setting)			
	MIX	IND		Mixed signal of INCOM and PGM is output as INCOM and PGM outputs INCOM level control knob adjusts INCOM audio level and PGM level control knob adjusts the PGM audio level
	MIX	MIX		Mixed signal of INCOM and PGM is output as INCOM and PGM outputs INCOM level control knob adjusts mixed signal level of the INCOM and PGM, and PGM level control knob adjusts the balance between them

Ref.No.	Name	Description	Factory setting
S111	RTS1	Select when connecting an RTS kit to the INCOM 1 connector. RTS: RTS CH1 is activated as INCOM 1 connector NORM: Normal mode	NORM
S302	RTS2	Select when connecting an RTS kit to the INCOM 2 connector. RTS: RTS CH2 is activated as INCOM 2 connector NORM: Normal mode	NORM
S181-1	UNBAL/BAL	Turns on and off the function to ground the MIC (Y) signal when a headset with dynamic microphone is connected to the INCOM 1 connector and the connection is unbalanced BAL: Normal mode UNBAL: MIC(Y) signal is grounded (This reduces hum)	UNBAL
S181-2	UNBAL/BAL	Turns on and off the function to ground the MIC (Y) signal when a headset with dynamic microphone is connected to the INCOM 2 connector and the connection is unbalanced BAL: Normal mode UNBAL: MIC(Y) signal is grounded (This reduces hum)	UNBAL
S182	INTERCAM1 CB/DYN (Panel)	Select according to a microphone of the headset to be connected to INCOM 1 connector CB: Carbon microphone DYN: Dyanmic microphone	CB (Carbon)
S362	INTERCAM2 CB/DYN (Panel)	Select according to a microphone of the headset to be connected to INCOM 2 connector CB: Carbon microphone DYN: Dyanmic microphone	CB (Carbon)
S183	GAIN (Panel)	Sets the level of INCOM 1 intercom audio to be sent to the CCU +: The gain is increased by about 6 dB againt standard level 0: Standard level −: The gain is decreased by about 6 dB againt standard level	0 (0 dB)
S363	GAIN (Panel)	Sets the level of INCOM 2 intercom audio to be sent to the CCU +: The gain is increased by about 6 dB againt standard level 0: Standard level −: The gain is decreased by about 6 dB againt standard level	0 (0 dB)
S301	TRACKER/INCOM2 mode select switches		
S301-1	TRACKER/PGM (PGM/R)	Turns on and off the function to add PGM (program audio) to the TRACKER RECEIVE OUT ON: The PGM is added to the TRACKER RECEIVE OUT OFF: Normal mode	ON
S301-2	TRACKER/INCOM2 (IN2R/R)	Turns on and off the function to add the INCOM 2 audio (TALK/RECEIVE) to the TRACKER RECEIVE OUT ON: The INCOM 2 audio is added to the TRACKER RECEIVE OUT OFF: Normal mode	OFF
S301-3	TRACKER/INCOM2 (T/IN2R)	Turns on and off the function to add the TRACKER TALK to the INCOM 2 audio (TALK) to be sent to the CCU ON: The TRACKER TALK is added to the INCOM 2 audio (TALK) OFF: Normal mode	OFF
S301-4	TRACKER/INCOM2 (T/IN2R)	Turns on and off the function to add the TRACKER TALK to the INCOM 2 audio (RECEIVE) sent from the CCU ON: The TRACKER TALK is added to the INCOM 2 audio (RECEIVE) OFF: Normal mode	OFF
S411	TRACKER (T) 0/−20	Selects the TRACKER TALK level at the TRACKER connector 0: 0 dBu (Standard level) −20: −20 dBu (Select when input level is too high) (0 dBu = 0.775 Vrms)	0 (0 dBu)

AU-251 board



AU-251 BOARD (A SIDE)

Ref.No.	Name	Description	Factory setting
S600	MIC1 CHU/CA	Selects a MIC signal which is sent to the CCU as MIC 1 input CHU: Camera MIC connector input CA: Camera adaptor MIC 1 connector input	CA
S700	MIC +48 V	MIC POWER +48 V ON/OFF switch Turn on when using a PHANTOM +48 V microphone	OFF
S800	MIC +12 V	MIC POWER +12 V ON/OFF switch Turn on when using an AB POWERING +12 V microphone **Note** When the MIC POWER switch on the rear panel to OFF or +48 V, this switch is not activated even if set to ON	OFF
S200-1	RCP POWER SAVE	Turns on and off the power saving function for RCP drive circuit when the CCU is connected to the unit ON: Power for the RCP drive circuit is turned off when the CCU is connected (Turned on when the camera is used alone) OFF: Always turned on	ON
S200-2	BATTERY ALARM	Turns on and off the function to light the back tally lamp of the unit when the battery signal circuit is detected ON: Back tally lamp is lit OFF: Back tally lamp is unlit	OFF
S351	MIC MONITOR	Turn on and off the function to monitor the MIC input by the headset connected to the INCOM connector ON: Monitoring is enabled OFF: Monitoring is disabled	OFF

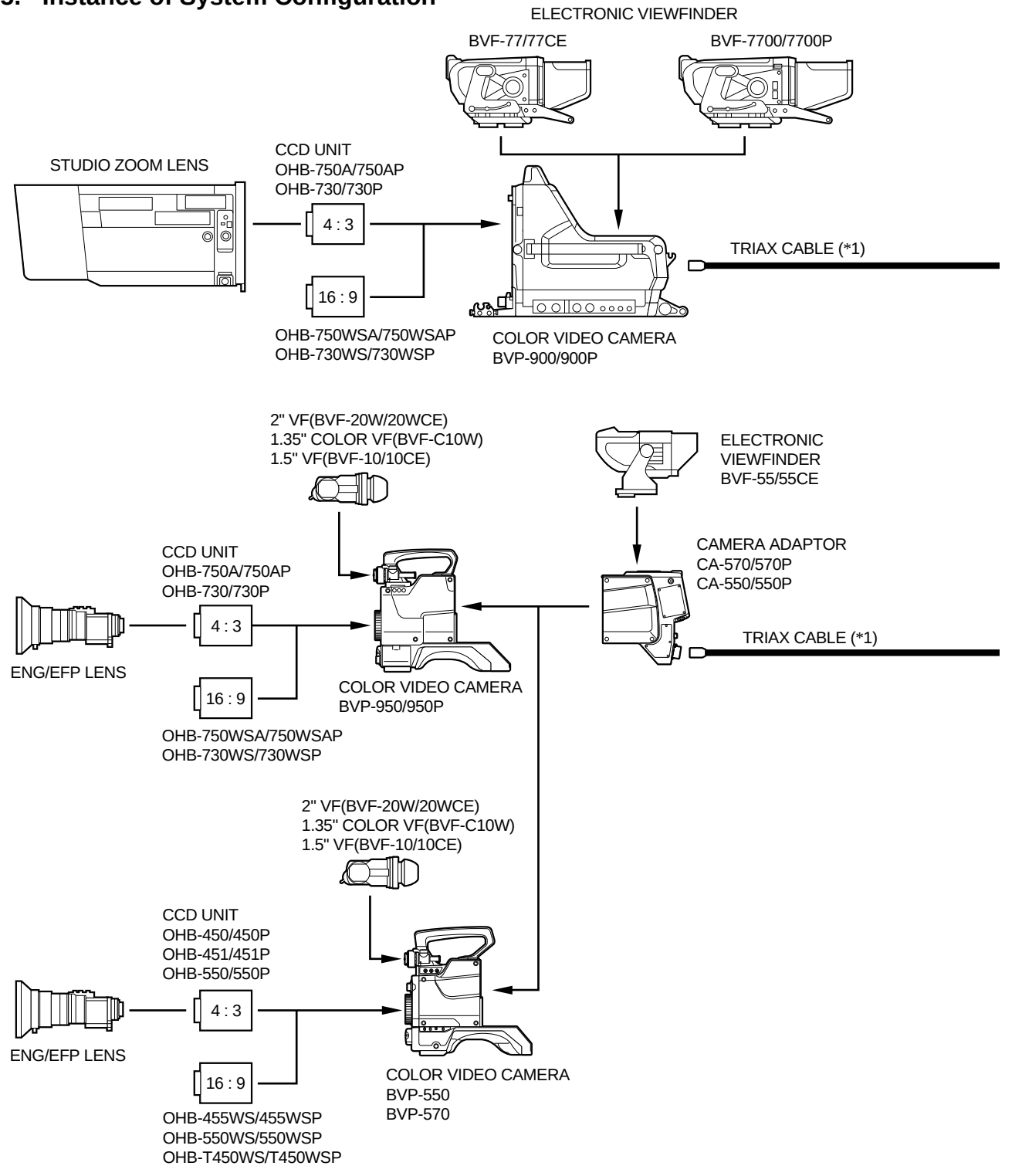
Ref.No.	Name	Description	Factory setting
S100	TEST OUT signal select switch **Note** The table below shows selectable output signals in combination with S100-1 through S100-4 and depending on whether the RET CONT signal is low or high		
S100-1	PB VIDEO/RET	Disables automatically switching between PB VIDEO and RET VIDEO signals when S100-1 is set to ON	OFF
S100-2	VBS/RET	Disables automatically switching between VBS/MONITOR and PB/RET VIDEO signals when S100-2 is set to ON	OFF
S100-3	MONITOR/VBS	Selects MONITOR or VBS signal	OFF
S100-4	RET CONT	Inhibits the RET CONT signal when S100-4 is set to OFF	ON

Selecting TEST OUT signal

S100-1	S100-2	S100-3	S100-4	RET CONT	Output signal at TEST OUT connector
OFF	OFF	X	X	X	RET VIDEO OUT (in connection with CCU)
					PB VIDEO OUT (in connection with VTR)
ON	OFF	X	X	X	PB VIDEO OUT
X	ON	OFF	OFF	X	VBS OUT
X	ON	ON	OFF	X	MONITOR OUT
OFF	ON	OFF	ON	Low	RET VIDEO OUT (in connection with CCU)
				Low	PB VIDEO OUT (in connection with VTR)
				High	VBS OUT
OFF	ON	ON	ON	Low	RET VIDEO OUT (in connection with CCU)
				Low	PB VIDEO OUT (in connection with VTR)
				High	MONITOR OUT

X: Don’t care.

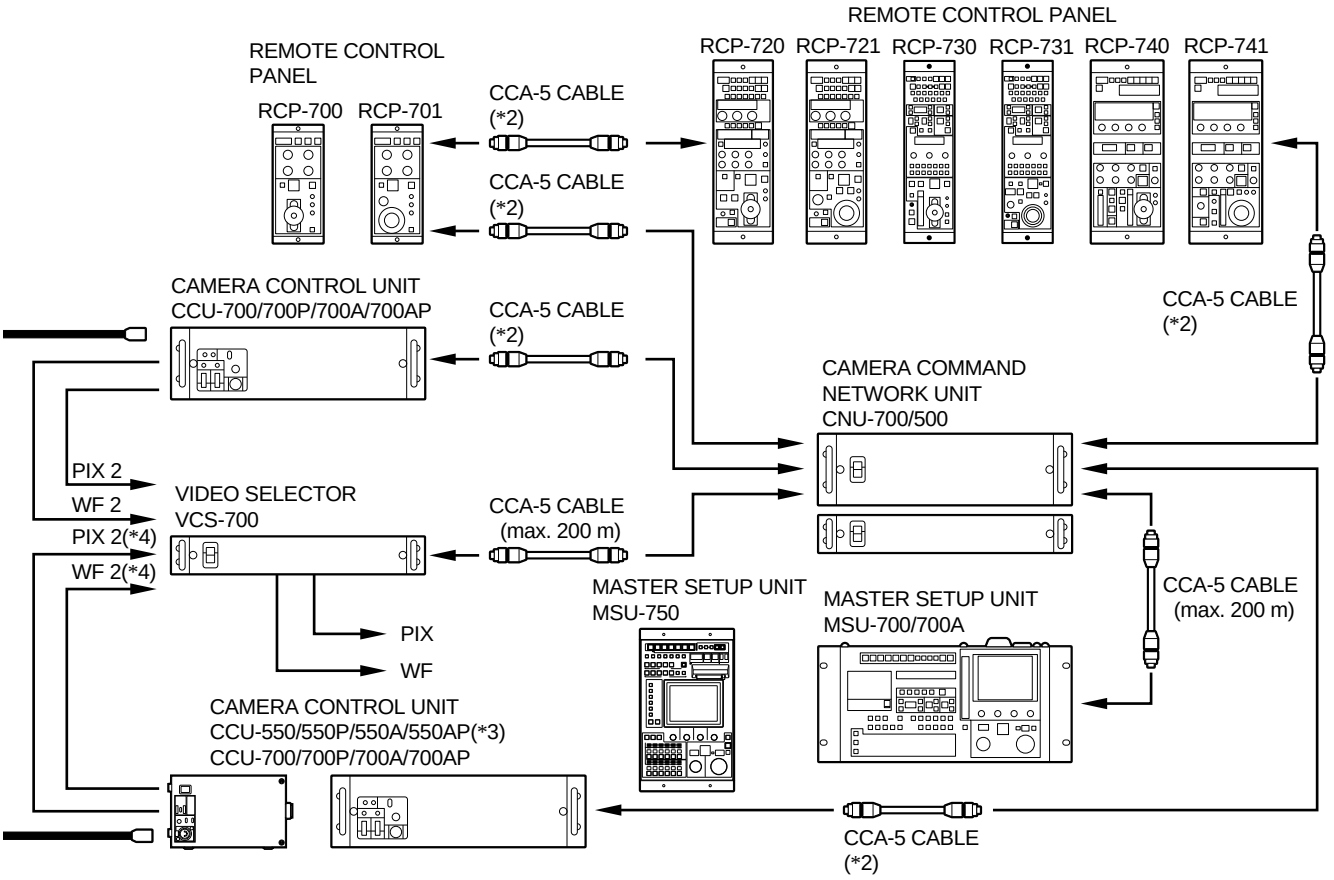
1-5. Instance of System Configuration



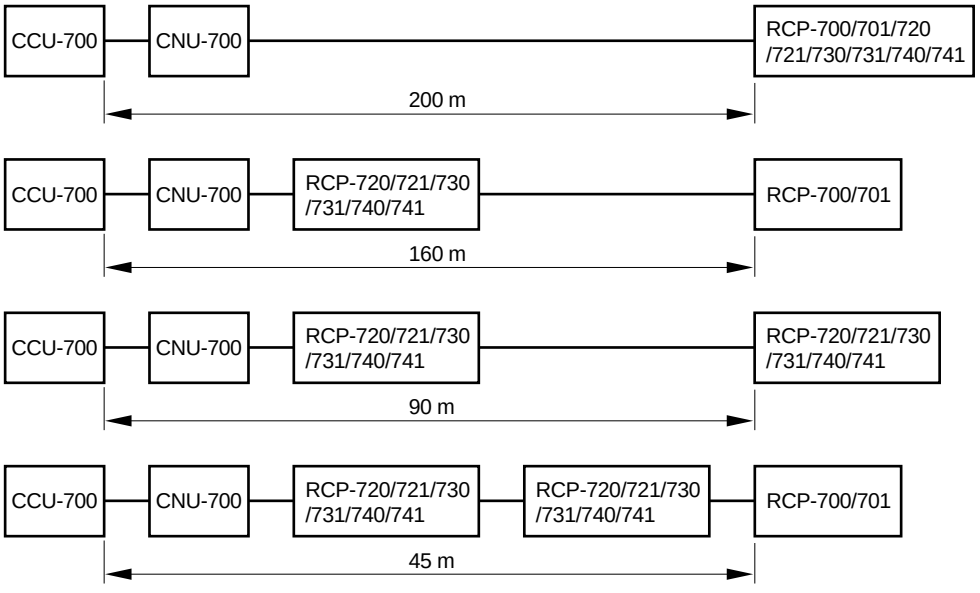
∗1: TRIAX Cable length

Diameter	Maximum length	
	CCU-700	CCU-550
8.5 mm	1000 m	700 m
14.5 mm	2000 m	1400 m

Diameter	Cable-lenght limitation for prompter signal transmission	
	CCU → CAM	CAM → CCU
8.5 mm	500 m	400 m
14.5 mm	1000 m	800 m

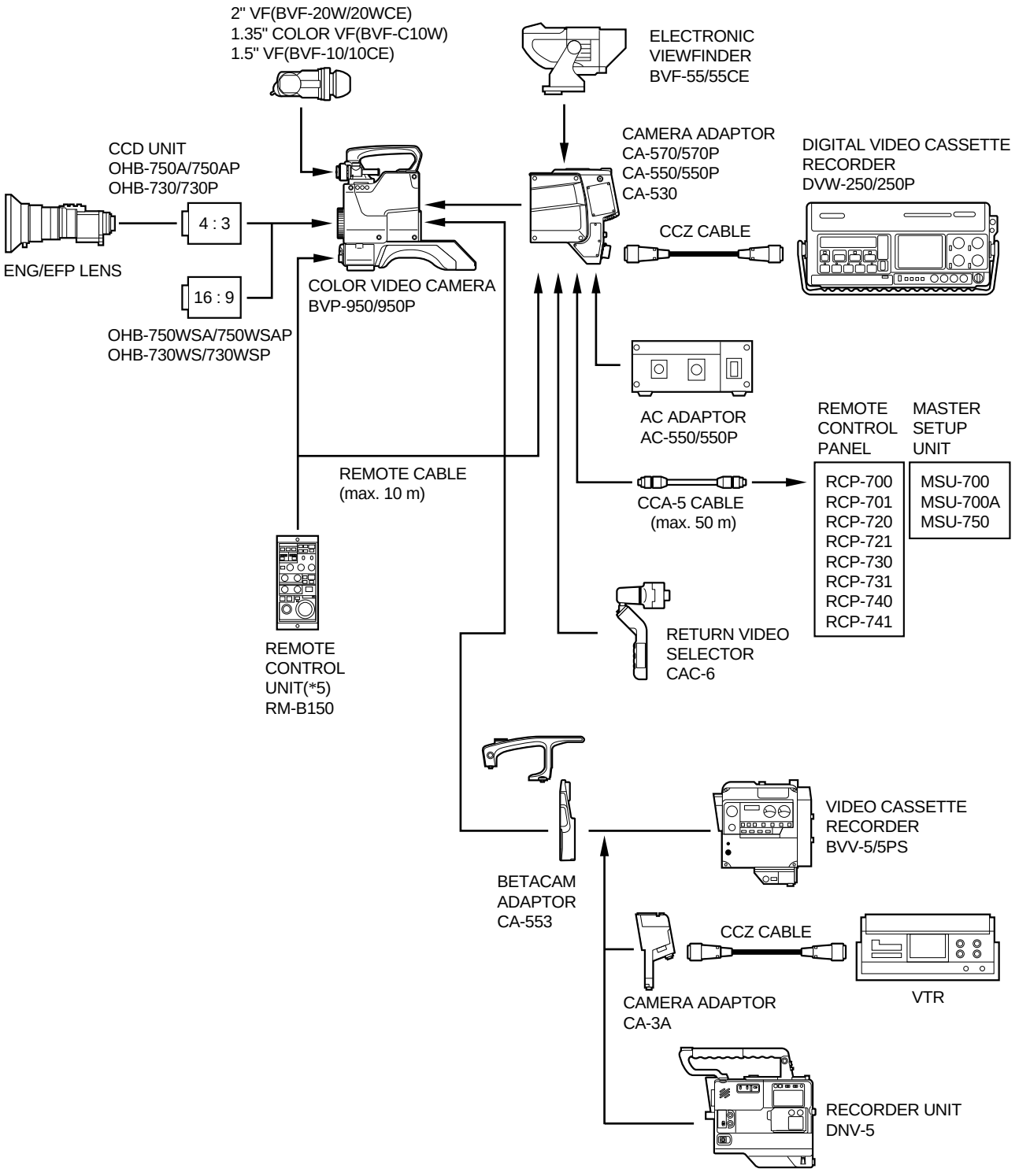


*2: CCA-5 Cable length

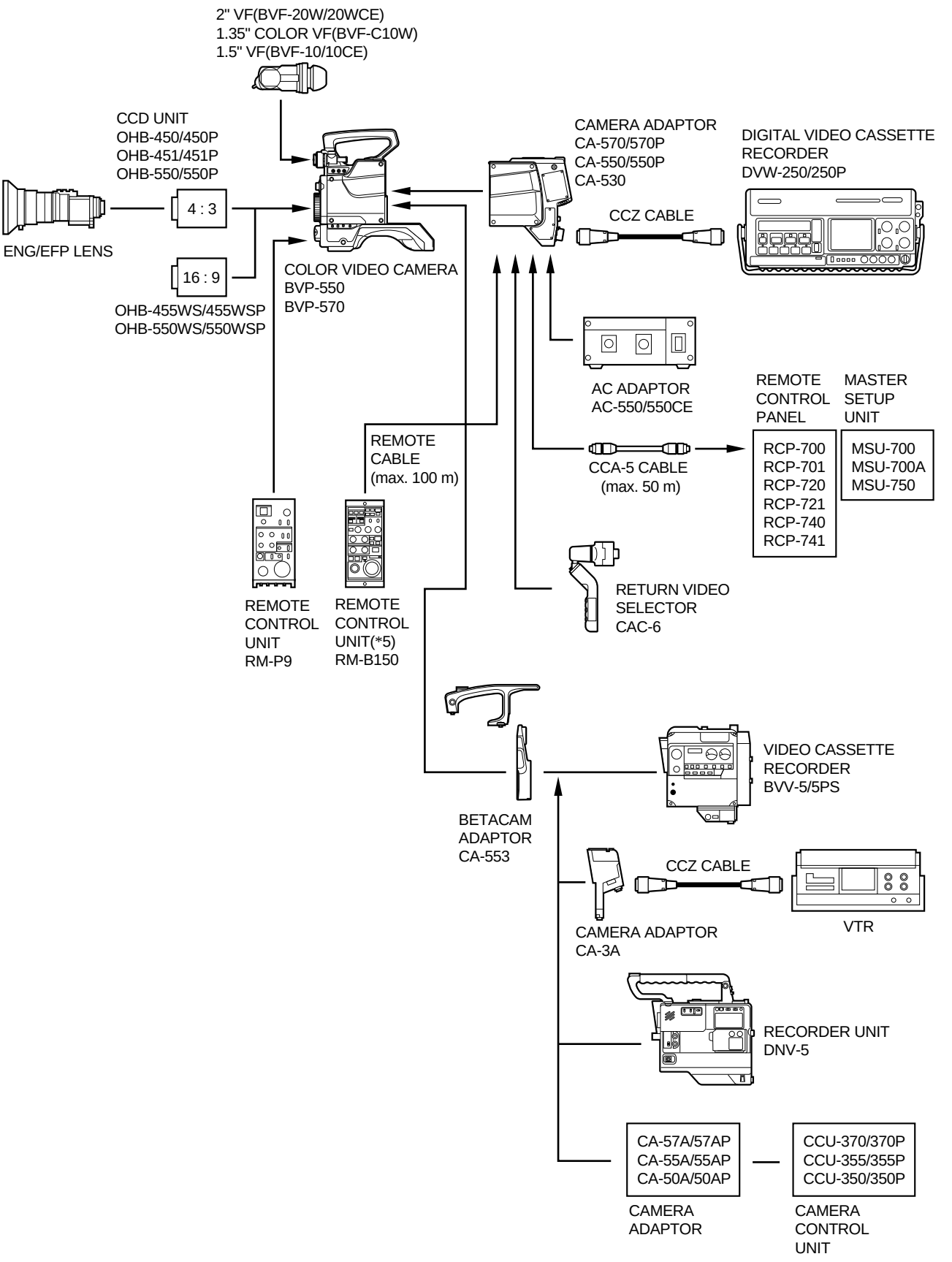


∗3: When the CA-570/570P is connected with the CCU-550/550P/550A/550AP, use of intercom transmission channel is limited to only one channel.
In this case, use the INCOM 1 connector for the CA-570.
For the CA-570P, both INCOM 1 and INCOM 2 connectors can be used.

∗4: When the CCU is connected with the VCS-700, the PIX 2 and WF 2 connectors of the CCU are normally used. When the CCU-550/550P/550A/550AP is connected, use of PIX and WF transmission channels are limited to only one channel respectively.
In this case, use the PIX and WF connectors for the CCU-550/550P/550A/550AP.

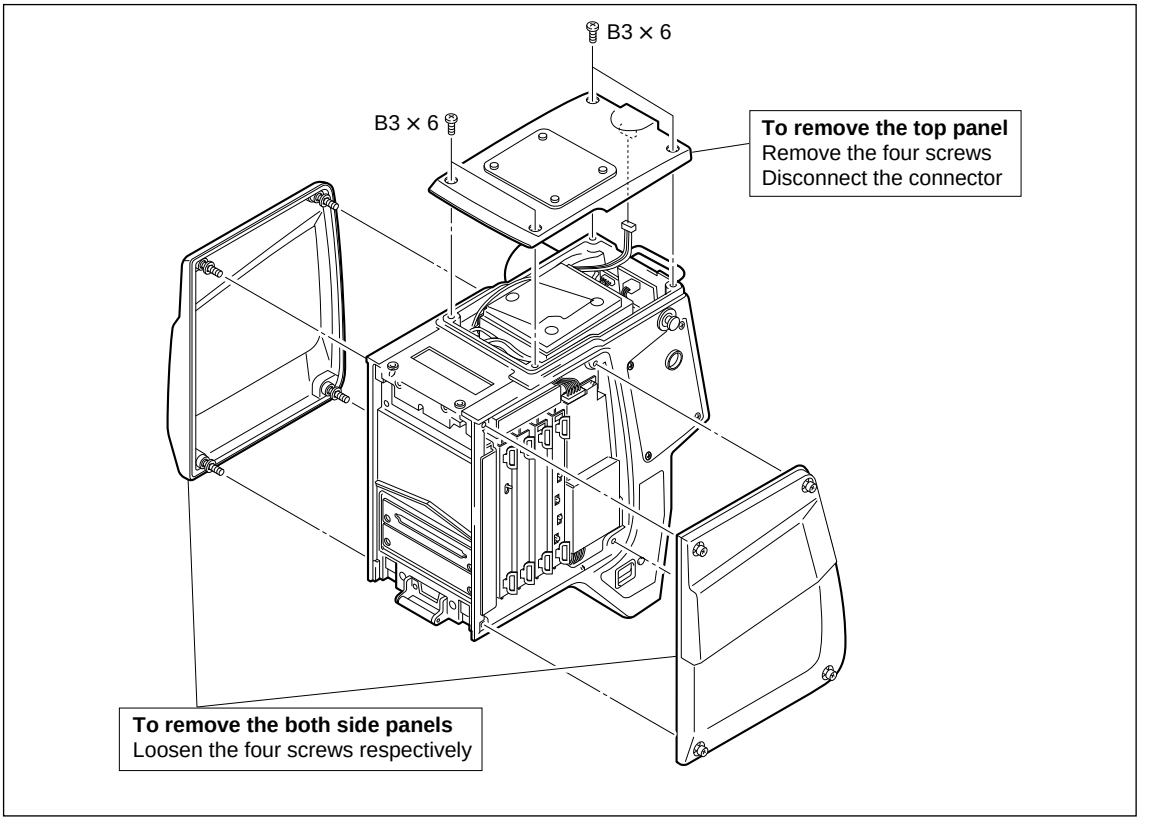


∗5: When the CA-550/550P is connected to the RM-B150, video signals cannot be output from the MONITOR connector of the RM-B150.

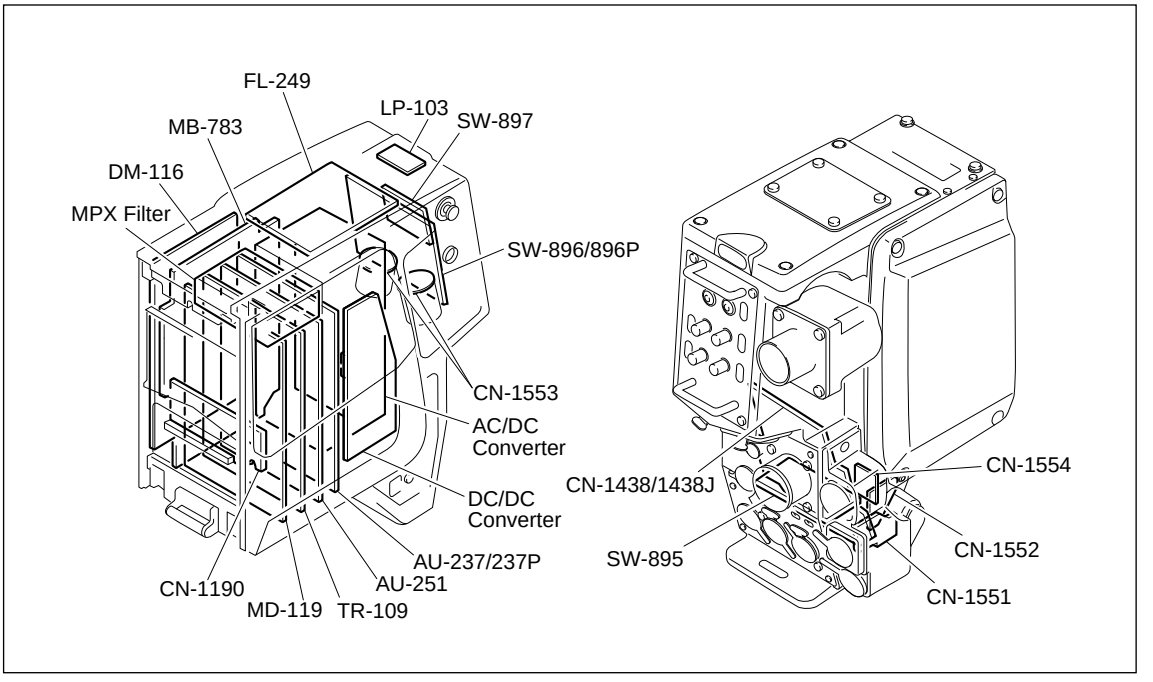

2" VF(BVF-20W/20WCE)
1.35" COLOR VF(BVF-C10W)
1.5" VF(BVF-10/10CE)
CCD UNIT
OHB-450/450P
OHB-451/451P
OHB-550/550P
4 : 3
16 : 3
ENG/EFP LENS
OHB-455WS/455WSP
OHB-550WS/550WSP
COLOR VIDEO CAMERA
BVP-550
BVP-570
CAMERA ADAPTOR
CA-570/570P
CA-550/550P
CA-530
CCZ CABLE
DIGITAL VIDEO CASSETTE
RECORDER
DVW-250/250P
AC ADAPTOR
AC-550/550CE
REMOTE
CONTROL
PANEL
MASTER
SETUP
UNIT
RCP-700
RCP-701
RCP-720
RCP-721
RCP-740
RCP-741
MSU-700
MSU-700A
MSU-750
CCA-5 CABLE
(max. 50 m)
REMOTE
CABLE
(max. 100 m)
REMOTE
CONTROL
UNIT
RM-P9
REMOTE
CONTROL
UNIT(*5)
RM-B150
RETURN VIDEO
SELECTOR
CAC-6
VIDEO CASSETTE
RECORDER
BVV-5/5PS
BETACAM
ADAPTOR
CA-553
CCZ CABLE
VTR
CAMERA ADAPTOR
CA-3A
RECORDER UNIT
DNV-5
CA-57A/57AP
CA-55A/55AP
CA-50A/50AP
CAMERA
ADAPTOR
CCU-370/370P
CCU-355/355P
CCU-350/350P
CAMERA
CONTROL
UNIT

Section 2
Service Overview

2-1. Removing the Cabinet



2-2. Location of Printed Wiring Boards



2-3. Notes on Service

2-3-1. Circuit Protection Device

The CN-1438/1552 and MB-783 boards are provided with positive thermistors for power line to protect circuits. This device limits a current by steeply increasing the inner resistance when the device rises to a certain temperature due to overcurrent or high ambient temperature. If the device is activates once, turn off the power and check an equipment concerned; camera adaptor or other equipment connected to the DC OUT, TRACKER or REMOTE connector of the camera adaptor. After the cause is eliminated and the device cools off, turn on the power again. If there is no trouble, the unit will operate normally. It takes about a minute for the device to cool off after powering off the unit.

Board	Ref No.	Address	Equipment protected
CN-1438	CB1	B3	Circuits in the camera adaptor
CN-1552	CB1	—	Equipment connected to DC OUT connector
MB-783	CB1	D2	Equipment connected to TRACKER connector
	CB2	D2	Equipment connected to REMOTE connector

2-3-2. Standard Tightening Torque for Screws

The standard tightening torque for the screws used in CA-570/CA-570P are as follows.

Screw type	Tightening torque
M2	19×10^{-2} N•m (1.9 kgf•cm)
M2.6	53×10^{-2} N•m (5.3 kgf•cm)
M3	80×10^{-2} N•m (8.0 kgf•cm)
M4	140×10^{-2} N•m (14.0 kgf•cm)

2-4. Cares After Using at Special Environment

It is recommended to check the following items after gathering the news at seaside, dust area or spa.

1. Clean off sand and other dust on the unit.
2. Do not allow salt in seawater or sulfur in spa to contact a not-painted surface of the cabinet. They may cause to corrode. Clean with alcohol immediately if contacted.
3. Clean the connection surface of connectors.
4. Carry out the common operation check and confirm that the unit normally operates.

2-5. Self-Diagnosis

The Diagnosis page of the Operation menu is used for self-diagnosis of every plug-in board.
The Operation menu appears on the viewfinder screen.

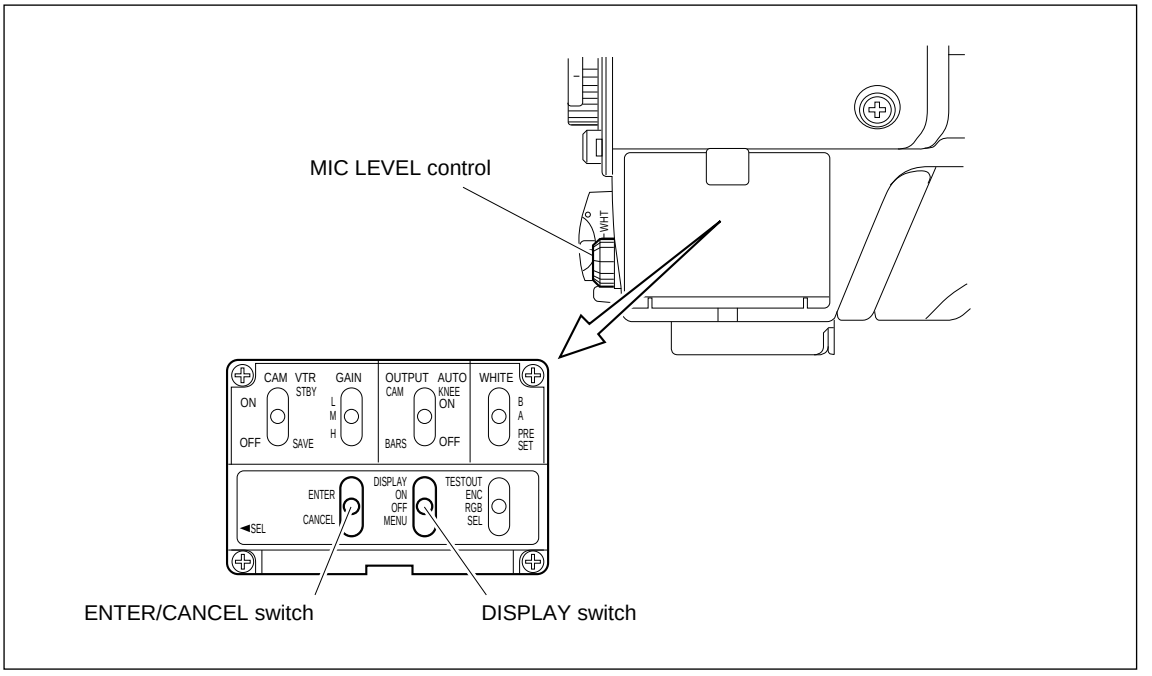
When using the camera adaptor together with the BVP-950/950P

Equipment required

Color video camera	BVP-950/950P
CCD unit	OHB-730/750A series
Viewfinder	BVF-10/C10W/20W series

Supply power from a camera control unit CCU-550/700/700A series, AC adaptor AC-550/550CE or VTR.

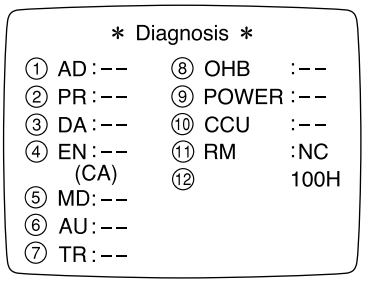
Switches and control knob



Operational procedures

1. Change the DISPLAY switch from OFF to MENU. The Operation menu is displayed.
2. Turn the MIC LEVEL control to display the Diagnosis page.
3. Press the MIC LEVEL control or set the ENTER/CANCEL switch to ENTER.
4. The menu page is returned to the previous page every time the ENTER/CANCEL switch is set to CANCEL.
5. To cancel the menu operation, set the DISPLAY switch to OFF.

Display descriptions



Marks	Board	Judging Point	Suspected Abnormality (when NG is displayed)
⑤	MD-119	Y RF output Color-difference RF output	• RF carrier levels for Y and R-Y/B-Y are out of specs.∗ • Improper connection of the board
⑥	AU-251 AU-237/237P	+7.8 V (AU-251) IC452 (AU-237/237P)	• Power voltage for the AU-251 board is out of specs. • The serial data is correctly received/transmitted from IC452 on the AU-237/237P board • Improper connection of the board (AU-251 or AU-237/237P)
⑦	TR-109	RF output (TP4)	• Carrier level for AUDIO RF is out of specs. • Improper connection of the board

∗ : Only when no video signal is input to the camera adaptor.

Notes

- When the camera adaptor is not connected to the CCU, the columns ⑤, ⑥ and ⑦ will not appear.
- Refer to the BVP-950/950P maintenance manual for details on descriptions other than columns ⑤, ⑥ and ⑦.

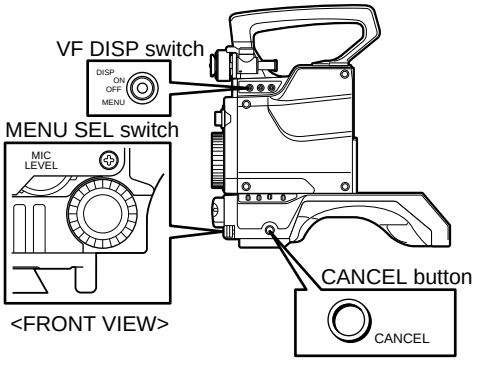
When using the camera adaptor together with the BVP-550/550P

Equipment required

Color Video Camera	BVP-550/550P/570
CCD Unit	OHB-450/550 series
Viewfinder	BVF-10/C10W/20W series

Supply power from a camera control unit CCU-550/700/700A series, AC adaptor AC-550/550CE or VTR.

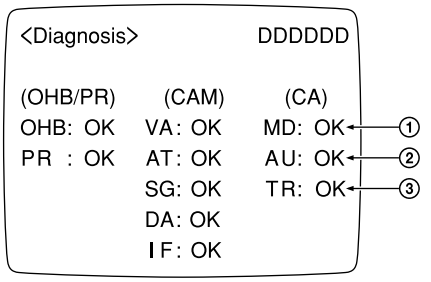
Switches and Button



Operational procedures

1. Set the DISP switch to MENU. The operation menu will be displayed.
3. Rotate the MENU SEL switch to display the Diagnosis page and then press the MENU SEL switch.
4. The menu page is returned to the previous page every time CANCEL button is pressed.
5. To exit from the menu, set the DISP switch to OFF.

Display descriptions



Marks	Board	Judging Point	Suspected Abnormality (when NG is displayed)
①	MD-119	Y RF output Color-difference RF output	• RF carrier levels for Y and R-Y/B-Y are out of specs.* • Improper connection of the board
②	AU-251 AU-237/237P	+7.8 V (AU-251) IC452 (AU-237/237P)	• Power voltage for the AU-251 board is out of specs. • The serial data is correctly received/transmitted from IC452 on the AU-237/237P board • Improper connection of the board (AU-251 or AU-237/237P)
③	TR-109	RF output (TP4)	• Carrier level for AUDIO RF is out of specs. • Improper connection of the board

* : Only when no video signal is input to the camera adaptor.

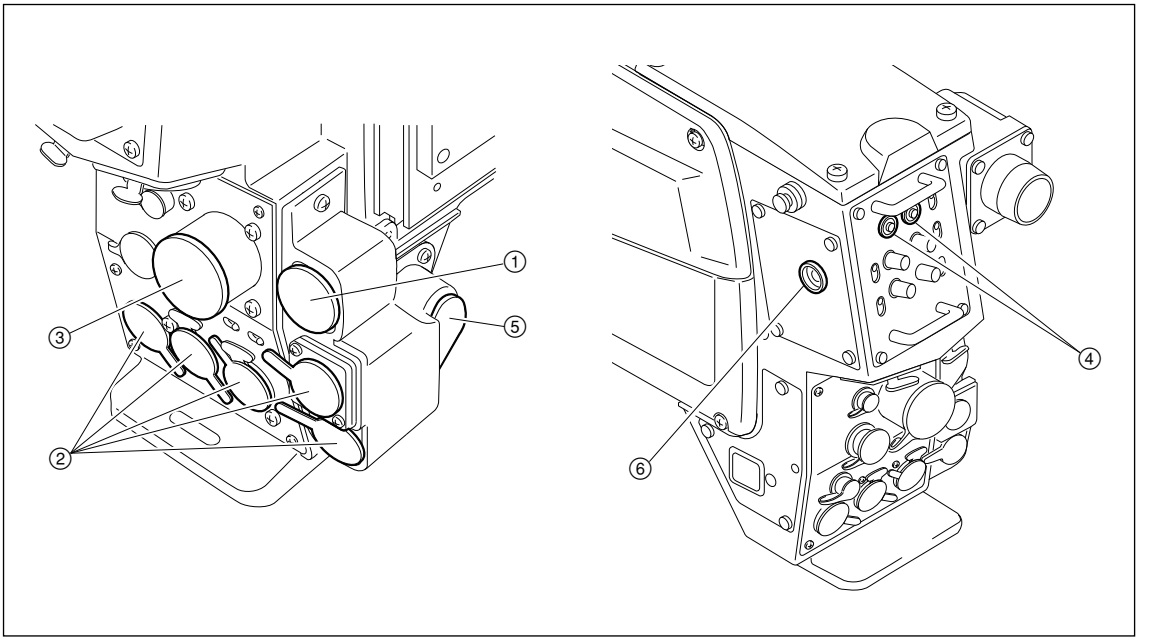
Notes

- When the camera adaptor is not connected to the CCU, the columns ① through ③ will display "– –".
- Refer to BVP-550/550P/570 maintenance manual for details on descriptions on columns of "OHB/PR" and "CAM".

2-6. Recommended Replacement Parts

Parts listed below are recommended replacement parts. They are subject to cracks with the lapse of time. Check sometimes by visual, and replace as necessary.

Name	Sony Part No.	Remarks
①	COVER, CONNECTOR	3-187-015-0X
②	CAP, CONNECTOR	3-605-338-0X
③	CAP, CONNECTOR	3-612-791-0X
④	COVER, SW	3-676-244-1X
⑤	RUBBER (EA), DROP PROTECTION	3-724-730-0X
⑥	COVER (LARGE), SW	3-731-742-0X

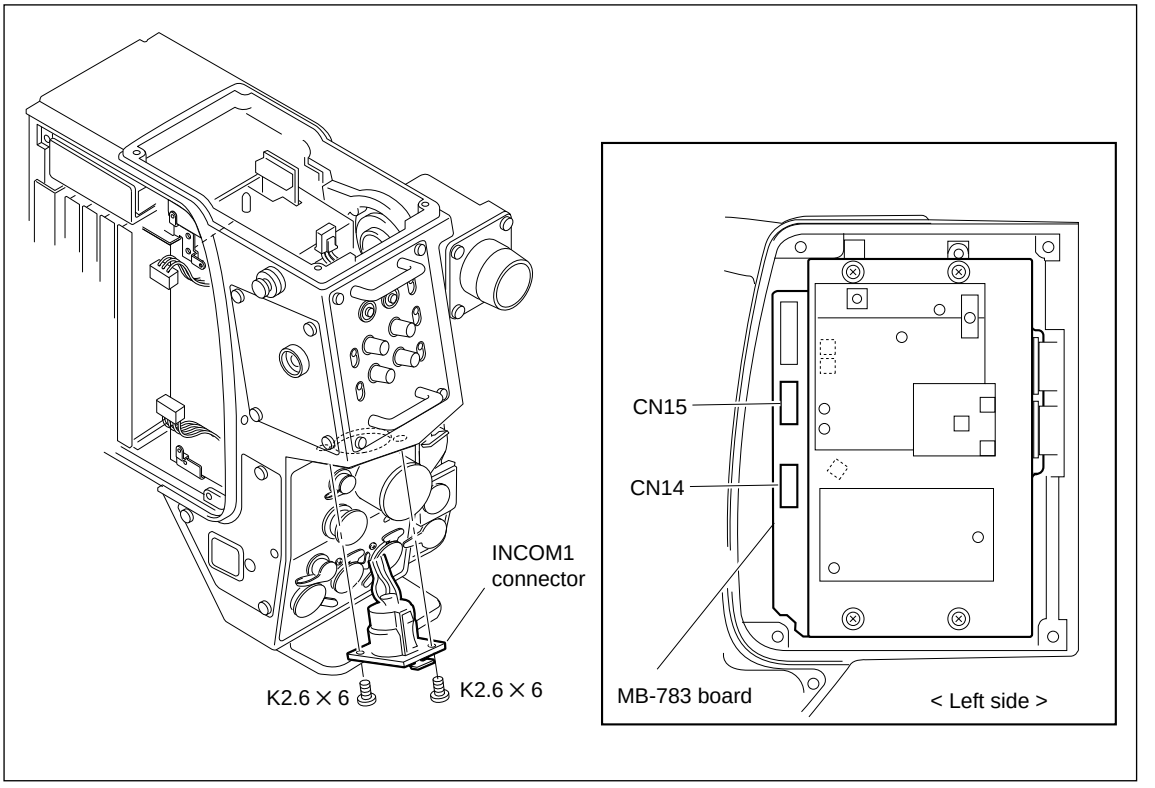


2-7. Replacing INCOM 1/2 the Connector

1. Remove the left side panel referring to Section 2-1.
2. Remove the DC/DC converter, FL-249 board and AC/DC converter referring to Sections 2-8, 2-9 and 2-10.
3. When replacing the INCOM 1 connector, disconnect CN14 on the MB-783 board. When replacing the INCOM 2 connector, disconnect CN15 on the MB-783 board.
4. Remove the two screws securing the connector that needs to be replaced and pull it out. Replace the connector with harness with a new one.
5. Install a new connector in the reverse order of removal.

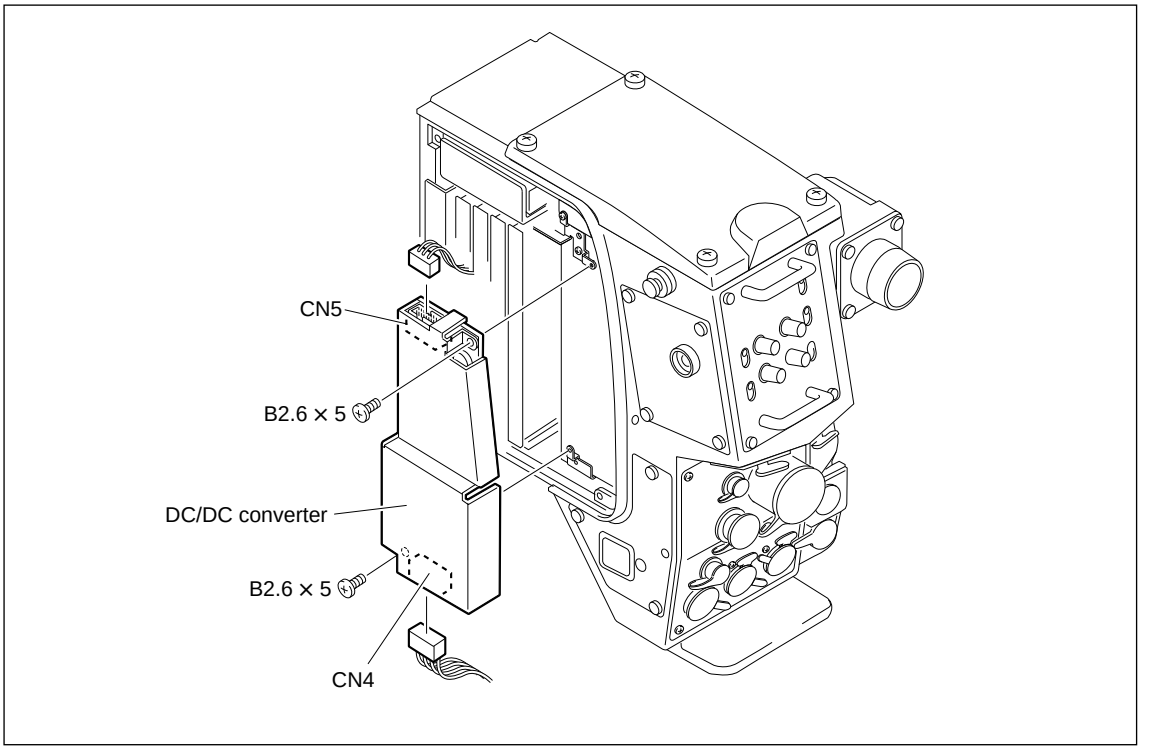
   Note at installation

   When reinstalling the FL-249 board, refer to Section 2-9 for proper connection.



2-8. Removing/Installing the DC/DC Converter

1. Remove the right side panel referring to Section 2-1.
2. Remove the two screws. Disconnect CN4 and CN5 to remove the DC/DC converter.
3. Install in the reverse order of removal.



2-9. Removing/Installing the FL-249 Board

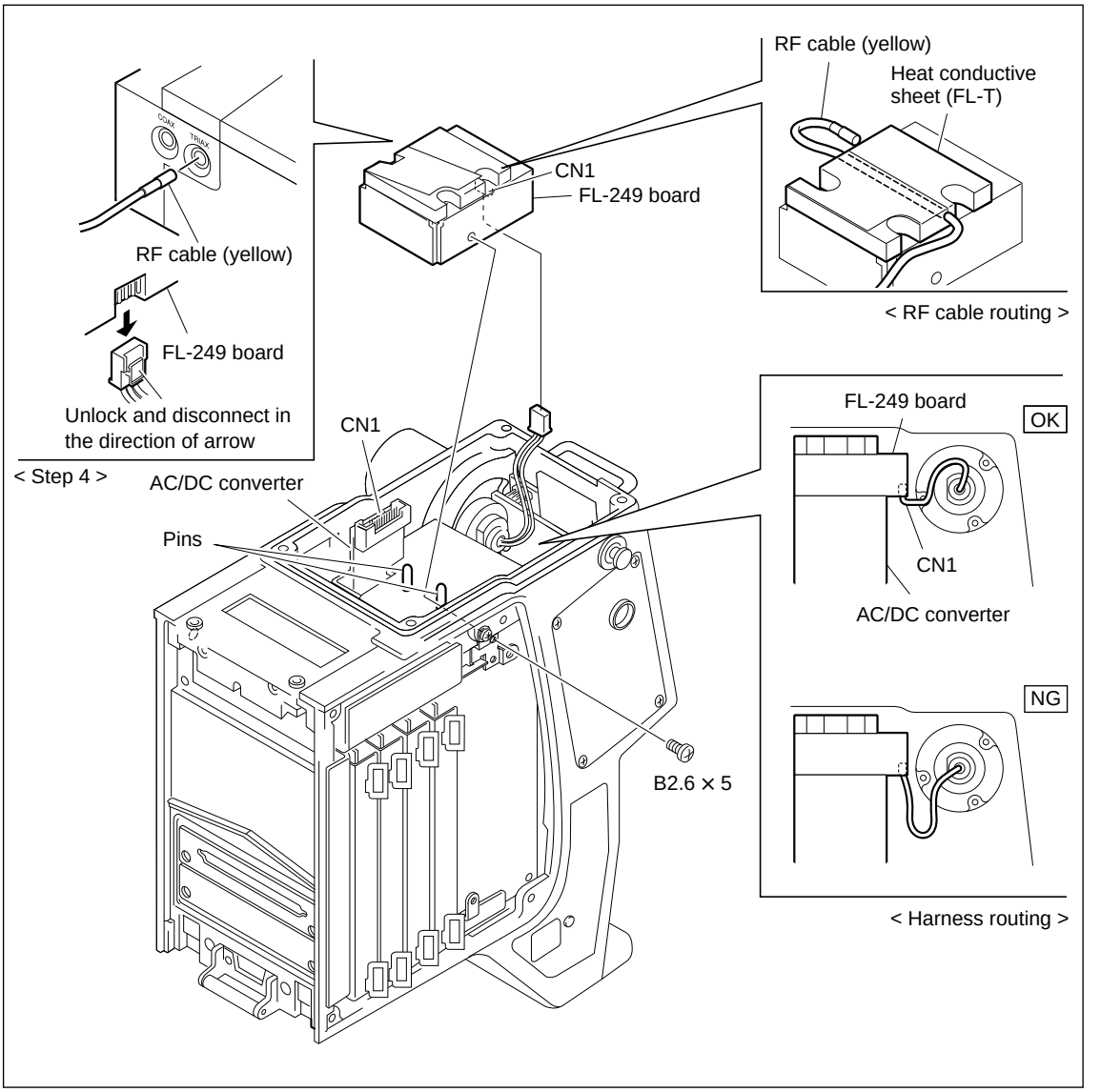
1. Remove the right side panel and top panel referring to Section 2-1.
2. Remove the DC/DC converter referring to Section 2-8.
3. Remove the screw (B2.6 × 5) and pull out the FL-249 board in an upward direction.
4. Disconnect the RF cable (yellow) from the TRIAX side. Disconnect CN1 on the FL-249 board.

   Note

   When disconnecting the RF cable, do not pull the cable itself. Hold the connector plug portion.
5. Install in the reverse order of removal.

   Notes at installation

   - When installing, carefully connect the FL-249 board to CN1 on the AC/DC converter, ensuring that pins on the AC/DC converter is aligned with guides of the FL-249 board.
   - After connecting the harness extending from the TRIAX connector to CN1 on the FL-249 board, route the harness as shown in the figure.
   - When connecting the RF cable (yellow), put the RF cable (yellow) between the heat conductive sheets (FL-T) as shown in the figure.

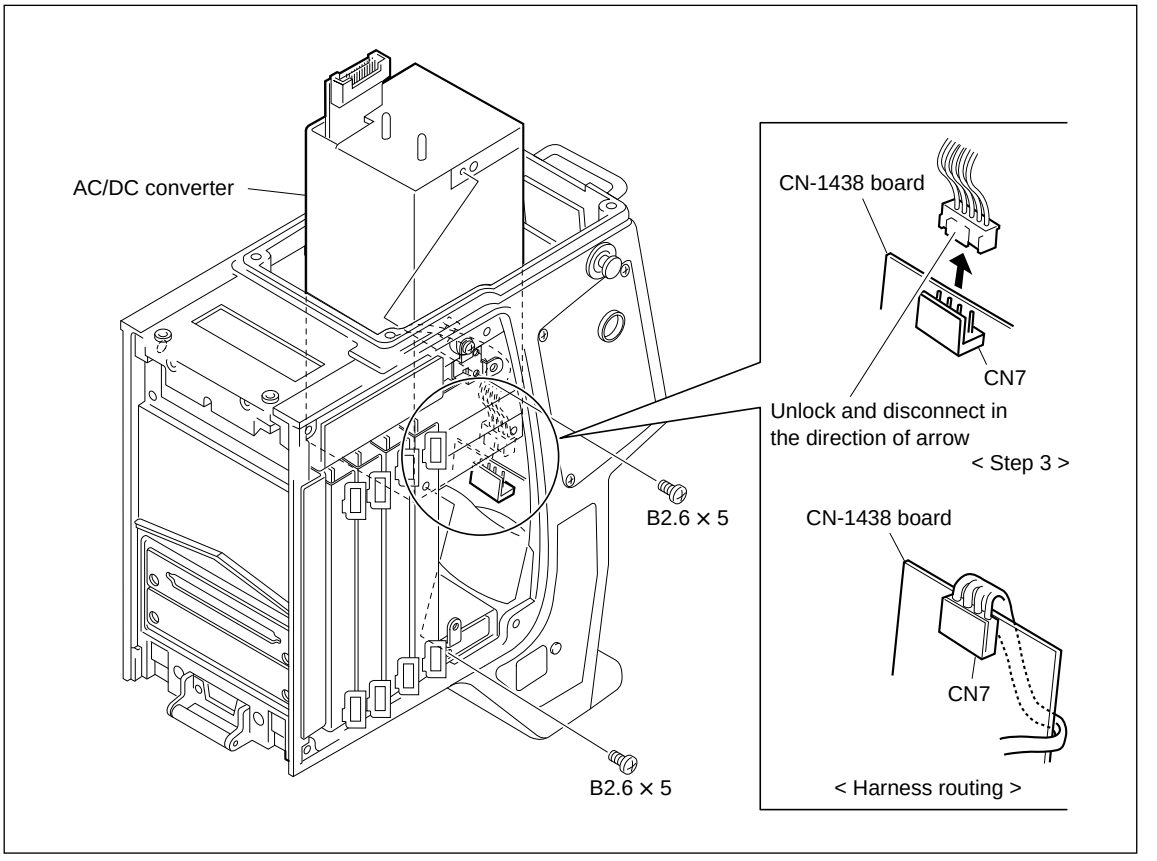


2-10. Removing/Installing the AC/DC Converter

1. Remove the FL-249 board referring to Section 2-9.
2. Remove the two screws (B2.6 × 5) securing the AC/DC converter.
3. Disconnect CN7 on the CN-1438 board while lifting the AC/DC converter.
4. Install in the reverse order of removal.

Note at installation

After connecting the harness extending from the AC/DC converter to CN7 on the CN-1438 board, route the harness as shown in the figure.



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