SONY

COLOR VIDEO CAMERA

BVP-900
BVP-900P
BVP-900WSPK

Power HAD 1000

MAINTENANCE MANUAL Part 1

1st Edition

Serial No. 18001 and Higher: BVP-900 (UC)

Serial No. 38001 and Higher: BVP-900 (J)

Serial No. 48001 and Higher: BVP-900P (CE)

Serial No. 58001 and Higher: BVP-900WSPK (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

Purpose of this manual

This manual is the maintenance manual part 1 for Color Video Camera BVP-900/900P/900WSPK.
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.

- **BVP-900/900P/900WSPK Operation Manual (Supplied with BVP-900/900P/900WSPK)**
  This manual is necessary for application and operation of BVP-900/900P/900WSPK.

- **BVP-900/900P/900WSPK 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, parts list, semiconductor pin assignments, block diagrams, schematic diagrams and board layouts.
  If this manual is required, please contact your local Sony Sales Office/Service Center.
  Sony Part Number : 3-194-736-XX (Volume 1)
  : 3-194-738-XX (Volume 2)

- **OHB Installation Manual (Supplied with OHB-730/750A series)**
  This manual describes the information items necessary when the OHB is supplied and installed.

- **OHB Maintenance Manual (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.
  Sony Part Number : 3-194-649-XX

- **Maintenance Manual for CCD Unit (Available on request)**
  This manual describes items on maintenance, items that premise the service based on the components parts such as alignment, schematic diagrams, board layouts and spare parts list for the CCD unit of BVP-900WSPK.
  If this manual is required, please contact your local Sony Sales Office/Service Center.
  Sony Part Number : 3-201-895-XX

- **System Manual BKP-9901 (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 recommended replacement part, self-diagnosis and notes on services.

Section 1
Installation

1-1. Check of ROM Version

When the BVP-900/900P is used under the camera system using MSU-700 and CNU-700, be sure to check that the ROM version for IC10 on the CPU-171 board of the MSU-700 is Ver. 3.00 or higher and that the ROM versions for IC4 and IC5 on the AT-89 board of the CNU-700 are Ver. 3.00 or higher. If ROM replacement is required, contact your local Sony Sales Office/Service Center.

ROM Version

MSU-700
IC10/CPU-171 board Ver. 3.00 or higher

CNU-700
IC4 and IC5/AT-89 board Ver. 3.00 or higher

1-2. Supplied Accessories

Accessories	Sony Part No.	Qt'y
Angle adjustment brackets	2-280-511-01	2
Number plates (For side panel)	3-185-945-01	2
Clamp bands	3-612-712-01	2
Number plate (For rear panel)	3-612-749-01	1
Number plate (For UP tally lamp)	4-027-937-01	1

1-3. Connectors and Cables

1-3-1. Connector Input/Output Signals

TEST OUT

BNC 75 Ω 1.0 V p-p

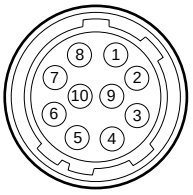
PROMPTER

BNC 75 Ω 1.0 V p-p

TRIAX

King type (for BVP-900)
Fischer type (for BVP-900P)

TRACKER (10P FEMALE)

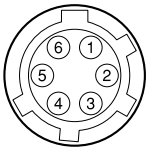


(EXTERNAL VIEW)

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, 100 mA (MAX)
6	PGM OUT (G)	GND for PGM
7	TRACKER T IN (X)	TRACKER TALK 0 dBu/–20 dBu High impedance balanced
8	TRACKER T IN (Y)	
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)

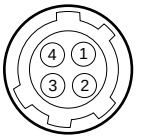
RET CONTROL (6P FEMALE)



(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

DC OUT 12 V *1 (4P FEMALE)

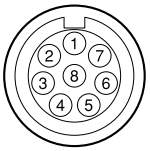


(EXTERNAL VIEW)

No.	SIGNAL	SPECIFICATIONS
1	GND	GND for POWER
2	NC	No connection
3	NC	No connection
4	+12 V OUT	+12 V dc, 0.5 A (MAX)

∗1: In connection with BVF-7700/7700P, the DC OUT 12 V connector and REMOTE connector cannot be used together, because of a limit of power supply capacity.

REMOTE *1 (8P FEMALE)

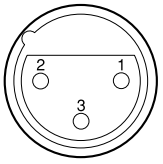


(EXTERNAL VIEW)

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

∗1: In connection with BVF-7700/7700P, the DC OUT 12 V connector and REMOTE connector cannot be used together, because of a limit of power supply capacity.

AUDIO IN CH1/CH2 (3P FEMALE)

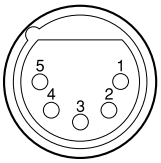


(EXTERNAL VIEW)

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)

INTERCOM 1/2 (5P FEMALE)

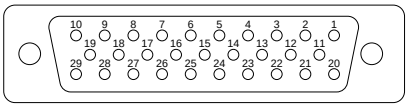


(EXTERNAL VIEW)

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	0 dBu
5	PGM OUT	0 dBu

(0 dBu = 0.775 Vrms)

OHB (29P FEMALE)

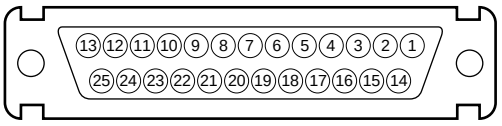


(EXTERNAL VIEW)

No.	SIGNAL	SPECIFICATIONS
1	R VIDEO IN (G)	GND for R VIDEO
2	R VIDEO IN	V = 500 mV p-p 100 % white, positive Zi = 22 Ω
3	G VIDEO IN (G)	GND for G VIDEO
4	G VIDEO IN	V = 500 mV p-p 100 % white, positive Zi = 22 Ω
5	B VIDEO IN (G)	GND for B VIDEO
6	B VIDEO IN	V = 500 mV p-p 100 % white, positive Zi = 22 Ω
7	GND	
8	GND	
9	−11.5 V OUT	−11.5 V dc
10	GND (UNREG)	GND for UNREG
11	+15.5 V OUT	+15.5 V dc
12	+8.0 V OUT	+8.0 V dc
13	+5.5 V OUT	+5.5 V dc
14	HD IN	0 - 5 V, negative
15	ND POSITION IN	ND-1: 0.4 V dc ND-2: 1.45 V dc ND-3: 2.50 V dc ND-4: 3.55 V dc ND-5: 4.60 V dc

No.	SIGNAL	SPECIFICATIONS
16	RXD OUT	CHU → OHB 0 - 5 V
17	S. LD OUT	Serial Data Load Pulse Output
18	−3.5 V OUT	−3.5 V dc
19	UNREG OUT	10.5 - 17.0 V
20	HD OUT	0 - 5 V, negative
21	+6.5 V OUT	+6.5 V dc
22	VD OUT	0 - 5 V, negative
23	DIAG IN	Open Collector
24	CC POSITION IN	CC-A: 0.4 V dc CC-B: 1.45 V dc CC-C: 2.50 V dc CC-D: 3.55 V dc CC-E: 4.60 V dc
25	TXD IN	OHB → CHU
26	SHD IN	0 - 5 V, positive
27	SHD IN (G)	GND for SHD
28	S. DT OUT	Serial Data Output
29	S. CK OUT	Clock Input for Serial Data

VF (25P FEMALE)



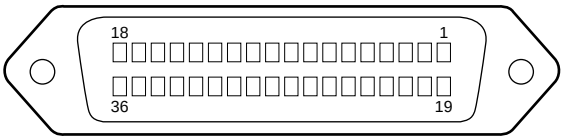
(EXTERNAL VIEW)

No.	SIGNAL	SPECIFICATIONS
1	VF R VIDEO OUT (X) *2	V = 714 mV p-p (NTSC) 700 mV p-p (PAL) Zo = 75 Ω ±5 % POSI
2	NC	No connection
3	VF G OUT(X)	B/W: Y/RET, COLOR: G Zo = 75 Ω ±5 % 1 V p-p
4	NC	No connection
5	VF B VIDEO OUT (X) *2	V = 714 mV p-p (NTSC) 700 mV p-p (PAL) Zo = 75 Ω ±5 % POSI
6	NC (RET $\overline{\text{ON}}$ OUT)	No connection (ON: GND, OFF: +5 V)
7	+12 V (VF) OUT	+12 V dc (at 3.1 A)
8	+12 V (VF) OUT	+12 V dc (at 3.1 A)
9	UP TALLY ON OUT	ON: +12 V OFF: 0 V
10	NC (VF RET VIDEO OUT (X))	No connection (V = 1.0 V p-p Zo = 75 Ω ±5 %)
11	R TALLY ON OUT	ON: 5.0 V ±0.5 V OFF: 0 +0.5 V
12	$\overline{\text{VF SEL}}$ COL/BW IN	COLOR: GND B/W: High impedance
13	NC	No connection

No.	SIGNAL	SPECIFICATIONS
14	VF R VIDEO OUT (G)	GND for VF R VIDEO
15	PEAKING OFF OUT	OFF: GND ON: High impedance
16	VF G VIDEO OUT (G)	GND for VF G VIDEO
17	CHASSIS GND	CHASSIS GND
18	VF B VIDEO OUT (G)	GND for VF B VIDEO
19	VF DC GND	GND for +12 V (VF)
20	VF DC GND	GND for +12 V (VF)
21	TALLY GND	GND for TALLY
22	NC (VF RET VIDEO OUT (G))	No connection (GND for VF RET VIDEO)
23	G TALLY ON OUT	ON: 5.0 V ±0.5 V OFF: 0 +0.5 V
24	NC	No connection
25	16 : 9 ON OUT	ON: GND OFF: High impedance

*2: Signals at pins 1 and 5 are output only when a color viewfinder is connected to the camera.

LENS (36P FEMALE)



(EXTERNAL VIEW)

No.	SIGNAL	SPECIFICATIONS
1	NC	No connection
2	NC	No connection
3	NC	No connection
4	+12 V (LENS)OUT	+12 V (at 0.3 A)
5	LENS DC GND	GND for +12 V (LENS)
6	GND	GND
7	NC	No connection
8	LENS EXT-A IN	*4
9	LENS EXT-B IN	*4
10	LENS EXT-C IN	*4
11	LENS AUX OUT	ON: GND OFF: High impedance
12	IRIS POSI IN	Zi ≧ 10 kΩ 2 to 7 V “3.4 ±0.1 V (F16)” “6.2 ±0.1 V (F2.8)”
13	ZOOM POSI IN	Zi ≧ 10 kΩ 2 to 7 V “2 V (WIDE), 7 V (TELE)”
14	RET 1 $\overline{\text{ON}}$ IN	Zi ≧ 10 kΩ ON: L OFF: High impedance
15	RET 2 $\overline{\text{ON}}$ IN	Zi ≧ 10 kΩ ON: L OFF: High impedance
16	FOCUS POSI IN	Zi ≧ 10 kΩ 2 to 7 V “2 V (MIN), 7 V (∞)”
17	IRIS CONT OUT	2 to 7 V “3.4 ±0.1 V (F16)” “6.2 ±0.1 V (F2.8)” Zo ≦ 1 kΩ
18	IRIS $\overline{\text{AUTO}}$/MANU OUT	AUTO: L MANU: H Zo ≦ 1 kΩ

No.	SIGNAL	SPECIFICATIONS
19	NC	No connection
20	NC	No connection
21	LENS R TALLY ON OUT	ON: L OFF: H Zo ≦ 1 kΩ
22	EXP POSITION IN	Zi ≧ 10 kΩ 1 to 4 V 1 V: −7.5° 4 V: +7.5°
23	RET 3 $\overline{\text{ON}}$ IN	Zi ≧ 10 kΩ ON: L OFF: High impedance
24	LENS ADRS A IN	*3
25	LENS ADRS B IN	*3
26	LENS ADRS C IN	*3
27	LENS ADRS D IN	*3
28	EXTENDER 1 $\overline{\text{ON}}$ OUT	ON: GND OFF: High impedance
29	EXTENDER 2 $\overline{\text{ON}}$ OUT	ON: GND OFF: High impedance
30	NC	No connection
31	INCOM 1 ENG/PRD IN	Zi ≧ 10 kΩ ENG: GND PRD: High impedance
32	INCOM 2 ENG/PRD IN	Zi ≧ 10 kΩ ENG: GND PRD: High impedance
33	INCOM MIC 1 $\overline{\text{ON}}$ IN	Zi ≧ 10 kΩ ON: GND OFF: High impedance
34	INCOM MIC 2 $\overline{\text{ON}}$ IN	Zi ≧ 10 kΩ ON: GND OFF: High impedance
35	NC (REGI VD OUT ⎍⎍)	No connection
36	NC (LENS DC GND)	No connection

*3 Zi ≧ 10 kΩ
1: High impedance
0: 0 +0.5 V
LENS ADRS A (Low-order bit)
LENS ADRS D (High-order bit)

*4 Zi ≧ 10 kΩ
1: High impedance
0: 0 ±0.5 V

EX1	EX2	EX3	MODE
1	1	1	EXTENDER OFF
1	0	1	EXT-A (×1.5) ON
0	1	1	EXT-B (×2) ON
0	0	1	EXT-C (×2.5) ON

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.

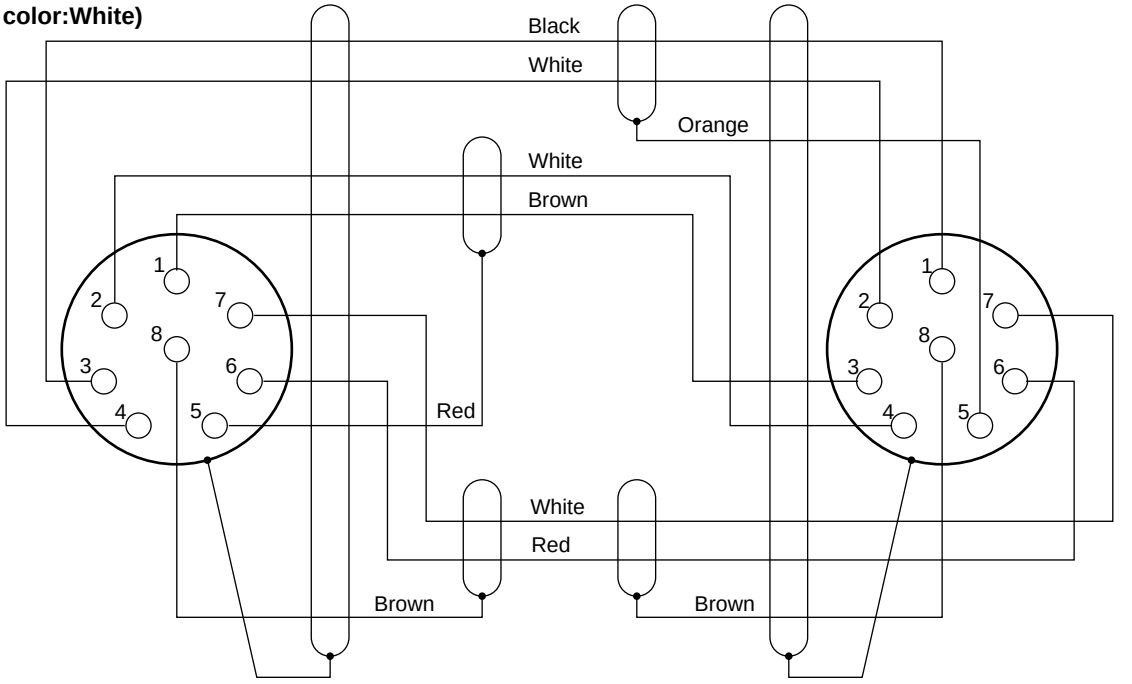
Connector name	Connection connectors/cables
TEST OUT PROMPTER (BNC)	1-569-370-12 Plug, BNC
TRACKER (10P FEMALE)	1-506-522-11 Plug, 10P Male or HIROSE HR10R-10P-10P equivalent
RET CONTROL (6P FEMALE)	1-560-078-00 Plug, 6P Male or HIROSE HR10-7PA-6P equivalent
DC OUT 12V (4P FEMALE)	1-566-425-11 Plug, 4P Male or HIROSE HR10A-7P-4P equivalent
REMOTE (8P FEMALE)	1-766-848-11 Plug, 8P Male or 1-783-372-11 REMOTE cable *1 *2 (Supplied with RM-B150, 10 m) or CCA cable assembly (option) CCA-5-10 (10 m)/CCA-5-3 (3 m) *2
AUDIO IN (3P FEMALE)	1-508-084-00 XLR, 3P Male or ITT Cannon XLR-3-12C equivalent
INTERCOM (5P FEMALE)	1-508-370-11 XLR, 5P Male or ITT Cannon XLR-5-12C equivalent

∗1: The use of REMOTE cable enables to monitor video signals.
∗2: If using a cable of length different from a standard product, contact your local Sony Sales Office/Service Center.

1-3-3. Wiring Diagram for Cable

CCA-5 Cable

(Outer sheath color:White)

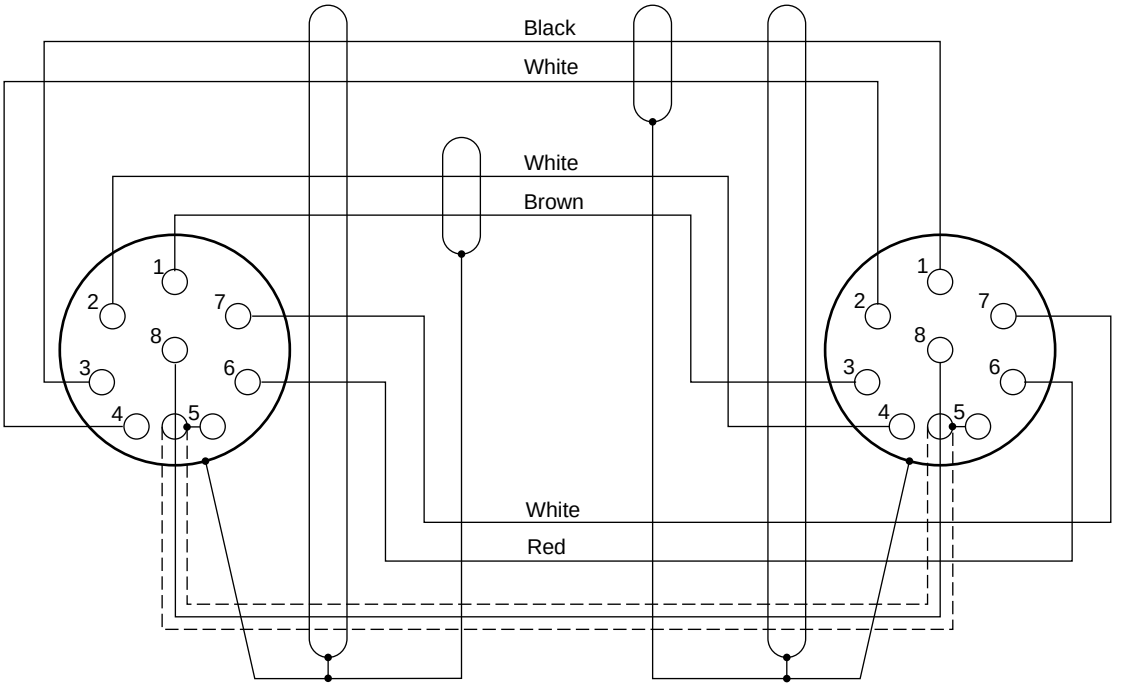


8P CONNECTOR(MALE)
(WIRING SIDE)

8P CONNECTOR(MALE)
(WIRING SIDE)

REMOTE Cable (Supplied with RM-B150)

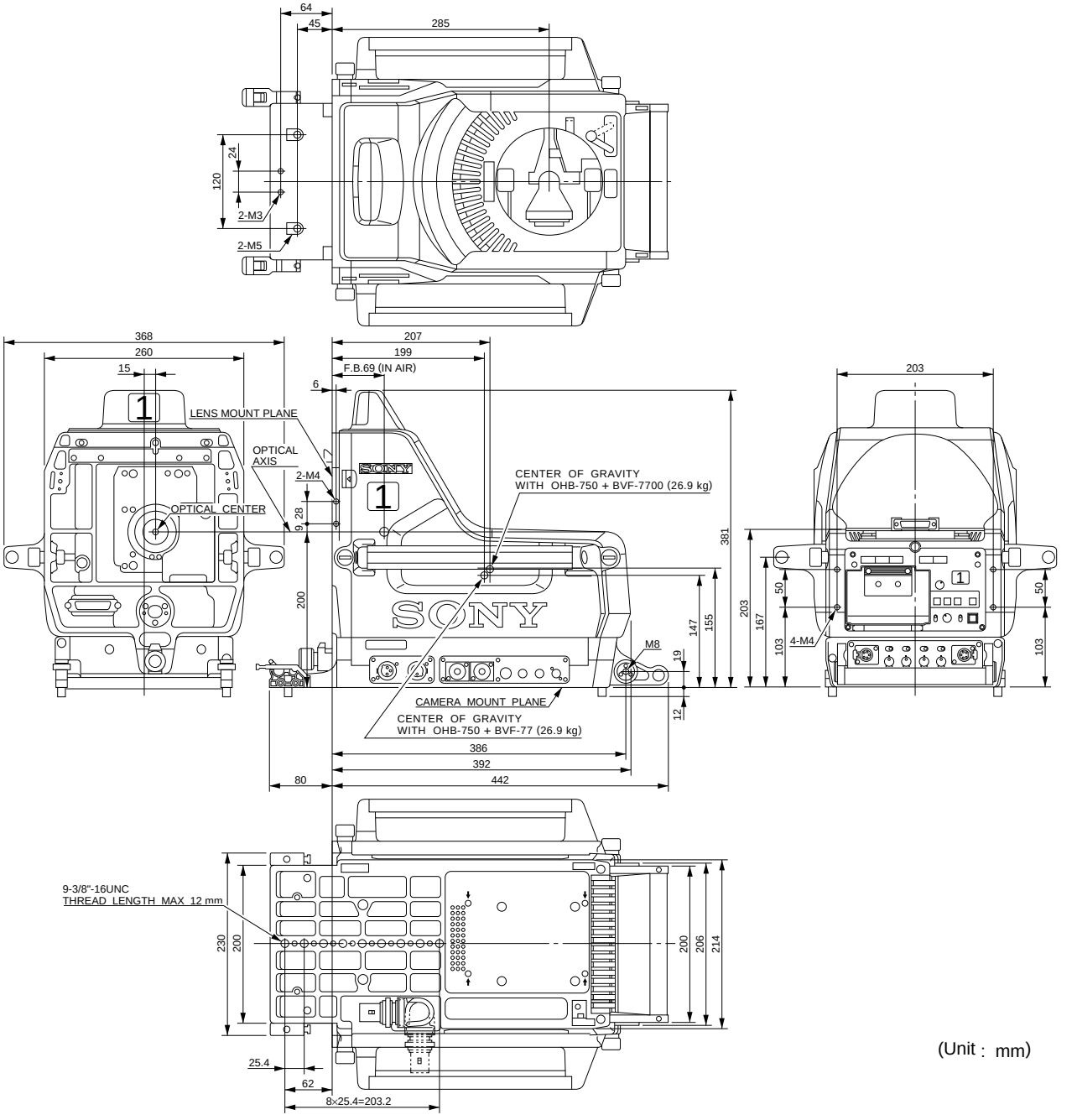
(Outer sheath color:Black)



8P CONNECTOR(MALE)
(WIRING SIDE)

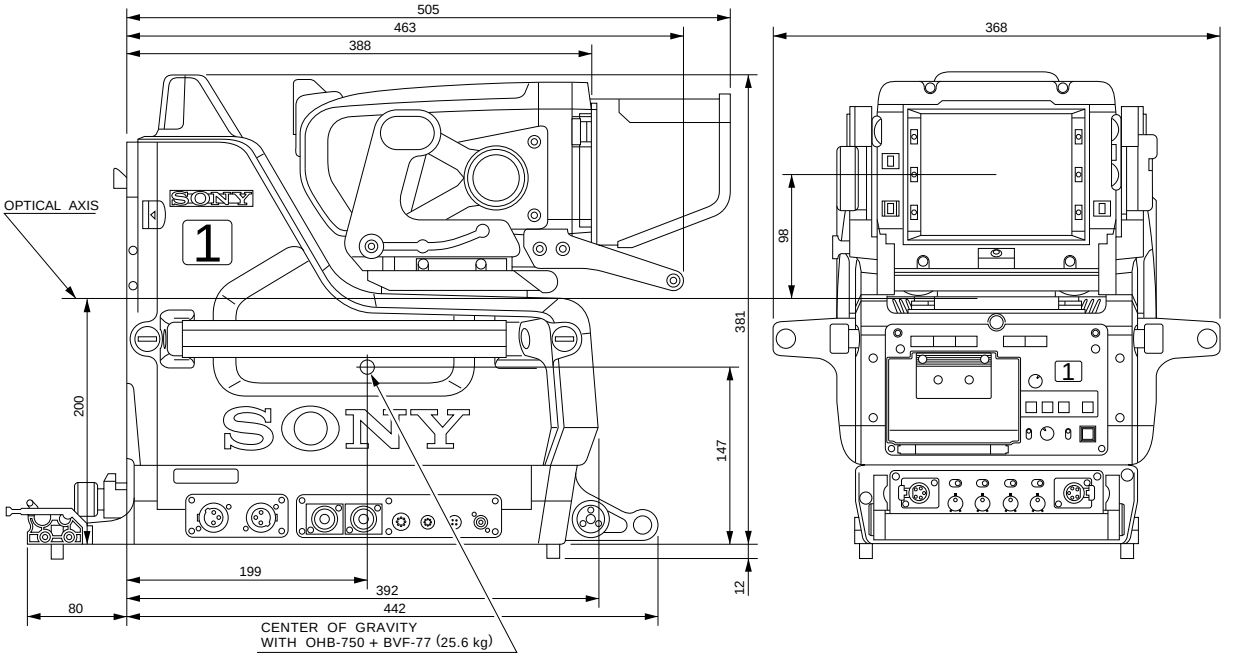
8P CONNECTOR(MALE)
(WIRING SIDE)

1-4. Outside Dimensions

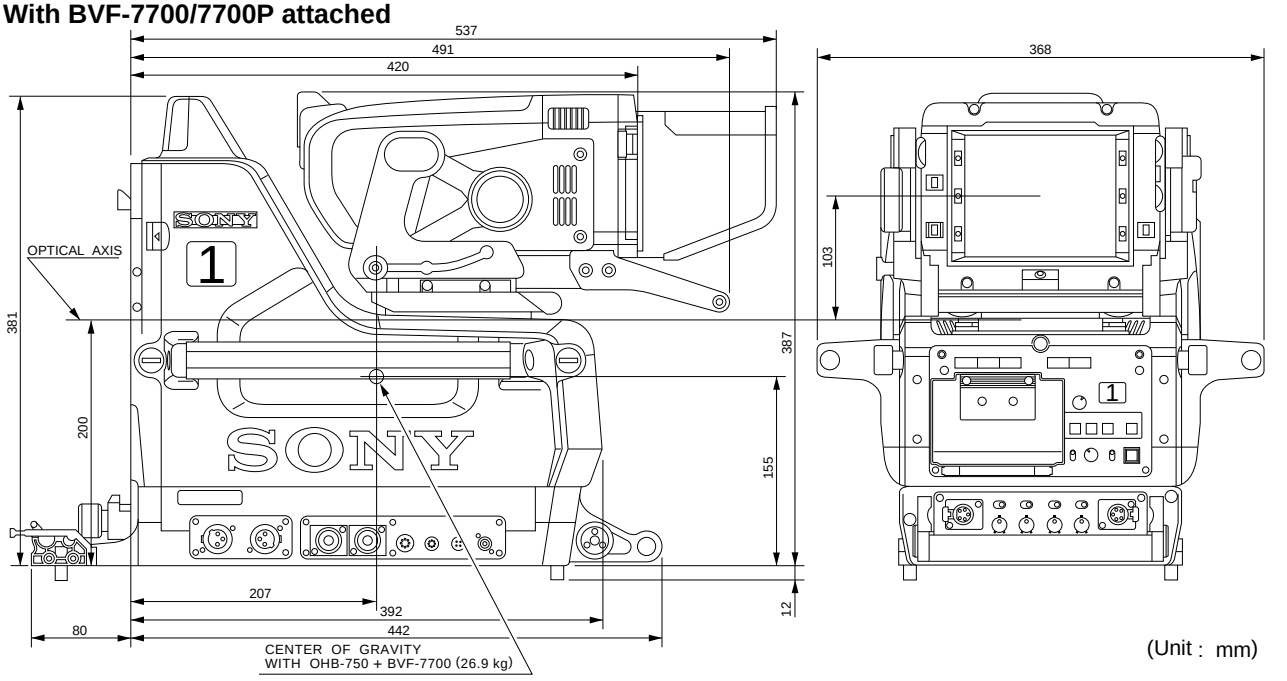


(Unit : mm)

With BVF-77/77CE attached



With BVF-7700/7700P attached



(Unit : mm)

1-5. Installation Conditions

Operating temperature: −20 ˚C to +45 ˚C
Storage temperature: −20 ˚C to +50 ˚C
Humidity: No condense

- Install the unit in a location as dry and well-ventilated as possible.
- Do not install the unit in the following conditions.
  High temperature room or near the heat source
  Excessive dust or mechanical vibration
  Intense magnetic and electric fields
  A place subjected to direct sunlight or strong light

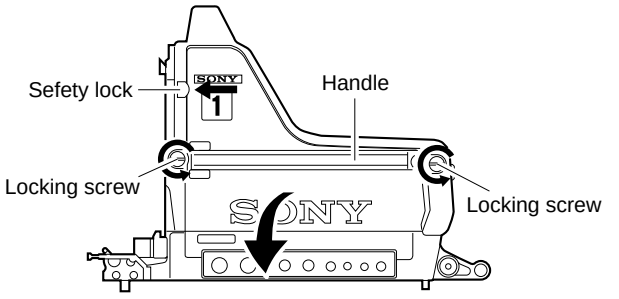
1-6. Opening and Closing the Side Panel

Opening

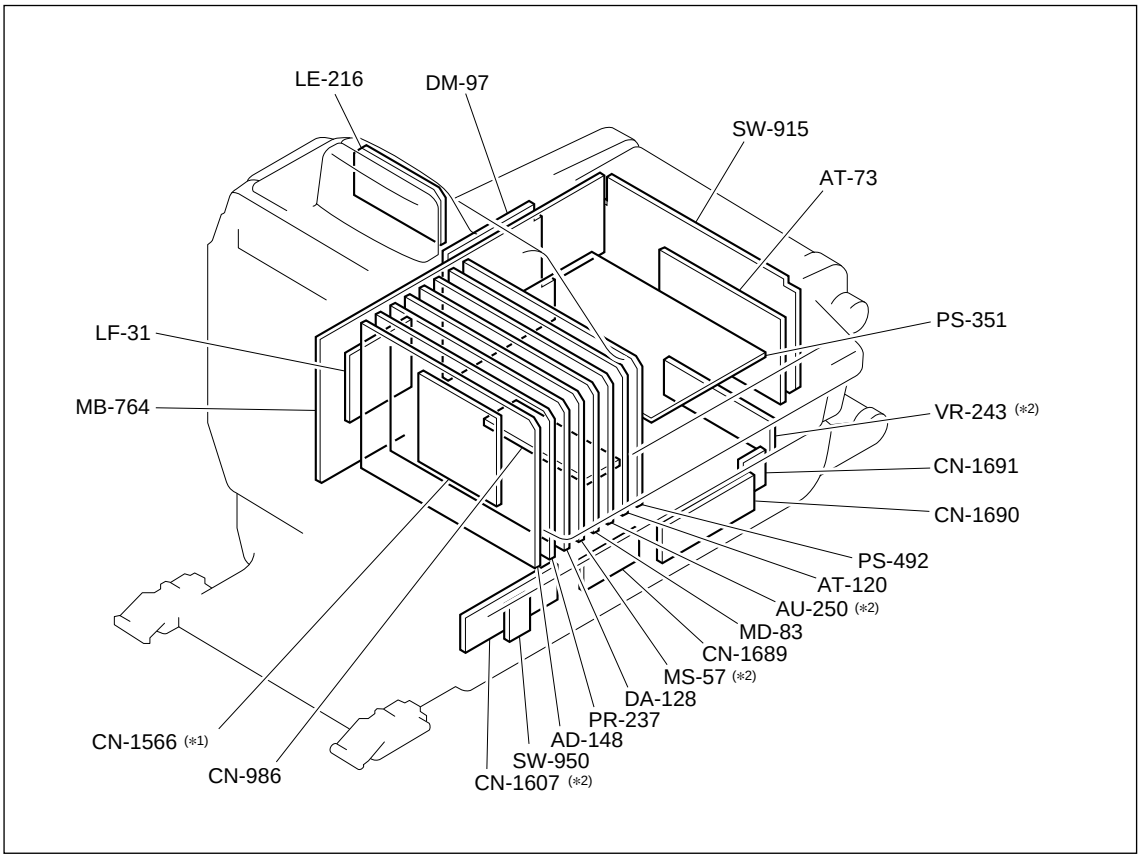
Loosen the two side-panel locking screws, and while sliding the safety lock toward the lens, open the side panel by holding the handle.

Closing

When you close the side panel, the safety lock is automatically locked. Fasten the side-panel locking screws securely.



1-7. Location of Printed Circuit Boards

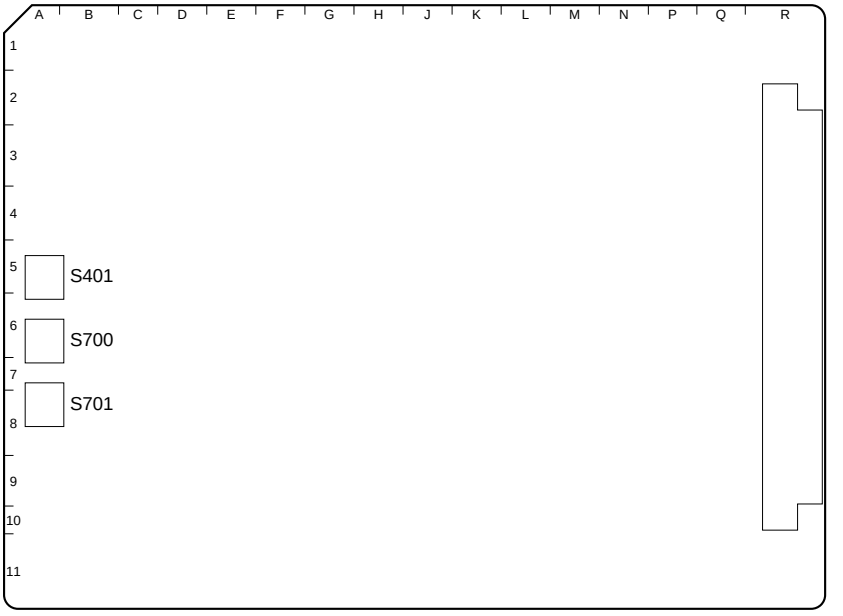


*1 : The CN-1566 board is installed on the DA-128 board.
*2 : The actual name varies depending on the model.

Model name	AU-250	CN-1607	MS-57	VR-243
BVP-900 (UC)	AU-250	CN-1607A	MS-57A	VR-243A
BVP-900P/900WSPK (CE)	AU-250P	CN-1607A	MS-57P	VR-243P

1-8. Function of Internal Switches

MS-57 board

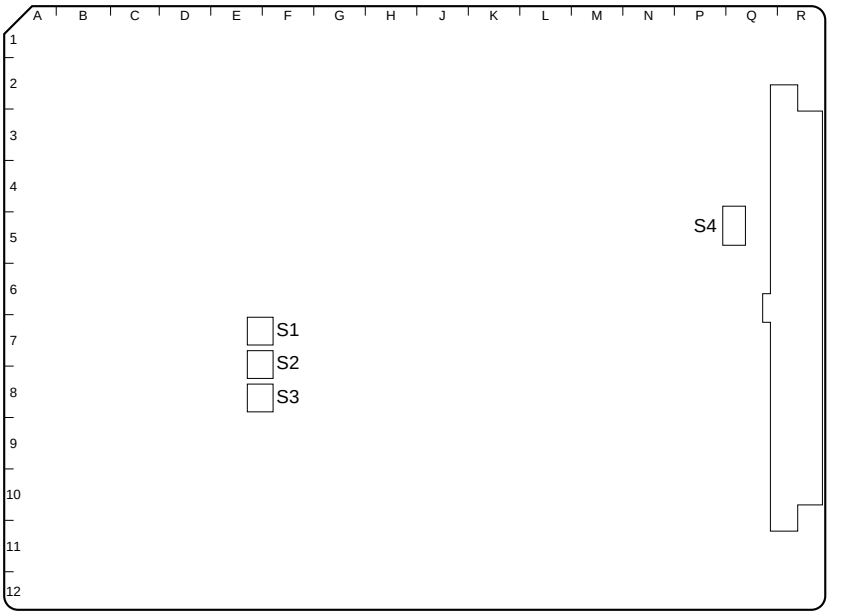


MS-57 BOARD (A SIDE)

Ref. No.	Switch name	Description	Factory setting
S401	TEST OUT connector signal select switch	Selects an output signal at the TEST OUT connector. VBS: VBS signal *1 VF: VF video signal RET: Return video signal from CCU	VF
S700	CCU CALL ON/OFF switch	Turn on to light up the UP TALLY lamps of the camera and viewfinder while they are not lit, or to light off them while they are lit, when pressing the CALL button of the MSU and RCP.	OFF
S701	CHU CALL ON/OFF switch	Turn on to light up the UP TALLY lamps of the camera and viewfinder while they are not lit, or to light off them while they are lit, when pressing the CALL button on the rear panel of the camera.	OFF

*1: To output a VBS signal, the standalone unit BKP-7910/7910P (option) is required.

MD-83 board



MD-83 BOARD (A SIDE)

Ref. No.	Switch name	Description	Factory setting
S1	R ON/OFF switch	Select the combination of R, G and B signals input to the Y, R-Y and B-Y matrix circuits for board adjustment.*2	All ON
S2	G ON/OFF switch		
S3	B ON/OFF switch		
S4	PROMPTER DIRECTION select switch	Selects the direction of the prompter signal to be transmitted between the camera and CCU. CCU → CAM: The prompter signal is transmitted from the CCU to the camera and then it is output at the PROMPTER connector of the camera. CAM → CCU: The prompter signal is input at the PROMPTER connector of the camera and then it is transmitted to the CCU.	CCU → CAM

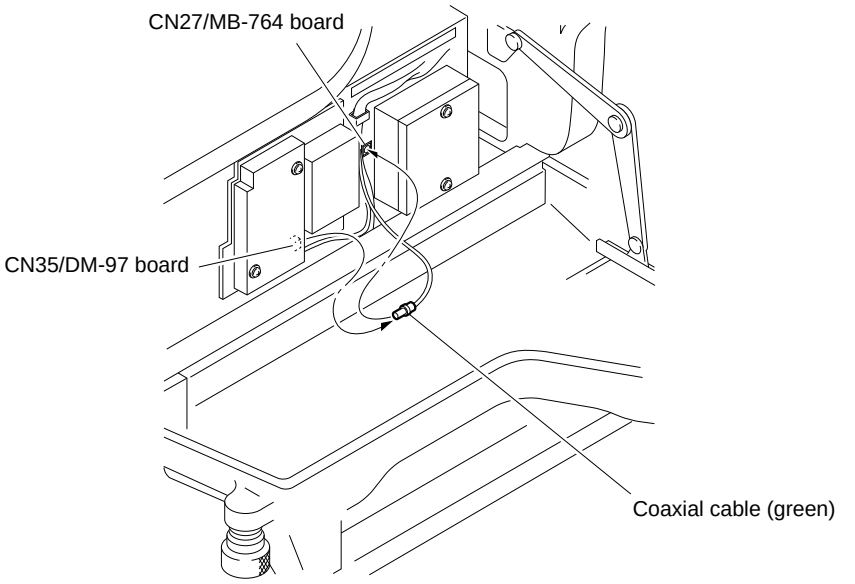
*2

Adjusting point	S1	S2	S3
RV101 (Y REF)	ON	ON	ON
RV201 (R-Y REF)	OFF	ON	ON
RV301 (B-Y REF)	OFF	OFF	ON

Note

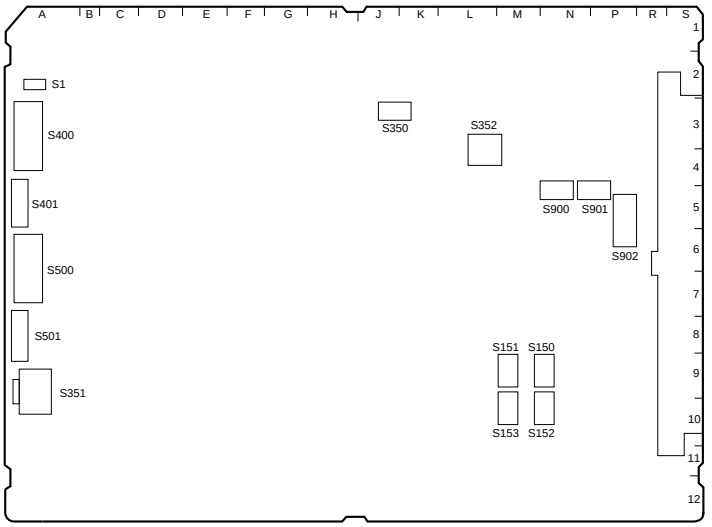
When changing S4 switch setting to the "CAM → CCU" position, be sure to take the following steps.

(1) Disconnect the TRIAX cable from the camera.
(2) Open the left side panel of the camera.
(3) Disconnect the coaxial cable (green) from CN35 (PROMPT) on the DM-97 board.
(4) Reconnect the coaxial cable to CN27 (PROMPT REVERSE) on the MB-764 board. (Insert until it clicks.)



The coaxial cable has been connected to CN35 on the DM-97 board at the factory.

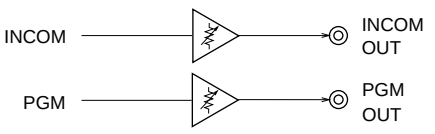
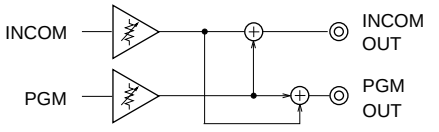
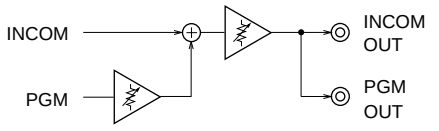
AU-250 board



AU-250 BOARD (A SIDE)

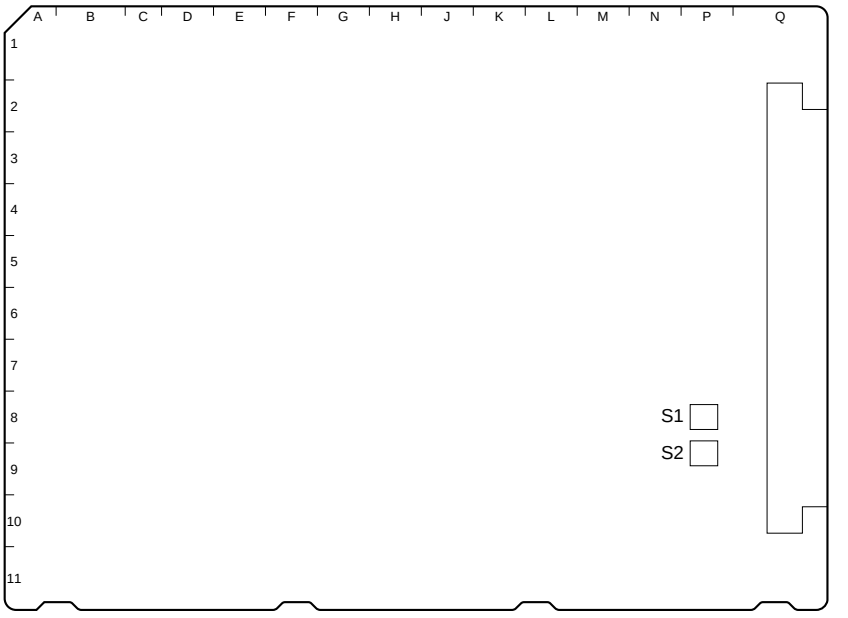
Ref. No.	Switch name	Description	Factory setting
S1	INCOM 1/2 MIC UNBALANCE switch	When a headset with a dynamic microphone is connected to the INTERCOM 1 or 2 connector and the connection is unbalanced, the intercom line may hum. Turn on to reduce the hum.	OFF
S150, S151	INCOM 1/PGM MIX switch	Selects how the INCOM and PGM of the INCOM 1 connector are output. (See the table below)	
S152, S153	INCOM 2/PGM MIX switch	Selects how the INCOM and PGM of the INCOM 2 connector are output. (See the table below)	

INCOM/PGM MIX mode select switches

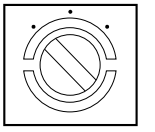
INCOM1 / INCOM2	S150 / S152	S151 / S153	Description
	IND	IND	 INCOM and PGM are output independently. (Factory setting)
	MIX	IND	 Mixed signal of INCOM and PGM is output as INCOM and PGM outputs. INCOM level control knob adjusts INCOM audio level and PGM level control knob adjusts the PGM audio level.
	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.	Switch name	Description	Factory setting
S350	TRACKER TALK LEVEL select switch	Selects the MIC input level at TRACKER connector, 0 dBu or –20 dBu.	0 dBu (0 dBu = 0.775 V rms)
S351	MIC MONITOR ON/OFF switch	Turn on to add the program MIC input to the INCOM output of the INTERCOM connector and to monitor.	OFF
S352	TRACKER/INTERCOM 2 mode select switch (S352-1 to S352-4)		
S352-1	TRACKER PGM ON/OFF switch	Turn on to add the program audio to the TRACKER RECEIVE output.	OFF
S352-2	TRACKER INCOM 2 ON/OFF switch	Turn on to add the INCOM 2 audio signal to the TRACKER RECEIVE output. Set S352-2, S352-3 and S352-4 to the same position.	OFF
S352-3	TRACKER INCOM 2 ON/OFF switch	Turn on to add the TRACKER audio signal to the INCOM 2 MIC output to be transmitted to the CCU. Set S352-3, S352-2 and S352-4 to the same position.	OFF
S352-4	TRACKER INCOM 2 ON/OFF switch	Turn on to add the TRACKER audio signal to the INCOM 2 RECEIVE output to be transmitted from the CCU. Set S352-4, S352-2 and S352-3 to the same position.	OFF
S400	INCOM 1 MIC select switch	Select according to a microphone of the headset to be connected to INTERCOM connector. C: Carbon microphone D: Dynamic microphone	C
S500	INCOM 2 MIC select switch		C
S401	INTERCOM 1 audio level select switch	Select the audio levels of the INTERCOM audio signals to be transmitted to the CCU, –6 dBu, 0 dBu or +6 dBu.	0 dBu (0 dBu = 0.775 V rms)
S501	INTERCOM 2 audio level select switch		
S900	RTS 1 select switch	When an RTS kit BKP-7913 (option) is connected to the INTERCOM 2 connector, S900 and S901 take effect. Set S900 to RTS position so that the RTS CH1 can be activated as the INTERCOM 1 connector. Set S901 to RTS position so that the RTS CH2 can be activated as the INTERCOM 2 connector.	NORM
S901	RTS 2 select switch		NORM
S902	RTS PS select switch	When an RTS kit BKP-7913 (option) is connected to the INTERCOM 2 connector, S902 takes effect. Selects whether the power to the RTS belt pack is supplied to RTS CH1 or RTS CH2.	CH2

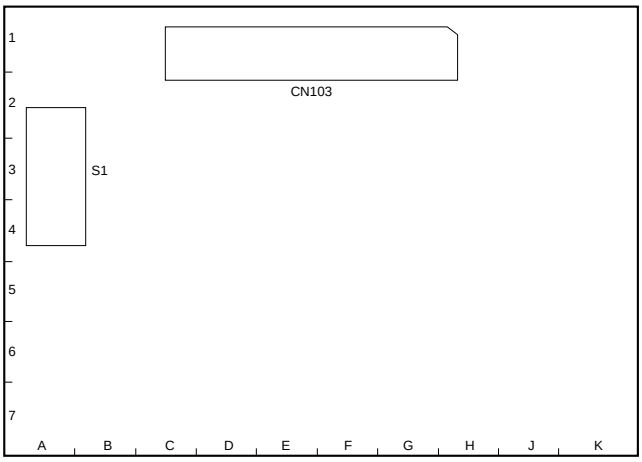
AT-120 board



AT-120 BOARD (A SIDE)

Ref. No.	Switch name	Description	Factory setting
S1	Factory use only	Be sure to use these switches with factory-set position.	
S2			

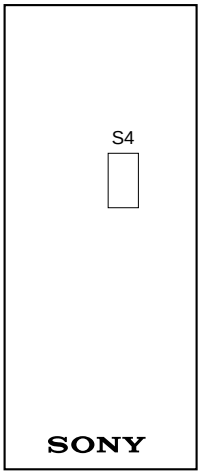
AT-73 board



AT-73 BOARD (A SIDE)

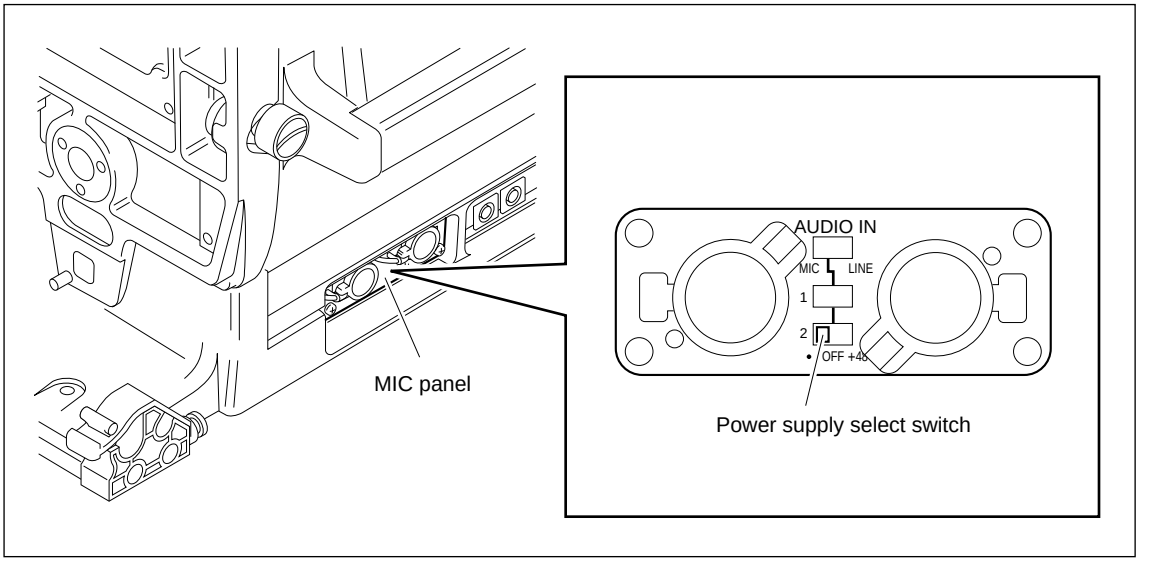
Ref. No.	Switch name	Description	Factroy setting
S1	Not used	—	OPEN

CN-1607 board



CN-1607 BOARD (B SIDE)

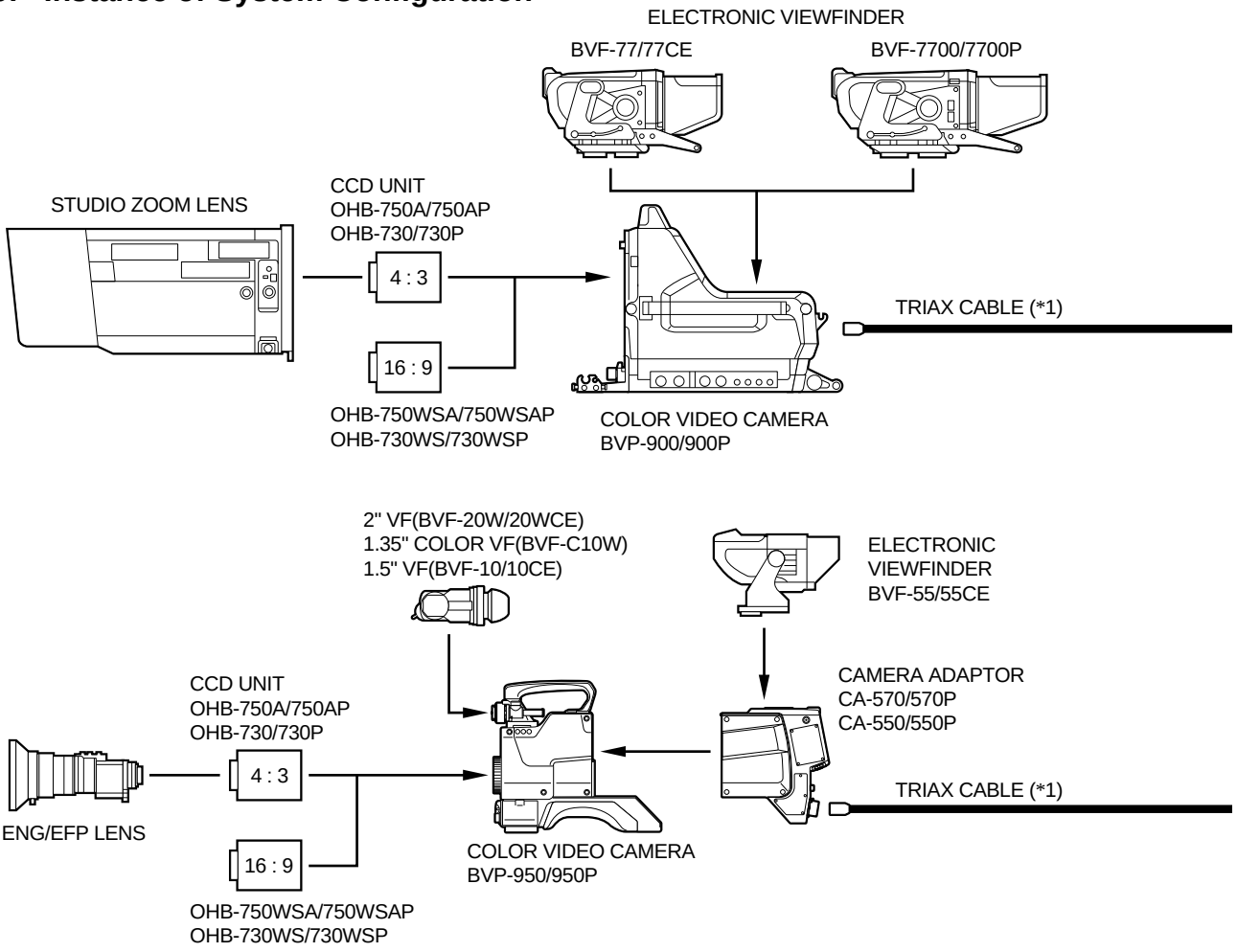
Ref. No.	Switch name	Description	Factory setting
S4	+12 V power supply switch	Turn on to power the microphone with +12 V while setting the power supply select switch on the MIC panel to "•" position.	OFF



Note

Be sure to set this switch in accordance with a power of microphone. If not, it will cause the failure of a microphone.

1-9. Instance of System Configuration



OTHER OPTIONAL ACCESSORIES

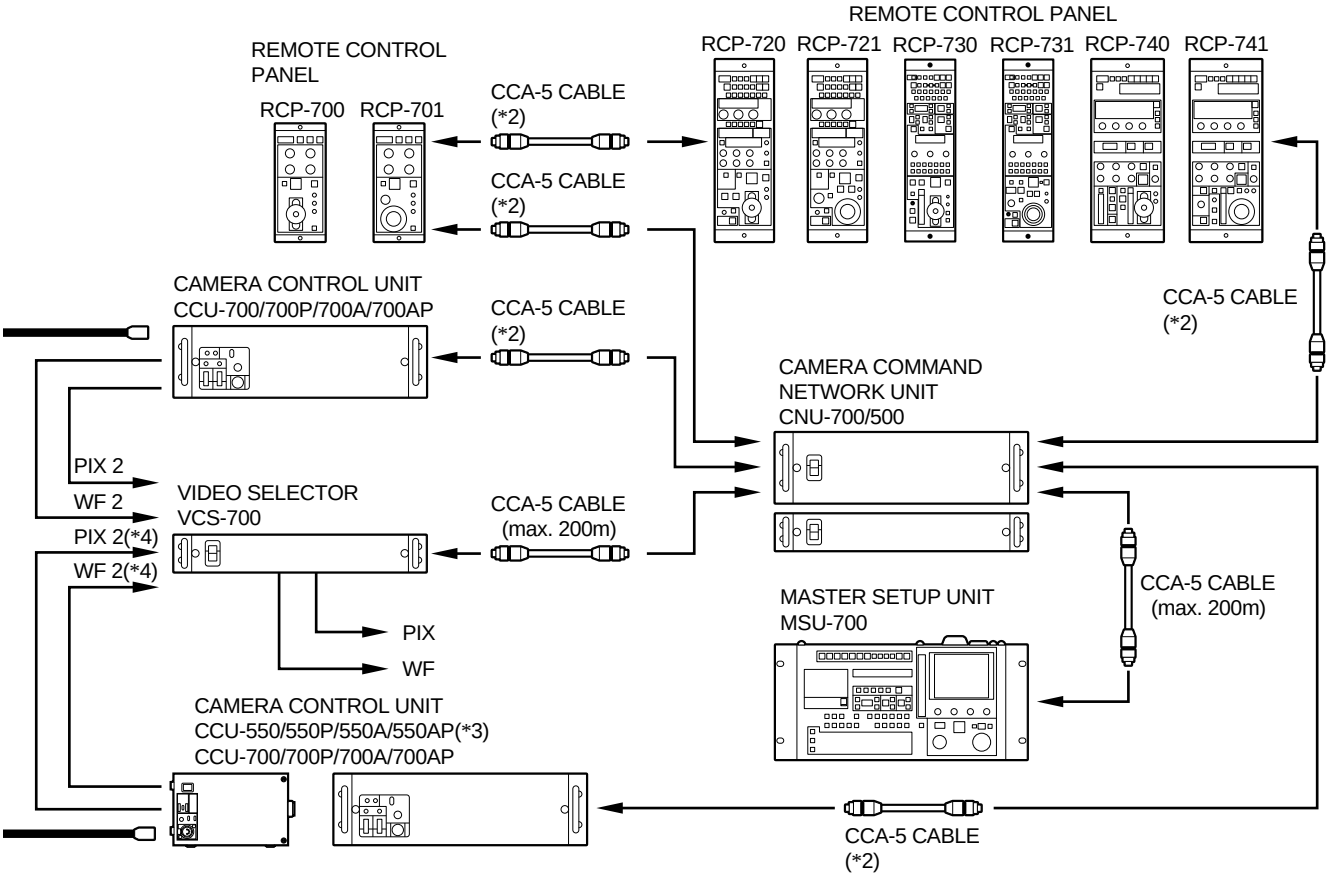
For BVP-900/900P	STANDALONE UNIT BKP-7910/7910P
	SCRIPT HOLDER BKP-7911/7912
	TRIAX UNIT BKP-7010
	RTS KIT BKP-7913

For BVP-950/950P	ELECTRET CONDENSER MICROPHONE ECM-MS5
	MICROPHONE C-74 (Sony P/N 1-542-099-11)
	CRADLE SUSPENSION CRS-3P
	CARRYING CASE LC-303SFT
For CA-550/550P	TELEPROMPTER UNIT BKP-5971

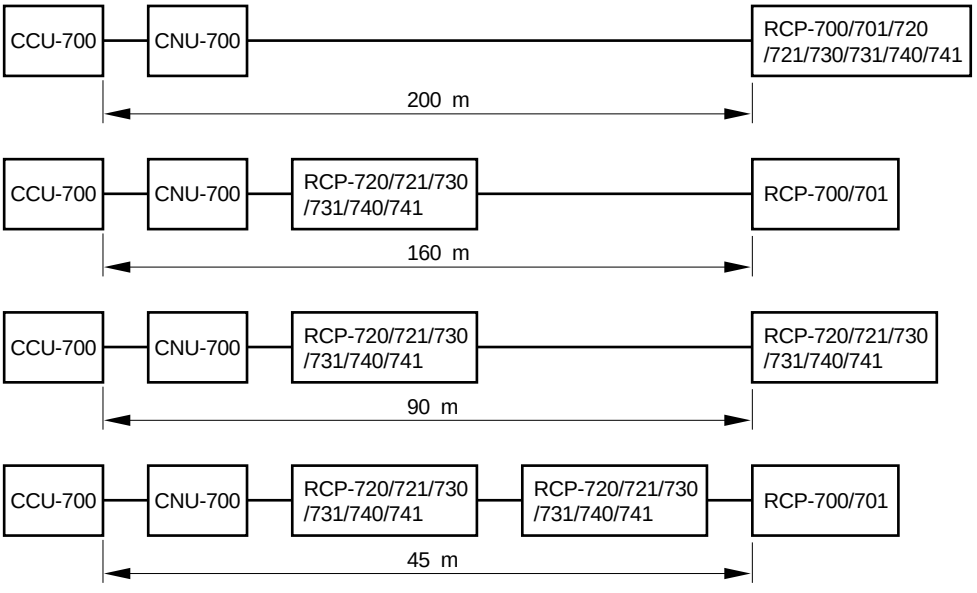
∗1: TRIAX CABLE LENGTH

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

Diameter	Cable-length 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 of the CA-570/570P.

∗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.

Section 2
Service Overview

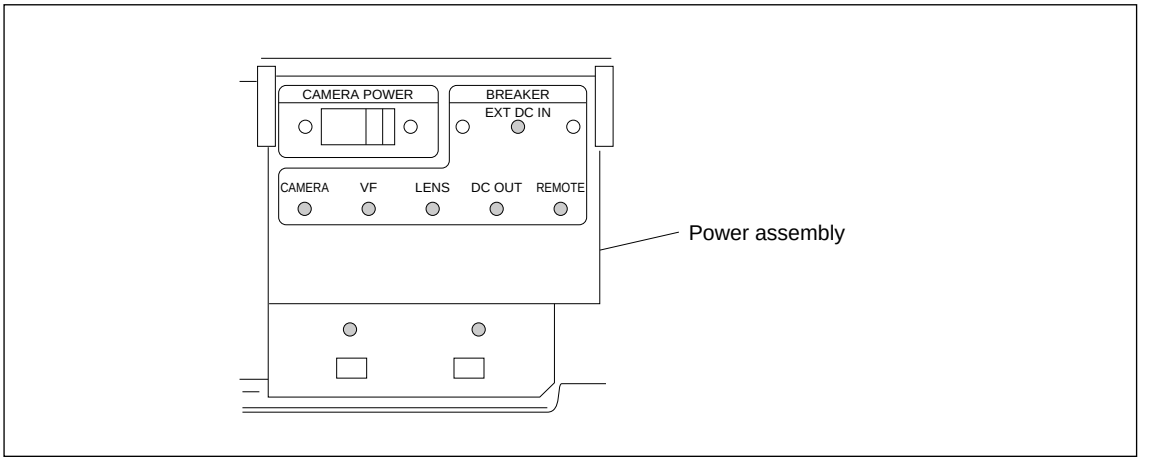
2-1. Notes on Service

2-1-1. Installing Jumper Board

The DA-128 board is provided with a jumper board CN-1566 on it. The CN-1566 board is necessary when the RC-68 board of OHB-730WS/730WSP/750WSA/750WSAP is not installed. Unless the RC-68 board is installed, be sure to connect the CN-1566 board to the DA-128 board. If not, the video image will not be displayed normally.

2-1-2. Reset of Breaker

Excessive current in the internal circuitry will trip the internal circuit breaker regardless of causes. If the circuit breaker trips once, check the circuit or block concerned, and then press the appropriate breaker release button. If there is no trouble, the power to the unit will be turned on.



2-1-3. Standard Tightening Torque for Screws

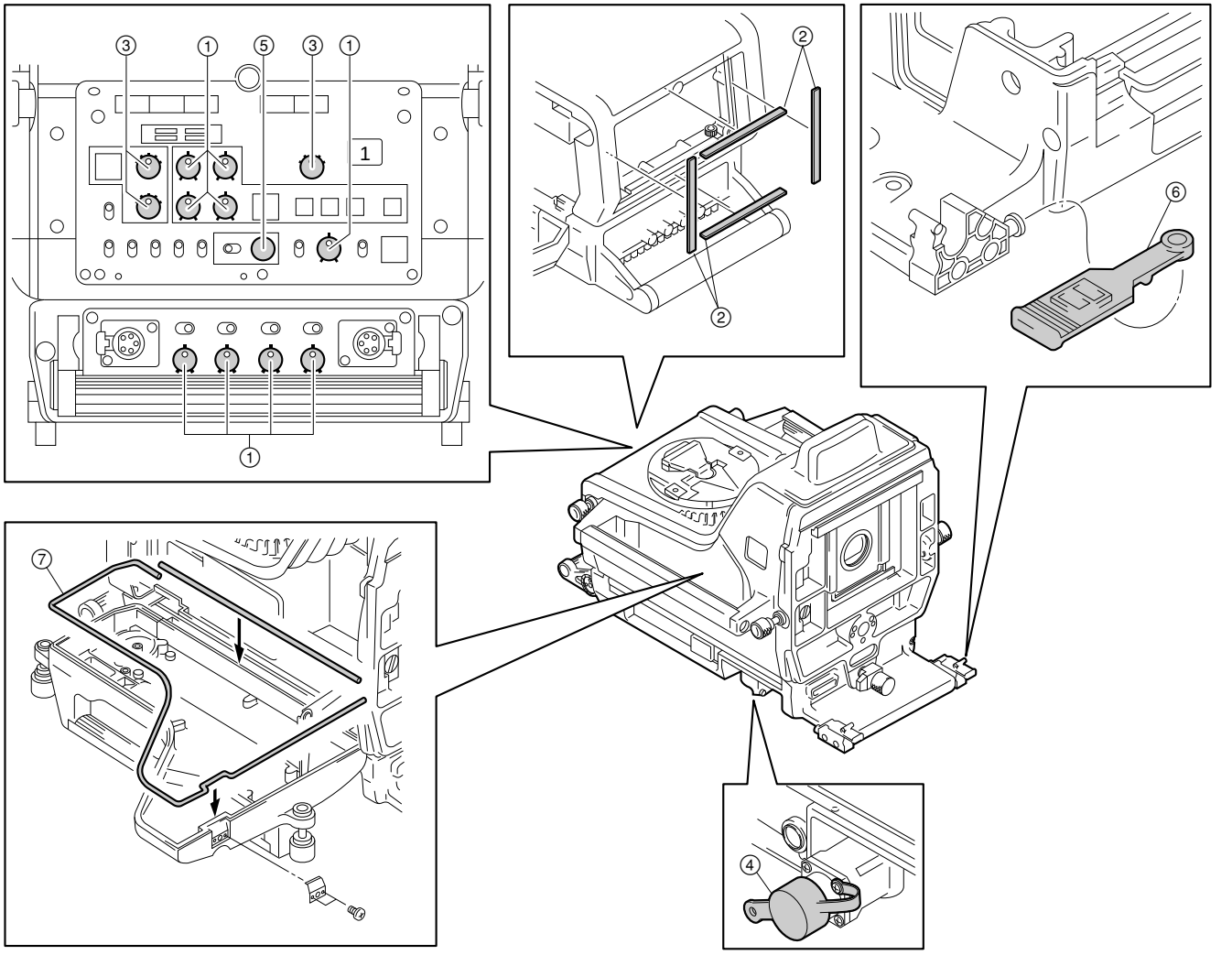
The standard tightening torque for the screws used in BVP-900/900P/900WSPK are as follows.

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)

2-2. Recommended Replacement Part

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.

No.	Description	Sony P/N
①	Control knob assembly	X-3167-563-X
②	Shielding rubber	3-185-869-0X
③	Control knob	3-185-872-0X
④	Connector cap	3-186-499-0X
⑤	Control knob	3-602-483-0X
⑥	Clamp band	3-612-712-0X
⑦	Shielding cushion	3-615-750-6X



2-3. Error Message in Automatic Adjustment Mode

If an error occurs during automatic adjustments, an error message appears on a viewfinder screen. Take following measures according to the displayed message.

① "OVER FLOW"

The adjusted value overflowed the adjustable range. Check whether the settings on the camera are correct or not. If they are correct, adjustments of the internal boards are necessary. If adjustments of the boards are required, contact your local Sony Sales Office/Service Center.

② "LOW LEVEL"

The video signal level was too low for white balance or skin detail phase adjustment, and the white balance or skin detail phase could not be adjusted. Raise the video signal level by using brighter illumination, opening the lens iris, or raising the gain of the video signal.

③ "TIME LIMIT"

Automatic adjustment did not finish within a specified period. Check whether the settings on the camera are correct or not. If they are correct, adjustments of the internal boards are necessary. If adjustments of the boards are required, contact your local Sony Sales Office/Service Center.

④ "NOT CLOSE"

The lens did not close for black balance or black shading adjustment.

⑤ "LOW SATURATION"

The saturation of subject was too low for skin detail phase adjustment, and color tone could not be discriminated. Raise the video signal level by using brighter illumination, opening the lens iris, or raising the gain of the video signal.

⑥ "OVER LEVEL"

The video signal level was too high for white balance or white shading adjustment, and the color tone could not be discriminated. Lower the video signal level by using brighter illumination, closing the lens iris, or to lower the gain of the video signal.

Other message

- **"BREAK"**

The automatic adjustment was interrupted with the BREAK command.

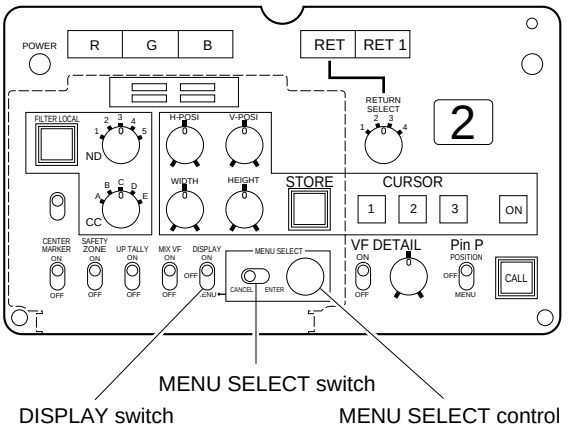
2-4. Self-Diagnosis

The DIAGNOSIS page of the OPERATION menu is used for self-diagnosis of every plug-in board and the OHB. The OPERATION menu appears on the viewfinder screen. By changing an internal switch on the MS-57 board, the same signal as output to the viewfinder is enabled to be output at the TEST OUT connector.

Equipment required

CCD unit	OHB-730/730P/730WS/730WSP/750A/750AP/750WSA/750WSAP
Camera control unit	CCU-700/700P/700A/700AP
Electronic viewfinder	BVF-77/77CE/7700/7700P (or B/W monitor)

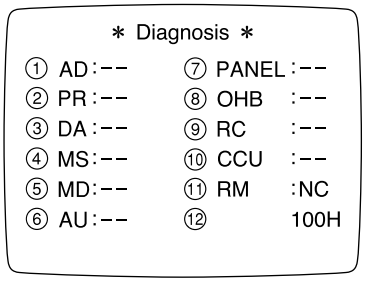
Switches and control knob



Operational procedures

1. Change the DISPLAY switch from OFF to MENU. The OPERATION menu is displayed.
2. Turn the MENU SELECT control to move the → cursor to DIAGNOSIS.
3. Set the MENU SELECT switch to ENTER.
4. The menu page is returned to the previous page when the MENU SELECT switch is pressed to CANCEL.
5. To cancel the menu operation, set the DISPLAY switch to OFF.

Display descriptions



Marks	Board/Block	Judging point
①	AD-148	The serial data is correctly received from the AT-120 board.
②	PR-237	There is no problem when IC8, IC24 and IC33 run diagnostics on themselves.
③	DA-128	The serial data is correctly received from the AT-120 board.
④	MS-57	A multiplex sync signal is output to the viewfinder.
⑤	MD-83	An RF signal is output to the TRIAX connector.
⑥	AU-250	The level of AUDIO RF signal exceeds the standard level.
⑦	PANEL	Communication with the AT-73 board (rear panel) is normal.
⑧	OHB	The serial data is correctly received from the AT-120 board.
⑨	RC-68 *1	There is no problem when IC1 to IC3 run diagnostics on themselves.
⑩	CCU *2	The serial data is correctly received from the CCU.
⑪	RM *3	The serial data is correctly received from the RM.
⑫	—	A power-on time of the camera is displayed. (Unit:Hour)

*1: The RC-68 board is supplied with the OHB-730WS/730WSP/750WSA/750WSAP.
When the RC-68 board is not installed in the camera, the column ⑨ is not displayed.
*2: When the CCU is not connected to the camera, the column ⑩ is not displayed.
*3: When the RM is not connected to the camera, “NC” is displayed in the column ⑪.

BVP-900 (J, UC)
BVP-900P (CE)
BVP-900WSPK (CE) J, E
3-203-497-01

Sony Corporation
B&P Company

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