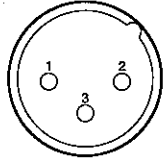


MIC OUTPUT CH1/CH2 (XLR 3P, MALE)

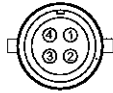


(EXTERNAL VIEW)

(0 dBu = 0.775 Vrms)

No.	Signal	Specifications
1	MIC OUT (G)	0 dBu/-20 dBu
2	MIC OUT (X)	(Selectable with S201,
3	MIC OUT (Y)	S251/AU board)

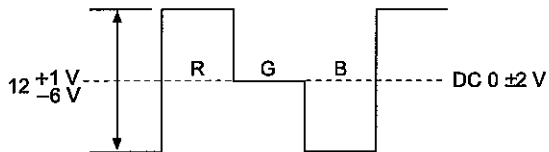
WF MODE (4P FEMALE)



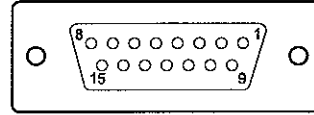
(EXTERNAL VIEW)

No.	Signal	Specifications
1	SEQ CONT OUT (G)	OPEN COLLECTOR +(PNP)/-(NPN)
2	SEQ CONT OUT (X)	(Selectable with S901/VA board)
3	STAIR CASE OUT (X)	*1)
4	STAIR CASE OUT (G)	GND for STAIR CASE

*1) Stair Case signal



MIC REMOTE (D-Sub 15P, FEMALE)



(EXTERNAL VIEW)

No.	Signal	Specifications
1	+5.5 V OUT	Max. 70 mA
2	AUX4 (** TALLY GND)	(** TALLY for GND)
3	AUX2 (** G TALLY OUT)	(** Q405 (NPN) /AT board) ON (GND): Max 30 mA
4	AUX1 (** R TALLY OUT)	(** Q403 (NPN) /AT board) ON (GND): Max 30 mA
5	CHU MIC	CONT2
6	AMP	CONT1
7	GAIN IN	CONT0
8	MIC1 GAIN CONT ON/OFF IN	*3) See below
9	GND (+5.5 V)	GND for +5.5 V
10	AUX3 (** TALLY OUT)	(** R/G TALLY OUT Q409 (NPN) /AT board) ON (GND): Max 30 mA
11	NC	No connection
12	16:9/4:3 SELECT EN IN	+5.0 V (or OPEN): DIS-EN GND: EN
13	16:9/4:3 SELECT IN	+5.0 V (or OPEN): 4:3 GND: 16:9
14	AUX9	
15	MIC GAIN CONT2 IN	*2) See below

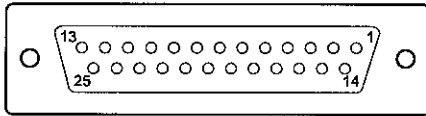
*2)

CONT0	CONT1	CONT2	CHU MIC1 AMP GAIN
H	H	H	60 dB
L	H	H	50 dB
H	L	H	40 dB
L	L	H	30 dB
H	H	L	20 dB

*3)

8pin	15pin	MIC GAIN CONT
L	L	MIC1/MIC2 ON
L	H	MIC1 ON
H	L	MIC2 ON
H	H	INTERNAL SET

INTERCOM/TALLY/PGM (D-Sub 25P, FEMALE)



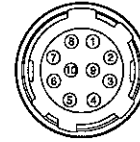
(EXTERNAL VIEW)

(0 dBu = 0.775 V_{rms})

No.	Signal	Specifications
1	ENG (R) (X) OUT	ENG SYSTEM RECEIVE
2	ENG (R) (Y) OUT	0 dBu BALANCED
3	ENG (G)	GND for ENG
4	ENG (T) (X) IN	ENG SYSTEM TALK
5	ENG (T) (Y) IN	0 dBu BALANCED
6	PGM (X) IN	-20 dBu/0 dBu
7	PGM (Y) IN	(Selectable with
8	PGM (G) IN	S451/AU board)
9	GND	GND for AUX
10	AUX8	
11	R TALLY (X) IN	ON: 24 V dc, TTL (H), SHORT
12	R TALLY (Y) IN	OFF: 0 V dc, TTL (L), OPEN
13	GND	CHASSIS GND
14	PROD (R) (X) OUT	PROD SYSTEM
15	PROD (R) (Y) OUT	RECEIVE 0 dBu BALANCED
16	PROD (G)	GND for PROD
17	PROD (T) (X) IN	PROD SYSTEM TALK
18	PROD (T) (Y) IN	0 dBu BALANCED
19	NC	No connection
20	NC	No connection
21	NC	No connection
22	AUX7	
23	AUX6	
24	G TALLY (X) IN	ON: 24 V dc, TTL (H), SHORT
25	G TALLY (Y) IN	OFF: 0 V dc, TTL (L), OPEN

*4 To use these interface signals, modification for AT board is required.
For more details, please consult your Sony service representative.

REMOTE (10P, FEMALE)
RCP

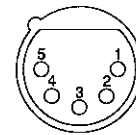


(EXTERNAL VIEW)

No.	Signal	Specifications
1	—	—
2	PIX OUT	PICTURE MONITOR
3	TX (G)	SERIAL DATA
4	TX (X)	
5	—	—
6	—	—
7	RX (X)	SERIAL DATA
8	—	—
9	UNREG GND	GND for POWER
10	UNREG OUT	POWER

Front panel

INTERCOM (5P, FEMALE)



(EXTERNAL VIEW)

(0 dBu = 0.775 V_{rms})

No.	Signal	Specifications
1	INCOM (T) IN (Y)	-20 dBu (CARBON MIC)
2	INCOM (T) IN (X)	-60 dBu (DYNAMIC MIC)
3	INCOM (T) IN (G)	GND for INCOM
4	INCOM (R) OUT (X)	Max. 12 dBu
5	PGM OUT (X)	Max. 12 dBu

1-2-2. Connection Connector

Use the connectors below or the equivalent at its tip when cables are connected to each connector on the connector panel during installation and servicing.

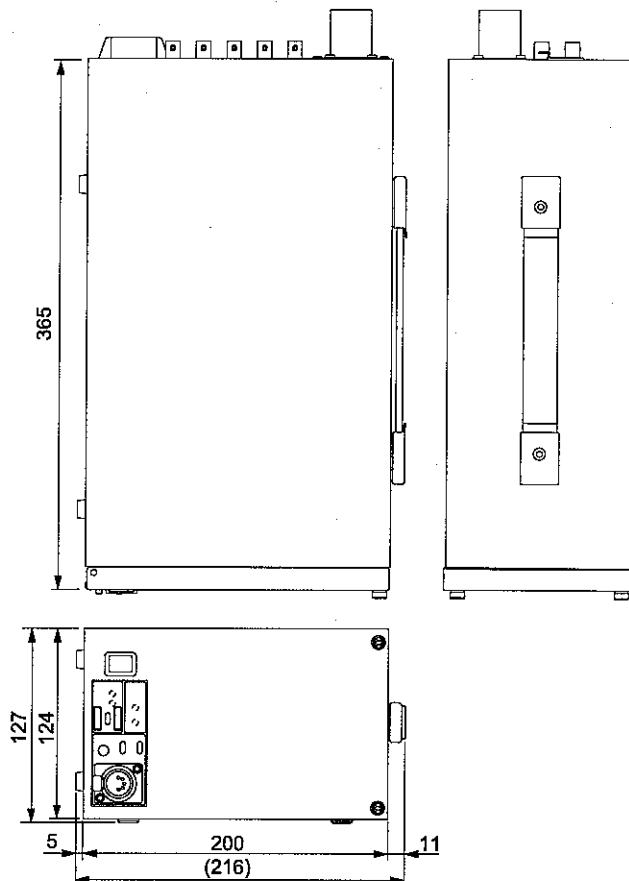
Connector name	Connected connector/cable
REFERENCE	
RET 1/2	
RET-3/PROMPTER	
Y/G	
R-Y/R	
B-Y/B	
WF	1-569-370-12 plug, BNC
PIX	
VBS 1/SDI-1	
VBS 2/SDI-2	
VBS 3/SDI-3	
COAX (BNC type)	
AUDIO OUT CH-1/CH-2 (3P, MALE)	1-508-083-00 XLR, 3-pin FEMALE or CANNON XLR-3-11C or the equivalent
MIC REMOTE (15P, FEMALE)	1-506-582-11 D-Sub, 15-pin male or JAE DA-15PF-N or the equivalent
INTERCOM/TALLY/PGM (25P, FEMALE)	D-Sub, 25-pin male, JAE DA- 25PF-N or the equivalent
WF MODE (4P, FEMALE)	1-560-155-00 plug, 4-pin male
REMOTE (10P, FEMALE)	1-506-522-1X plug, 10-pin male, or CCA cable assembly (optional) CCA-7-30 (30 m) CCA-7-10 (10 m) CCA-7-3 (3 m)
INCOM (5P, FEMALE)	1-508-370-11 XLR, 5-pin male, or CANNON XLR-5-12C or the equivalent

1-3. Operating Environment

Operating temperature: +5 °C to +40 °C
 Storage temperature: -20 °C to +55 °C
 Humidity: Noncondensing
 Supply voltage: 100 V to 240 V ± 10 % (50/60 Hz)
 Power consumption: 1.3 A 100 V (maximum)

1. Do not put the unit in a place subject to high temperature or in a location near heat sources.
2. Do not put the unit in a place subject to excessive electric and magnetic fields.
3. Put the unit in a dry and well-ventilated place.
4. Do not put the unit in a place subject to excessive dust and mechanical shock.
5. Do not put the unit in a place subject to direct sunlight and light.

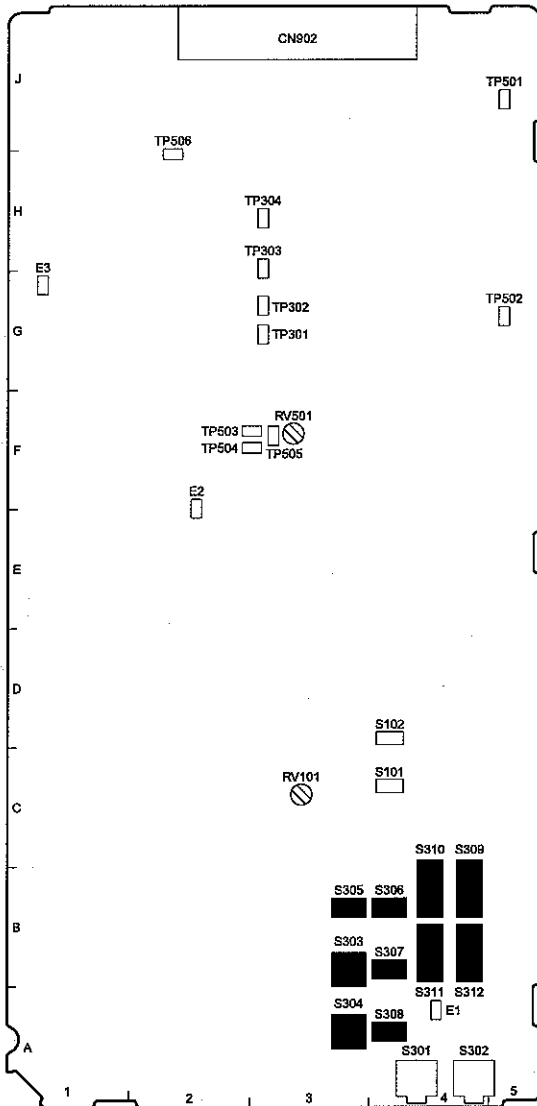
1-4. Outer Dimensions



(Unit: mm)

1-7. Switch Settings

AT-155 board



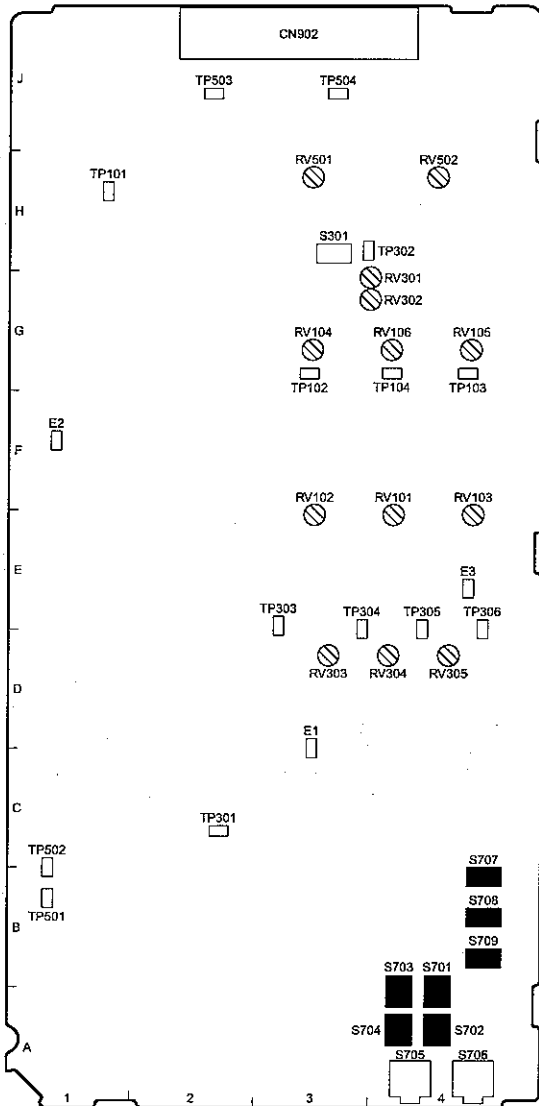
AT-155 BOARD (A SIDE)

Notes

- A character string in the parentheses shows switch address (location) on the board.
- Never change the setting of the factory use switches.

SW No.	Description	Factory setting
S303 (B-3)	H phase adjust	B
S304 (A-3)	V phase adjust	8
S305 (B-3)	NTSC ↔ PAL	
S306 (B-4)	Not used	
S307 (B-4)		
S308 (A-4)		
S309 (B-4)	MODE1	
	1. ON: Analogue audio OFF: Digital audio	ON
	2. ON: RCP baud rate 70Kbps OFF: 35Kbps	OFF
	3. Not used	OFF
	4. Not used	OFF
	5. Not used	OFF
	6. ON: WFM&PIX same control enable OFF: WFM&PIX same control disable	OFF
	7. Not used	
	8. Not used	
S310 (B-4)	TEST 1 to 8 Not used	ALL OFF
S311 (B-4)	CCU NO. 1 to 8 Not used	ALL OFF
S312 (B-4)	MODE2	
	1. ON: System delay LV5000 OFF: WFM601	OFF
	2. ON: PIX & BARS character mix enable OFF: PIX & BARS character mix disable	OFF
	3. ON: D-sub 15P WFM-remote OFF: D-sub 15P MIC-remote	OFF
	4. ON: MIC-Gain-CTL 1, 2 independent OFF:	OFF
	5. Not used	OFF
	6. ON: Initial-CCU-ASPECT 16:9 OFF: Initial-CCU-ASPECT 4:3	OFF
	7. Not used	OFF
	8. Not used	OFF

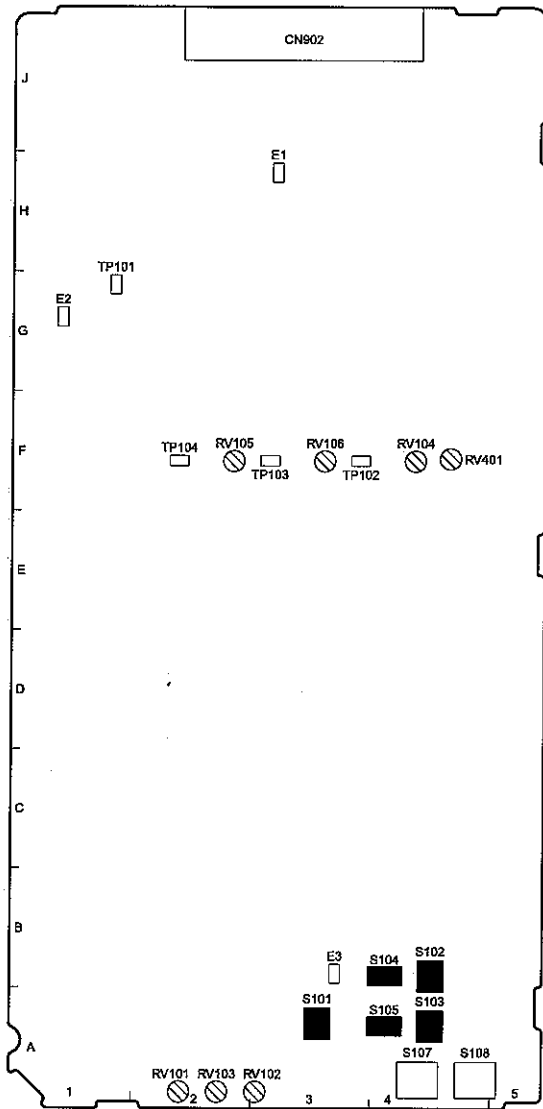
EN-156 board



EN-156A BOARD (A SIDE)

SW No.	Description	Factory setting
S701 (A-4)	1. ON: SDI output from BNC-1 OFF: VBS	ON
	2. ON: SDI output from BNC-2 OFF: VBS	OFF
	3. ON: SDI output from BNC-3 OFF: VBS	ON
	4. ON: Y/R-Y/B-Y OFF: RGB output	OFF
S702 (A-4)	1. ON: With Sync on G/Y OFF: Without Sync on G/Y	OFF
	2. ON: With Character on SDI output from BNC-3 OFF: Without Character on SDI output from BNC-3	OFF
	3. ON: Narrow Q-filter on VBS OFF: Wide Q-filter on VBS	OFF
	4. ON: With Set-up on VBS OFF: Without Set-up on VBS	UC model ON
S703 (A-4)	1 to 4 Not used	
S704 (A-4)	1. ON: Four signals on SEQ OFF: Three signals on SEQ	OFF
	2. ON: RGB & ENC signals in four signals on SEQ OFF: RGB & Y signals in four signals on SEQ	OFF
	3. ON: With Character on WFM OFF: Without Character on WFM	OFF
	4. ON: Without Character on PIX OFF: With Character on PIX	OFF
S707 (B-4)	Not used	OFF
S708 (B-4)	Not used	OFF
S709 (B-4)	Not used	OFF

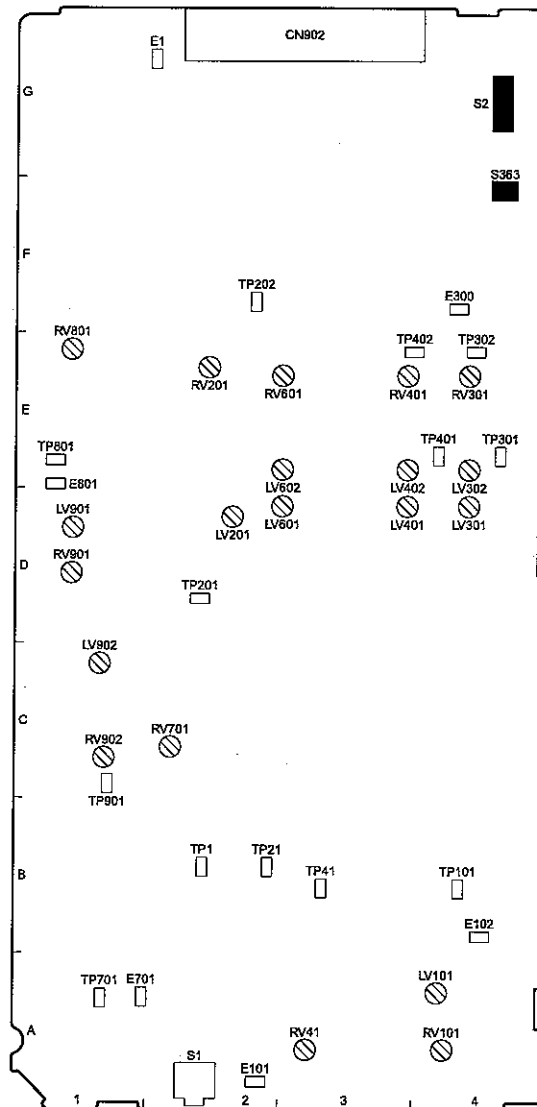
IV-57 board



IV-57A BOARD (A SIDE)

SW No.	Description	Factory setting
S101 (A-3)	Not used	OFF
S102 (B-4)	Not used	OFF
S103 (A-4)	Not used	OFF
S104 (B-4)	Not used	OFF
S105 (A-4)	Not used	OFF

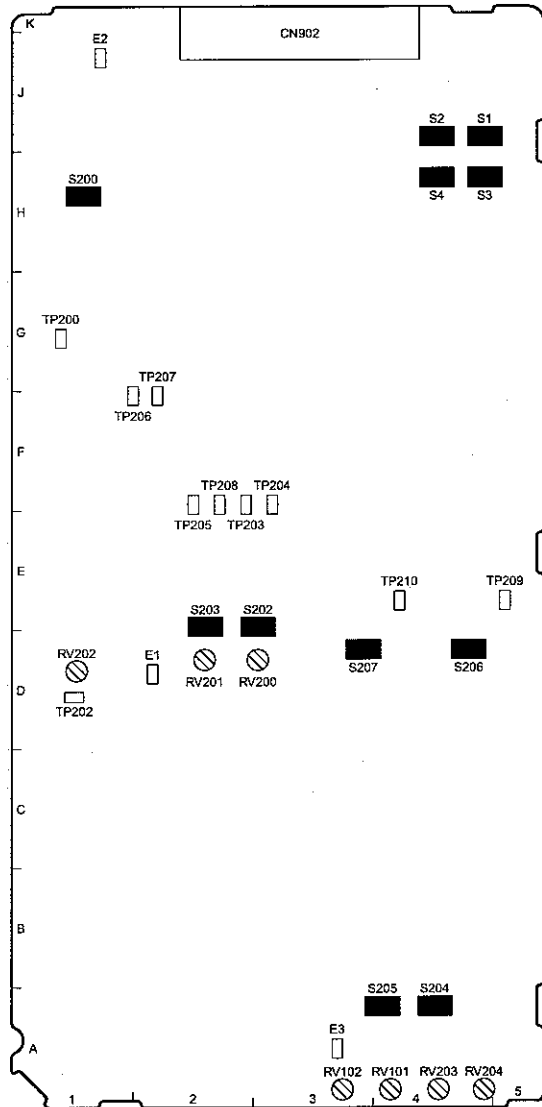
TR-133 board



TR-133A BOARD (A SIDE)

SW No.	Description	Factory setting
S2 (G-4)	TX: Fix Prompter video direction from CCU to CHU RX: Fix Prompter video direction from CHU to CCU REMOTE: Direction selectable on CCU configuration menu	REMOTE
S363 (F-4)	For adjustment use only	OFF

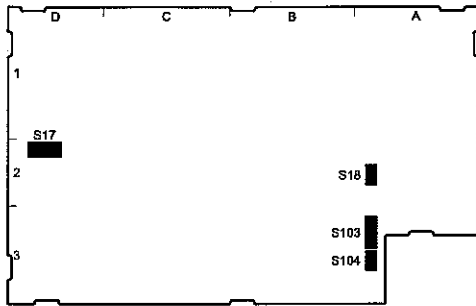
AU-300 board



AU-300 BOARD (A SIDE)

SW No.	Description	Factory setting
S1 (J-4)	CONTACT: R TALLY is contact mode POWER: R TALLY is power mode (with S3)	CONTACT
S2 (J-4)	CONTACT: R TALLY is contact mode POWER: R TALLY is power mode (with S4)	CONTACT
S3 (H-4)	TTL: R TALLY is TTL mode POWER: R TALLY is power mode (with S1)	TTL
S4 (H-4)	TTL: R-TALLY is TTL mode POWER: R-TALLY is power mode (with S2)	TTL
S200 (H-1)	0 dB: PGM line is set to 0 dB -20 dB: PGM line is set to -20 dB	0 dB
S202 (E-3)	0 dB: MIC2 line is set to 0 dB -20 dB: MIC2 line is set to -20 dB	0 dB
S203 (E-2)	0 dB: MIC1 line is set to 0 dB -20 dB: MIC1 line is set to -20 dB	0 dB
S204 (A-4)	RTS: Prod line is set to RTS CC: Prod line is set to ClearCom	RTS
S205 (A-4)	RTS: ENG line is set to RTS CC: ENG line is set to ClearCom	RTS
S206 (D-4)	4W: Prod line is set to 4W RTS: ENG line is set to RTS/CC	4W
S207 (D-3)	4W: ENG line is set to 4W RTS: ENG line is set to RTS/CC	4W

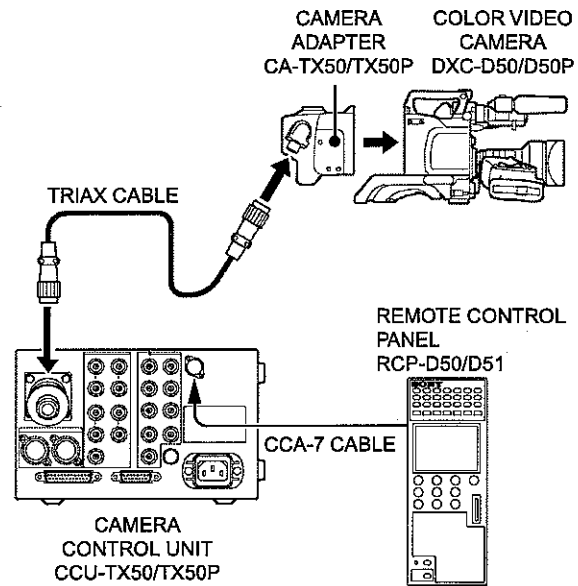
SW-1257 board



SW-1257 BOARD (B SIDE)

SW No.	Description	Factory setting
S17 (D-2)	1. Not used	OFF
	2. ON: WHT R/B volume is set to Absolute mode OFF: WHT R/B volume is set to Relative mode	OFF
	3. ON: Black R/B volume is set to Absolute mode OFF: Black R/B volume is set to Relative mode	OFF
	4. ON: Master Black volume is set to Absolute mode OFF: Master Black volume is set to Relative mode	OFF
	5. ON: IRIS volume is set to Absolute mode OFF: IRIS volume is set to Relative mode	OFF
	6. ON: Black R/B volume is set to Flare level adjustment OFF: Black R/B volume is set to black level adjustment	OFF
	7. ON: DETAIL volume is set to Absolute mode OFF: DETAIL volume is set to Relative mode	OFF
	8. ON: M.GAMMA volume is set to Absolute mode OFF: M.GAMMA volume is set to Relative mode	OFF
S18 (A-2)	LED Brightness Low/High	High
S103 (A-3)	DYN: For dynamic microphone ECM for ECM microphone CAB: For carbon microphone	DYN
S104 (A-3)	Not used	GND

1-8. Instance of System Configuration

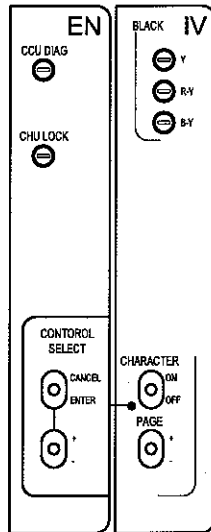


Section 2 System Setup

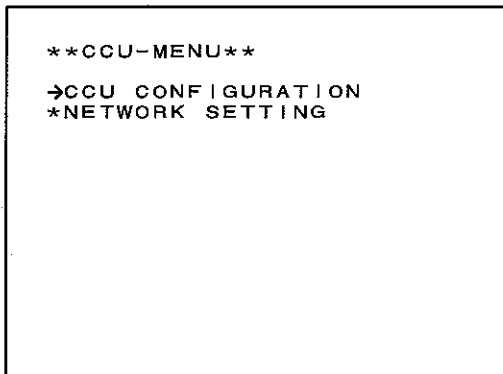
2-1. CCU CONFIGURATION MENU

Displaying CCU CONFIGURATION MENU

Open the CCU front panel and perform the following steps to display CCU CONFIGURATION MENU.



1. Connect the monitor television to the PIX connector (for picture monitor output) on the CCU rear panel.
2. Set the CHARACTER switch on the IV-57 board to "OFF" (center).
3. Push the PAGE switch on the IV-57 board downward twice continuously, and then turn the CHARACTER switch down within two seconds.
4. CCU CONFIGURATION MENU appears on the monitor television.
(To cancel operation of the menu, set the CHARACTER switch to "ON" (up).)



*: NETWORK SETTING is not used.

Changing/Checking CCU CONFIGURATION MENU content

After performing the steps 2 to 4 of the "2-1. CCU CONFIGURATION MENU", enter CCU CONFIGURATION MENU and select an item to change or check the menu content.

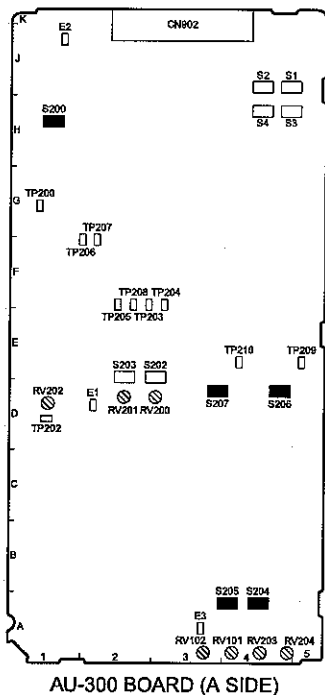
5. Set the CONTROL SELECT switch on the EN-156 board to "ENTER" with the "CCU-MENU" screen displayed to enter CCU CONFIGURATION MENU.
6. Push the "+"/"-" switch on the EN-156 board to "-". The monitor screen changes to another page.
7. Select a change item with the "+"/"-" switch, and fix the content by setting the CONTROL SELECT switch to "ENTER"
(To cancel operation of the menu, set the CHARACTER switch to "ON" (up).)

2-3. Audio System

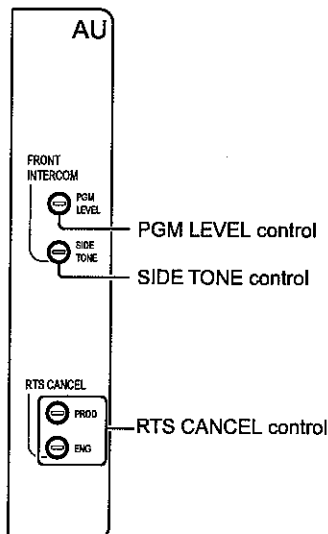
2-3-1. Settings for the Intercom Systems

This unit can use two intercom lines independently, a producer line and an engineer line. The two lines can be selected by means of the camera adapter CA-TX50/TX50P or CCU-TX50/TX50P.

Since this unit conforms to the 4W and RTS intercom systems, set the internal switch in accordance with the system to be used.



AU board



1. Selecting the intercom system

Select the intercom system, 4W or RTS or CC*, for each engineer or producer line.

* CC: Clear Com

• For the producer line:

Set the switches S206 (PROD SELECT) and S204 (CC/RTS) on the AU-300 board according to the intercom system to be used.

Factory setting: 4 W

• For the engineer line:

Set the switches S207 (ENG SELECT) and S205 on the AU-300 board according to the intercom system to be used.

Factory setting: 4 W

RTS cancel adjustment

If the system is in RTS intercom, it is necessary to perform the following adjustments as well.

- (1) Connect a headset to the INCOM connector on the front panel. Complete the headset setting referring to "2. Setting the headset microphone" described later.
- (2) Turn the SIDE TONE control on the panel of the AU-300 board fully counterclockwise to minimize the side tone level.
- (3) Set the MIC/PGM switch on the front panel to "MIC-ON".
- (4) Set the PROD/PRIV/ENG switch on the front panel to "PROD".
- (5) While speaking through the headset microphone, adjust the PROD RTS CANCEL control on the panel of the AU-300 board to minimize the side tone level.
- (6) Set the PROD/PRIV/ENG switch on the front panel to "ENG".
- (7) While speaking through the headset microphone, adjust the ENG RTS CANCEL control on the panel of the AU-300 board to minimize the side tone level.
- (8) Reset the SIDE TONE control on the panel of the AU-300 board to the original position.

Note

When S206 and S207 are set to RTS and CC respectively, be sure to connect this camera system to the RTS intercom system. Otherwise oscillation may occur.

2. Setting the headset microphone

Set the switch S103 on the SW-1257 board according to the type of headset microphone connected to the INCOM connector on the front panel.

When a carbon microphone is used: CM

When a dynamic microphone is used: DYN

When an ECM microphone is used: ECM
(factory setting)

Note

When the switch S103 is set to DYN, the switch S5 is also set according to the type of microphone, balanced or unbalanced.

When a balanced type microphone is used: OPEN
(factory setting)

When an unbalanced type is used: GND

• Side tone adjustment

Adjust the side tone level through the headset connected to the INCOM connector on the front panel to the desired level by the SIDE TONE control on the panel of the AU-300 board.

3. Setting the input signal level of the program audio signal

Set the switch S200 (PGM IN) on the AU-300 board to 0 dB or -20 dB, according to the audio signal level of the camera system.

Factory setting: 0 dB

• Mix level adjustment of program audio signal

Adjust the mix level of the program audio signals through the headset connected to the INCOM connector on the front panel to the desired level by the PGM LEVEL control on the panel of the AU-300 board.

4. Selecting the intercom line connected to the INCOM connector

Select the intercom line connected to the INCOM connector by the switch on the front panel as follows.

• To connect the producer line:

Set the PROD/PRIV/ENG switch to PROD.

• To connect the engineer line:

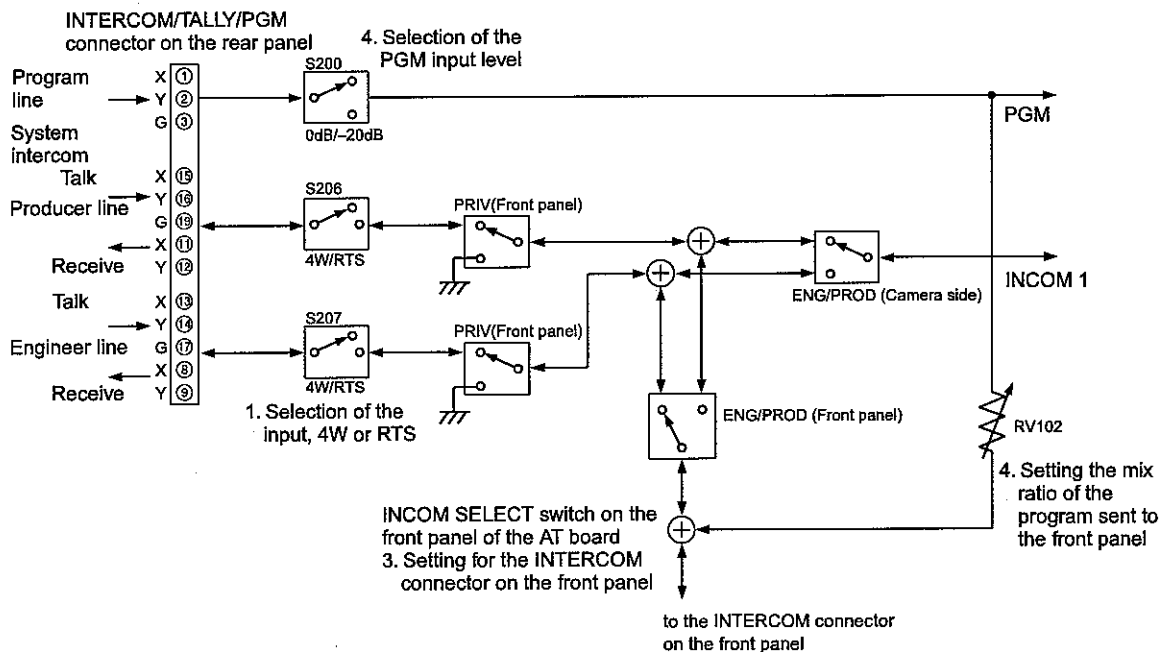
Set the PROD/PRIV/ENG switch to ENG.

• To connect only the camera:

Set the PROD/PRIV/ENG switch to PRIV. When the switch is set to PRIV, the external intercom line is deactivated, and only the intercom with the camera is activated.

5. Switch settings on the AU-300 board

The switch settings and the signal flow of the AU-300 board are as shown below. (Refer to the below diagram.)



2-3-2. Setting the Program Microphone Signal

This unit can output the two program microphone lines (MIC 1 and MIC 2) after receiving the independent two program microphone lines (MIC 1 and MIC 2) from the video camera DXC-D50/D50P and camera adapter CA-TX50/TX50P.

Remote control of the input level of a microphone

The level of the microphone signal input to the MIC connector on the DXC-D50/D50P or the MIC connector on the CA-TX50/TX50P can be controlled by this unit. The adjustable range is from -60 dBu to -20 dBu in 10 dBu steps. Select either step of the following.

1. Microphone input level adjustment from the MIC REMOTE connector

The microphone input level control is set by pin 8 and pin 15 of the MIC REMOTE connector on the rear panel. The microphone input level is controlled by pin 5, pin 6, and pin 7 of the MIC REMOTE connector.

Setting the microphone input level control

Pin No.		Microphone connector	
8	15	MIC IN CH-1	MIC IN CH-2
L	L	ON	ON
L	H	ON	OFF
H	L	OFF	ON
H	H	Internal settings	

Setting the microphone input level

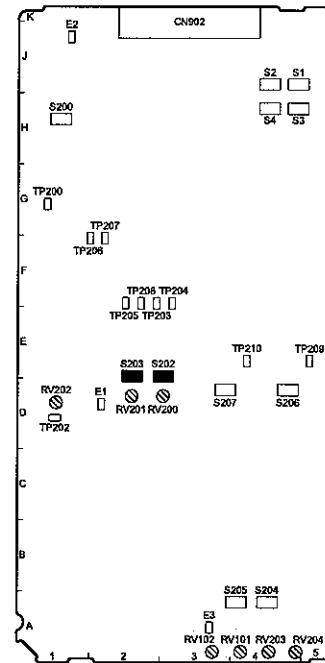
Pin No.	7	6	5
-60 dBu	H	H	H
-50 dBu	L	H	H
-40 dBu	H	L	H
-30 dBu	L	L	H
-20 dBu	H	H	L

H: +5 V (C-MOS level)

L: GND

Input impedance: 100 k Ω +5 V pull up

Setting the microphone output level



AU-300 BOARD (A SIDE)

The level of the signal output from the MIC OUTPUT connectors on the rear panel is selected (0 dBu, -20 dBu) by the switches on the AU-300 board.

MIC OUTPUT 1 level: switch S203 (MIC 1 LEV)

MIC OUTPUT 2 level: switch S202 (MIC 2 LEV)

Factory setting: 0 dBu (Both S202 and S203)

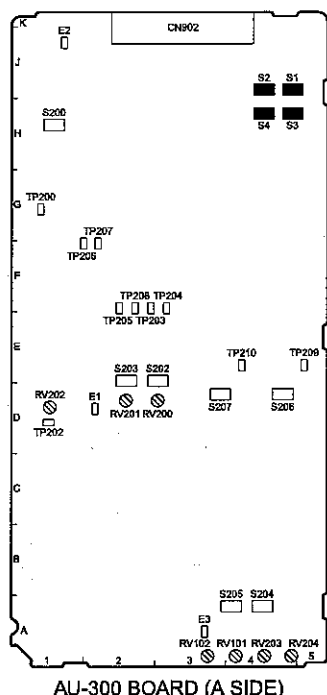
2. Microphone input adjustment using CCU menu

The microphone input level can also be set by the CCU CONFIGURATION menu of "C05" page.

2-4. Control System

2-4-1. Setting for the Tally System

This unit conforms to red-tally and green-tally systems and also to contact supply and power supply (24 V/TTL). Set switches on the AU-300 board according to the tally system to be used.



AU-300 BOARD (A SIDE)

Set the switches as follows:

Settings for the tally system

	Red tally		Green tally	
Switches	S1	S3	S2	S4
Contact supply	CONTACT	—	CONTACT	—
24 V power supply	POWER	POWER	POWER	POWER
5 V power supply	POWER	TTL	POWER	TTL

At the factory, set the switches S1 and S2 on the CCU-TX50/TX50P to CONTACT.

2-5. Video System

The signal levels of the units used in the DXC-D50/D50P series camera system are set to the standard values at the factory. Before starting operation, check the levels of the units, and adjust them if necessary. Basically, adjustment is performed with the controls and switches on the internal boards, but some adjustment can be made from the CCU CONFIGURATION menu. For such items, perform basic adjustment with the switches and controls on the boards, and fine adjustment with the CONFIGURATION menu*.

* For how to use the CONFIGURATION menu, refer to Section 2-1. CCU CONFIGURATION MENU.

2-5-1. Selecting the Input/Output Signal

Select the signal of the input and output connectors in accordance with the video system to be installed.

Setting the VBS OUT connector

Set the signal output from the VBS/SDI-1 to 3 OUT connectors on the rear panel by the switch S701 (OUTPUT) on the EN board.

VBS/SDI-1 and 3

To output VBS signal: OFF

To output SDI signal: ON (factory setting)

VBS/SDI-2

To output VBS signal: OFF (factory setting)

To output SDI signal: ON

Setting the Y/G, R-Y/R and B-Y/B OUT connectors

Set the signal output from the Y/G, R-Y/R and B-Y/B OUT connectors on the rear panel by the switch S701 (OUTPUT) on the EN board.

To output Y/R-Y/ B-Y signal: ON

To output RGB signal: OFF (factory setting)

2-5-2. Resetting the Control Data

Before adjustment, reset the control data of the unit.

1. Open page "C13" of the CCU CONFIGURATION menu.
2. Position the cursor at "BACKUP RESET" in the lower line.
3. Press ENTER once, "BACKUP RESET OK?" is displayed.
4. Press ENTER again to reset the control data.
5. Be sure to turn off and on the power.

2-5-3. Adjusting the Phases of the Signals

Adjust the signal phase of the unit. Before starting adjustment, input the following sync signals to the unit and all equipment connected.

CCU-TX50/TX50P

A reference signal of the system including a burst and sync signals

Signal level: 40 IRE (for CCU-TX50) or
0.3 V p-p (for CCU-TX50P)

Waveform monitor, vectorscope

A reference sync signal of the system specified by the equipment to be used

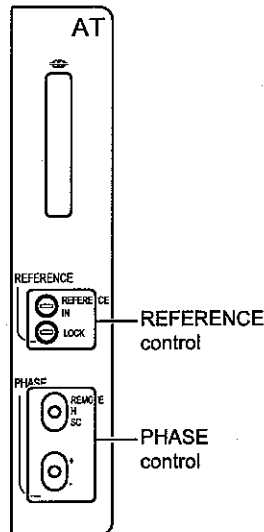
Adjusting the phases of the sync signal

Adjust the phases of the output signals so that the phases of the output signals align with the phase of the reference signal. The phase can be adjusted using the switches on the AT board.

The phase can also be checked by the CCU CONFIGURATION menu.

Adjusting on the AT-155 board

AT-155 board



1. Set the REMOTE/H/SC switch on the AT-155 board to H or SC.
2. Adjust the H phase and SC-H phase with the +/- switch.

To check the phase by the CCU CONFIGURATION menu:

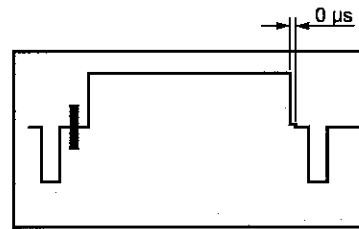
1. Open "C06" page.
2. The "COARSE" value of "H PHASE" and the "SC-PHASE" value vary with the phase adjust switch on the AT-155 board.

Adjusting the phases of the camera signals

Adjust the phases of the blanking section of camera and the blanking section of CCU so that they are identical. The phases are adjusted at the factory.

1. Close the iris on the lens.
2. Set the master black level of the camera to the maximum value.
3. Monitoring the VBS signal, adjust the phases using the CCU CONFIGURATION menu "CHU H-PHASE" (page "C07") so that the blanking period of the camera signal disappears from the monitor screen.

Test point: VBS 1 OUT/CCU rear panel



4. Reset the master black level of the camera to 0.

Section 3 Service Overview

3-1. Location of Printed Wiring Boards

