

Quick Reference upon Service Visit ①  
Notes, PD/SD diagnosis, and methods for various settings

Notes when visiting for service

1. Notes when disassembling/reassembling





- ① **Rear case**  
When reassembling the rear case, the screws must be tightened in a specific order. Be careful not to tighten them in the wrong order forcibly. For details, see "Rear Case" in "7. DISASSEMBLY".
- ② **Attaching screws for the HDMI connector**  
When attaching the HDMI connector after replacing the Main Assy, secure the HDMI connector manually with a screwdriver, but not with an electric screwdriver. If you tighten the screws too tightly with an electric screwdriver, the screw heads may be damaged, in which case the screws cannot be untightened/tightened any more.

2. On parts replacement

- ① **How to discharge before replacing the Assys**  
A charge of significant voltage remains in the Plasma Panel even after the power is turned off. Safely discharge the panel before replacement of parts, in either manner indicated below:  
A: Let the panel sit at least for 3 minutes after the power is turned off.  
B: Turn the Large Signal System off before the power is turned off then, after 1 minute, turn the power off.  
For details, see "5.6.1 PANEL DRIVE-POWER ON/OFF FUNCTION".
- ② **On the settings after replacement of the Assys**  
Some boards need settings made after replacement of the Assys. For details, see "8. EACH SETTING AND ADJUSTMENT".

3. On various settings

- ① **Setting in Factory mode**  
After a Mask indication into the panel is performed, be sure to set the Mask setting to "OFF" then exit Factory mode.

PD/SD		No. of LEDs flashing		LED Display Information
Item		Red	Blue	
Panel section	SQ_LSI		Blue 1	① Rewriting software 
	Communication with the module IIC		Blue 2	
	DIGITAL-RST2		Blue 3	
Panel high temperature		Blue 4	② PD (2-15) 	
MTB section	Audio/ Short-circuit SP terminal		Blue 5	③ SD (1-15) 
	Communication with the Module UCOM		Blue 6	
	Main 3-wire serial communication		Blue 7	
	Main IIC communication		Blue 8	④ No backup 
	Communication with the Main UCOM		Blue 9	
	FAN		Blue 10	
	Unit high temperature		Blue 11	This indication does not display all LED patterns. For details, please refer to 5.1.1 LED DISPLAY INFORMATION.
	Digital Tuner communication		Blue 12	
	MTB-RST2/RST4		Blue 13	
	Main EEPROM		Blue 15	
	POWER	Red 2		
SCAN	Red 3			
SCN-5V	Red 4			
Y-DRIVE	Red 5			
Y-DCDC	Red 6			
Y-SUS	Red 7			
ADRS	Red 8			
X-DRIVE	Red 9			
X-DCDC	Red 10			
X-SUS	Red 11			
DIG-DCDC	Red 12			
UNKNOWN	Red 15			

How to locate several items on the Factory menu

- { } : Item on the Factory menu
- [ ] : Key on the remote control unit
- " " : Screen indication

1. Confirmation of accumulated power-on time and power-on count

Select {INFORMATION} then {HOUR METER}.  
(After entering Factory mode, press [↓] five times.)

2. Confirmation of the Power-down and Shutdown histories

- ① **Panel system**  
PD: Select {PANEL FACTORY} then {POWER DOWN}.  
(After entering Factory mode, press [MUTING] once, press [ENTER/SET], then press [↓] three times.)  
SD: Select {PANEL FACTORY} then {SHUT DOWN}.  
(After entering Factory mode, press [MUTING] once, press [ENTER/SET], then press [↓] four times.)

- ② **MTB section**  
Select {INFORMATION} then {MAIN NG}.  
(After entering Factory mode, press [↓] three times.)

3. How to display the Mask indication

- ① **Mask indication in the panel side**
  1. Select {PANEL FACTORY} then {RASTER MASK SETUP}.  
(After entering Factory mode, press [MUTING] once, press [ENTER/SET], then press [↓] 8 times.)
  2. Press [ENTER/SET], then select a Mask indication, using [↓] or [↑].

Adjustments and Settings after replacement of the Assys (Procedures in Factory mode)

1. Digital Video Assy: Transfer of backup data

- ① Select {PANEL FACTORY}, {ETC}, then {BACKUP DATA}. (After entering Factory mode, press [MUTING] once, press [ENTER/SET], press [↓] seven times, then press [ENTER/SET].)
- ② Select {TRANSFER}, using [→], then hold [ENTER/SET] pressed for at least 5 seconds.
- ③ After transfer of backup data is completed, {ETC} is automatically selected, and the LED on the front panel returns to normal lighting.

2. MAIN Assy: Execution of FINAL SETUP.

- ① Select {INITIALIZE} then {FINAL SETUP}, then press [ENTER/SET]. (After entering Factory mode, press [MUTING] three times, then press [↓] four times.)
- ② Select "YES", using [→]. Then hold [ENTER/SET] pressed for at least 5 seconds.
- ③ After "FINAL SETUP IS COMPLETE" is displayed on the screen, turn the POWER switch of the main unit off.

3. POWER SUPPLY Unit: Clearance of the accumulated power-on count and maximum temperature value

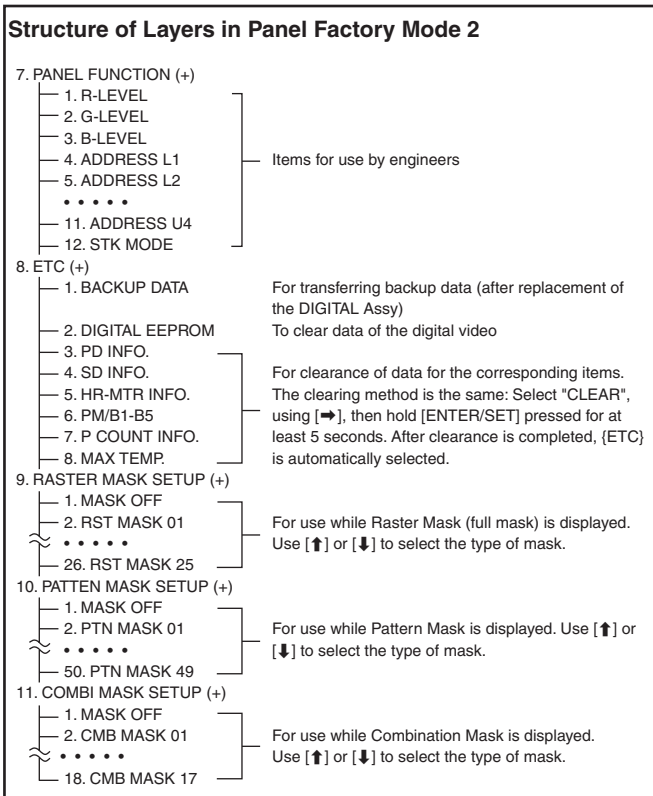
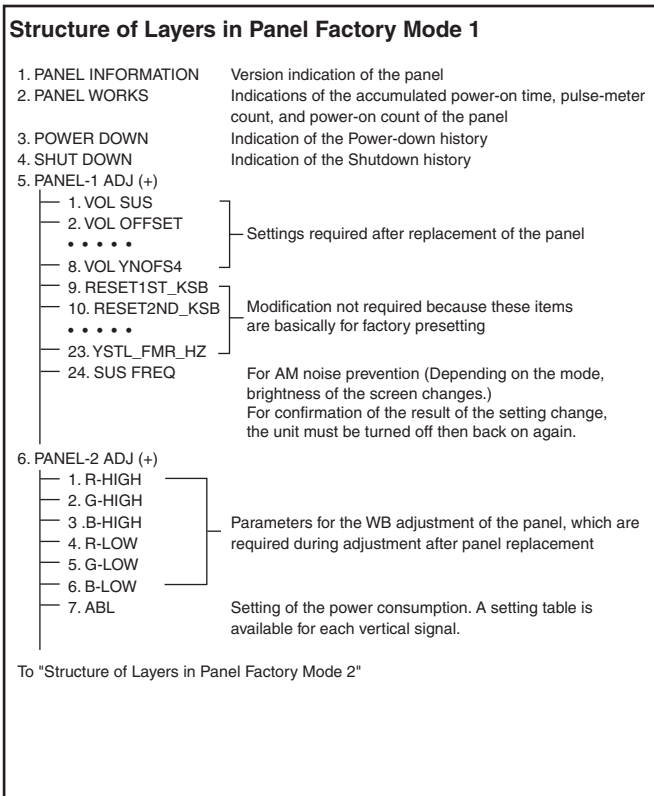
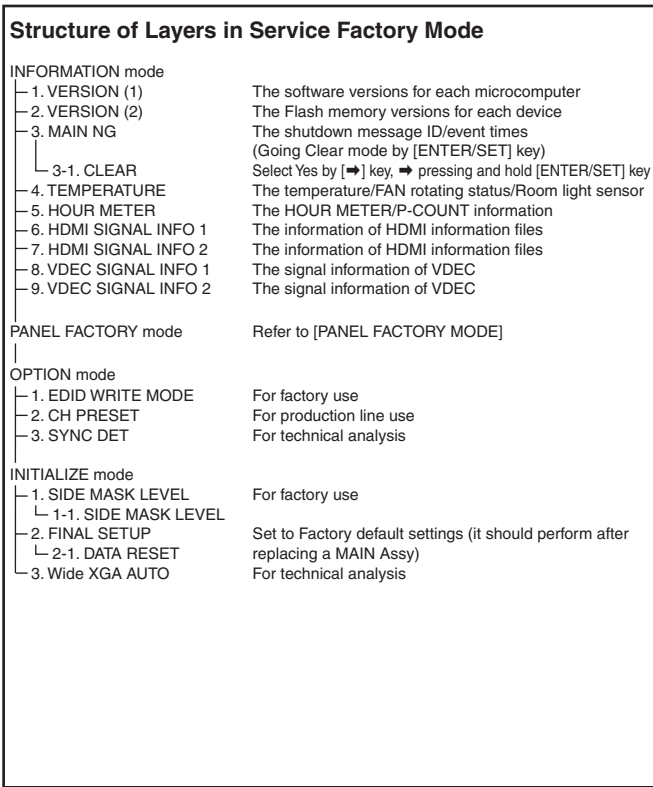
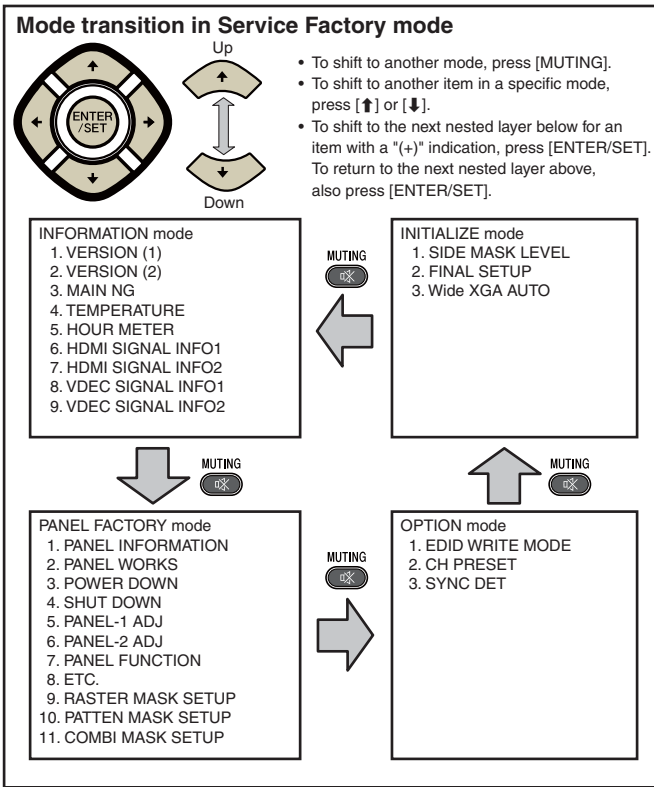
- ① Select {PANEL FACTORY}, {ETC}, then {P COUNT INFO}. (After entering Factory mode, press [MUTING] once, press [ENTER/SET], press [↓] seven times, press [ENTER/SET], then press [↓] six times.)
- ② Press [→] to select "CLEAR". Hold [ENTER/SET] pressed for at least 5 seconds. After clearance is completed, "ETC" is automatically selected. Clear the maximum temperature value (MAX TEMP) in the same manner.

4. Other Assys: Clearance of the maximum temperature value

- ① Select {PANEL FACTORY}, {ETC}, then {MAX TEMP}. (After entering Factory mode, press [MUTING] once, press [ENTER/SET], press [↓] seven times, press [ENTER/SET], then press [↓] seven times.)
- ② Press [→] to select "CLEAR". Hold [ENTER/SET] pressed for at least 5 seconds. After clearance is completed, "ETC" is automatically selected.

## Quick Reference upon Service Visit ②

### Mode transition and structure of layers in Service Factory mode



# 5. DIAGNOSIS

## 5.1 POWER SUPPLY OPERATION

### 5.1.1 LED DISPLAY INFORMATION

#### LED Pattern



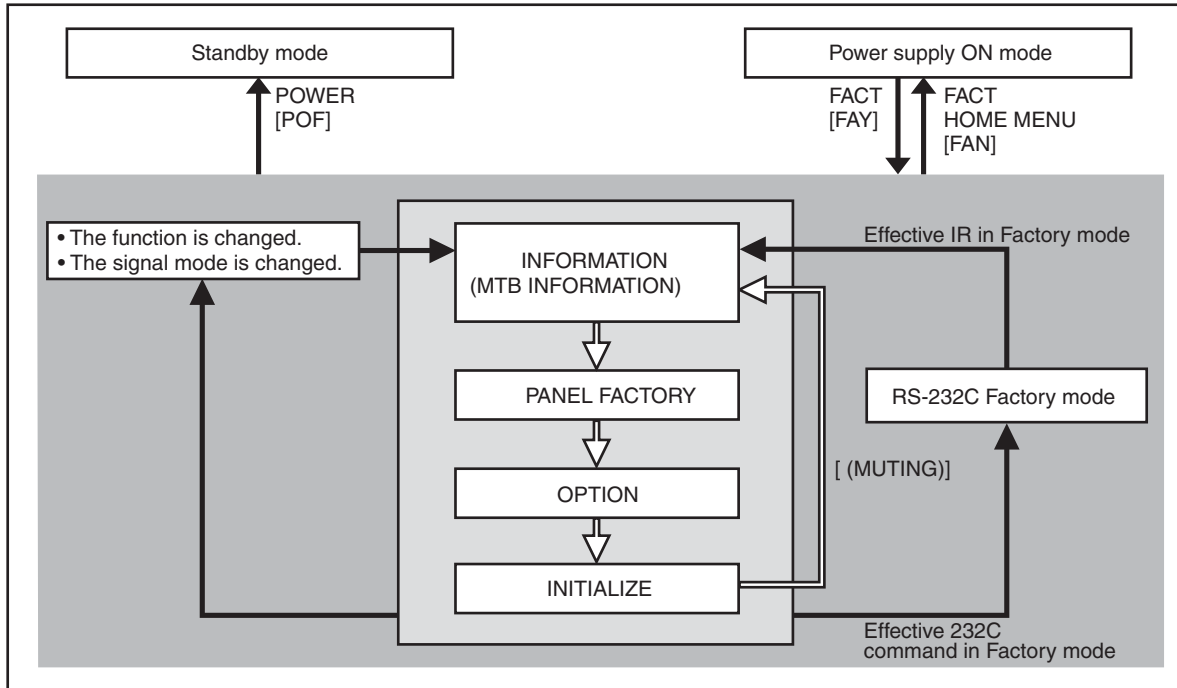
State	LED Pattern	Remarks
AC OFF or Main power switch OFF	B R O	
Standby power management	B R O	
Power ON (Screen ON)	B R O	
Power-down	B R O	Once 500ms Twice n times 2.5s Once
Shutdown	B R O	500ms Once Twice n times 2.5s Once
No digital adjustment data copied for backup	B R O	200ms The LEDs flash only while the panel is turned on.
In the process of rewriting the program of the microcomputer	B R O	100ms 100ms
During factory operation	B R O	
During reservation video recording (Unit: Standby)	B R O	Step-up D model, Regular D model only
During reservation video recording (Unit: ON)	B R O	Step-up D model, Regular D model only
Sleep timer	B R O	Regular A model only

# 6. SERVICE FACTORY MODE

## 6.1 OUTLINE OF THE SERVICE FACTORY MODE

Operations during Service Factory mode are described here.

### 6.1.1 SERVICE FACTORY MODE TRANSITION CHART



### 6.1.2 HOW TO ENTER/EXIT SERVICE FACTORY MODE

#### ■ How to enter Service Factory Mode

By using a PDP service remote control)

- PDP service remote control : Press [FACTORY] key.

By issuing RS-232C commands )

- During normal Standby mode : Issue [PON] then [FAY].
- During normal operation mode : Issue [FAY].

#### ■ How to exit Service Factory Mode

By using a PDP service remote control)

- PDP service remote control : press [FACTORY] key.
- Supplied remote control unit : press [HOME MENU] key.

By issuing RS-232C commands)

- Issue [FAN].

#### ■ How to enter Service Factory Mode by Using the supplied Remote Control Unit

- Same as previous model. Please refer to the technical document (Service Know-how).

## 6.1.3 FUNCTIONS WHEN ENTERING THE SERVICE FACTORY MODE

### ■ Functions whose setting are set to OFF

The settings for the following functions are set to OFF when Service Factory mode is entered (including when the "FAY" command is received) :

Function	Remarks
2-Screen Operation	Input function set on the main side is selected.
FREEZE	
Auto size, Side Mask	It is not performed during Factory mode.
ORBITER, Mask control	Central value operation (ORBITER)
Sleep Timer	Cancel the operation.
Room light sensor	Turn off the detecting operation excepting Regular A, D model (Setting data will be retained.)
Blue LED dimmer	Turn off the operation (Setting data will be retained.)
Power control	Turn off the operation (Setting data will be retained.)
Image position	Central value operation

### ■ User data

User data will be treated as follows :

- User data on picture-quality and audio-quality adjustments are not reflected, and factory-preset data are output (user data will be retained in memory). When the unit enters Service Factory mode, the current audio-quality adjustment data will be still be retained in memory.
- User-setting data will be applied to the various settings (items on the menus), signal formats, and the items that are associated with path change (HDMI settings, etc.).
- Data on screen (i.e., screen position; meaning clock dividers, and not including data on screen size). Are reset to the default values (data stored in memory will be retained).  
Screen size will be retained.

## 6.1.4 REMOTE CONTROL CODE IN SERVICE FACTORY MODE

Remote Control Keys	Basic Functions	Remarks
MUTING	Switching the main items.	Shifting to the next main item (top).
↓ (DOWN)	Switching the subtitled items.	Shifting downward to the next subtitled item.
↑ (UP)	Switching the subtitled items.	Shifting upward to the next upper layer.
← (LEFT)	Decreasing the adjustment value.	Decreasing the adjustment value.
→ (RIGHT)	Increasing the adjustment value.	Increasing the adjustment value.
ENTER/SET	Switching the layers.	Shifting downward or upward to the next lower or upper layer.
INPUT	Selecting INPUT.	Shifting the INPUT to the next function.
INPUTxx	Selecting INPUT.	Switching the INPUT to xx. (xx=1 to 6 etc)
CH+/P+	Increasing the channel number.	
CH-/P-	Decreasing the channel number.	
Numeric Keys	Function: TV	Function: TV (previously selected channel number is selected)
POWER	Power OFF.	Turning the power off.
FACTORY	Factory OFF (Factory mode)	In Factory mode, turning Factory mode off.
	Factory ON (Non-Factory mode).	In Non-Factory mode, turn Factory mode on.
HOME MENU	Menu ON.	In Factory mode, turn Factory mode off.
VOLUME+	Volume UP.	Increasing 10 the adjustment value. (PANEL FACTORY)
VOLUME-	Volume DOWN.	Decreasing 10 the adjustment value. (PANEL FACTORY)
DRIVE OFF (Note1)	Drive Mode OFF.	Turning Drive mode off.
INTEGRATOR	INTEGRATOR MENU ON.	Enter INTEGRATOR MODE.

(Note 1) When ten seconds have passed since the [DRIVE OFF] key was pressed at the standby, it becomes invalid.

Please press [POWER] key from the [DRIVE OFF] key pressing within ten seconds when you do power supply ON while driven OFF.



PDP service remote control



PDP-428XD  
PDP-508XD



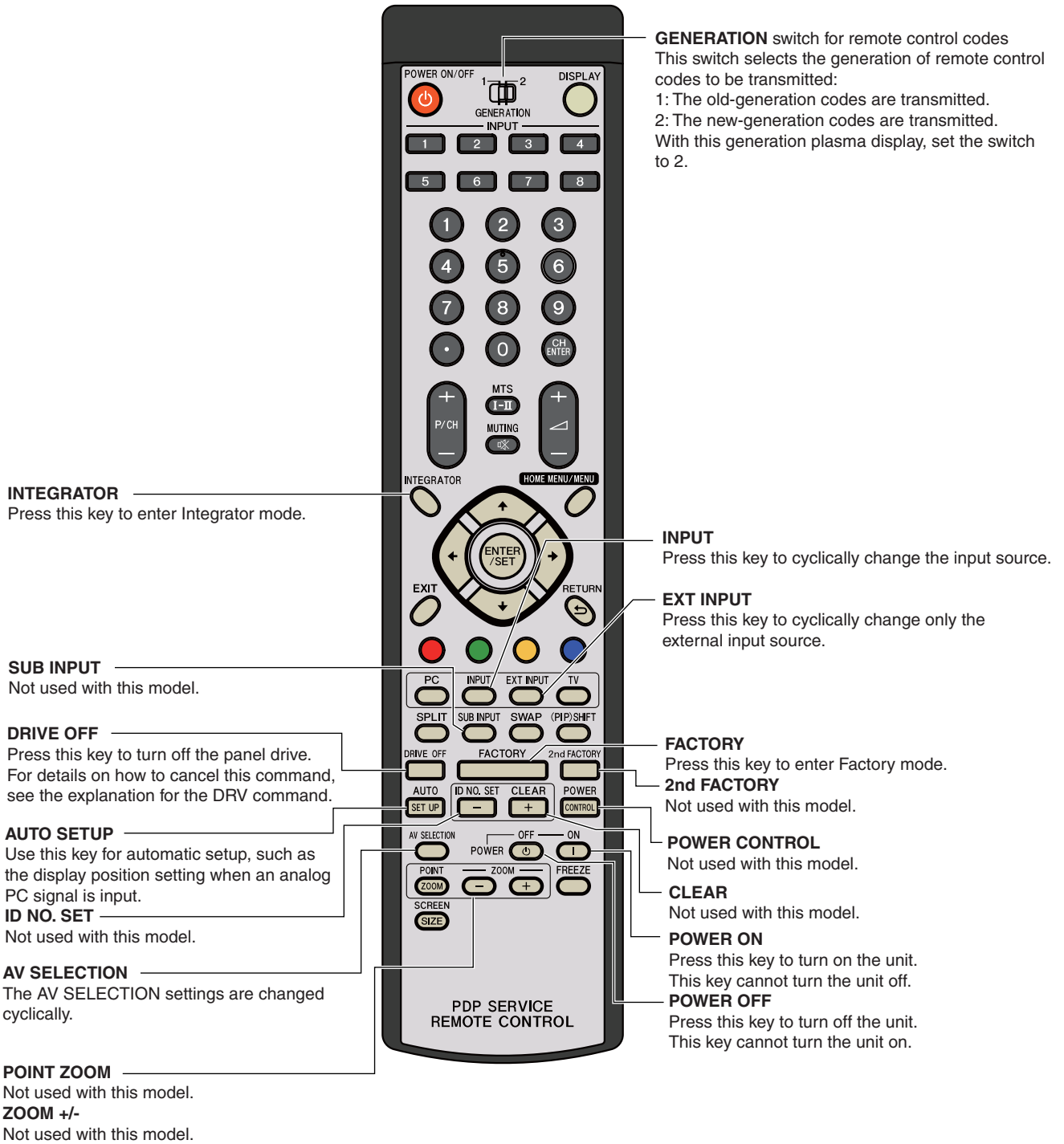
PDP-4280XD  
PDP-5080XD



PDP-4280XA  
PDP-5080XA

## 6.1.5 PDP SERVICE REMOTE CONTROL

- The keys labeled with the same names on the service remote control unit have the same functions as those of the supplied remote control unit. (See "2.3 PANEL FACILITIES.")
- For the keys not provided on the supplied remote control unit, see the explanations below:



# 6.1.6 FACTORY HIERARCHICAL TABLE

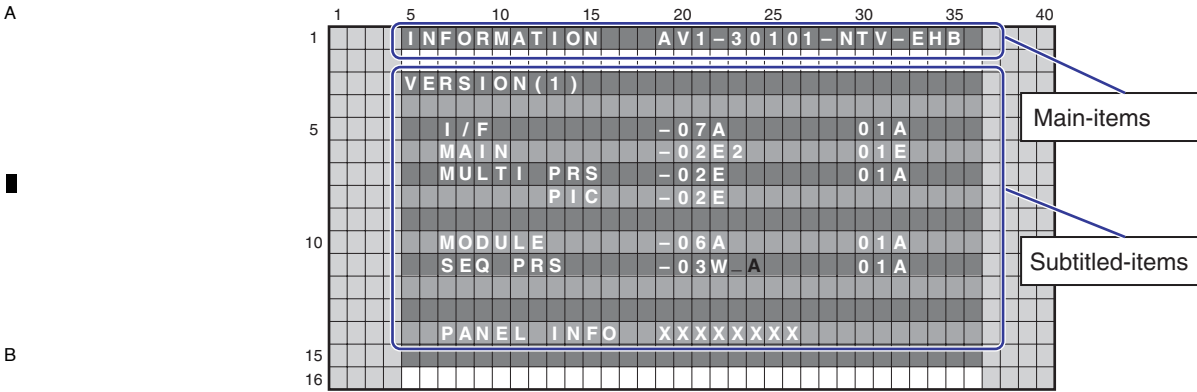
Large Item	Middle Item	Variable / Adjustment Range	Remarks
	Small Item		
<b>6.2.1 INFORMATION</b>			
	6.2.1.1 VERSION (1)		
	6.2.1.2 VERSION (2)		
	6.2.1.3 MAIN NG	CLEAR <=>	NO <=> YES
	6.2.1.4 TEMPERATURE		
	6.2.1.5 HOUR METER		
	6.2.1.6 HDMI SIGNAL INFO 1		
	6.2.1.7 HDMI SIGNAL INFO 2		
	6.2.1.8 VDEC SIGNAL INFO 1		
	6.2.1.9 VDEC SIGNAL INFO 2		
<b>6.2.2 PANEL FACTORY (+)</b>			
	6.2.2.1 PANEL INFORMATION		
	6.2.2.2 PANEL WORKS		
	6.2.2.3 POWER DOWN		
	6.2.2.4 SHUT DOWN		
	6.2.2.5 PANEL-1 ADJ (+)	VOL_SUS <=>	000 to 255 Equivalent to VSU (Setting value: Factory adjustment value)
		VOL_OFFSET <=>	000 to 255 Equivalent to VOF (Setting value: Factory adjustment value)
		VOL_RST_P <=>	000 to 255 Equivalent to VRP (Setting value: Factory adjustment value)
		VOL_XPOFS1 <=>	000 to 255 Equivalent to VX1 (Setting value: Factory adjustment value)
		VOL_XPOFS2 <=>	000 to 255 Equivalent to VX2 (Setting value: Factory adjustment value)
		VOL_YNOFS1 <=>	000 to 255 Equivalent to VY1 (Setting value: Factory adjustment value)
		VOL_YNOFS3 <=>	000 to 255 Equivalent to VY3 (Setting value: Factory adjustment value)
		VOL_YNOFS4 <=>	000 to 255 Equivalent to VY4 (Setting value: Factory adjustment value)
		RESET1ST_KSB <=>	112 to 144 Equivalent to R1K (Setting value: 128 fixed)
		RESET2ND_KSB <=>	112 to 144 Equivalent to R2K (Setting value: 128 fixed)
		YSTL_1SF_KSB <=>	112 to 144 Equivalent to Y1K (Setting value: 128 fixed)
		YSTL_1SF_HZ <=>	112 to 144 Equivalent to Y1Z (Setting value: 128 fixed)
		XSUS_1ST_B <=>	112 to 144 Equivalent to X1B (Setting value: 128 fixed)
		YSUS_2ND_B <=>	112 to 144 Equivalent to Y2B (Setting value: 128 fixed)
		XSUS_3RD_B <=>	112 to 144 Equivalent to X3B (Setting value: 128 fixed)
		YSUS_B <=>	112 to 144 Equivalent to YSB (Setting value: 128 fixed)
		XSUS_B <=>	112 to 144 Equivalent to XSB (Setting value: 128 fixed)
		YSTL_KSB <=>	112 to 144 Equivalent to YTK (Setting value: 128 fixed)
		YSTL_HZ <=>	112 to 144 Equivalent to YTZ (Setting value: 128 fixed)
		YSTL_2SF_KSB <=>	112 to 144 Equivalent to Y2K (Setting value: 128 fixed)
		YSTL_2SF_HZ <=>	112 to 144 Equivalent to Y2Z (Setting value: 128 fixed)
		YSTL_FMR_KSB <=>	112 to 144 Equivalent to YNK (Setting value: 128 fixed)
		YSTL_FMR_HZ <=>	112 to 144 Equivalent to YNZ (Setting value: 128 fixed)
		SUS_FREQ <=>	MODE 1 to MODE 8 Equivalent to SFR (Setting value: MODE1)
	6.2.2.6 PANEL-2 ADJ (+)	R-HIGH <=>	000 to 511 Equivalent to PRH (Setting value: Factory adjustment value)
		G-HIGH <=>	000 to 511 Equivalent to PGH (Setting value: Factory adjustment value)
		B-HIGH <=>	000 to 511 Equivalent to PBH (Setting value: Factory adjustment value)
		R-LOW <=>	000 to 999 Equivalent to PRL (Setting value: 512 fixed)
		G-LOW <=>	000 to 999 Equivalent to PGL (Setting value: 512 fixed)
		B-LOW <=>	000 to 999 Equivalent to PBL (Setting value: 512 fixed)
		ABL <=>	000 to 255 Equivalent to ABL (Setting value: Factory adjustment value)
	6.2.2.7 PANEL FUNCTION (+)	R-LEVEL <=>	LV-0 to LV-7 Equivalent to RRL (Setting value: Lv-0)
		G-LEVEL <=>	LV-0 to LV-7 Equivalent to RGL (Setting value: Lv-0)
		B-LEVEL <=>	LV-0 to LV-7 Equivalent to RBL (Setting value: Lv-0)
		ADDRESS L1 <=>	PH0 to PH9 Equivalent to AP0S* (Setting value: PH1)
		ADDRESS L2 <=>	PH0 to PH9 Equivalent to AP0S* (Setting value: PH2)
		ADDRESS L3 <=>	PH0 to PH9 Equivalent to AP1S* (Setting value: PH0)
		ADDRESS L4 <=>	PH0 to PH9 Equivalent to AP1S* (Setting value: PH1)
		ADDRESS U1 <=>	PH0 to PH9 Equivalent to AP2S* (Setting value: PH0)
		ADDRESS U2 <=>	PH0 to PH9 Equivalent to AP2S* (Setting value: PH0)
		ADDRESS U3 <=>	PH0 to PH9 Equivalent to AP3S* (Setting value: PH0)
		ADDRESS U4 <=>	PH0 to PH9 Equivalent to AP3S* (Setting value: PH0)
		STK MODE <=>	OFF <=> MODE1 to MODE8 <=> Equivalent to SMK (Setting value: MODE1)
	6.2.2.8 ETC. (+)	BACKUP DATA <=>	NO OPRT <=> TRANSFER or ERR Equivalent to BCP
		DIGITAL EEPROM <=>	NO OPRT <=> DELETE/REPAIR Equivalent to FAJ/UAJ
		PD INFO. <=>	NO OPRT <=> CLEAR Equivalent to CPD
		SD INFO. <=>	NO OPRT <=> CLEAR Equivalent to CSD
		HR-MTR INFO. <=>	NO OPRT <=> CLEAR Equivalent to CHM
		PM/B1-B5 <=>	NO OPRT <=> CLEAR Equivalent to CPM
		P COUNT INFO. <=>	NO OPRT <=> CLEAR Equivalent to CPC
		MAX TEMP. <=>	NO OPRT <=> CLEAR Equivalent to CMT
	6.2.2.9 RASTER MASK SETUP (+)	MASK OFF	Equivalent to MKS+S00
		RST MASK 01 <=>	<=> 48V <=> 50V <=> 60V <=> Equivalent to MKS+S51
		•••	60P <=> 72V <=> 75V <=>
		RST MASK 25 <=>	••• Equivalent to MKS+S75

\*: Setting value

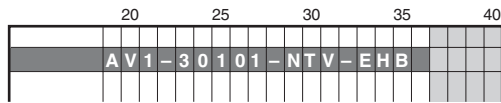


Large Item		Middle Item		Variable / Adjustment Range	Remarks
		Small Item			
<b>6.2.2 PANEL FACTORY (+)</b>					
6.2.2.10	PATTERN MASK SETUP (+)	MASK OFF		<=> 48V <=> 50V <=> 60V <=> 60P <=> 72V <=> 75V <=>	Equivalent to MKS+S00
		PTN MASK 01 <=>			Equivalent to MKS+S01
		•••			•••
		PTN MASK 49 <=>			Equivalent to MKS+S49
6.2.2.11	COMBI MASK SETUP (+)	MASK OFF		<=> 48V <=> 50V <=> 60V <=> 60P <=> 72V <=> 75V <=>	Equivalent to MKC+S00
		CMB MASK 01 <=>			Equivalent to MKC+S01
		•••			•••
		CMB MASK 17 <=>			Equivalent to MKC+S17
<b>6.2.3 OPTION</b>					
6.2.3.1	EDID WRITE MODE <=>			DISABLE <=> ENABLE	Exclusively used for production line for the technical analysis
6.2.3.2	CH PRESET <=>			USER <=> FACTORY	
6.2.3.3	SYNC DET (+)				
<b>6.2.4 INITIALIZE</b>					
6.2.4.1	SIDE MASK LEVEL (+)		SIDE MASK LEVEL <=>		
6.2.4.2	FINAL SETUP		DATA RESET <=>	NO <=> YES	
6.2.4.3	Wide XGA AUTO <=>			DISABLE <=> ENABLE	Exclusively used for technical analysis (details omitted)

# 6.1.7 INDICATIONS IN SERVICE FACTORY MODE



## Main-item indications



### ① Input function

Input Functions	OSD
AV 1 to 5	AV 1 to 5
Terrestrial Analog Wave	AIR
Terrestrial Digital Wave (excepting Regular A model)	ARD
Cable	CBL
Home Gallery (Step-up D model only)	HG
PC	PC

### ② SIG mode and Screen size

Note: See SIG-Mode Tables. (See next page.)

### ③ Color system and Signal type

Color System and Signal Type	OSD	
	At Composite Input	At S-connector Input
NTSC	NTV	NTS
PAL	PLV	PLS
PAL M	PMV	PMS
PAL N	PNV	PNS
PAL 60	P6V	P6S
SECAM	SCV	SCS
4.43 NTSC	4NV	4NS
BLACK/WHITE	BWV	BWS
Y/CB/CR	CBR	
Y/PB/PR	PBR	
RGB	RGB	
Digital Video signal	DIG	

### ④ Option (Destination, Panel Generation, etc.)

Options	OSD
Step-up D model	EHB
Regular D model	ESB
Regular A model	ERB

## ② SIG Mode and Screen size (by User is displayed)

**1st and 2nd characters** : Resolution of the input signal

**3rd and 4th characters** : Refresh rate of the input signal

**5th character** : Selection of the screen size

### ■ Input signal mode table for video signals (resolutions and V frequencies)

1st to 4th Character		Signal Type	Fv (Hz)	Fh (kHz)
10	50	SDTV*625i	50.000	15.750
	60	SDTV*525i	60.000	15.750
20	50	SDTV*625p	50.000	31.500
	60	SDTV*525p	60.000	31.500
30	50	HDTV*1125i	50.000	33.750
	60	HDTV*1125i	60.000	33.750
40	50	HDTV*750p	50.000	45.000
	60	HDTV*750p	60.000	45.000
50	24	HDTV*1125p	24.000	27.000
	50	HDTV*1125p	50.000	56.250
	60	HDTV*1125p	60.000	67.500

Fv: Vertical Frequency, Fh: Horizontal Frequency

### ■ Input signal mode table for PC signals (resolutions and V frequencies)

1st to 4th Character		Signal Type	Fv (Hz)	Fh (kHz)
C1	70	720 x 400	70.087	31.469
C2	60	640 x 480	59.940	31.469
C4	60	800 x 600	60.317	37.879
C6	60	1280 x 720	60.000	44.800
C7	60	1024 x 768	60.004	48.363
C9	60	1360 x 768	60.015	47.712
D6	60	1280 x 1024	60.000	64.000

Fv: Vertical Frequency, Fh: Horizontal Frequency

### ■ Current selection of the screen size

5th Character	GUI Notation	VIDEO	PC	Remarks
0	DOT BY DOT	● (*)	–	
1	4:3	●	●	
2	FULL	●	●	
3	ZOOM	●	–	
4	CINEMA	●	–	
5	WIDE	●	–	
6	FULL 14:9	●	–	
7	CINEMA 14:9	●	–	

●: supported, –: unsupported

(\*): It is effective only with models having the Full HD panel.

## 6.2 DETAILS OF FACTORY MENU

### 6.2.1 INFORMATION

#### ■ Operation items

No.	Function/Display	Context	RS-232C Command
6.2.1.1	VERSION (1)	The software versions for each microcomputer are displayed. (Common part)	QS1
6.2.1.2	VERSION (2)	The Flash memory versions for each device are displayed. (Individual part)	QSE
6.2.1.3	MAIN NG	The Shutdown Message ID/Event Times in Main Microcomputer are displayed.	QNG
6.2.1.4	TEMPERATURE	The Temperature/FAN rotating status in Main Microcomputer are displayed.	QMT
6.2.1.5	HOUR METER	The HOUR METER/P-COUNT information are displayed.	QS3
6.2.1.6	HDMI SIGNAL INFO 1	The Information of HDMI information files are displayed.	-
6.2.1.7	HDMI SIGNAL INFO 2		
6.2.1.8	VDEC SIGNAL INFO 1	Display the Signal Information on VDEC.	-
6.2.1.9	VDEC SIGNAL INFO 2		

#### 6.2.1.1 VERSION (1)

1	5	10	15	20	25	30	35	40	
1	I	N	F	O	R	A	T	I	O
2	A	V	1	-	3	0	1	0	1
3	-	N	T	V	-	E	H	B	
4	V	E	R	S	I	O	N	(	1
5	I	/	F		-	0	7	A	
6	M	A	I	N		-	0	2	E
7	M	U	L	T	I	P	R	S	
8				P	I	C			
9						-	0	2	E
10	M	O	D	U	L	E			
11	S	E	Q	P	R	S			
12						-	0	6	A
13						-	0	3	W
14									
15	P	A	N	E	L	I	N	F	O
16	X	X	X	X	X	X	X	X	X

Microcomputer	Item Name	Display Example (Execution program block)	Display Example (Boot block)
I/F microcomputer	I/F	-07A	01A
Main microcomputer	MAIN	-02E2	01E
Multi processor	MULTI PRS	-02E	01A
Multi processor	MULTI PIC	-02E	
Module microcomputer	MODULE	-06A	01A
Sequence processor	SEQ PRS	-03W_A	01A

**Note:** In the 29-32 rows, the Boot version information on each device is displayed.

In the 19-24 rows, the version of the execution program is displayed.

- **PANEL INFO:** It displays the generation of the panel, inchage and the type of the panel. For details on display values and settings, see "10: Panel Information" in "9.3.1. QS1 (PANEL STATUS)."

## 6.2.1.2 VERSION (2)

1	5	10	15	20	25	30	35	40
1	INFORMATION				AV1-30601-NTV-EHB			
	VERSION (2)							
5	DTB HARD 0001				PASSWORD 1234			
10								
15								
16								

### Step-up D / Regular D

Meaning	Item Name	Display Example
DTV Hardware Version	DTV HARD	0001
User Password	PASSWORD	1234

1	5	10	15	20	25	30	35	40
1	INFORMATION				AV1-30601-NTV-EHB			
	VERSION (2)							
5	PASSWORD 1234							
10								
15								
16								

### Regular A

Meaning	Item Name	Display Example
User Password	PASSWORD	1234

### 6.2.1.3 MAIN NG

1	5	10	15	20	25	30	35	40
1	INFORMATION				AV1-30601-NTV-EHB			
	MAIN NG							
5	MAIN		SUB		00151H21M			
	1	MA-IIC	FE1	00031H50M				
	2	MA-IIC	AV-SW	00013H03M				
	3	MA-3L	IF	00002H52M				
	4	MAIN	----	00001H58M				
10	5	TEMP2	----	00000H07M				
	6							
	7							
	8							
15								
16								

#### MTB side's Shutdown NG information

OSD: MAIN	OSD: SUB	Cause of Shutdown
AUDIO	----	Short-circuit of the speaker terminal or failure of audio amplifier.
MODULE	----	Failure of communication to Module microcomputer.
MA-3L		3-wire Serial Communication of Main microcomputer.
	IF	Communication failure of IF microcomputer
	MULTI	Multi Processor communication failure
MA-IIC		IIC Communication failure of Main microcomputer
	FE1	Analog Tuner 1
	MSPMAP	MSP/MAP
	AV-SW	AV Switch
	RGB-SW	RGB Switch
	VDEC	VDEC
	SDRAM	VDEC-SDRAM
	ADC	AD/PLL
	HDMI	HDMI
DEMOD	COFDM error	
MAIN		Communication failure of Main microcomputer
FAN	FAN1	Fan stopped
	FAN2	Fan stopped (Only with models having the Full HD panel)
TEMP2		Abnormally high temperature at MTB.
DTUNER		Failure of Digital Tuner
	PS/RST	Failure to DTV Starting
	D-ANT	Abnormally in the antenna power supply of DTV tuner
RST-MA	M-DCDC	Abnormally in RST2 of MTB. (power decrease of DC-DC converter)
	RELAY	Relay Power Supply
MA-EEP		IIC communication line between EEPROM and MAIN

A

	1	5	10	15	20	25	30	35	40	
1		I N F O R M A T I O N				A V 1 - 3 0 6 0 1 - N T V - E H B				
		M A I N N G								
5										
10										
15		C L E A R < = >				: N O				
16										

B

**Operation:**

Even if [←] key or [→] key is pressed, {CLEAR <=> :YES} ↔ {CLEAR <=> :NO} is repeated.  
 If the [ENTER/SET] key is kept on pressing for 5 second when the status of this menu is <YES>, clear process will begin.

C

D

E

F

## 6.2.1.4 TEMPERATURE

A present temperature and the FAN rotation are displayed.  
If either [←] key or [→] key is pressed, the display data is refreshed.

1	5	10	15	20	25	30	35	40
1	INFORMATION				AV1-30601-NTV-EHB			
	TEMPERATURE							
5	TEMP 1		:	+40.2 (C)				
	TEMP 2		:	+40.2 (C)		130 (A/D)		
	FAN 1		:	LOW				
10	FAN 2		:	---				
	B-SENSOR		:	1023 (A/D)				
15								
16								

### • Display/Meaning

- TEMP1 : The temperature of the sensor on the panel side is displayed by the centigrade.  
 TEMP2 : The temperature conversion display is done with 10 bit the A/D input value of IF uCOM 90 pin (AN4). It is displayed by both the centigrade (C) and 8 bit A/D value.  
 (Remark:When temperature (C) of the sensor becomes more than a specified temperature, the shutdown start of processing.)  
 FAN1 : The value of the FAN rotating state is displayed.  
 STOP: stopped, LOW: slow speed, HIGH: high speed.  
 FAN2 : The value of the rotation state of FAN is displayed.  
 During a rotation of FAN, 8bit D/A value output from 2 pin (DA0) of IF uCOM is displayed.  
 It is displayed with OFF during a stop (only for the FHD model).  
 B-SENSOR : The value that indicated the degree of brightness input into an Room light sensor is displayed.  
 AD value when the output of the Room light sensor was input into 89 pin (AN5) of IF uCOM is displayed.  
 However, the Regular A, D model is not displayed.

## 6.2.1.5 HOUR METER

1	5	10	15	20	25	30	35	40
1	INFORMATION				AV1-30601-NTV-EHB			
	HOUR METER							
5	PANEL		00151H 21M					
	PANEL COUNT/SERIAL							
10	P-COUNT		0000095 TIMES					
	SERIAL							
15								
16								

### • Display/Meaning

Meaning	Item Name	Display Example	Corresponding RS-232C Command
HOUR METER (PANEL)	PANEL	00151H 21M	QS3
POWER ON COUNTER	P-COUNT	0000095 TIMES	QS3
SYSTEM SERIAL	SERIAL		QS3

**Note:** The PANEL-side's HOUR METER/P-COUNT acquires information from the PANEL-side.



## 6.2.1.6 HDMI SIGNAL INFO 1

1	5	10	15	20	25	30	35	40
1	INFORMATION				AV1-10601-NTV-EHB			
	HDMI SIGNAL INFO 1							
5	PWR5V : ACTIVE				MODE : HDMI			
	VSYNC : ACTIVE				BIST : --			
	CKDT : ACTIVE				NVAL : 0006144			
	SCDT : ACTIVE				CTSVAL : 0074250			
	DCRPT : ACTIVE				AKSV : B70361F714			
10	AUTH : ACTIVE				BKSV : 511EF21ACD			
					IT CNT : NO			
					EXTCOL : xvYCC709			
					RGB QR : DEFAULT			
					PIXDEP : 12 bit			
15								
16								

Displays the input signal information of HDMI terminal

Item	Meaning
PWR5V	+5 V power detection (18 pin of HDMI terminal)
VSYNC	VSYNC detection
CKDT	Clock detection
SCDT	SYNC detection
DCRPT	HDCP decryption status
AUTHEN	HDCP authentication status
MODE	HDMI mode status
BIST	----
NVAL	N value
CTSVAL	CTS value
AKSV	Shadow AKSV value
BKSV	Shadow BKSV value
IT CNT	IT content (AVI info)
EXTCOL	Extension calorimetry (AVI info)
RGV QR	RGB range (AVI info)
PIXDEP	Number of pixel/bit

## 6.2.1.7 HDMI SIGNAL INFO 2

1	5	10	15	20	25	30	35	40
1	INFORMATION				AV1-10601-NTV-EHB			
	HDMI SIGNAL INFO 2							
5	H RES : 2200				COL SP : 422			
	V RES : 0563				COLMET : 709			
	H DE : 1920				ASPECT : 16 : 9			
	V DE : 0540				ACTIVE :			
	INTRL : INT				Same as pict			
10	V POL : POS				V FMT :			
	H POL : POS				1920x1080i@60			
	AUDIO : 48k				PIX RP : 00			
	PCM				SOURCE : PIONEER			
	20 bit				DVR-DT90			
15								
16								

### Displays input signal status of HDMI terminal

Display Item	Meaning
H RES	Number of horizontal pixels (decimal)
V RES	Number of vertical lines (decimal)
H DE	Number of effectively horizontal pixels (decimal)
V DE	Number of effectively vertical lines (decimal)
INTRL	Interlace (=INT) or progressive (=PRG)
V POL	VSYNC polarity
H POL	HSYNC polarity
AUDIO (first line)	Sampling frequency. (ex. DVD: 48kHz, CD: 44.1kHz) *1
AUDIO (second line)	PCM (PCM) or No PCM (=no PCM)
AUDIO (third line)	Quantization bit
COL SP	Color space (AVI Info) (422 or 444 or RGB) *2
COLMET	Calorimetry (AVI Info) (SD: 601, HD:709) *2
ASPECT	Aspect (AVI Info)
ACTIVE	Video active format (AVI Info)
V FMT	Video identification code (AVI Info)
PIX RP	Pixel repeat value for 2880 dot
SOURCE (first line)	Vendor name of the emission device
SOURCE (second line)	Model name of the emission device

\*1: Please confirm whether to be displayed here when the sound is not emitted.

\*2: There is a possibility of not suitable for the state of the source equipment when the color is amusing.

### Display of HDMI FACTORY and correspondence of resolution

Please confirm the following 5 items when the picture doesn't come out.

Input Signal	FACTORY Display				
	H RES	V RES	H DE	V DE	V FMT
480i (525i) @ 60	858	262 or 263	720	240	720x480i @ 60
480p (525p) @ 60	858	525	720	480	720x480p @ 60
1080i (1125i) @ 60	2200	562 or 563	1920	540	1920x1080i @ 60
720p (750p) @ 60	1650	750	1280	720	1280x720p @ 60
1080p (1125p) @ 60	2200	1125	1920	1080	1920x1080p @ 60
576i (625i) @ 50	864	312 or 313	720	288	720x576i @ 50
576p (625p) @ 50	864	625	720	576	720x576p @ 50
1080i (1125i) @ 50	2640	562 or 563	1920	540	1920x1080i @ 50
720p (750p) @ 50	1980	750	1280	720	1280x720p @ 50
1080p (1125p) @ 50	2640	1125	1920	1080	1920x1080p @ 50
1080p (1125p) @ 24	2750	1125	1920	1080	1920x1080p @ 24

### 6.2.1.8 VDEC SIGNAL INFO 1

1	5	10	15	20	25	30	35	40
1	INFORMATION				AV1-30601-NTV-EHB			
	VDEC SIGNAL INFO 1							
5	MVDEC - 000 : 00				SVDEC - 400 : 00			
	- 001 : 00				- 401 : 00			
	- 094 : 00				- 494 : 00			
	- 095 : 00				- 495 : 00			
	- 096 : 00				- 496 : 00			
10	- 098 : 00				- - - : -			
	- 1B5 : 00				- 5B5 : 00			
	- 1B6 : 00				- 5B6 : 00			
	- 1B7 : 00				- 5B7 : 00			
15								
16								

Displays signal status that is input to VDEC.

Device	Sub Address (Main screen)	Sub Address (Sub screen)	Meaning
VDEC	000h	400h	Line system distinction result
	001h	401h	VTR distinction result
	094h	494h	Slot number
	095h	495h	Color system distinction result
	096h	496h	ACC coefficient
	098h	---	3D YC flag
	1B5h	5B5h	MV detection 1
	1B6h	5B6h	MV detection 2
1B7h	5B7h	MV detection 3	

**Note:** The SVDEC data display in the Regular A, D model, but the value is not settled because the multi-screen display function is not used.

### 6.2.1.9 VDEC SIGNAL INFO 2

1	5	10	15	20	25	30	35	40
1	INFORMATION				AV1-30601-NTV-EHB			
	VDEC SIGNAL INFO 2							
5	MVDEC - 205 : 00				SVDEC - 605 : 00			
	- 208 : 00				- 608 : 00			
	- 20B : 00				- 60B : 00			
	- 20C : 00				- 60C : 00			
10	- 20D : 00				- 60D : 00			
15								
16								

Displays signal status that is input to VDEC.

Device	Sub Address (Main screen)	Sub Address (Sub screen)	Meaning
VDEC	205h	605h	CC detection 1
	208h	608h	CC detection 2
	20Bh	60Bh	CC-CRI detection
	20Ch	60Ch	XDS content advisor 0
	20Dh	60Dh	XDS content advisor 1

**Note:** The SVDEC data display in the Regular A, D model, but the value is not settled because the multi-screen display function is not used.

## 6.2.2 PANEL FACTORY (+)

### ■ Operation Items

This is the menu screen for the adjustment of the panel. Data acquisition and value adjustment can be performed for the following items:

No.	Indication	Description of functions
6.2.2.1	PANEL INFORMATION	Data, such as the version of the microcomputer of the panel, product serial number, and statuses of memories for adjustment values for the main unit and for backup, are displayed.
6.2.2.2	PANEL WORKS	Operation data, such as accumulated pulse-meter count, accumulated hour-meter count, accumulated power-on count, and the temperature detected by the sensor, are displayed.
6.2.2.3	POWER DOWN	The power-down history is displayed, with the hour-meter values that indicate the hour values when power-downs occurred.
6.2.2.4	SHUT DOWN	The shutdown history is displayed, with the hour-meter values that indicate the hour values when shutdowns occurred.
6.2.2.5	PANEL-1 ADJ (+)	Settings of the driving pulse timing and driving voltage can be performed.
6.2.2.6	PANEL-2 ADJ (+)	White balance and ABL (power consumption) for the panel can be set.
6.2.2.7	PANEL FUNCTION (+)	The level for correction of panel degradation can be set.
6.2.2.8	ETC. (+)	Copying of backup data and clearance of various data can be performed.
6.2.2.9	RASTER MASK SETUP (+)	The mask indication (RASTER) can be set and indicated.
6.2.2.10	PATTERN MASK SETUP (+)	The mask indication (PATTERN) can be set and indicated.
6.2.2.11	COMBI MASK SETUP (+)	The mask indication (COMBI) can be set and indicated.

## ■ Details of indications in each layer

- In the following examples, GUI images for a 50-inch model are indicated. Although the display areas for the menu for 42-inch and 50-inch models are different, the items to be displayed are the same.

### 6.2.2.1 PANEL INFORMATION

- Data, such as the version of the microcomputer of the panel, product serial number, and statuses of memories for adjustment values for the main unit and for backup, are displayed. No other layers are nested below this layer, and there are no adjustment items.

	1	5	10	15	20	25	30	32
1		PANEL	FACT.		IN1-30602-RGB-JHB			
AREA 1		PANEL INFORMATION						
2		MODULE		-01A			01A	
3		-PRG		-01A				
4		-DAT		-01A				
5		SEQ PRS		-01Y			02A	
6		-PRQ		-01Y				
7		-PIC		-01Y				
8		-SEQ		520Y				
9								
A		SERIAL						
B		DIG.EEP		ADJUSTED				
C		BACKUP		NO DATA!				
D								
E								

← Display area for 42-inch model (rows 2-8)

← Display area for 50-inch model (rows 2-16)

#### ■ Key operation

- <DOWN> : Shifting to PANEL WORKS
- <UP> : Shifting to COMBI MASK SETUP (+)
- <L/R> : Updating displayed information

#### ■ Display items:

- MODULE : The version of data written in the Module microcomputer (IC3151) is indicated.
- PRG : The program version of the Module microcomputer is indicated.
- DAT : The data version of the Module microcomputer is indicated.
- SEQ-PRG : The version of data written in the Sequence LSI (IC3401) is indicated.
- PRG : The program version of the Sequence LSI is indicated.
- PIC : The Picture-data version of the Sequence LSI is indicated.
- SEQ : The sequence-data version of the Sequence LSI is indicated.
- SERIAL : The serial number of the module is indicated.
- DIG.EEP : The adjusted status of the EEPROM that is mounted on the DIGITAL Assy is indicated.
- BACKUP : The adjusted status of the EEPROM for backup that is mounted on the SENSOR Assy is indicated.

### 6.2.2.2 PANEL WORKS

- Data on operations, such as the accumulated pulse-meter counts, hour-meter count, power-on count, and temperature detected by the sensor, are sent back. No other layers are nested below this layer, and there are no adjustment items.

	1	5	10	15	20	25	30	32
1		PANEL	FACT.		IN1-30602-RGB-JHB			
AREA 1		PANEL WORKS						
2								
3		PM-B1		00000715			M	
4		PM-B2		00000607			M	
5		PM-B3		00000852			M	
6		PM-B4		00000668			M	
7		PM-B5		00000733			M	
8								
9		HR-MTR		000025H		20M		
A		P-COUNT		00000095		TIMES		
B		TEMP1		+27.4	/	+70.8		
C								
D								
E								

#### ■ Key operation

- <DOWN> : Shifting to POWER DOWN
- <UP> : Shifting to PANEL INFORMATION
- <L/R> : Updating displayed information

← Temperature unit is " °C (Centigrade) ".

#### ■ Contents of the Display item

- PM-B1 to B5: The accumulated pulse-meter counts for the 5 blocks on the screen are indicated. (the lowest-order digit represents millions of pulses.)
- HR-MTR: The hour-meter value (accumulated power-on hours) is indicated.
- P-COUNT: The accumulated power-on count is indicated.
- TEMP1: The current panel temperature and the historical maximum temperature recorded in memory are indicated. The range of temperature indication is from -50.0 to +99.9. (The temperature unit is " °C (Centigrade) ".)

### 6.2.2.3 POWER DOWN

- The power-down history is displayed. The last most 8 power-down histories are displayed with the hour-meter values that indicate the hours when power-downs occurred. No other layers are nested below this layer, and there are no adjustment items.

	1	5	10	15	20	25	30	32
1	PANEL	FACT.			IN1-30602	-	RGB-JHB	
AREA 1	POWER	DOWN						
2		1ST		2ND		000124H	23M	
3								
4	1	X-DRV				000124H	21M	
5	2	Y-SUS	SCAN			000115H	05M	
6	3	SCAN				000107H	53M	
7	4	POWER	SCAN			000098H	47M	
8	5	ADRS				000051H	30M	
9	6	SCN5V	X-DCDC			000022H	21M	
A	7	Y-DCDC				000000H	57M	
B	8							
C								
D								
E								

#### Key operation

- <DOWN> : Shifting to SHUT DOWN
- <UP> : Shifting to PANEL WORKS
- <L/R> : Updating displayed information

#### <Causes of power-down and corresponding OSD indications>

Cause of power-down	OSD Indication	Cause of power-down	OSD Indication
POWER SUPPLY Unit	P-PWR	ADDRESS Assy	ADRS
SCAN Assy	SCAN	X DRIVE Assy	X-DRV
5 V power for SCAN Assy	SCN5V	DC/DC converter for X drive	X-DCDC
Y DRIVE Assy	Y-DRV	X-drive SUS circuit	X-SUS
DC/DC converter for Y drive	Y-DCDC	Unknown	UNKNOW
Y-drive SUS circuit	Y-SUS		

\* When power-down is confirmed, the factor is displayed as "1st", "2nd", according to the accuracy order.

\* The power-down history is not recorded when the power-down occurred at the same place and same time.

### 6.2.2.4 SHUT DOWN

- The shutdown history is displayed. The last most 8 shutdown histories are displayed with the hour-meter values that indicate the hours when shutdowns occurred. No other layers are nested below this layer, and there are no adjustment items.

	1	5	10	15	20	25	30	32
1	PANEL	FACT.			IN1-30602	-	RGB-JHB	
AREA 1	SHUT	DOWN						
2		MAIN		SUB		000124H	23M	
3								
4	1	TMP-NG	TEMP-H			000124H	21M	
5	2	SQ-LSI	RTRY			000115H	05M	
6	3	MD-IIC	DAC2			000107H	53M	
7	4	SQ-LSI	VER-HS			000098H	47M	
8	5	MD-IIC	BACKUP			000051H	30M	
9	6	SQ-LSI	BUSY			000012H	07M	
A	7							
B	8							
C								
D								
E								

#### Key operation

- <DOWN> : Shifting to PANEL-1 ADJ (+)
- <UP> : Shifting to POWER DOWN
- <L/R> : Updating displayed information

\* When there is detail information when shutdown occurred, the possible defective part is displayed as Sub information.

#### <Cause of shut-down and corresponding OSD Indication >

Cause of shut-down (MAIN)		Cause of shut-down (SUB)	
Item	OSD Indication	Item	OSD Indication
Drive Processing IC	SQ_LSI	Communication Error	RTRY
		Drive Stop	SQNO
		Communication Busy	BUSY
		Version mismatching (H/S)	VER-HS
		Version mismatching (M/S)	VER-MS
MDU-IIC	MD-IIC	MAIN EEPROM Communication Error	EEPROM
		BACKUP EEPROM Communication Error	BACKUP
		DAC1 Communication Error	DAC1
		DAC2 Communication Error	DAC2
Abnormally in RST2 power supply	RST2	-	-
Panel temperature	TMP-NG	High temperature of the panel	TEMP-H
		Low temperature of the panel	TEMP-L

### 6.2.2.5 PANEL-1 ADJ (+)

- Timing and voltage for the driving pulse are set. At third line of the screen, the WB (White Balance) table and frequency table indicating operation status are displayed, and at fifteenth line of the screen, the item for the upper nested layer (PANEL-1 ADJ [+]) is displayed. Pressing the SET key shifts the screen to the next nested layer below for item selection.

	1	5	10	15	20	25	30	32
1	PANEL FACT. IN1-30602-RGB-JHB							
	AREA 1	[ TBL1 / TBL1 ]						
2								
3								
4								
5								
6								
7								
8								
9								
A								
B								
C								
15	D	PANEL-1 ADJ (+)						
16	E							

#### ■ Key operation

- <DOWN> : Shifting to PANEL-2 ADJ (+)
- <UP> : Shifting to POWER DOWN
- <SET> : Shifting to the next nested layer

- When the screen is shifted to the next nested layer below, the item of the layer above is indicated at third line of the screen, and the item of the layer below is indicated at fifteenth line.
- The configuration of the menu screen is the same for any adjustment item that has lower layers.
- To confirm that the change in the SUS FREQ. setting has resulted in diminishing of AM radio interference in this layer, after changing the setting, turn the unit off then back on.

	1	5	10	15	20	25	30	32
1	PANEL FACT. IN1-30602-RGB-JHB							
	AREA 1	PANEL-1 ADJ [ TBL1 / 60VS ]						
2								
3								
4								
5								
6								
7								
8								
9								
A								
B								
C								
15	D	VOL OFFSET <=> : 128						
16	E							

#### ■ Key operation

- <DOWN> : Shifting to the next item
- <UP> : Shifting to the previous item
- <RIGHT> : Adding by one to the adjustment/setting value
- <LEFT> : Subtracting by one from the adjustment/setting value
- <VOL+> : Adding by 10 to the adjustment/setting value
- <VOL-> : Subtracting by 10 from the adjustment/setting value
- <SET> : Determining the adjustment/setting value and shifting to the upper layer

### 6.2.2.6 PANEL-2 ADJ (+)

- White balance can be adjusted by adjusting R, G, and B gain. Pressing the SET key shifts the screen to the next nested layer below for item selection.

		1	5	10	15	20	25	30	32
1		PANEL FACT. IN1-30602-RGB-JHB							
	AREA 1	[ TBL1 / 60VS ]							
	2								
5	3								
	4								
	5								
	6								
B	7								
10	8								
	9								
	A								
	B								
	C								
15	D	PANEL-2 ADJ (+)							
16	E								

#### Key operation

- <DOWN> : Shifting to PANEL FUNCTION (+)
- <UP> : Shifting to PANEL-1 ADJ (+)
- <SET> : Shifting to the next nested layer

		1	5	10	15	20	25	30	32
1		PANEL FACT. IN1-30602-RGB-JHB							
	AREA 1	PANEL-2 ADJ [ TBL1 / 60VS ]							
	2								
5	3								
	4								
	5								
	6								
	7								
10	8								
	9								
	A								
	B								
	C								
D	D	R-HIGH <=> : 256							
16	E								

#### Key operation

- <DOWN> : Shifting to the next item
- <UP> : Shifting to the previous item
- <RIGHT> : Adding by one to the adjustment/setting value
- <LEFT> : Subtracting by one from the adjustment/setting value
- <VOL+> : Adding by 10 to the adjustment/setting value
- <VOL-> : Subtracting by 10 from the adjustment/setting value
- <SET> : Determining the adjustment/setting value and shifting to the upper layer

The ABL/WB adjustment values are grouped into up to four tables, depending on the drive sequences. The adjustment value for the actually driven table is displayed. The number of the adjustment table and the drive sequence currently selected are displayed on the right side of the third line as the On-Screen display.

#### Drive sequence and adjustment table

Sequence Name	Video50	Video60	Video72	Video75	PC60
Adjustment Value Table	TBL2	TBL1	TBL1	TBL3	TBL4



### 6.2.2.7 PANEL FUNCTION (+)

- A setting for panel degradation correction can be made. Pressing the SET key shifts the screen to the next nested layer below for item selection.

	1	5	10	15	20	25	30	32
1		PANEL	FACT.		IN1-30602-RGB-JHB			
	AREA 1				[TBL1/60VS]			
2								
3								
4								
5								
6								
7								
8								
9								
A								
B								
C								
D		PANEL	FUNCTION (+)					
E								

#### ■ Key operation

- <DOWN> : Shifting to ETC.(+)
- <UP> : Shifting to PANEL-2 ADJ (+)
- <SET> : Shifting to the next nested layer

	1	5	10	15	20	25	30	32
1		PANEL	FACT.		IN1-30602-RGB-JHB			
	AREA 1	PANEL	FUNCTION		[TBL1/60VS]			
2								
3								
4								
5								
6								
7								
8								
9								
A								
B								
C								
D		R-LEVEL	<=>		:LV-0			
E								

#### ■ Key operation

- <DOWN> : Shifting to the next item
- <UP> : Shifting to the previous item
- <RIGHT> : Adding by one to the adjustment/setting value
- <LEFT> : Subtracting by one from the adjustment/setting value
- <SET> : Determining the adjustment/setting value and shifting to the upper layer

A

### 6.2.2.8 ETC. (+)

- The setting about the backup of panel adjusting value and various data on panel operational information can be cleared. Pressing the SET key shifts the screen to the next nested layer below for item selection.

		1	5	10	15	20	25	30	32
1		PANEL FACT.				IN1-30602-RGB-JHB			
	AREA 1	[ TBL1 / 60VS ]							
	2								
5	3								
	4								
	5								
	6								
B	7								
	8								
	9								
	A								
	B								
	C								
15	D	ETC. ( + )							
16	E								

#### Key operation

- <DOWN> : Shifting to RASTER MASK SETUP (+)
- <UP> : Shifting to PANEL FUNCTION (+)
- <SET> : Shifting to the next nested layer

B

C

		1	5	10	15	20	25	30	32
1		PANEL FACT.				IN1-30602-RGB-JHB			
	AREA 1	ETC. [ TBL1 / 60VS ]							
	2								
5	3								
	4								
	5								
	6								
	7								
10	8								
	9								
	A								
	B								
	C								
15	D	BACKUP DATA <=> : NO OPRT							
16	E								

#### Key operation

- <DOWN> : Shifting to the next item
- <UP> : Shifting to the previous item
- <RIGHT> : Adding by one to the adjustment/setting value
- <LEFT> : Subtracting by one from the adjustment/setting value
- <SET> : Determining the adjustment/setting value and shifting to the upper layer

D

E

F

### 6.2.2.9 RASTER MASK SETUP (+)

- This menu set the RASTER MASK and the drive sequence at RASTER MASK state. Pressing the SET key shifts the screen to the next nested layer below for item selection.

	1	5	10	15	20	25	30	32	
1		PANEL	FACT.		IN1-30602	-	RGB-JHB		
	AREA 1							[TBL1/60VS]	
2									
3									
4									
5									
6									
7									
8									
9									
A									
B									
C									
15		D RASTER MASK SETUP (+)							
16	E								

#### ■ Key operation

- <DOWN> : Shifting to PATTERN MASK SETUP (+)
- <UP> : Shifting to ETC. (+)
- <SET> : Shifting to the next nested layer

	1	5	10	15	20	25	30	32	
1		PANEL	FACT.		IN1-30602	-	RGB-JHB		
	AREA 1	R A S T E R M A S K S E T U P						[TBL1/60VS]	
2									
3									
4									
5									
6									
7									
8									
9									
A									
B									
C									
15		D R S T M A S K 0 1						: 6 0 V	
16	E								

#### ■ Key operation

- <DOWN> : Shifting to the next MASK
- <UP> : Shifting to the previous MASK
- <RIGHT> : Changing MASK sequence (+)
- <LEFT> : Changing MASK sequence (-)
- <SET> : Determining the adjustment/setting value and shifting to the upper layer

- The MASK indication sequence can be changed among 48V, 50V, 60V, 72V, 75V and 60P, using the Right or Left key. The selected sequence and the ABL/WB table are retained until the mask is turned off.

### A 6.2.2.10 PATTERN MASK SETUP (+)

- This menu set the PATTERN MASK and the drive sequence at PATTERN MASK state. Pressing the SET key shifts the screen to the next nested layer below for item selection.

		1	5	10	15	20	25	30	32
1		PANEL FACT.				IN1-30602-RGB-JHB			
	AREA 1	PATTERN MASK SETUP (+)				[TBL1/60VS]			
	2								
	3								
5	4								
	5								
	6								
B	7								
	8								
10	9								
	A								
	B								
	C								
15	D	PATTERN MASK SETUP (+)							
16	E								

#### ■ Key operation

- <DOWN> : Shifting to COMBI MASK SETUP (+)
- <UP> : Shifting to RASTER MASK SETUP (+)
- <SET> : Shifting to the next nested layer

		1	5	10	15	20	25	30	32
1		PANEL FACT.				IN1-30602-RGB-JHB			
	AREA 1	PATTERN MASK SETUP				[TBL1/60VS]			
	2								
	3								
5	4								
	5								
	6								
	7								
10	8								
	9								
	A								
	B								
	C								
15	D	PTN MASK 01				: 60V			
16	E								

#### ■ Key operation

- <DOWN> : Shifting to the next MASK
- <UP> : Shifting to the previous MASK
- <RIGHT> : Changing MASK sequence (+)
- <LEFT> : Changing MASK sequence (-)
- <SET> : Determining the adjustment/setting value and shifting to the upper layer

- The MASK indication sequence can be changed among 48V, 50V, 60V, 72V, 75V and 60P, using the Right or Left key. The selected sequence and the ABL/WB table are retained until the mask is turned off.

### 6.2.2.11 COMBI MASK SETUP (+)

- This menu set the COMBI MASK and the drive sequence at COMBI MASK state. Pressing the SET key shifts the screen to the next nested layer below for item selection.

		1	5	10	15	20	25	30	32
1		PANEL FACT .				IN1-30602-RGB-JHB			
	AREA	1	COMBI MASK SETUP			[TBL1 / 60VS]			
2									
3									
4									
5									
6									
7									
8									
9									
A									
B									
C									
15	D	COMBI MASK SETUP (+)							
16	E								

#### Key operation

- <DOWN> : Shifting to PANEL INFORMATION
- <UP> : Shifting to PATTERN MASK SETUP (+)
- <SET> : Shifting to the next nested layer

		1	5	10	15	20	25	30	32
1		PANEL FACT .				IN1-30602-RGB-JHB			
	AREA	1	COMBI MASK SETUP			[TBL1 / 60VS]			
2									
3									
4									
5									
6									
7									
8									
9									
A									
B									
C									
15	D	CMB MASK 01						: 60V	
16	E								

#### Key operation

- <DOWN> : Shifting to the next MASK
- <UP> : Shifting to the previous MASK
- <RIGHT> : Changing MASK sequence (+)
- <LEFT> : Changing MASK sequence (-)
- <SET> : Determining the adjustment/setting value and shifting to the upper layer

- The MASK indication sequence can be changed among 48V, 50V, 60V, 72V, 75V and 60P, using the Right or Left key. The selected sequence and the ABL/WB table are retained until the mask is turned off.

## 6.2.3 OPTION

### Operation item

A

No.	Function	Content	RS-232C
6.2.3.1	EDID WRITE MODE ⇔	DISABLE ⇔ ENABLE	---
6.2.3.2	CH PRESET ⇔	USER ⇔ FACTORY	---
6.2.3.3	SYNC DET (+)	Exclusively used for technical analysis	---

#### 6.2.3.1 EDID WRITE MODE <=>

Exclusively used for production line.

#### 6.2.3.2 CH PRESET <=>

Exclusively used for production line.

#### 6.2.3.3 SYNC DET (+)

Exclusively used for technical analysis (details omitted).

C

D

E

F

## 6.2.4 INITIALIZE

### Operation item

No.	Function	Content	RS-232C
6.2.4.1	SIDE MASK LEVEL (+)	Configure the color of the side mask.	SML
6.2.4.2	FINAL SETUP (+)	Initialize flash memorys on virgin product status	FST
6.2.4.3	Wide XGA AUTO <=>	Exclusively used for technical analysis.	---

### 6.2.4.1 SIDE MASK LEVEL (+)

1	INITIALIZE	AV1-30601-NTV-EHB
5		
10		
15	SIDE MASK LEVEL (+)	
16		

To configure sidemask level (To adjust the values, input signal is required).

Display	Content	RS-232C
SIDE MASK LEVEL <=>	Adjust Side Mask level (Adjustable range: 000 to 255)	SML

### 6.2.4.2 FINAL SETUP (+)

1	INITIALIZE	AV1-30601-NTV-EHB
5	FINAL SETUP	
10		
15	DATA RESET <=>	: NO
16		

- To reset each memory values to factory default values. Factory command is "FST".
- When the configuration is set to <NO> and the [ENTER/SET] key is pressed, no action is taken and the menu returns to previous screen.
- When the configuration is set to <YES> and the [ENTER/SET] key is pressed for 5 seconds, the reset action executes.

**Be sure to disconnect and connect the AC cable after FINAL SETUP.**

**When replacing the MAIN Assy, the FINAL SETUP is required.**

### 6.2.4.3 Wide XGA AUTO <=>

Exclusively used for technical analysis (details omitted).

## 8. EACH SETTING AND ADJUSTMENT



1. At shipment, the unit is adjusted to its best conditions. Normally, it is not necessary to readjust even if an assembly is replaced. If the adjustment is shifted or if it becomes necessary to readjust because of part replacement, etc., perform the adjustment as described below.
2. Any value changed in Service/Factory mode will be stored in memory as soon as it is changed. Before readjustment, take note of the original values for reference in case you need to restore the original settings.
3. Use a stable AC power supply.

### 8.1 ADJUSTMENT REQUIRED WHEN THE UNIT IS REPAIRED OR REPLACED

#### ■ When any of the following assemblies is replaced

POWER SUPPLY Unit	➔	Refer to "8.3 HOW TO CLEAR HISTORY DATA".
DIGITAL Assy	➔	Writing of backup data is required. Refer to the "8.2 BACKUP OF THE EEPROM (DIGITAL ASSY)".
X DRIVE Assy	➔	No adjustment required
Y DRIVE Assy	➔	No adjustment required
Service Panel Assy	➔	Refer to "8.3 HOW TO CLEAR HISTORY DATA" and "8.4 ADJUSTMENTS WHEN THE SERVICE PANEL ASSY IS REPLACED".
MAIN Assy (*)	➔	No adjustment required
SENSOR Assy	➔	Writing of backup data is required. Refer to the "8.2 BACKUP OF THE EEPROM (DIGITAL ASSY)".
Other assemblies	➔	No adjustment required

Note (\*): When replacing the MAIN Assy, be sure to perform the FINAL SETUP.



A

### Notes on replacing parts

For the parts described in the list below, replacement is required for the whole Assy, not only the defective part. If any part listed below is identified as defective and needs replacement, replace the whole Assy, and make necessary adjustments after replacement.

**Reason:** The whole Assy must be replaced, because adjustments and data rewriting for the Assy at the level of production line are required.

PCB Assy No.	Assy Name	Parts that Require Whole-Assy Replacement		
		Ref No.	Function Name	Part No.
AWV2461 (PDP-428XD and PDP-508XD)  AWV2462 (PDP-4280XD and PDP-5080XD)  AWV2463 (PDP-4280XA and PDP-5080XA)	MAIN Assy	IC4601	AV switch	R2S11006FT
		IC4701	RGB switch	R2S11001FT
		IC4703	EEPROM	BR24L01AFJ-W
		IC4801	MAIN VDEC	CM0048BF
		IC5001	A/D Converter	AD9985KSTZ-110
		IC5102	EEPROM	BR24L02FV-W
		IC5103	EEPROM	BR24L02FV-W
		IC5203	EEPROM	BR24L02FV-W
		IC8204	Flash ROM	AGC1050
		IC8301	Flash UCOM	AGC1037
		IC8602	Flash ROM	AGC1040 (for AWV2463)
		IC8602	Flash ROM	AGC1041 (for AWV2461, AWV2462)
AWV2452, AWV2447	X DRIVE Assy	• Parts of X D-D CON BLOCK		
AWV1262, AWV1260	Y DRIVE Assy	• Parts of Y VF D-D CON BLOCK • Parts of Y MAIN D-D CON BLOCK 1 • Parts of Y MAIN D-D CON BLOCK 2		

D

POWER SUPPLY Unit



The assembly must be replaced as a unit, and no part replacement is allowed.

MAIN Assy



No adjustment is required after replacement of parts other than those mentioned above.

DIGITAL Assy



No adjustment is required after replacement of parts other than those mentioned above.

X DRIVE Assy



No adjustment is required after replacement of parts other than those shown in "8.5 ADJUSTMENTS WHEN THE DRIVE ASSYS ARE REPLACED."

E

Y DRIVE Assy



No adjustment is required after replacement of parts other than those shown in "8.5 ADJUSTMENTS WHEN THE DRIVE ASSYS ARE REPLACED."

ADDRESS Assy



No adjustment required

SENSOR Assy



No adjustment is required after replacement of parts other than those mentioned above.

TANSHI Assy



No adjustment required

F

## 8.2 BACKUP OF THE EEPROM (DIGITAL ASSY)

### Outline

Adjustment data are stored in the EEPROM (IC3156/4K) on the DIGITAL Assy in the production process. Those adjustment data are also automatically stored in the EEPROM (for backup: IC3652) on the SENSOR Assy.

If the DIGITAL Assy is replaced, those adjustment data for backup can be copied from the EEPROM on the SENSOR Assy to a new DIGITAL Assy.

### Backed up data

- Drive voltage adjustment value
- Hour-meter count
- Pulse-meter count
- Panel white balance adjustment value
- Serial No.
- Drive waveform adjustment value
- P-ON counter value
- PD/SD histories

### How to copy backup data

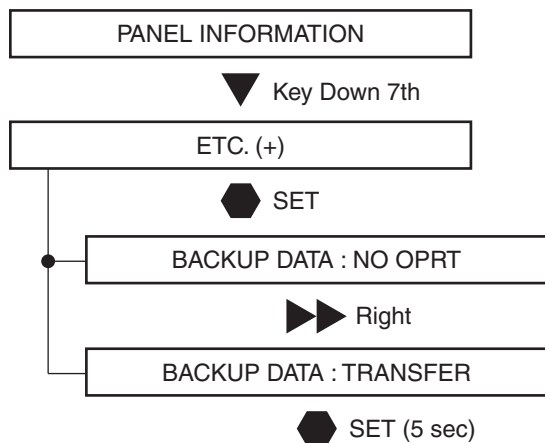
#### 1. When the DIGITAL Assy is replaced with one for service (usual service)

Adjustment data can be restored by copying the data backed up in the SENSOR Assy to the EEPROM on a new DIGITAL Assy.

The EEPROM on the new DIGITAL Assy has no adjustment data, and the EEPROM for backup in the SENSOR Assy has adjustment data. After replacing the DIGITAL Assy, enter PANEL FACT. mode, display the PANEL INFORMATION page, then check if "NO DATA!" is set for "DIG. EEP" and "ADJUSTED" is set for "BACKUP". Then, proceed in the following steps:

##### (1) Copying, using the Factory menu

- ① Plug in the AC cord, press the Power switch on the unit to set it to ON, then enter Standby mode.
- ② Turn on the power, using the remote control unit, then enter Panel Factory mode.  
Copy the backup data, as shown in the figure below.



- ③ Turn the power off.
- After the DIGITAL Assy is replaced with one for service, be sure to check if "NO DATA!" is set for "DIG. EEP" on the PANEL INFORMATION page of the PANEL FACT. mode.
  - If copying of the backup data fails in the above procedure, the red LED lights, and the blue LED flashes, as a warning that no backup data were copied.
  - If both the DIGITAL and SENSOR Assys are to be replaced, first replace the SENSOR Assy, turn the unit on and back off again, then replace the DIGITAL Assy.

##### (2) Copying, using the RS-232C commands

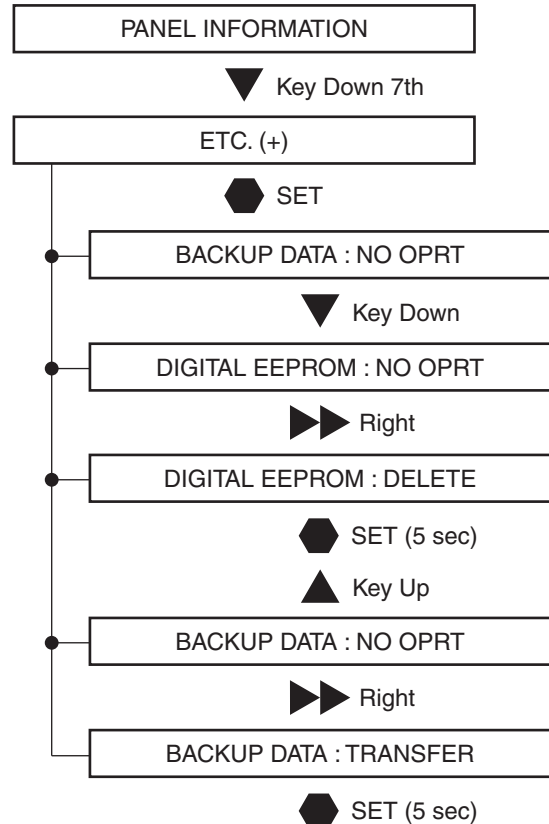
- ① Turn on the unit, using the remote control unit or by issuing the PON command. Then issue the FAY command.
- ② Issue the BCP command to transfer the data stored in the EEPROM for backup.
- ③ Turn the power off.

## 2. When a secondhand DIGITAL Assy that had been mounted in another product is to be reused

As adjustment data for another product are already stored in the secondhand DIGITAL Assy, first delete those data then copy the backup data stored in the EEPROM on the SENSOR Assy.

### (1) Copying, using the Factory menu

- ① Plug in the AC cord, press the Power switch on the unit to set it to ON, then enter Standby mode.
- ② Turn on the power, using the remote control unit, then enter Panel Factory mode.  
Copy the backup data, as shown in the figure below.



- ③ Turn the power off.

#### Note:

If the secondhand DIGITAL Assy is mounted in the product then the unit is turned on then back off again, the data in the EEPROM on the DIGITAL Assy are copied over the EEPROM in the SENSOR Assy. Thus the backup data can never be restored. During the first power-on after the DIGITAL Assy is replaced, be sure to enter Factory mode to copy the backup data. Or, before removing the secondhand DIGITAL Assy from the original product, delete the adjustment data on it, using the Factory mode (DIGITAL EEPROM: DELETE), mount it to the product to be repaired, then copy the data from the backup EEPROM.

### (2) Copying, using the RS-232C commands

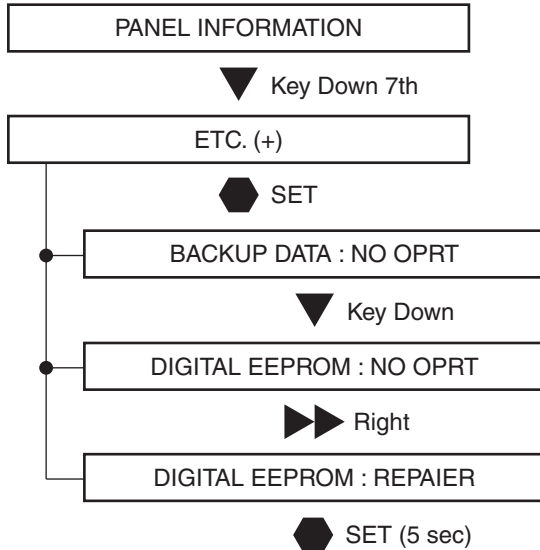
- ① Turn on the unit, using the remote control unit or by issuing the PON command. Then issue the FAY command.
- ② Issue the UAJ command to delete data stored in the EEPROM on the DIGITAL Assy.
- ③ Issue the BCP command to transfer the data stored in the EEPROM for backup.
- ④ Turn the power off.

### 3. In a case where normal backup data are not stored in the backup EEPROM because the EEPROM on the DIGITAL Assy is defective, etc., and where manually adjusted values are to be applied to the product

**Note:** In this section, it is assumed that settings for various items have been completed, using Factory menu or RS-232C commands.

#### (1) Method using the Factory menu

- ① Set various setting/adjustment values.
- ② Proceed in the following steps.



- ③ Turn the power off.

**Note:**

When a DIGITAL Assy with an EEPROM in which adjustment data are stored is mounted, this step is not required after manual adjustment. ("DIGITAL EEPROM: REPAIR" is not indicated.)

#### (2) Method using the RS-232C commands

Issue the FAJ command.

# 8.3 HOW TO CLEAR HISTORY DATA

## ■ Clearance of various logs after the Assys are replaced

Besides adjustment data, data on accumulated power-on time and logs on defective parts of the product are backed up. Some of those data must be cleared after the Assys are replaced for service.

### (1) Clearance of logs, using the RS-232C commands

Item	Content	When the Panel is replaced	When the POWER SUPPLY Unit is replaced	When the Other parts is replaced	RS-232C Commands
Hour-meter	Accumulated power-on time	Must be cleared	No need to be cleared	No need to be cleared	CHM
Pulse-meter	Accumulated number of pulses emitted	Must be cleared (mandatory)	No need to be cleared	No need to be cleared	CPM
Shutdown history	Cause of an SD and hour-meter count	Must be cleared	No need to be cleared	No need to be cleared	CSD
Power-down history	Cause of an PD and hour-meter count	Must be cleared	No need to be cleared	No need to be cleared	CPD
Power-on counter	Relay-on count	No need to be cleared	Must be cleared (mandatory)	No need to be cleared	CPC
MAX TEMP	Historical max. temperature	Must be cleared	Must be cleared	Must be cleared	CMT

**Notes:** • As the pulse-meter count is used for each correction function, it must be cleared when an Assy relevant to correction functions is replaced.

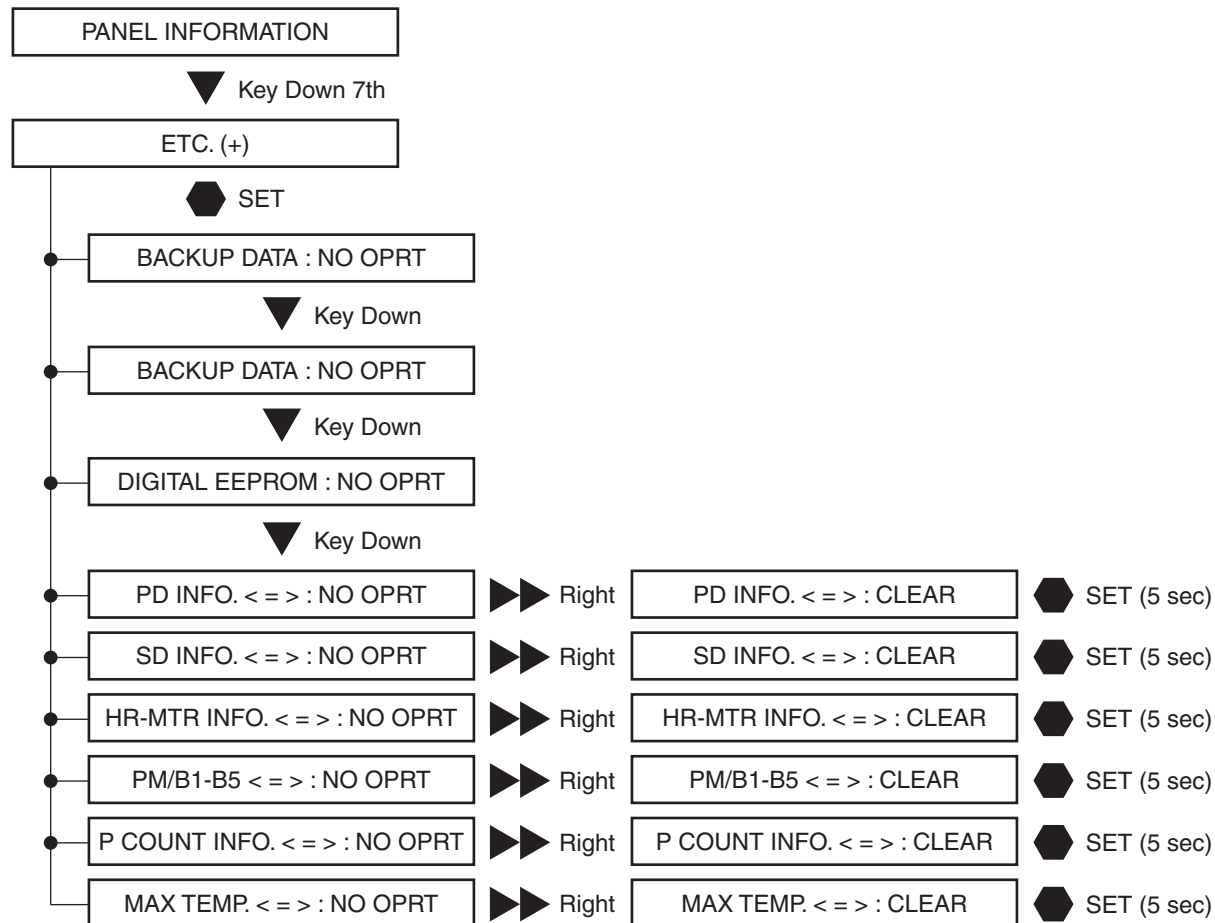
- When clearing logs, using the RS-232C commands, first enter Factory mode (by issuing FAY or PFY), then issue the corresponding command.

### (2) Clearance of logs, using the Factory menu

① Plug in the AC cord, press the Power switch on the unit to set it to ON, then enter Standby mode.

② Turn on the power, using the remote control unit, then enter Panel Factory mode.

Delete various logs, as shown in the figure below.



③ Turn the power off.