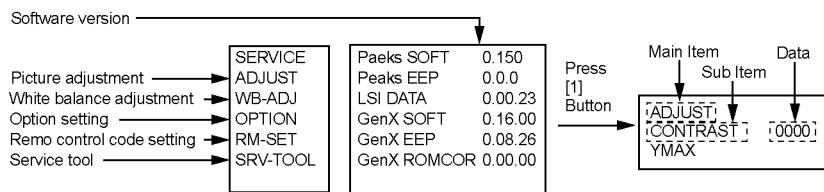


5 Service Mode

5.1. How to enter into Service Mode

While pressing [VOLUME (-)] button of the main unit, press [INFO] button of the remote control three times within 2 seconds.



5.1.1. Contents of adjustment mode

- Value is shown as a hexadecimal number.
- Preset value differs depending on models.
- After entering the adjustment mode, take note of the value in each item before starting adjustment.

Main item	Sub item	Sample Data	Remark
ADJUST	CONTRAST	000	
	COLOR	4C	
	TINT	00	
	SUB-BRT	808	
	BACKLGT	22E	
	B-Y-G	34	
	R-Y-A	00	
WB-ADJ	R-GAIN	F7	
	G-GAIN	FB	
	B-GAIN	DB	
	R-CENT	82	
	G-CENT	80	
	B-CENT	86	
OPTION	Boot	ROM	Factory Preset.
	STBY-SET	00	
	EMERGENCY	ON	
	CLK MODE	00	
	CLOCK	0E4	
RM-SET		00	Fixed.
SRV-TOOL		00	See next.

5.1.2. How to exit

Switch off the power with the [POWER] button on the main unit or the [POWER] button on the remote control.

5.2. SRV-TOOL

5.2.1. How to access

1. Select [SRV-TOOL] in Service Mode.
2. Press [OK] button on the remote control.

	SRV-TOOL		
Display of TD2Microcode version →	TD2Microcode:81c00011		
Display of Flash ROM maker code →	Flash ROM : 1 - 227E		
Display of SOS History →	PTCT : 00 . 00 . 00 . 00 . 00	Time 000040:40	Count 0000049 ← POWER ON TIME/COUNT Press [MUTE] button (3sec)

5.2.2. Display of SOS History

SOS History (Number of LED blinking) indication.

From left side; Last SOS, before Last, three occurrence before, 2nd occurrence after shipment, 1st occurrence after shipment.

This indication except 2nd and 1st occurrence after shipment will be cleared by [Self-check indication and forced to factory shipment setting].

5.2.3. POWER ON TIME/COUNT

Note : To display TIME/COUNT menu, highlight position, then press MUTE for 3sec.

Time : Cumulative power on time, indicated hour : minute by decimal

Count : Number of ON times by decimal

Note : This indication will not be cleared by either of the self-checks or any other command.

5.2.4. Exit

1. Disconnect the AC cord from wall outlet.

5.3. Service Mode Adjustment

1. Press the 'RECALL' button on the remote control and press '-' vol button on the LCD panel.
2. Press button number 1 on the remote control to select for Adjustment.
3. Self Check to Exit.

5.3.1. Self Check Mode

1. Press the 'MENU' button (on the remote control) and the 'DOWN' button on the LCD panel.
2. Press ON/OFF button on the panel to Exit.

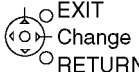
5.3.2. Hotel Mode Adjustment

1. Press the 'VOLUME DOWN' button on the TV panel and simultaneously press the AV button on the remote control 3 times to enter Hotel Mode.
2. Set Hotel mode 'on', then press 'EXIT' to come out.

5.3.3. Hotel Mode

Hotel Mode	
Hotel Mode	<input type="text" value="Off"/>
Initial INPUT	<input type="text" value="Off"/>
Initial POS	<input type="text" value="Off"/>
Initial VOL Level	<input type="text" value="Off"/>
Maximum Vol Level	<input type="text" value="100"/>
Button Lock	<input type="text" value="Off"/>
Remote Lock	<input type="text" value="Off"/>

Select



EXIT
Change
RETURN

Item	Function
Hotel Mode	Select hotel mode ON/OFF
Initial INPUT	Select input signal modes. Set the input, when each time power is switched on. Selection : OFF/Analogue TV/Digital TV/AV1/AV2/AV3/PC/HDMI1/HDMI2/HDMI3 • Off: give priority to a last memory. • Selectable input is depend on the model.
Initial POS	Select programme number. Selection : Off/0 to 100 • Off: give priority to a last memory.
Initial VOL level	Adjust the volume when each time power is switched on. Selection/Range : Off/0 to 100 • Off: give priority to a last memory.
Maximum VOL level	Adjust maximum volume. Range : 0 to 100
Button lock	Select local key conditions. Selection : Off/SETUP/MENU/All • Off: altogether valid. • SETUP: only F-key is invalid. (Tuning guide (menu) can not be selected.) • MENU: only F-key is invalid. (only Volume/Mute can be selected.) • ALL: altogether invalid.
Remote lock	Select remote control key conditions. Selection : Off/SETUP/MENU • Off: altogether valid. • SETUP: only Setup menu is invalid. • MENU: Picture/Sound/Setup menu are invalid.

6 Troubleshooting Guide

Use the self-check function to test the unit.

1. Checking the IIC bus lines
2. Power LED Blinking timing

6.1. Check of the IIC bus lines

6.1.1. How to access

Self-check indication only:

Produce TV reception screen, and while pressing [VOLUME (-)] button on the main unit, press [OK] button on the remote control for more than 3 seconds.

Self-check indication and forced to factory shipment setting:

Produce TV reception screen, and while pressing [VOLUME (-)] button on the main unit, press [MENU] button on the remote control for more than 3 seconds.

6.1.2. Exit

Disconnect the AC cord from wall outlet.

6.1.3. Screen display

SELF CHECK		---- . XXXXXX - XXXXXX
PEAKS	OK	
TUN1	OK	
FE	OK	
Hudson	OK	
MEM2	OK	
MEM3	OK	
MEM4	OK	
Copyright Panasonic Corporation 2009.		

6.1.4. Check Point

Confirm the following parts if NG was displayed.

DISPLAY	Ref. No.	Description	P.C.B.
PEAKS	IC8001	PEAKS LITE 2P	A-Board
TUN1	TU8300	TUNER	A-Board
FE	IC8300	FRONT END	A-Board
Hudson	IC4003	Hudson2	A-Board
MEM2	IC8503	EEPROM	A-Board
MEM3	IC4004	EEPROM	A-Board
MEM4	IC4504	EEPROM	A-Board

6.2. Power LED Blinking timing chart

1. Subject

Information of LED Flashing timing chart.

2. Contents

When an abnormality occurs, the protection circuit will operate and reset the unit to stand by mode. During this time, the defective block can be identified by the number of blinking times of the Power LED on the front panel of the unit as follow:

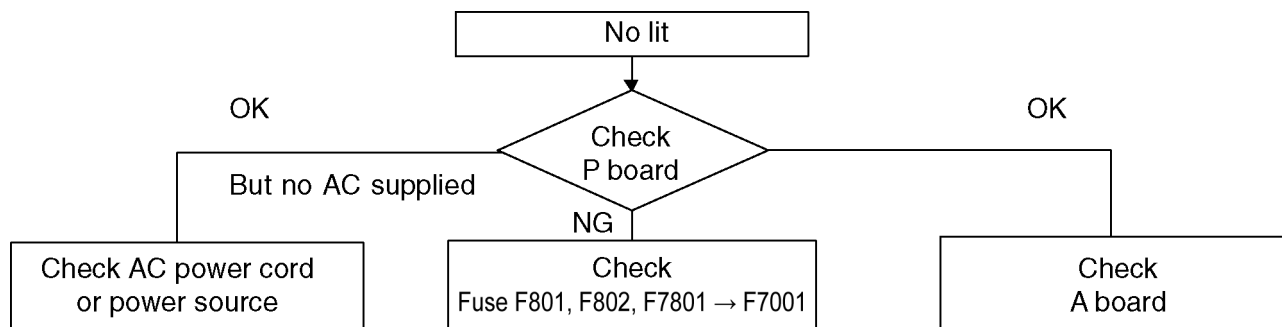
Blinking times	Contents	BOARD
1	Inverter_SOS	P BOARD
2	SUB 1.8V_SOS	A BOARD
3	SUB 1.2V_SOS	A BOARD
4	POWER_SOS	P/A BOARD
5	SUB 5V_SOS	A BOARD
9	TCON_SOS	A BOARD
10	SUB 3.3V_SENSE	A BOARD
11	DCDC_SOS	A BOARD
12	SOS	A BOARD

6.3. No Power

First check point

There are following 2 states of No Power indication by power LED.

1. No lit
2. Red is lit then turns red blinking a few seconds later. (See 6.2.)



8 Measurements and Adjustments

8.1. Voltage chart of A-board

Check voltage as follows at Reception state

VOLTAGE	TEST POINT	SPECIFICATION (Reception state)
STB3.3V	TP4716	3.3 ± 0.16 V
SUB5V	TP4724	5 ± 0.25 V
SOUND15V	TP2765	18 ± 2 V
5VS	TP2768	6.1 ± 0.3 V
SUB6V	TP2767	6.1 ± 0.3 V
TCON13.7V	TP7019	12.5 ± 2 V
TCON2.5V	TP4826	2.5 ± 0.12 V
TCON31V	TP7013	31 ± 3.1 V
TCON-6V	TP7014	-5.7 ± 0.6 V

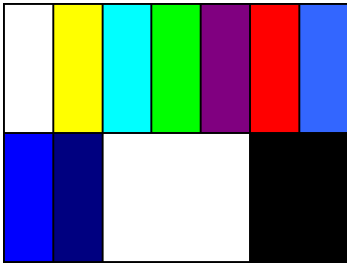
only miniLVDS model



8.2. Voltage chart of P-board

VOLTAGE	TEST POINT	SPECIFICATION (Reception state)	TEST POINT
P32V	TP7503	31 ± 2.5 V	J107
17V	TP7502	18 ± 2 V	J115
DTV12V	TP7501	12.2 ± 0.6 V	J21
TUNER6V	TP7601	6.1 ± 0.3 V	D7603K
DC390V	TP7201	390 ± 10 V	

8.3. Picture level adjustment (RF)

Instrument Name	Remarks
1. REMOTE TRANSMITTER 2. Ex. Signal (Sprit color bar)	
Adjustment or Inspection Procedure	Remarks
<p>procedure</p> <p>1. Receive the Sprit color bar. (Screen mode: ZOOM or FULL Picture mode: DYNAMIC AI: OFF AI Picture: OFF) *BACK LIGHT +30</p> <p>Inspection</p> <p>1. Enter Service mode, and select MAIN_ADJ PICTURE. Volume UP/DOWN key makes GAIN displayed under PICTURE to set. Pushing the remote controller [OK] key for about 3 seconds, GAIN is suited to the adjustment value automatically.</p> <div style="text-align: center;">  <p>(The Sprit Color Bar Pattern)</p> </div>	

8.4. Picture level adjustment (VIDEO)

Instrument Name	Remarks
1. REMOTE TRANSMITTER 2. Video signal generator (100% Color bar)	
Adjustment or Inspection Procedure	Remarks
<p>procedure</p> 1. Receive 100% Color bar. (ASPECT: ZOOM or FULL, Picture mode: VIVID, AI Picture: OFF) * BACK LIGHT MAX VALUE	
<p>Inspection</p> 1. Enter Service mode, and select ADJUST CONTRAST. Volume UP/DOWN key makes GAIN value displayed on the right of CONTRAST to set. Pushing the remote controller [OK] key for about 3 seconds, GAIN is suited to the adjustment value automatically.	

8.5. Picture level adjustment (YUV)

Instrument Name	Remarks
1. REMOTE TRANSMITTER 2. Component Video signal generator (100% Color bar 1080i)	
Adjustment or Inspection Procedure	Remarks
<p>procedure</p> 1. Receive 100% Color bar. (ASPECT: ZOOM or FULL, Picture mode: VIVID, AI Picture: OFF) * BACK LIGHT MAX VALUE	
<p>Inspection</p> 1. Enter Service mode, and select ADJUST CONTRAST. Volume UP/DOWN key makes GAIN value displayed on the right of CONTRAST to set. Pushing the remote controller [OK] key for about 3 seconds, GAIN is suited to the adjustment value automatically.	