

Service Hints



TX-P50X10E

Plasma Television

<PDP 2009 Model>

TX-P50/42/37X10E

TX-P50/42/37C10E

TX-P50/42/37X10B

TX-P50/42/37C10B

TX-PF50/42/37X10

TX-P50/42/37C10ES

- Ver 2.0-

Troubleshooting Guide

This service hints is published for technicians and engineers for repair. And it gives you the information how to judge the defective board of PDP. In the future, we will improve the contents for more easy diagnostic and trouble shooting.

Please file and use this Service Hints together with the main service manual and other publications related to models.

WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.



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1. 2009 PDP Line up & Feature Comparison (HD model)

1. 2009 PDP Line up & Feature Comparison

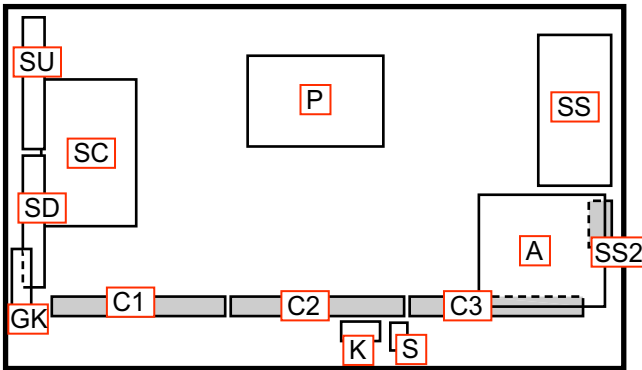
		X10 Series	C10 Series	
				
Picture	Size	50/42/37	50/42/37	
	Panel	HD PDP	HD PDP	
	Gradation	4,096	4,096	
	Contrast Ratio	20,000:1	20,000:1	
	Moving Picture Resolution	720 lines	720 lines	
	600 Hz Sub-field Drive	---	---	
	x.v. Colour	Y	Y	
	24p Cinematic Playback	Y	Y	
	24p Smooth Film	---	---	
	THX Mode	---	---	
	Digital Cinema Colour	---	---	
	Deep Color	---	---	
	Advanced 3D Colour Management	Y	Y	
	Motion Pattern Noise Reduction	Y	Y	
	Sub Pixel Control	Y	Y	
Sound	Speaker	Full-Range	Full-Range	
Networking	HDMI	3	2	
	VIERA Link (HDAVI Control 4)	Y	Y	
	VIERA CAST	---	---	
	VIERA Image Viewer	Y (JPEG playback)	Y (JPEG playback)	
	PC Input	Y	---	
	Game Mode	Y	Y	
	DLNA & DivX	---	---	
	VIERA Tools	Y	Y	

2. PCB Location & Function (HD model)

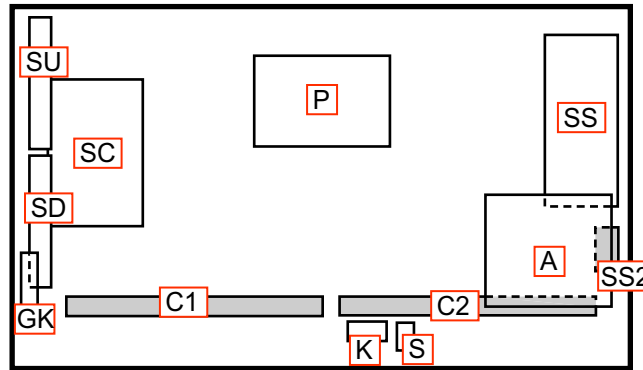
2. PCB Location & Function

X10 Series

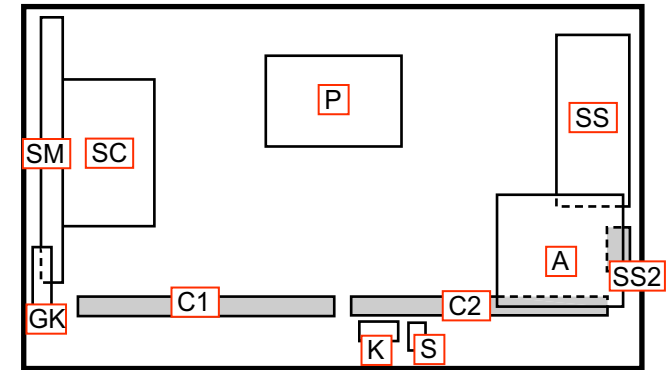
TX-P50X10E / TX-P50X10B / TX-PF50X10



TX-P42X10E / TX-P42X10B / TX-PF42X10



TX-P37X10E / TX-P37X10B / TX-PF37X10



Board Name	Function	Parts Number
P	Power Supply	LSEP1279EEHB
A	DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-lite 2p, Format Converter, Plasma AI, Sub-Field Processor	A-P50X10E (for TX-P50X10E) A-P50X10B (for TX-P50X10B) A-PF50X10 (for TX-PF50X10)
K	Remote receiver, Power LED, C.A.T.S sensor	TXN/K1EQUE
S	Power Switch	TXN/S1EQUE
GK	Key Switch	TXNGK1EQUE
C1	Data Driver (Lower Right)	TXNC11EPUE
C2	Data Driver (Lower Center)	TXNC21EPUE
C3	Data Driver (Lower Left)	TXNC31EPUE
SC	Scan Drive	TXNSC1EPUE
SS	Sustain Drive	TXNSS1EPUE
SS2	Sustain out (Lower)	TXNSS21EPUE
SU	Scan out (Upper),Not repairable. SU-Board should be exchanged for service.	TXNSU1EPUE
SD	Scan out (Lower),Not repairable. SD-Board should be exchanged for service.	TXNSD1EPUE

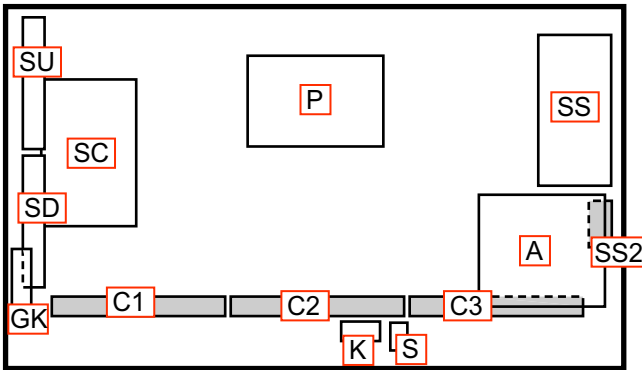
Board Name	Function	Parts Number
P	Power Supply	LSEP1279BEHB
A	DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-lite 2p, Format Converter, Plasma AI, Sub-Field Processor	A-P42X10E (for TX-P42X10E) A-P42X10B (for TX-P42X10B) A-PF42X10 (for TX-PF42X10)
K	Remote receiver, Power LED, C.A.T.S sensor	TXN/K1EQUE
S	Power Switch	TXN/S1EQUE
GK	Key Switch	TXNGK1EQUE
C1	Data Driver (Lower Right)	TNPA4892
C2	Data Driver (Lower Left)	TNPA4893
SC	Scan Drive	TXNSC1EQUE
SS	Sustain Drive	TXNSS1EQUE
SS2	Sustain out (Lower)	TNPA4807
SU	Scan out (Upper),Not repairable. SU-Board should be exchanged for service.	TNPA4776
SD	Scan out (Lower),Not repairable. SD-Board should be exchanged for service.	TNPA4777

Board Name	Function	Parts Number
P	Power Supply	LSEP1279BEHB
A	DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-lite 2p, Format Converter, Plasma AI, Sub-Field Processor	A-P37X10E (for TX-P37X10E) A-P37X10B (for TX-P37X10B) A-PF37X10 (for TX-PF37X10)
K	Remote receiver, Power LED, C.A.T.S sensor	TXN/K1EQUE
S	Power Switch	TXN/S1EQUE
GK	Key Switch	TXNGK1EQUE
C1	Data Driver (Lower Right)	TNPA4890
C2	Data Driver (Lower Left)	TNPA4891
SC	Scan Drive	TXNSC1ERUE
SS	Sustain Drive	TXNSS1ERUE
SS2	Sustain out (Lower)	TNPA4806
SM	Scan out ,Not repairable. SM-Board should be exchanged for service.	TNPA4775

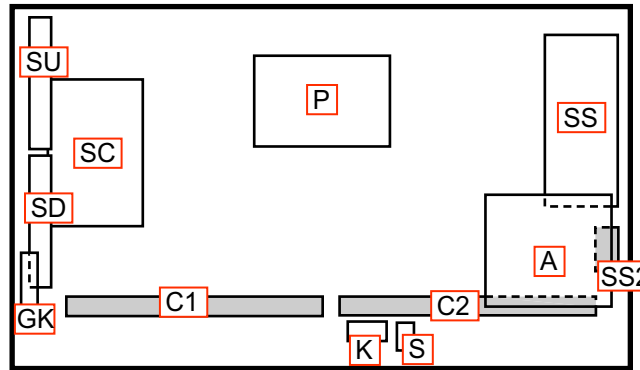
2. PCB Location & Function

C10 Series

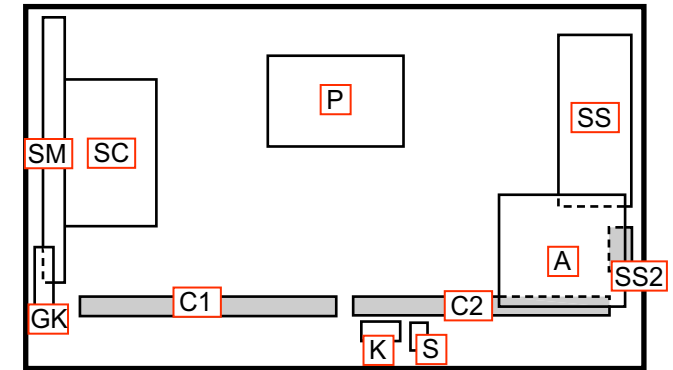
TX-P50C10E / TX-P50C10B



TX-P42C10E / TX-P42C10B / TX-P42C10ES



TX-P37C10E / TX-P37C10B / TX-P37C10ES



Board Name	Function	Parts Number
P	Power Supply	LSEP1279EEHB
A	DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-lite 2p, Format Converter, Plasma AI, Sub-Field Processor	A-P50C10E (for TX-P50C10E) A-P50C10B (for TX-P50C10B)
K	Remote receiver, Power LED	TXN/K1ETUE
S	Power Switch	TXN/S1ETUE
GK	Key Switch	TXNGK1EQUE
C1	Data Driver (Lower Right)	TXNC11EPUE
C2	Data Driver (Lower Center)	TXNC21EPUE
C3	Data Driver (Lower Left)	TXNC31EPUE
SC	Scan Drive	TXNSC1EPUE
SS	Sustain Drive	TXNSS1EPUE
SS2	Sustain out (Lower)	TXNSS21EPUE
SU	Scan out (Upper),Not repairable. SU-Board should be exchanged for service.	TXNSU1EPUE
SD	Scan out (Lower),Not repairable. SD-Board should be exchanged for service.	TXNSD1EPUE

Board Name	Function	Parts Number
P	Power Supply	LSEP1279BEHB
A	DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-lite 2p, Format Converter, Plasma AI, Sub-Field Processor	A-P42C10E (for TX-P42C10E) A-P42C10B (for TX-P42C10B) A-P42C10ES (for TX-P42C10ES)
K	Remote receiver, Power LED	TXN/K1ETUE
S	Power Switch	TXN/S1ETUE
GK	Key Switch	TXNGK1EQUE
C1	Data Driver (Lower Right)	TNPA4892
C2	Data Driver (Lower Left)	TNPA4893
SC	Scan Drive	TXNSC11UBG
SS	Sustain Drive	TXNSS11UBU
SS2	Sustain out (Lower)	TNPA4807
SU	Scan out (Upper),Not repairable. SU-Board should be exchanged for service.	TXNSU11UBG
SD	Scan out (Lower),Not repairable. SD-Board should be exchanged for service.	TXNSD11UBG

Board Name	Function	Parts Number
P	Power Supply	LSEP1279BEHB
A	DC-DC Converter, Tuner, Speaker out, AV Terminal, AV Switch, Digital Signal Processor, SYSTEM MPU, HDMI Switch, Peaks-lite 2p, Format Converter, Plasma AI, Sub-Field Processor	A-P37C10E (for TX-P37C10E) A-P37C10B (for TX-P37C10B) A-P37C10ES (for TX-P37C10ES)
K	Remote receiver, Power LED	TXN/K1ETUE
S	Power Switch	TXN/S1ETUE
GK	Key Switch	TXNGK1EQUE
C1	Data Driver (Lower Right)	TNPA4890
C2	Data Driver (Lower Left)	TNPA4891
SC	Scan Drive	TXNSC1ERUE
SS	Sustain Drive	TXNSS1ERUE
SS2	Sustain out (Lower)	TNPA4806
SM	Scan out ,Not repairable. SM-Board should be exchanged for service.	TNPA4775

3. PCB List (HD model)

3. PCB List

	X10 series									C10 series							
Board	TX-P50X10E	TX-P42X10E	TX-P37X10E	TX-P50X10B	TX-P42X10B	TX-P37X10B	TX-PF50X10	TX-PF42X10	TX-PF37X10	TX-P50C10E	TX-P42C10E	TX-P37C10E	TX-P50C10B	TX-P42C10B	TX-P37C10B	TX-P42C10ES	TX-P37C10ES
P	LSEP1279EEHB	LSEP1279BEHB	LSEP1279BEHB	LSEP1279EEHB	LSEP1279BEHB	LSEP1279BEHB	LSEP1279EEHB	LSEP1279BEHB	LSEP1279BEHB	LSEP1279EEHB	LSEP1279BEHB	LSEP1279BEHB	LSEP1279EEHB	LSEP1279BEHB	LSEP1279BEHB	LSEP1279BEHB	LSEP1279BEHB
A	A-P50X10E	A-P42X10E	A-P37X10E	A-P50X10B	A-P42X10B	A-P37X10B	A-PF50X10	A-PF42X10	A-PF37X10	A-P50C10E	A-P42C10E	A-P37C10E	A-P50C10B	A-P42C10B	A-P37C10B	A-P42C10ES	A-P37C10ES
K	TXN/K1EQUE	TXN/K1EQUE	TXN/K1EQUE	TXN/K1EQUE	TXN/K1EQUE	TXN/K1EQUE	TXN/K1EQUE	TXN/K1EQUE	TXN/K1EQUE	TXN/K1ETUE	TXN/K1ETUE	TXN/K1ETUE	TXN/K1ETUE	TXN/K1ETUE	TXN/K1ETUE	TXN/K1ETUE	TXN/K1ETUE
S	TXN/S1EQUE	TXN/S1EQUE	TXN/S1EQUE	TXN/S1EQUE	TXN/S1EQUE	TXN/S1EQUE	TXN/S1EQUE	TXN/S1EQUE	TXN/S1EQUE	TXN/S1ETUE	TXN/S1ETUE	TXN/S1ETUE	TXN/S1ETUE	TXN/S1ETUE	TXN/S1ETUE	TXN/S1ETUE	TXN/S1ETUE
GK	TXNGK1EQUE	TXNGK1EQUE	TXNGK1EQUE	TXNGK1EQUE	TXNGK1EQUE	TXNGK1EQUE	TXNGK1EQUE	TXNGK1EQUE	TXNGK1EQUE	TXNGK1EQUE	TXNGK1EQUE	TXNGK1EQUE	TXNGK1EQUE	TXNGK1EQUE	TXNGK1EQUE	TXNGK1EQUE	TXNGK1EQUE
C1	TXNC11EPUE	TNPA4892	TNPA4890	TXNC11EPUE	TNPA4892	TNPA4890	TXNC11EPUE	TNPA4892	TNPA4890	TXNC11EPUE	TNPA4892	TNPA4890	TXNC11EPUE	TNPA4892	TNPA4890	TXNC11EPUE	TNPA4890
C2	TXNC21EPUE	TNPA4893	TNPA4891	TXNC21EPUE	TNPA4893	TNPA4891	TXNC21EPUE	TNPA4893	TNPA4891	TXNC21EPUE	TNPA4893	TNPA4891	TXNC21EPUE	TNPA4893	TNPA4891	TXNC21EPUE	TNPA4891
C3	TXNC31EPUE	----	----	TXNC31EPUE	----	----	TXNC31EPUE	----	----	TXNC31EPUE	----	----	TXNC31EPUE	----	----	----	----
SC	TXNSC1EPUE	TXNSC1EQUE	TXNSC1ERUE	TXNSC1EPUE	TXNSC1EQUE	TXNSC1ERUE	TXNSC1EPUE	TXNSC1EQUE	TXNSC1ERUE	TXNSC1EPUE	TXNSC11UBG	TXNSC1ERUE	TXNSC1EPUE	TXNSC11UBG	TXNSC1ERUE	TXNSC11UBG	TXNSC1ERUE
SS	TXNSS1EPUE	TXNSS1EQUE	TXNSS1ERUE	TXNSS1EPUE	TXNSS1EQUE	TXNSS1ERUE	TXNSS1EPUE	TXNSS1EQUE	TXNSS1ERUE	TXNSS1EPUE	TXNSS11UBU	TXNSS1ERUE	TXNSS1EPUE	TXNSS11UBU	TXNSS1ERUE	TXNSS11UBU	TXNSS1ERUE
SS2	TXNSS21EPUE	TNPA4807	TNPA4806	TXNSS21EPUE	TNPA4807	TNPA4806	TXNSS21EPUE	TNPA4807	TNPA4806	TXNSS21EPUE	TNPA4807	TNPA4806	TXNSS21EPUE	TNPA4807	TNPA4806	TXNSS21EPUE	TNPA4806
SU	TXNSU1EPUE	TNPA4776	----	TXNSU1EPUE	TNPA4776	----	TXNSU1EPUE	TNPA4776	----	TXNSU1EPUE	TXNSU11UBG	----	TXNSU1EPUE	TXNSU11UBG	----	TXNSU11UBG	----
SD	TXNSD1EPUE	TNPA4777	----	TXNSD1EPUE	TNPA4777	----	TXNSD1EPUE	TNPA4777	----	TXNSD1EPUE	TXNSD11UBG	----	TXNSD1EPUE	TXNSD11UBG	----	TXNSD11UBG	----
SM	----	----	TNPA4775	----	----	TNPA4775	----	----	TNPA4775	----	----	TNPA4775	----	----	TNPA4775	----	TNPA4775

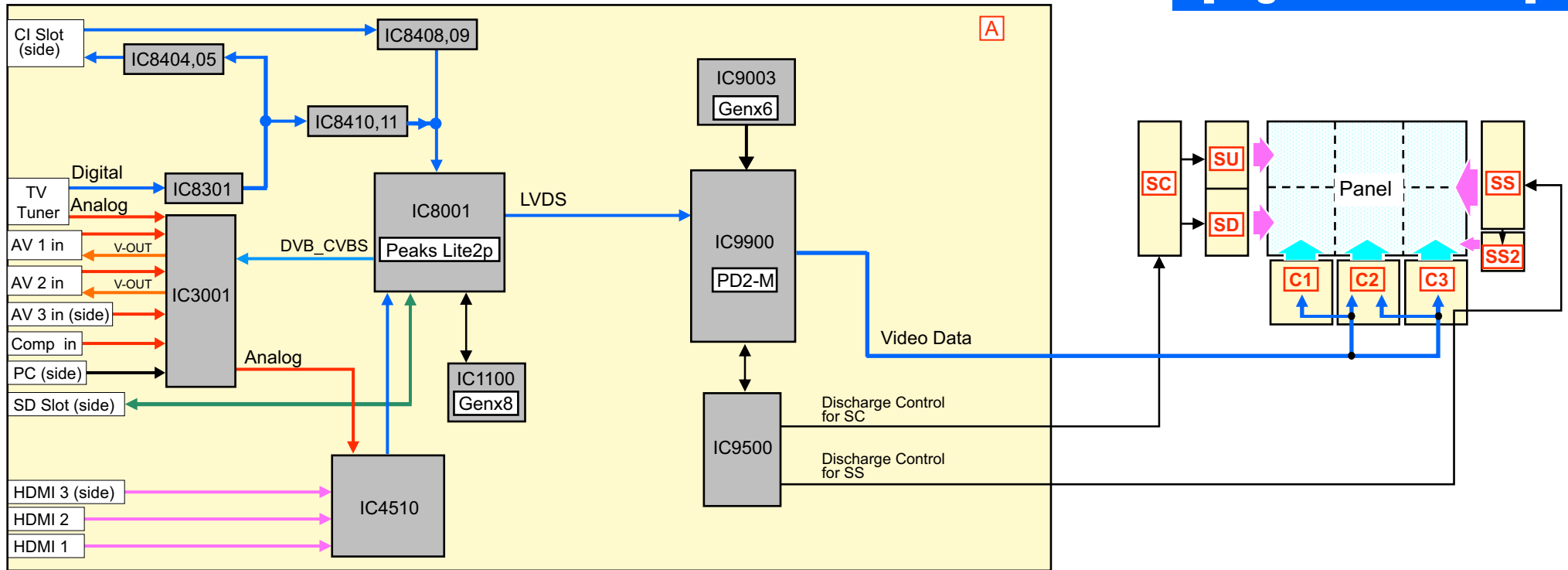
4. Block Diagram (HD model)

4. Block Diagram

Signal Processing Circuit (1) X10 Series

<PCB Function>

[e.g. TX-P50X10E]



IC8301
: Front End Processor
IC3001
: AV Switch
IC8404,05
8408,09
8410,11
: Buffer

IC4510
: HDMI I/F, 10bit A/D
IC8001
: Peaks Lite2p
(MAIN MPU+VIDEO SIGNAL PROCESSOR)
IC1100
: Genx8 (SYSTEM MPU)

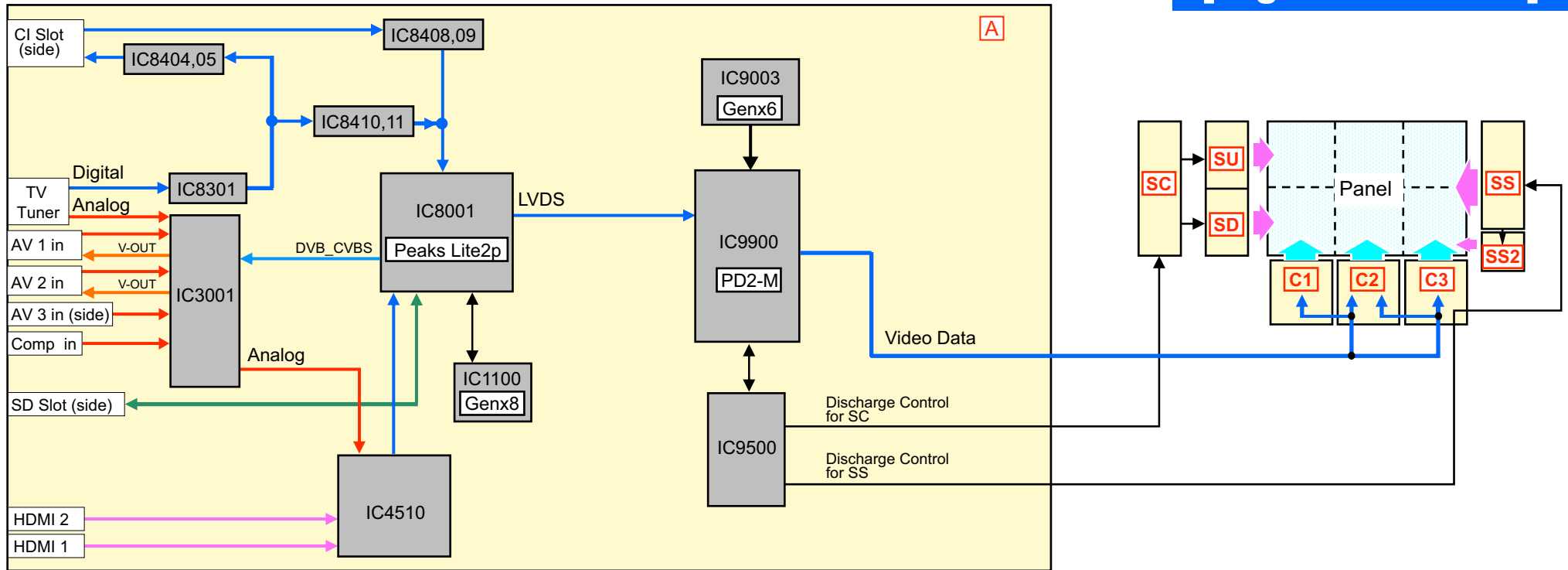
IC9900
: PD2-M
[LVDS Receiver,
Sub Field Processor,
Data Driver Processor
Plasma AI]
IC9500
: FPGA (Discharge Control)
IC9003
: Genx6 (Panel Micom)

4. Block Diagram

Signal Processing Circuit (2) C10 Series

<PCB Function>

[e.g. TX-P50C10E]



IC8301
: Front End Processor

IC3001
: AV Switch

IC8404,05
8408,09
8410,11
: Buffer

IC4510
: HDMI I/F, 10bit A/D

IC8001
: Peaks Lite2p
(MAIN MPU+VIDEO SIGNAL PROCESSOR)

IC1100
: Genx8 (SYSTEM MPU)

IC9900
: PD2-M
[LVDS Receiver,
Sub Field Processor,
Data Driver Processor
Plasma AI]

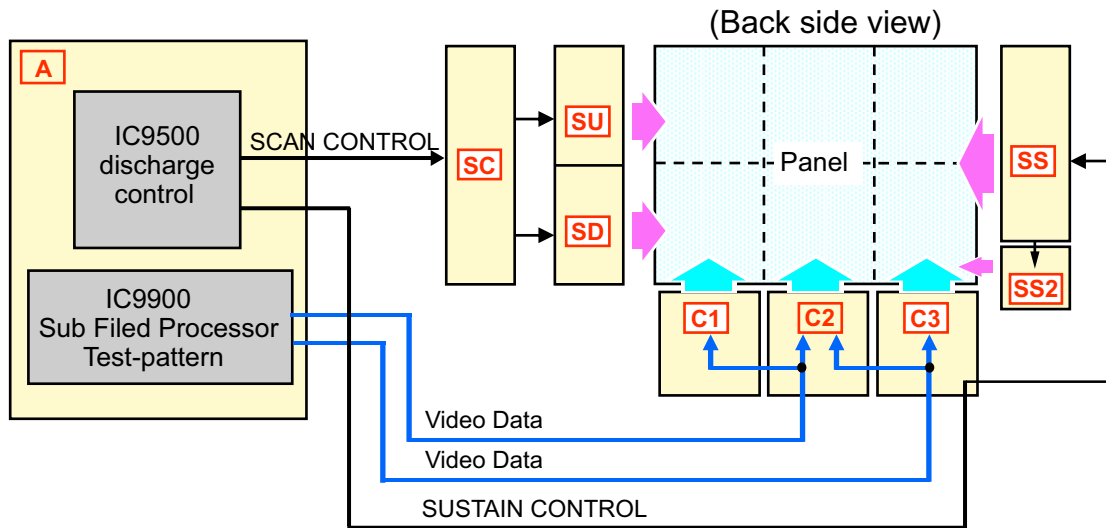
IC9500
: FPGA (Discharge Control)

IC9003
: Genx6 (Panel Micom)

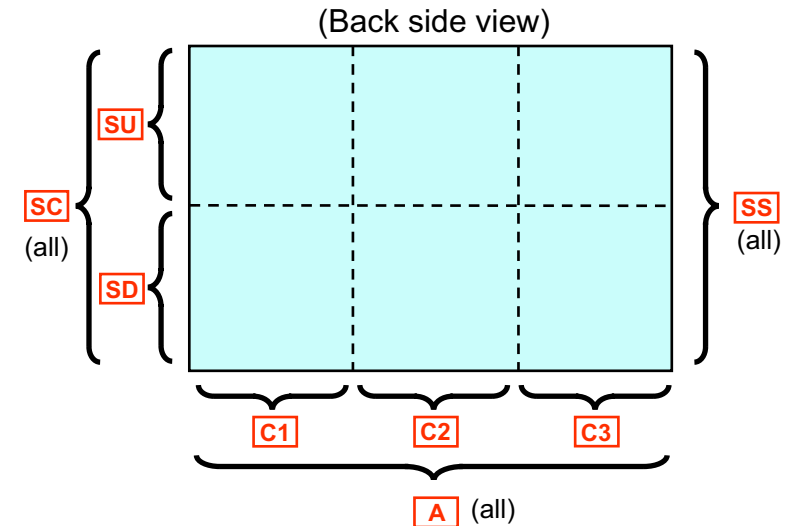
6. Troubleshooting (HD model)

We know the possible defective board by picture trouble area.

<Display device block diagram>



<Relation of defective board and picture trouble area >



* In case of 37inch models : For SU board and SD board, one SM board is used.

5. Troubleshooting for picture trouble

Picture trouble (diagnosis of vertical line)

PDP panel defective (Data driver IC defective)

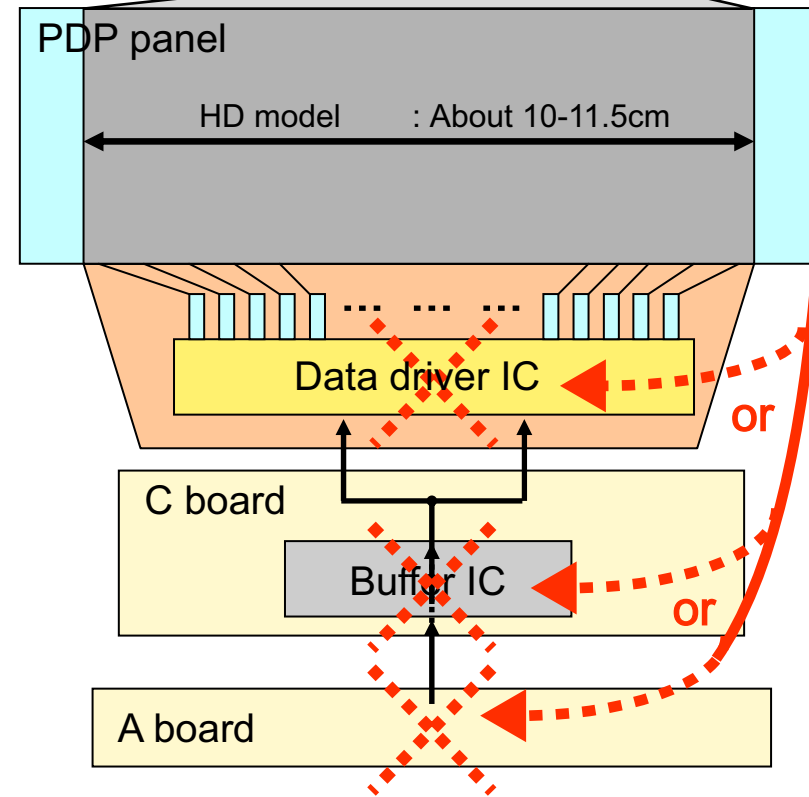
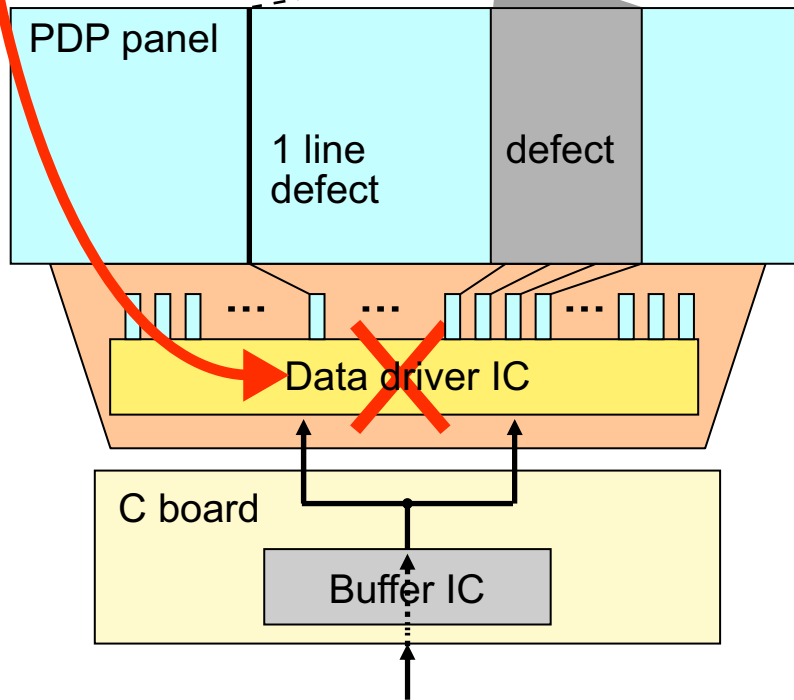
Data driver IC or C or A board defective

Width is narrower than FPC


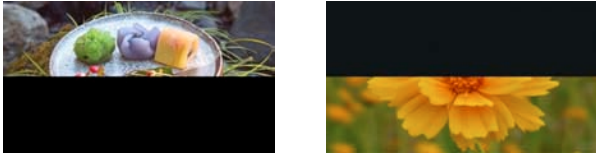

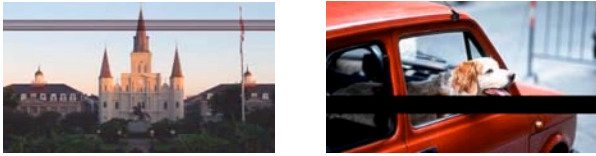
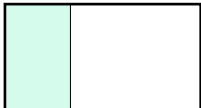


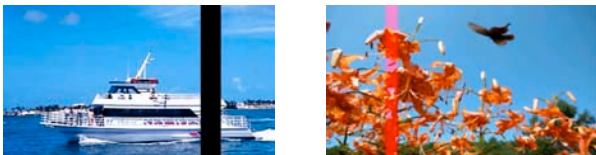
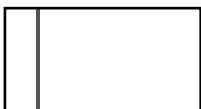
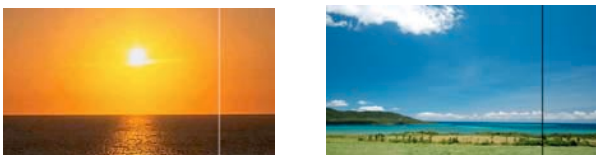
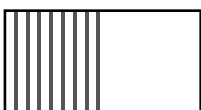
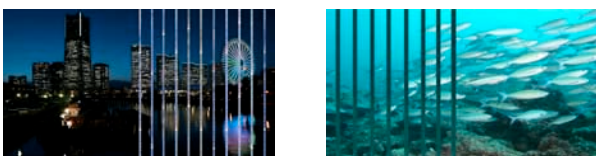
Width is same as FPC



Data driver IC defect= PDP panel defect






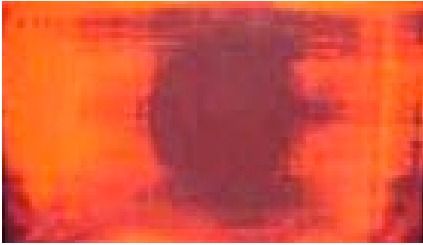
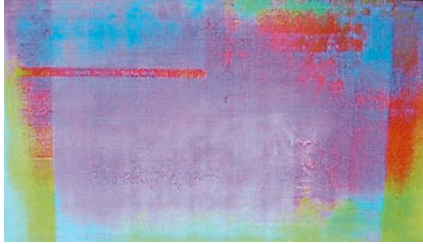


< Some part of screen >

Symptom	Actual symptom	Defective board
Trouble at Upper or Lower half (*1)	 	SU / SD board
Horizontal line (Upper or Lower side) (*1)	 	SU / SD board or PDP panel
Trouble at Left or Center or Right part (42/37inch : Left or Right half)	 	C1-C3 board (42/37inch : C1,C2)
Vertical line (Width is same as FPC)	 	C or A board or PDP panel
Vertical line (Width is narrower than FPC)	 	PDP panel
Regular bar	 	A board

(*1) In case of 37inch model : SU/SD-board change to one SM-board.

< All area of screen >

Symptom	Actual symptom		Defective board
Irregular Color			<div data-bbox="1727 379 2067 459" style="border: 1px solid black; background-color: blue; color: white; padding: 5px; text-align: center;">A board</div>
All vertical line			<div data-bbox="1727 667 2067 746" style="border: 1px solid black; background-color: blue; color: white; padding: 5px; text-align: center;">A board</div>
Abnormal electric discharge	 		<div data-bbox="1727 986 2067 1066" style="border: 1px solid black; background-color: blue; color: white; padding: 5px; text-align: center;">SC / SS board</div>

<Purpose>

Test pattern is helpful to find the defective parts.

For example, if we can see the picture problem at all over the screen (Picture Noise, Full Vertical Line, Abnormal color), we can find signal processing problem or panel phosphor problem by using test pattern.

<Model>

HD Models (X10, C10 series)

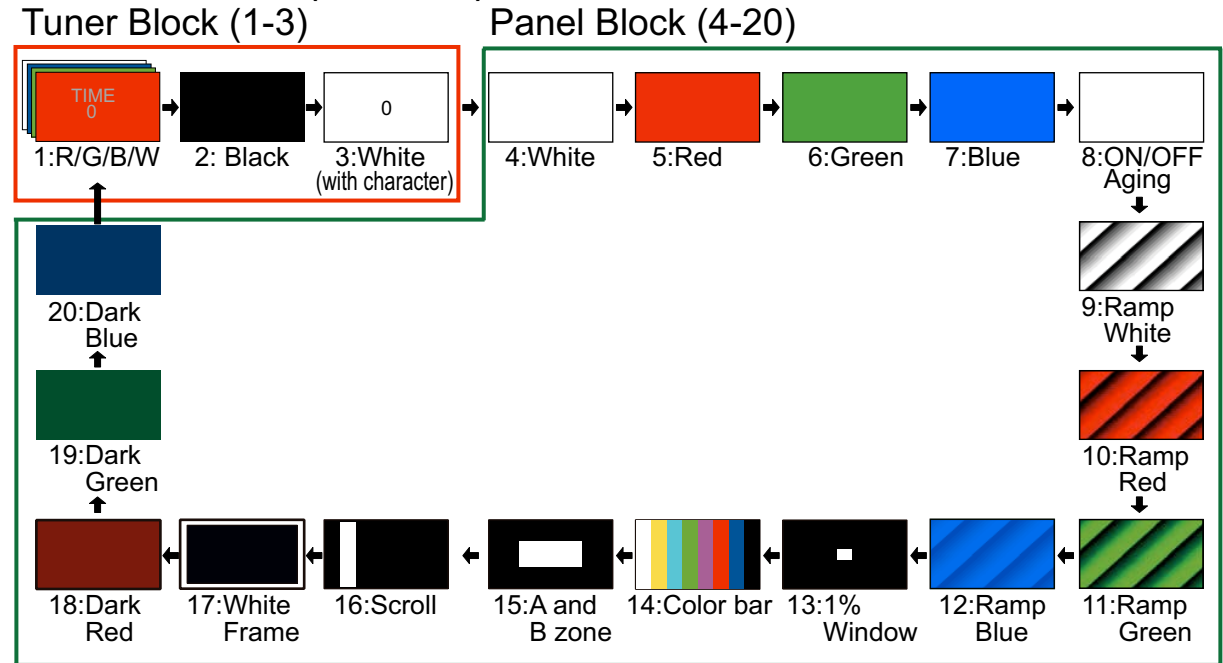
<Symptom>

Picture Noise, Full Vertical Line, Abnormal color

<How to enter the Test Pattern>

1. While pressing "VOLUME (-)" button of the main unit, press "0" button of the remote control three times within 2 seconds.
2. Push button "1" of Remote Controller several times, and select "Aging" setting, then "Test pattern" will appear.
3. Push "3" button of Remote Controller to select the test pattern mode to forward.
4. Push "4" button of Remote Controller to select the test pattern mode to reverse.

<Test Pattern (Normal)>



<Diagnosis>

How to diagnose by using test pattern

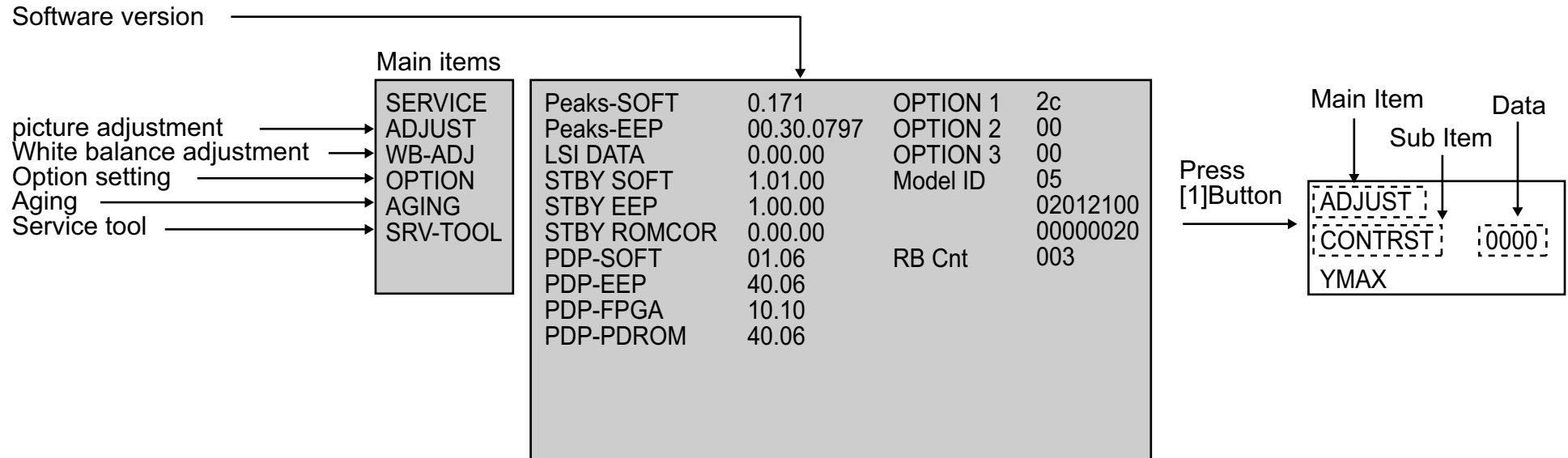
Abnormal picture (Picture Noise, Full Vertical Line, Abnormal color)

Test pattern (4-20)	Defective Block [Board]
Abnormal	Panel Block [A (SC/SS) Borad]
Normal	Tuner Block [A Board]

6. Service Information

<How to enter into Service Mode>

While pressing [VOLUME (-)] button of the main unit, press [0] button of the remote control three times within 2 seconds.



Key command

[1] button...Main items Selection in forward direction

[2] button...Main items Selection in reverse direction

[3] button...Sub items Selection in forward direction

[4] button...Sub items Selection in reverse direction

[VOL] button...Value of sub items change in forward direction (+), in reverse direction (-)

Press [OK] to memorize the value.

<Service tool mode>

How to access

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

SRV-TOOL	
TD2Microcode:81c0000e	
Flash ROM : 1-227E	
PTCT : 00.00.00.00.00	Time 00000:40 On/Off 0000022

Display of TD2Microcode version → TD2Microcode:81c0000e
 Display of Flash ROM maker code → Flash ROM : 1-227E
 Display of SOS History → PTCT : 00.00.00.00.00

Time 00000:40 On/Off 0000022 ← POWER ON TIME, On/Off display position

Display of SOS History

SOS History (Number of LED blinking) indication.

Latest SOS	Previous SOS	Second Previous SOS
↓	↓	↓
PTCT : 00 . 00 . 00 . 00 . 00		
	Second SOS after shipping	First SOS after shipping

POWER ON TIME, On/Off

Move the cursor to right low position and press [MUTE] button for 3sec.

Time	<u>00000</u> : <u>40</u>	On/Off	0000022
	Hour Minute		times

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

Exit

1. Disconnect the AC cord from wall outlet or switch off the power with the [POWER] button on the main unit.

<Contents>

As a convenient function for failure diagnosis, local maintenance function is installed to memorize log of error messages of digital broadcasting system.

By using this function analysis of troubles can be done.

<Available models>

2009 PDP models (only digital model)

<How to enter Local Maintenance display>

(1) Access SRV-TOOL display

Enter service mode, select SRV-TOOL, and push “OK” key by the remote control.

(2) Enter Log display of Local Maintenance.

By using four directions (UP, DOWN,RIGHT,LEFT), select upper-left cell of SRV-TOOL and push “OK” key for about three seconds.

The characters of Local Maintenance are indicated.

And perss “OK” key again.

Log display of Local Maintenance starts.



- Escape from Local maintenance display ----- Switch off the [POWER] button.
- How to delete Log data ----- Set factory shipping conditions by self check. (refer to page 30)

<Log construction of Local Maintenance>

The explanation of log

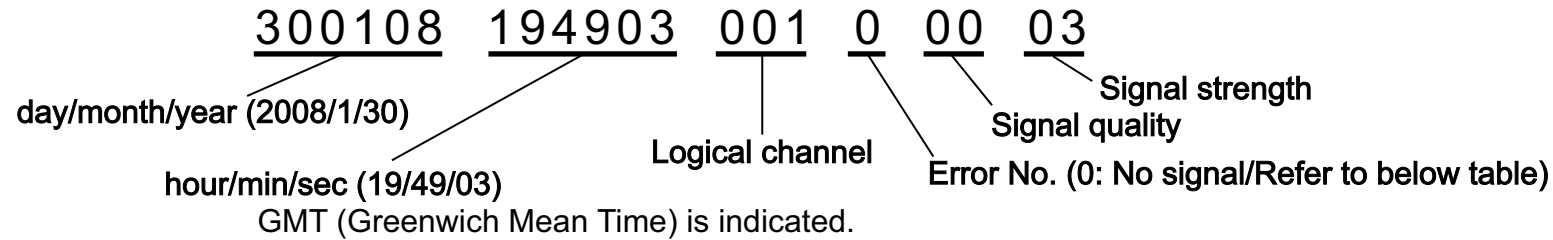
[PAL digital models]

1. cec.log - - - For the design section to analyze
 2. err_panel.log - - - log of error message of digital broadcasting, time, kind and date reception level
(refer to page 24)
 3. pow_msg.log - - - For the design section to analyze
 4. record1.log - - - For the design section to analyze
 5. scan_cable.log
 6. scan_satellite.log
 7. scan_freesat.log
 8. scan_terrestrial.log
- } Log of reception situation when scanning
(Date/Frequency/Signal quality/Signal strength)
(refer to page 24)
9. sig_msg.log - - - For the design section to analyze

<Log construction of Local Maintenance>

How to read log data

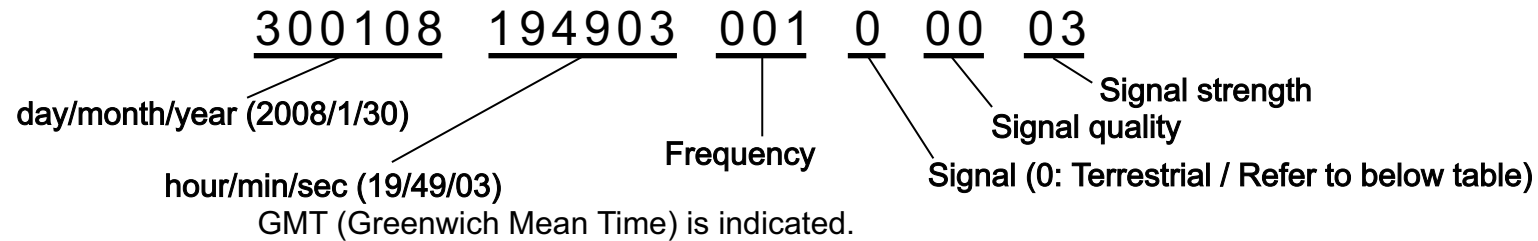
[**err_panel.log** data]



Kind of Error panel of Error No.

Error No.	Kind of Error panel	Remarks
0	NO SIGNAL	
1	NO SERVICE AVAILABLE	
2	NO VIDEO	
3	INVALID DVB CHANNEL	
4	ENCRYPTED	

[**scan_****.log** data]



Kind of Signal

Error No.	Signal	Remarks
0	Terrestrial	
1	Cable	
2	Satellite	
3	Freesat	

<Data copy function of Local Maintenance Log to SD card>

Log of Local Maintenance can be copied by Data Copy function to SD card and log data can be confirmed by PC.

<Steps to Data copy to SD card (TV set ➡ SD card)>

1. Making "starting file" in SD card
According to the function to use, make pwd file to start.
And keep it to SD card.

pwd file name - - - localmainte.pwd

How to make pwd file :
Create new (blank) Text file and change file name.

2. Power ON TV set and insert SD card with pwd file.
Automatically, Data Copy function display appears.

Note) Keep only one kind of pwd file in SD card.
If there are several pwd files, it may not work.

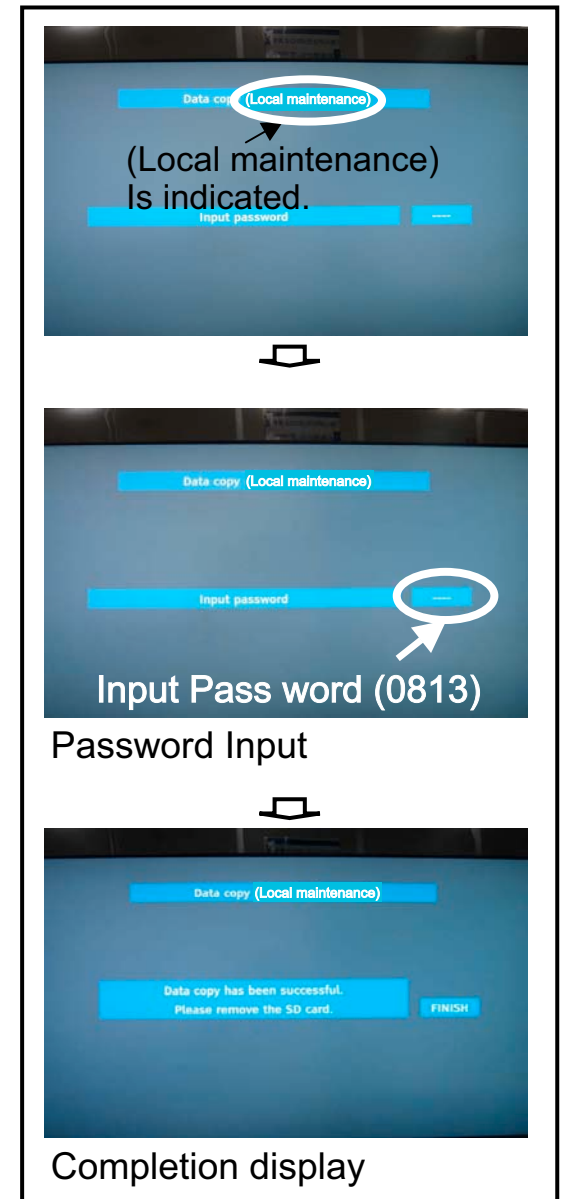
3. Input Pass word and perform Data Copy.
Input **Pass word (0813)** for Data copy to SD card and perform Data Copy.

4. Completion of Data Copy
After data copy completion is indicated, pull out SD card.
In SD card, new folder is made and in this folder, several logs are copied.

Note) No function to copy from SD card to TV set.

5. Power off the TV.

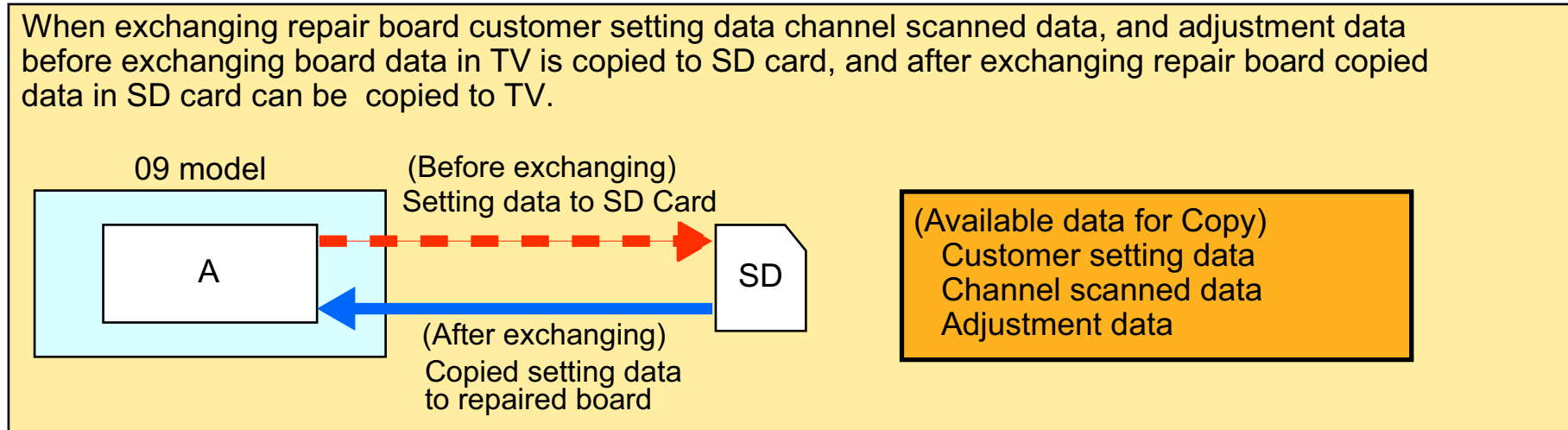
Note) By using PC, text data can be read.
And if data is not text data, change the suffix to txt or read by using the text editor.



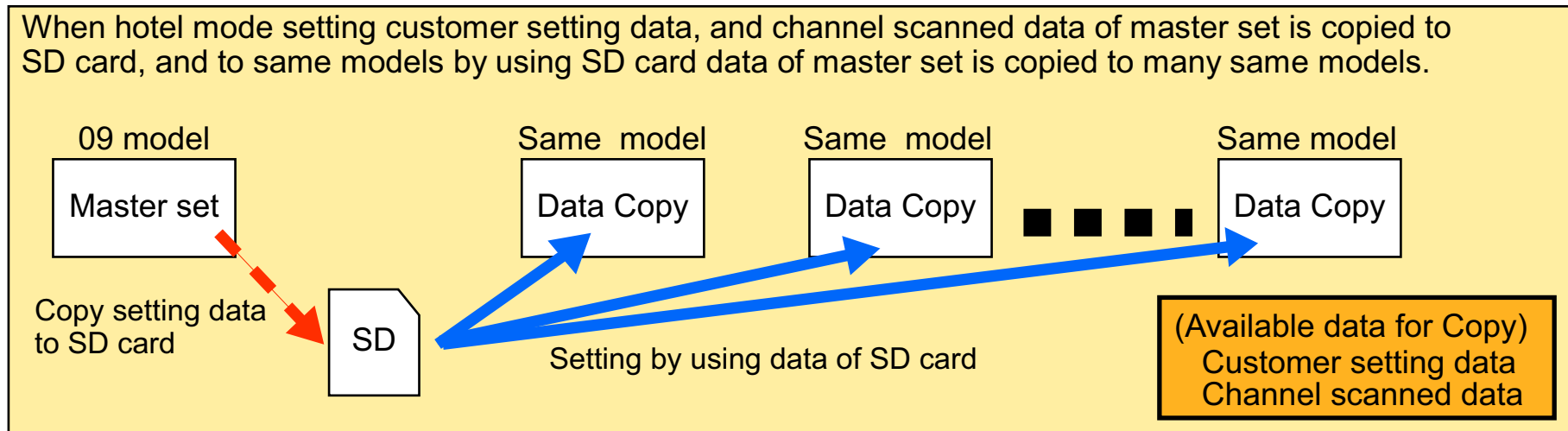
<From TV set to SD card>

There are two purposes.

(a) Copy of setting data when exchanging repair board (A board)



(b) Copy of hotel mode setting data



<From TV set to SD card>

[Preparation]

Make pwd file of (a) or (b) in SD card.

(Make new (empty) text file and change file name.)

	[pwd File name]
(a) For exchanging repair board	boardreplace.pwd
(b) For hotel mode setting	hotel.pwd

Note : Please make only 1 file ,for preventing operation error.

When making pwd file large letters should not be used.

<Steps of Data Copy to SD card (TV set → SD card)>

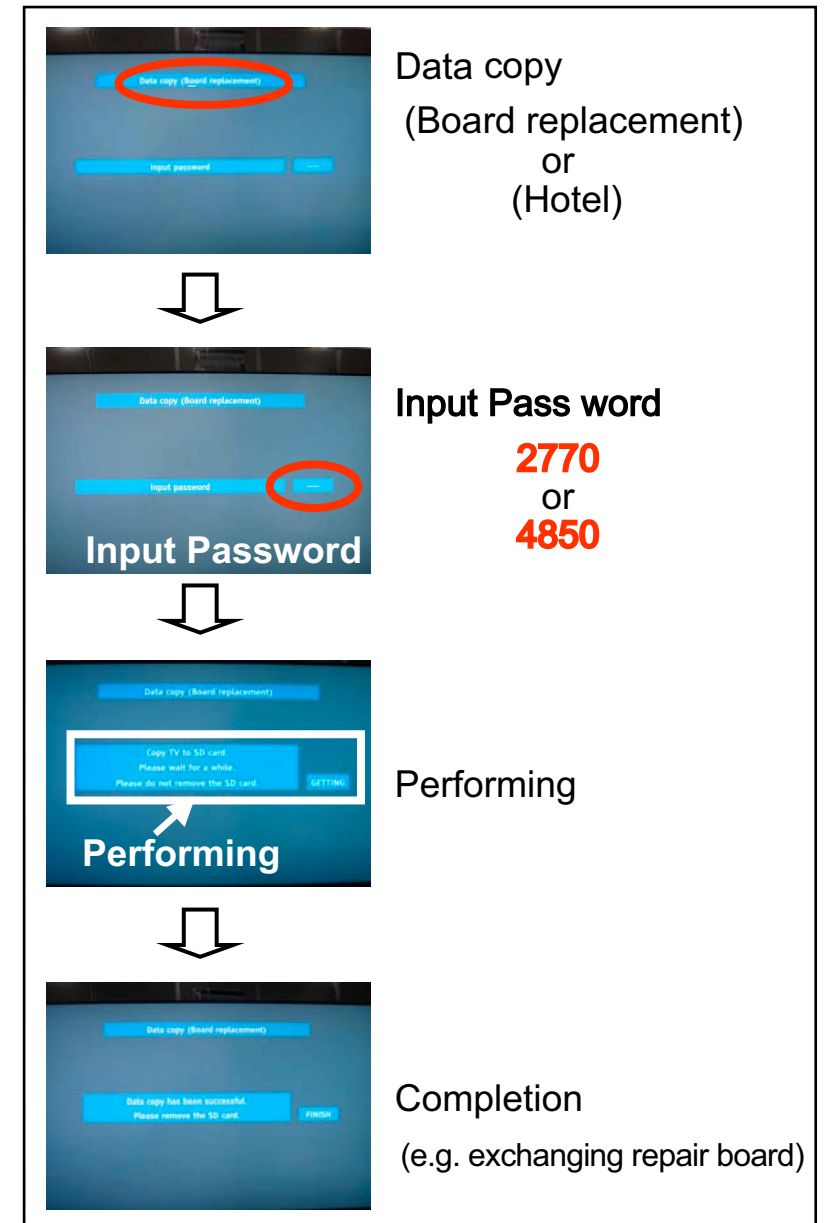
1. Power On TV set.
2. Insert SD card with pwd file to SD slot.
3. Automatically, Data Copy display will appear.
4. **Input Pass word** for Data copy to SD card by using remote control.

[Password for Data Copy]

(a) For exchanging repair board - - - - **2770**

(b) For hotel mode setting - - - - **4850**

5. Perform Data copy to SD card.
Information for reference
Time for Data copy (TV → SD card)
Euro/Asia model - - - - 90 seconds max.
6. End of Data copy to SD card
After the completion display of
Data Copy appear, pull out SD card.
Even if SD card is not pulled out, the display
will appear automatically.
Power Off TV set.
7. How to confirm Copy data
File data can be confirmed by PC.
When the following folder exists, data is pulled out.
Folder Name : (a) For exchanging repair boards - - - - **user_setup**
(After writing data, data is deleted.)
(b) For hotel mode setting - - - - **hotel**
(After writing data, data is not deleted.)



<Steps of Data Copy to TV set>

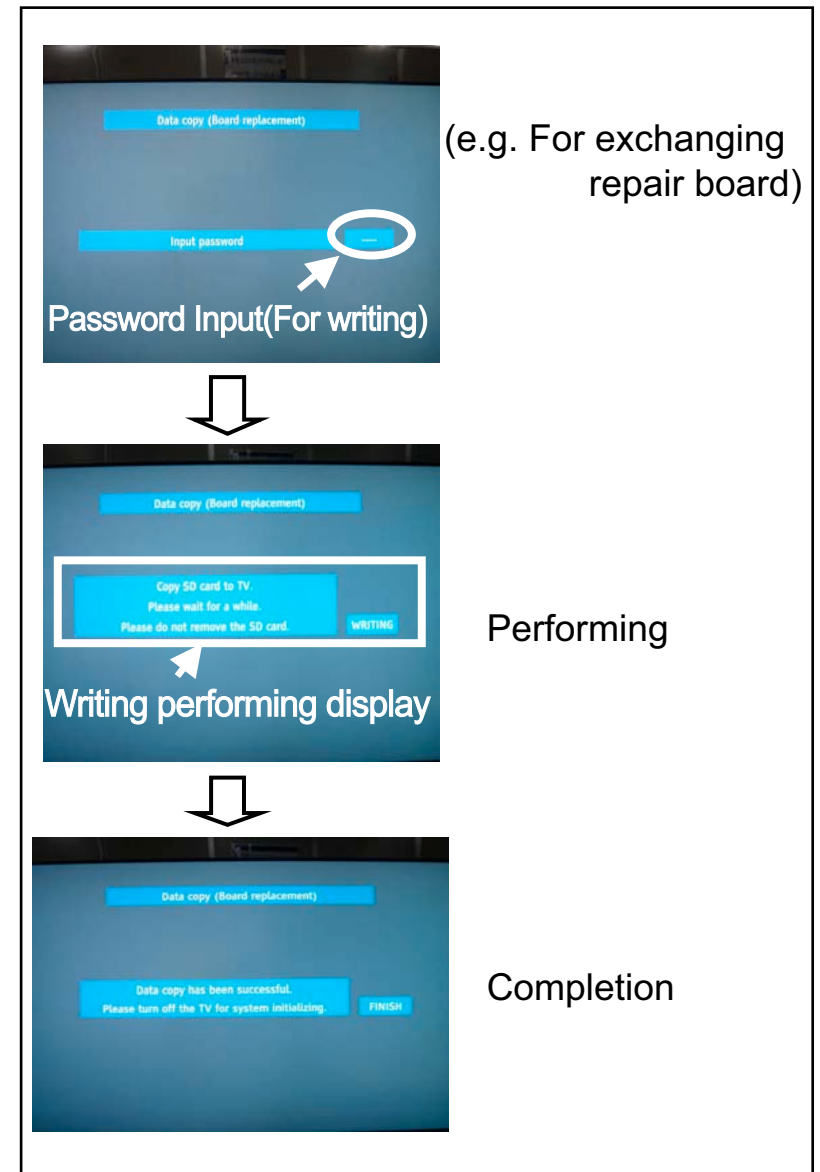
1. Power On TV set.
2. Insert SD card with Data to SD slot.
3. Automatically, Data Copy display will appear.
4. **Input Pass word** for Data copy to TV set by using remote control.

[Password for Data Copy]

- (a) For exchanging repair board - - - - **2771**
- (b) For hotel mode setting - - - - **4851**

5. Perform Data copy to TV set.
6. Completion of Data to TV set.
Completion of data Copy is displayed.
7. Pull out SD card.
Power OFF/ON by main switch.

- Note: 1. Depending on the trouble of boards, function of Data copy for exchanging repair boards does not always work.
2. This function does not work with other model numbers.



<Check of the IIC bus lines>

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.

Exit :

Disconnect the AC cord from wall outlet or switch off the power with the [POWER] button on the main unit.

2. Screen display & Check Point

(1) < X10/C10 Series > Screen display

_HD		Panasonic 2009PDP			
SET		SELF CHECK COMPLETE			
ADV	OK	PEAKS-SOFT	0.171	SUM	1f40
ADAV	OK	PEAKS-EEP	00.30.0797		
TUN	OK	GENX-SOFT	1.01.00	Model ID	05
GENX	OK	GENX-EEP	1.00.00		02012100
MEM1	OK	GENX-ROMCOR	0.00.00		00000020
MEM2	OK	PDP-MCU	01.06	EDID	ab 0515e5--
AVSW	OK	PDP-EEP	40.06		
PDP-PANEL	OK	PDP-FPGA	10.10		
OFDM	OK	PDP-PDPOM	40.06		
TEMP	OK				
VIF	OK				

Check Point

Confirm the following parts if NG was displayed.

Display	Ref.No.	Description	P.C.B
ADV	IC4510	AD/HDMI	A-Board
ADAV	IC2106	Sound Processor	A-Board
TUN	TU2901	Tuner	A-Board
GENX	IC1100	GenX (STB MCU)	A-Board
MEM1	IC1101	EEPROM (GenX)	A-Board
MEM2	IC8601	EPPROM (Peaks)	A-Board
AVSW	IC3001	Audio/Video SW	A-Board
PDP-PANEL	IC9003	MICOM	A-Board
OFDM	IC8301	Digital demodulater	A-Board
TEMP	IC4800	Temp Sensor	A-Board
VIF	TU2901	Tuner	A-Board

<Contents>

By using this function, even in the case of blackout, the results of Self Check can be confirmed.

<Available models>

2009 PDP models

<Steps>

1. Power on of TV set and insert the SD card. (**Starting file is not necessary.**)
2. After inserting SD card, perform Self Check according the method of Service Manual. (refer to page 30)
3. After the completion of Self Check, log file of results is automatically made.

File name is selfcheck.log.

If selfcheck.log is already in SD card, results are overwritten.

Note: For PAL models, when self check is performed with inserting SD card and results of Self check are OK, "SELF CHECK FAILED" is displayed.

42HD SET		Panasonic 2009PDP			
SELF CHECK FAILED					
ADV	OK	PEAKS-SOFT	0.171	SUM	1f40
ADAV	OK	PEAKS-EEP	00.30.0797	Model ID	05
TUN	OK	GENX-SOFT	1.01.00		02012100
GENX	OK	GENX-EEP	1.00.00		00000020
MEM1	OK	GENX-ROMCOR	0.00.00	EDID	e2 2b1b0bfb
MEM2	OK	PDP-MCU	01.06		
AVSW	OK	PDP-EEP	40.06		
PDP-PANEL	OK	PDP-FPGA	10.10		
OFDM	OK	PDP-PD2-M	40.06		
TEMP	OK				
FRC	OK				
VIF	OK				
SD CARD INSERTED!!					

When SD card is inserted and self check is OK, "SELF CHECK FAILED" is displayed.

Warning Comment "SD CARD INSERTED!!" is displayed.

(When SD card is inserted.)

<How to read Self check. Log file>

“ File contents ”

[yy/mm/dd hh:mm:ss] 01 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

yy: year(Two last digits),
 mm: month,
 dd: day,
 hh: hour,
 mm: minute,
 ss: second

No.1-19

Self check result
 00 or 01 : OK
 FF : NG or Not available for Self check

Items of Self check:Refer to the table below

[PAL models]

No.	Self check items	No.	Self check items
1	exec flag (Self check 01)	11	mem2 (EEPROM for Peaks)
2	ZWEI	12	pdppnl (PDP Panel module)
3	GC3FS	13	OFDM
4	adv (ADV7495A)	14	Temperature Sensor
5	vsw (Video SW)	15	FRC
6	adav(ADAV4622)	16	GC6P
7	avsw (AV SW)	17	VIF
8	Tun (Main Tuner)	18	lan
9	genx (Genx)	19	usb
10	mem1 (EEPROM for Genx)	—	—

6. Service Information

(6) CSP/BGA REPAIR PARAMETER SHEET

<For PDP series in 2009>

The following parameter is fundamental data.

Therefore, it will change according to the following factors and please adjust precise value with your environment and equipment .

1. Air-conditioner
2. Personal skill
3. Specification of Tools etc.

Tools for experiment
Company : Hakko Co.,Ltd.
Model no. : Hakko852 / Hakko853

Applicable model	<p>*PDP series in 2009 year ; The following ICs are used as common parts on several boards (PCBs) in models for all of the world. And the following parameter does not change depending on module (PCB). Therefore, please check IC size and circuit No. of replacing IC and use an appropriate parameter as below.</p>
------------------	---

	Type of Definition				HD	HD	FHD	FHD	FHD/HD	FHD	FHD/HD	FHD/HD	FHD/HD	FHD	FHD	FHD
	Circuit No.				IC9900	IC9901	IC9300	IC9902&3	IC8001	IC8001	IC8002&3	IC8002&3	IC4510	IC5100	IC5001&2	IC2600
	IC size				27*27	12*12	35*35	12*8	27*27	31*31	12*10	12*8	19*19	31*31	12*8	23*23
	Profile No.				Profile4	Profile3	Profile1	Profile3	Profile4	Profile4	Profile3	Profile3	Profile2	Profile5	Profile3	Profile4
Kind of work	Item 1	Item 2	Item 3	unit												
Various set up	Initial set up	Nozzle Part No.			A1129B	A1126B	A1203B	A1126B	A1129B	A1129B	A1126B	A1126B	A1127B	A1265B	A1126B	A1129B
		Nozzle Size			31*31	15*15	35*35	15*15	31*31	31*31	15*15	15*15	19*19	32*32	15*15	31*31
		Height from nozzle to C.B.A.	Pre-heating	mm	40	30	40	30	40	40	40	30	30	30	40	30
	Main heating		mm	4	3	4	3	4	4	4	3	3	3	4	3	4
	Cool down		mm	40	3	40	3	40	40	40	3	3	3	40	3	40
	Rough adjustment	Temperature	Upper side	deg	420	420	445	420	420	420	420	420	415	440	420	420
			Downer side	deg	235	235	235	235	235	235	235	235	230	235	235	235
		Blow level	l/min	20	12	22	12	20	20	20	12	12	12	20	12	20
	Fine adjustment	Heat time		s	240	210	240	210	240	240	210	210	180	240	210	240
			Temperature	Upper side	deg	370+5	360+5	370+5	360+5	370+5	370+5	360+5	360+5	375+5	370+5	360+5
Downer side		deg		265+5	265+5	265+5	265+5	265+5	265+5	265+5	265+5	265+5	265+5	265+5	265+5	265+5
Repair work	Time control	Heat time	Pre-heating	s	180	155	180	155	180	180	155	155	140	180	155	180
			Main heating	s	60	55	60	55	60	60	55	55	40	60	55	60
		Cool down time	s	over 30	over 30	over 30	over 30	over 30	over 30	over 30	over 30	over 30	over 30	over 30	over 30	over 30
Remark for each IC					Profile4	Profile3	Profile1	Profile3	Profile4	Profile4	Profile3	Profile3	Profile2	Profile5	Profile3	Profile4
Additional Information	1. If there are some parts (Crystal, capacitor, Tuner) near the target IC, cover them with heat-resistant tape.															