

Simple Repair Guide for PDP Panel

VD G.CS

May. 2008

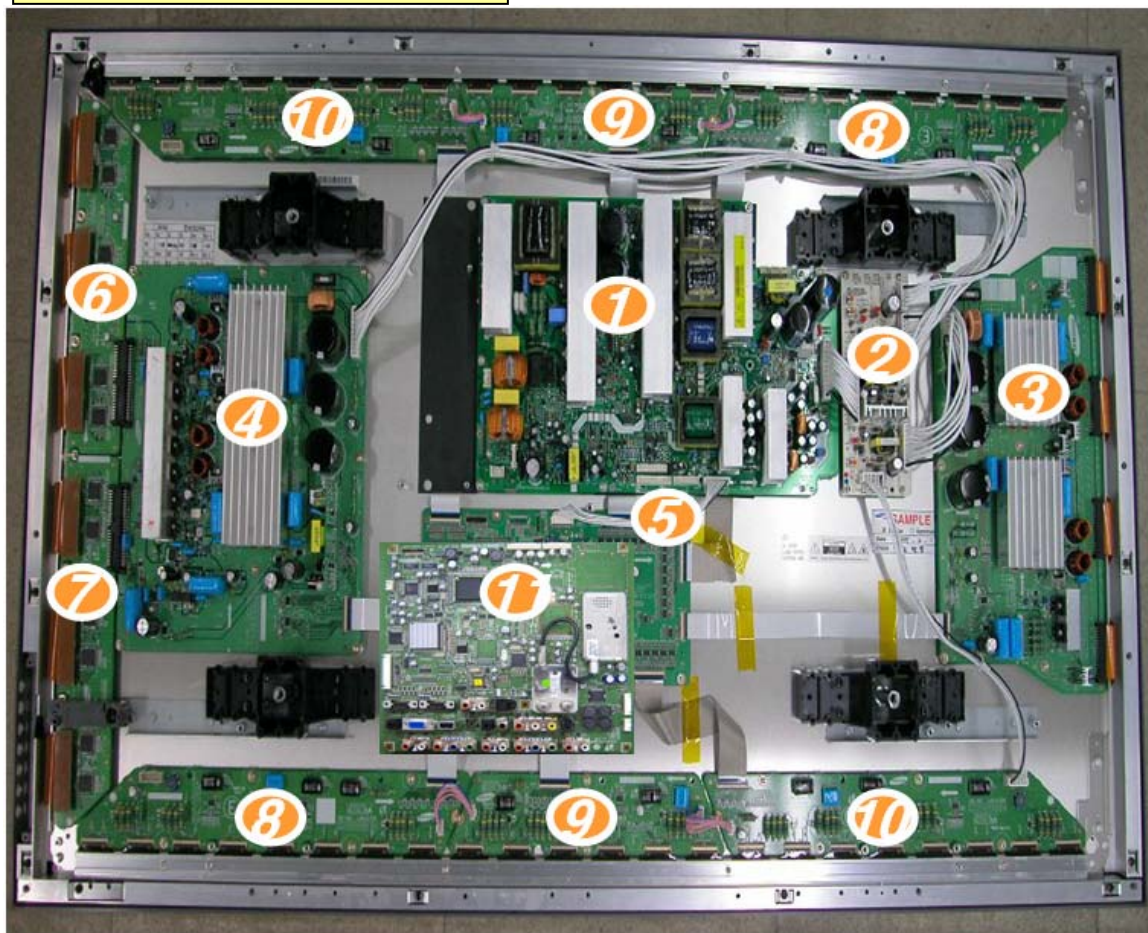
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- 2. Major Defect Symptom & Repair guide**
- 3. Function of each board**

1. Module Composition (Name & Location)
2. Major Defect Symptom & Repair guide
3. Function of each board

- Little difference as PDP Model version
- All locations are same with below picture as PDP model version

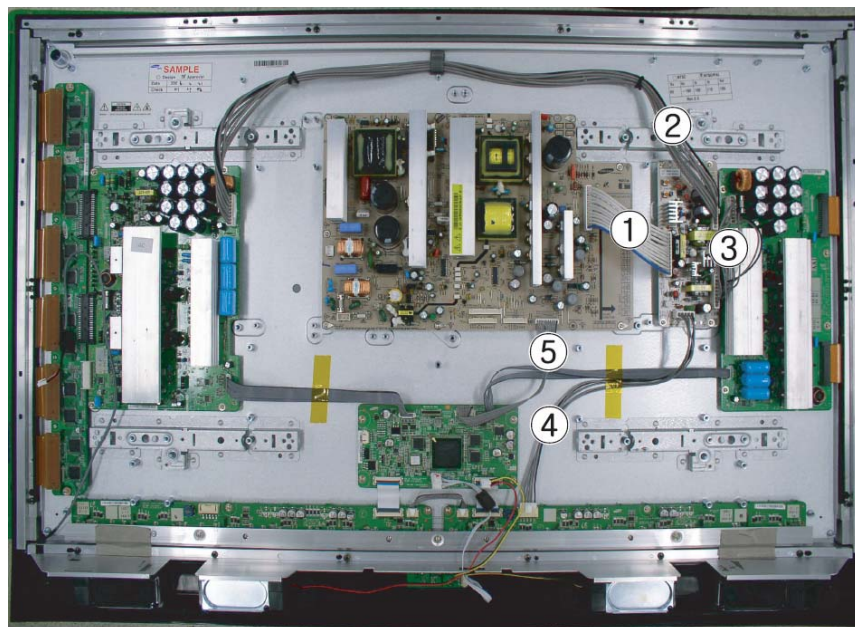
Example : PDP 2005



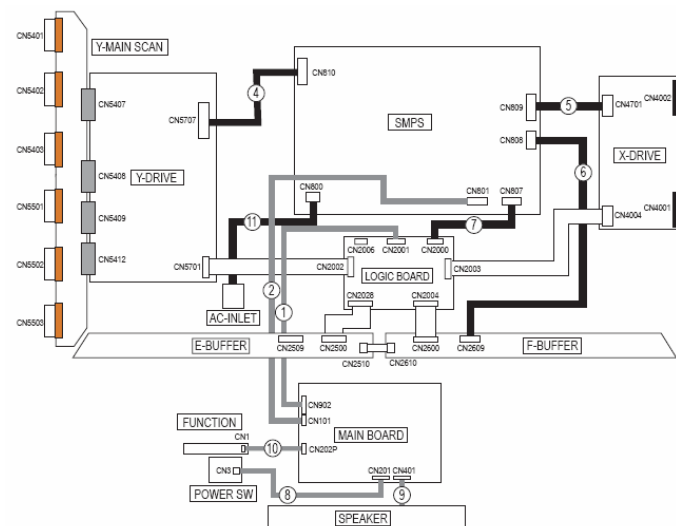
No	NAME
1	ASSY PCB P-SMPS
2	ASSY PCB P-SMPS DC-DC
3	ASSY PDP P-X MAIN BOARD
4	ASSY PDP P-Y MAIN BOARD
5	ASSY PDP P-LOGIC BOARD
6	ASSY PDP P-Y BUFFER UPPER BOARD or ASSY PDP P-Y MAIN UPPER SCAN
7	ASSY PDP P-Y BUFFER LOWER BOARD or ASSY PDP P-Y MAIN LOWER SCAN
8	ASSY PDP P-ADDRESS E-BUFFER BOARD
9	ASSY PDP P-ADDRESS F-BUFFER BOARD
10	ASSY PDP P-ADDRESS G-BUFFER BOARD
11	ASSY MISC-MAIN Board

- Can find the each part code on the GSPN with Model code & side label ver. on TV

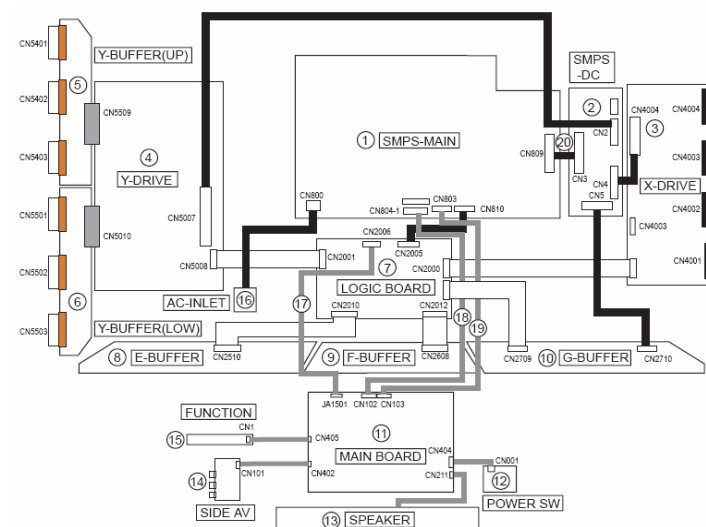
PDP 2006



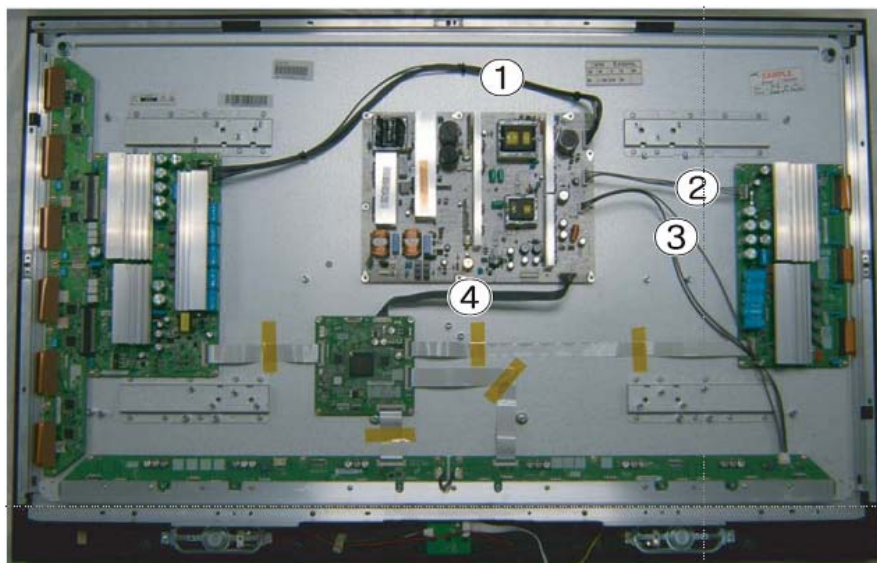
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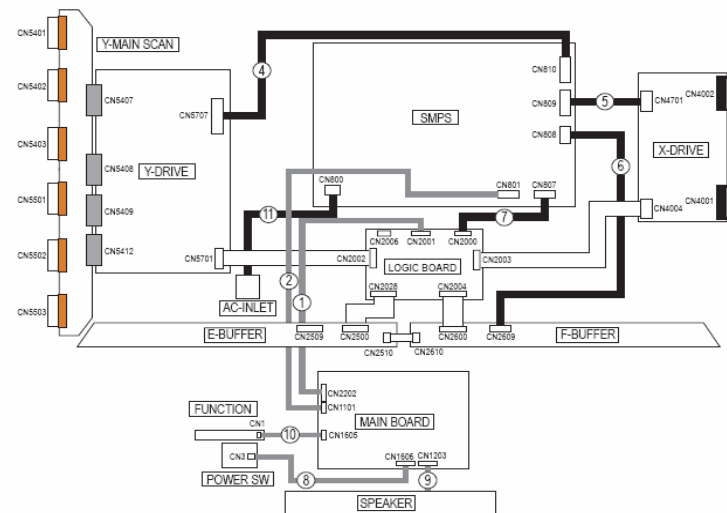
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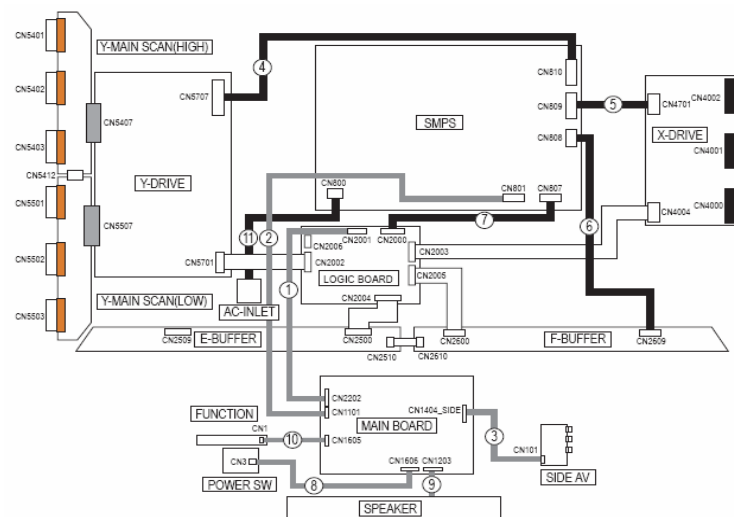
PDP 2007



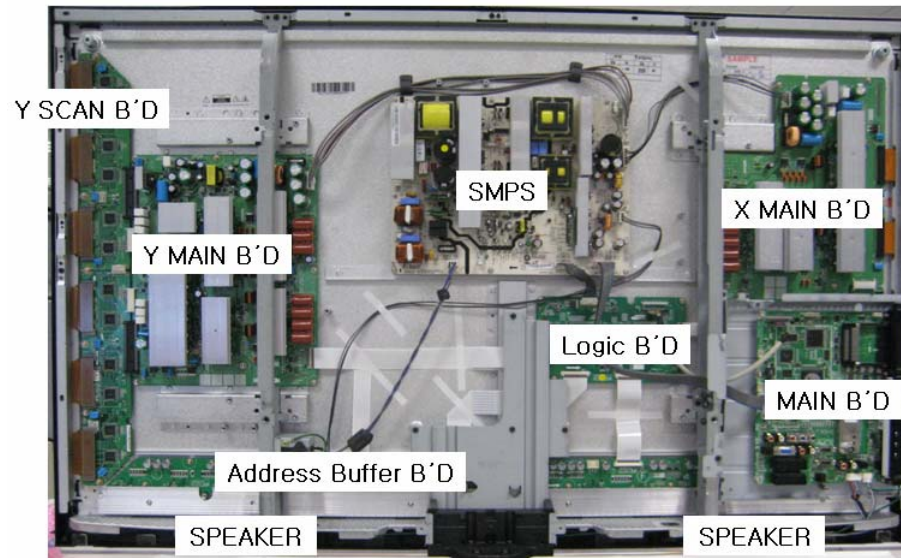
PS42C9+/PS42Q9+



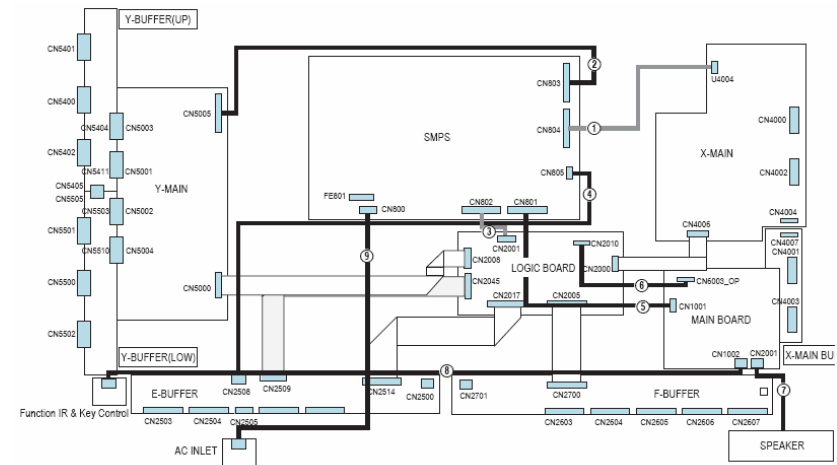
PS50C9+/PS50Q9+



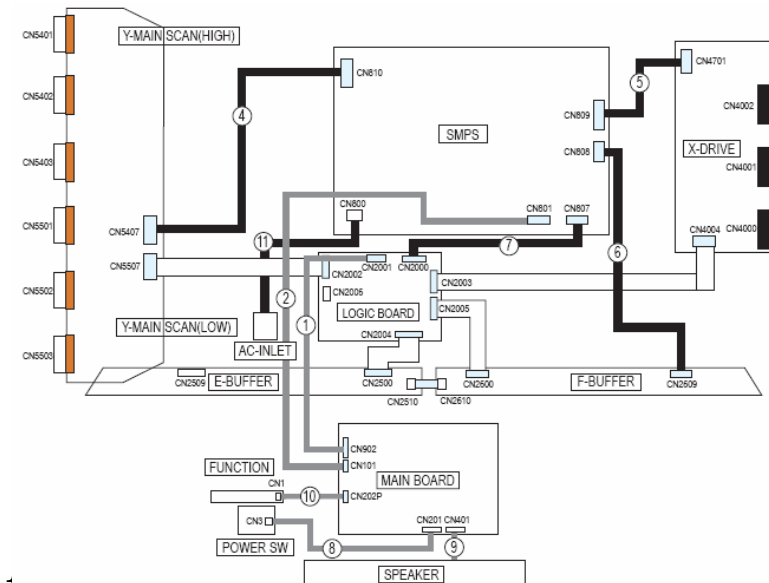
PDP 2008



PS42A450+/PS42A+



PS50A550+/PS50A+



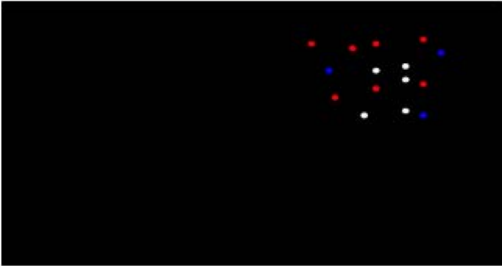







1. Module Composition (Name & Location)
- 2. Major Defect Symptom & Repair guide**
3. Function of each board


➤ Major defect symptom List

No	Symptom Name	Defective board
1	Discharge defect	Logic Board & Vs Va adjust on SMPS
2	Horizontal Line or Bar defect – Upper side	ASSY PDP P-Y BUFFER UPPER BOARD
3	Horizontal Line or Bar defect – Lower side	ASSY PDP P-Y BUFFER UPPER BOARD
4	Vertical Line or Block – Left side	ASSY PDP P-ADDRESS E-BUFFER BOARD
5	Vertical Line or Block – Right side	ASSY PDP P-ADDRESS G-BUFFER BOARD
6	Vertical Line or Block – Center	ASSY PDP P-ADDRESS F-BUFFER BOARD
7	Abnormal Display with regular intervals	ASSY PDP P-LOGIC BOARD
8	Dim Video or Dark Video	ASSY PDP P-X MAIN BOARD
9	Buzzing Noise	ASSY PCB P-SMPS & Cabinet
10	Pixel defect	Panel




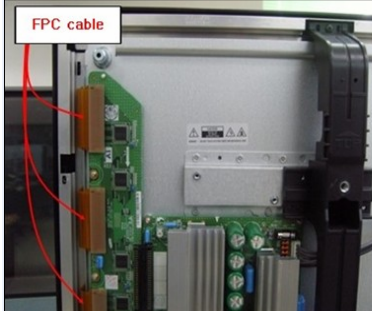

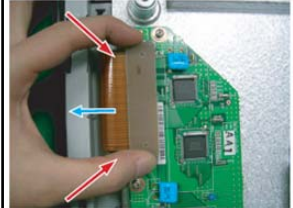
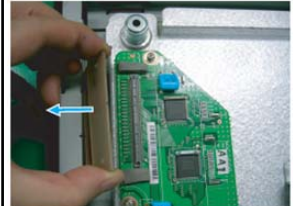
1. Discharge defect

Display	Symptom name	Repair Method	Remark
  	   Partial discharge defect	1. Upgrade Logic board Firmware - Refer to the left attached or change Logic board with upgraded one. - Refer to the left attached (only for W1 module)	 SW Upgrade  Logic BD Change
		2. Adjust Vs & Va on SMPS board - Refer to the left attached	
		3. If not fixed by adjust, replace whole Module - Also need to check Vs, Va voltage after panel replacement	

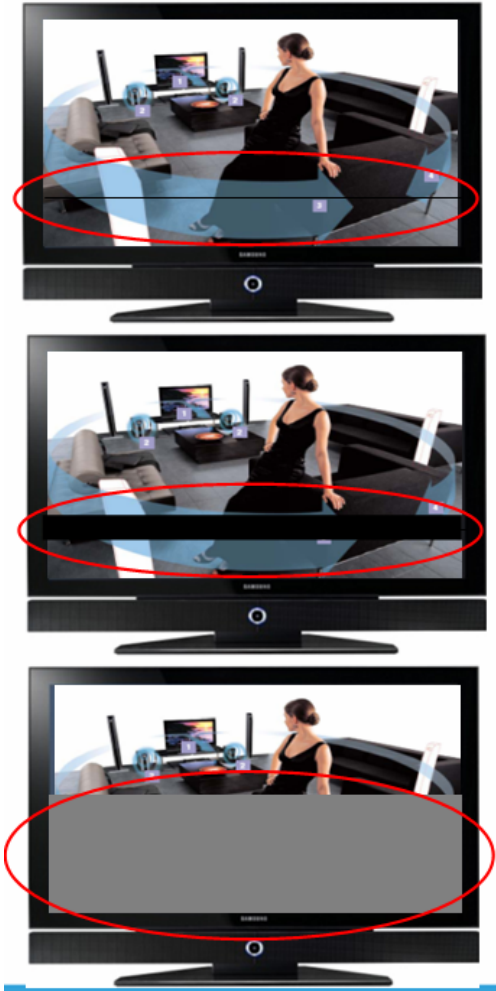
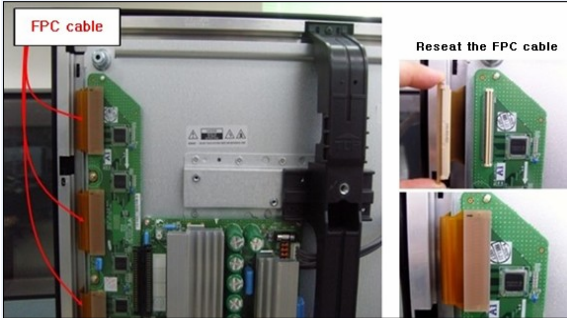
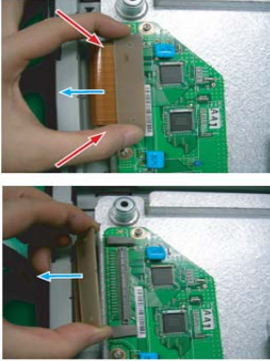
1. Discharge defect

Display	Symptom name	Repair Method	Remark
	Whole Picture Discharge like as contour line	1. Replace Y-Main and Y-Buffer board	Replacing both board can prevent form Repeat call.



2. Horizontal Line or Bar defect – Upper side

Display	Symptom name	Repair Method	Remark
  	Upper side Horizontal Line defect	1. Reseat FPC cable of defect occurred location  	(Caution) Attention to FPC cable damage  
		2. If not fixed, replace Y-buffer upper board	Need to replace the only on defect board Upper or Lower side
	In case all upper side defect, Replacing both board can prevent form Repeat call.		

3. Horizontal Line or Bar defect – Lower side

Display	Symptom name	Repair Method	Remark
	Lower side Horizontal line defect	<p>1. Reseat FPC cable of defect occurred location</p> 	<p>(Caution) Attention to FPC cable damage</p> 
		2. If not fixed, replace Y-buffer lower board	Need to replace the only on defect board Upper or Lower side
	<p>In case all lower side defect, Replacing both board can prevent form Repeat call.</p>		

4. Vertical Line or Block – Left side

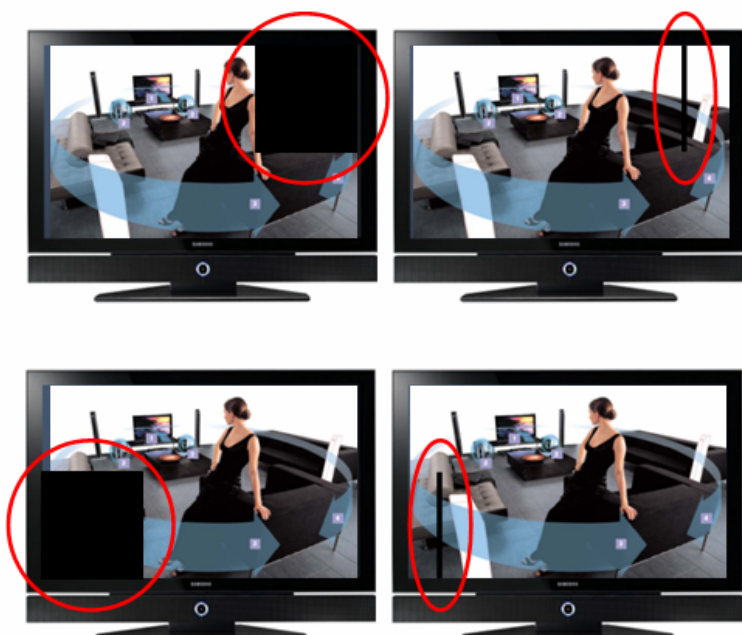
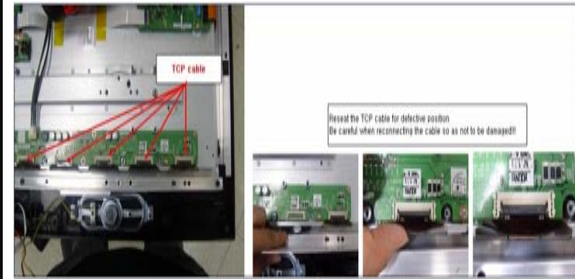
Display	Symptom name	Repair Method
	<p>Vertical line or Block No video</p>	<p>1. Reseat TCP cable on address E-buffer board</p> <p>- Refer to below picture</p>  <p>2. If not fixed, replace E-address buffer boards</p>

Defective position for E, F, G buffer

Need to replace the only defective board as defect position

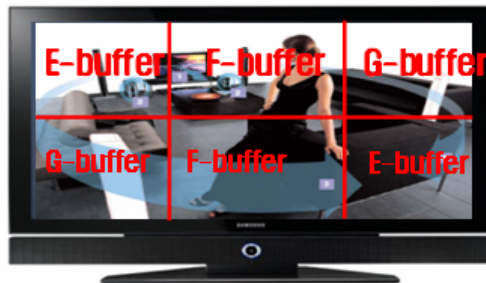


5. Vertical Line or Block – Right side

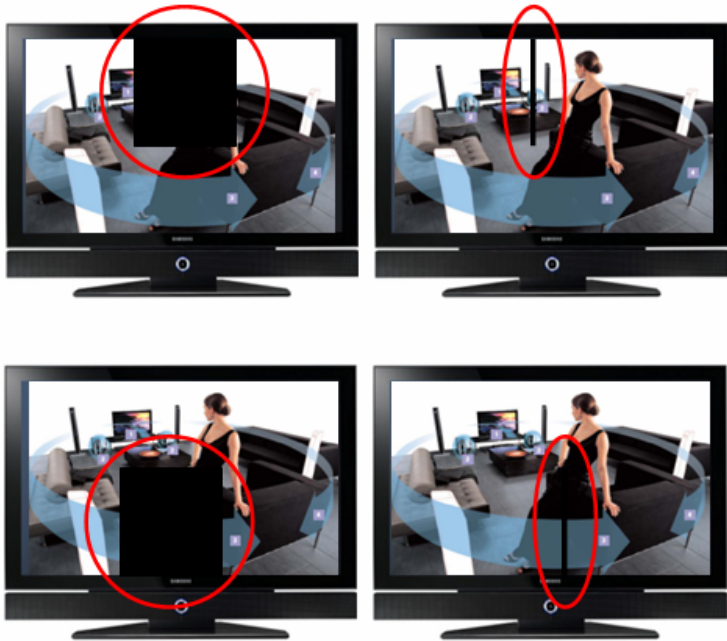
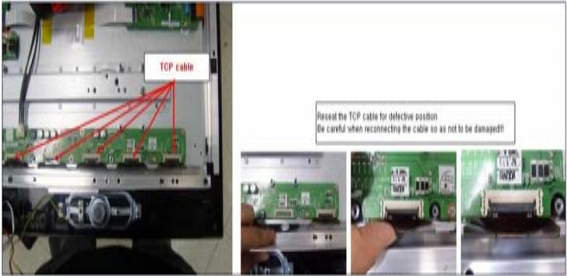
Display	Symptom name	Repair Method
	<p>Vertical line or Block No video</p>	<p>1. Reseat TCP cable on address G-buffer board</p> <p>- Refer to below picture</p>  <p>2. If not fixed, replace G-address buffer boards</p>

Defective position for E, F, G buffer

Need to replace the only defective board as defect position

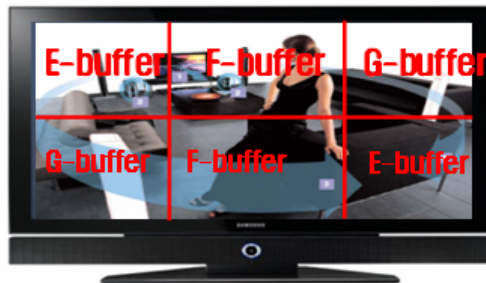


6. Vertical Line or Block - Center

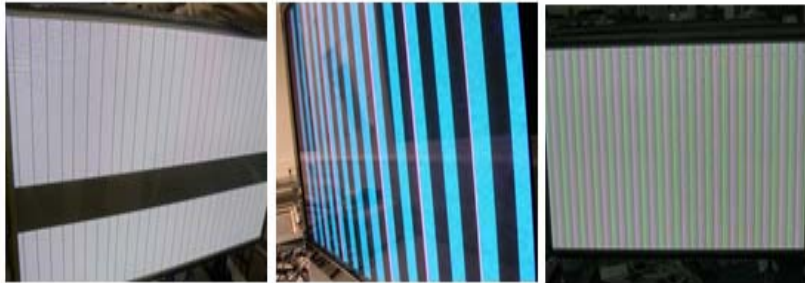
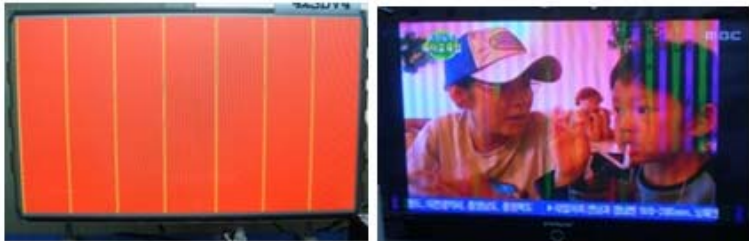

Display	Symptom name	Repair Method
	Vertical line or Block No video	1. Reseat TCP cable on address F-buffer board - Refer to below picture 
		2. If not fixed, replace F-address buffer boards

Defective position for E, F, G buffer


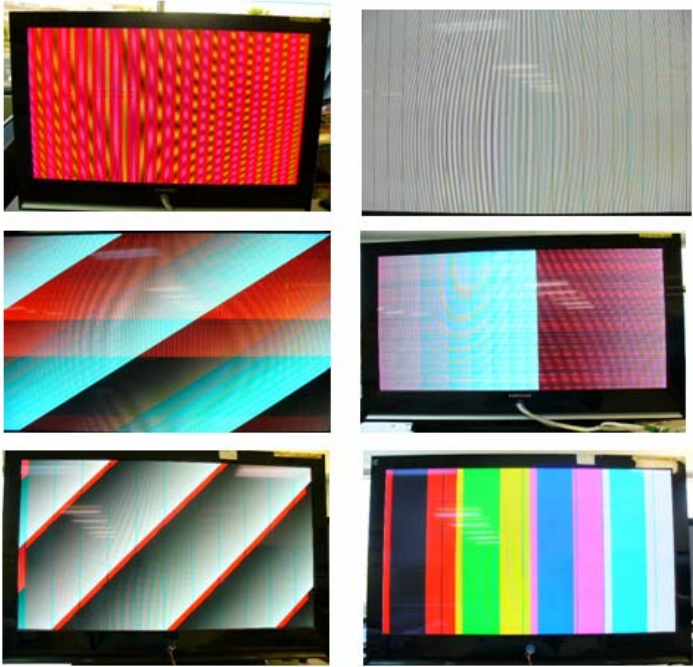
Need to replace the only defective board as defect position





7. Abnormal Display with regular intervals

Display	Symptom name	Repair Method
	<ul style="list-style-type: none"> • Abnormal Pattern at regular intervals 	<ol style="list-style-type: none"> 1. Reseat connector on a Logic board 2. If not fixed, Replace a logic board
	<ul style="list-style-type: none"> • Vertical lines at regular intervals 	
	<ul style="list-style-type: none"> • Signal sync. failure 	

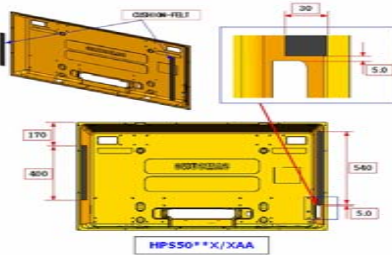
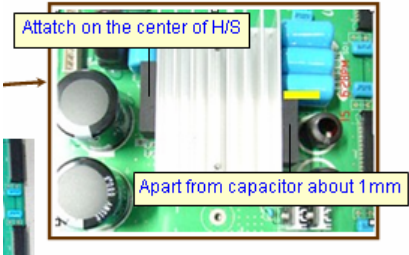
7. Abnormal Display with regular intervals

Display	Symptom name	Repair Method
	<ul style="list-style-type: none"> • Broken Picture 	<ol style="list-style-type: none"> 1. Reseat connector on a Logic board
	<ul style="list-style-type: none"> • Other Symptom Abnormal color or stripes 	<ol style="list-style-type: none"> 2. If not fixed, Replace a logic board

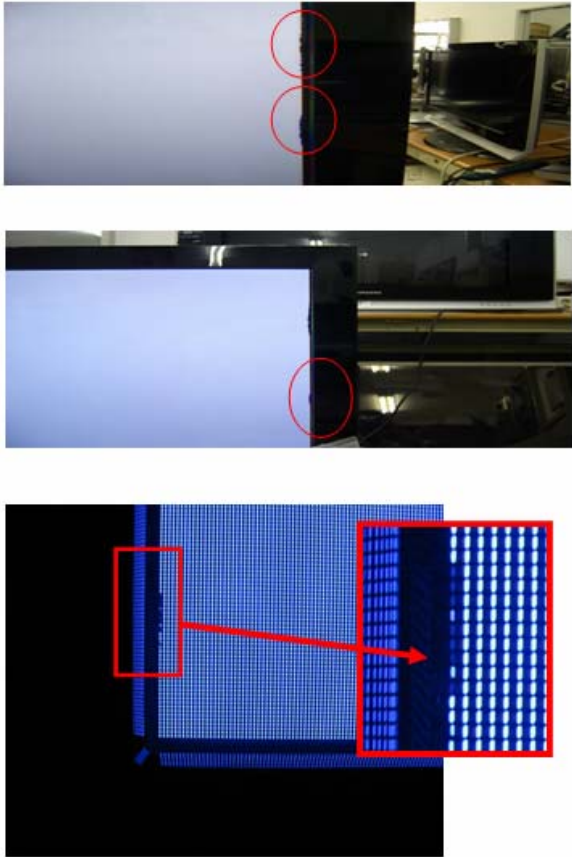
8. Abnormal Display with regular intervals

Display	Symptom name	Repair Method
<p>OK</p> 	<ul style="list-style-type: none">• Dim Video or No Video	<ol style="list-style-type: none">1. Reseat connector on a X-Main board2. If not fixed, Replace a X-Main board
<p>Dim Video</p> 		

9. Buzzing Noise

Display	Symptom name	Repair Method	Remark
Buzzing Noise by mechanical vibration	Buzzing Noise	1. If the noise comes from the vibration of Back-Cover, attach a spacer felt	
		2. If the noise source is X or Y main board, attach a damping sheet	
		3. If the noise source is SMPS, replace the SMPS	
		4. If not fix, replace the Module and then adjust Vs and Va	

10. Pixel defect

Display	Symptom name	Repair Method
	Large group Cell defect	Replace the whole module and then Adjust Vs and Va

1. Module Composition (Name & Location)
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■ **SMPS (Switching Mode Power Supply)**

It is the supplier to provide voltage and current to work the drive voltage and panel in each board.

■ **X-MAIN BOARD**

It makes the drive wave form by switching FETs to Timing Controller coming from logic-board and supplies X electrode of panel with the drive wave form via connector.

■ **Y-MAIN BOARD**

It makes the drive wave form by switching FETs to Timing Controller coming from the logic-board and provides Y electrode of panel with the drive wave form via Scan Driver IC on Y buffer board in order.

■ **LOGIC MAIN BOARD**

It process image signal and performs buffering of the logic-main board (to create XY drive signal and output) and the address driver output signal.

Then it supplies the output signal to the address driver IC(COF Module).

■ **LOGIC BUFFER(E,F,G)** : It delivers the data signal and control signal to the COF.

■ **Y-BUFFER (Upper,Lower)**

It is the board to impress the scan waveform on the Y board and consist of 2 boards (upper board and lower board).

8 Y-buffers are fixed at the scan driver (STV7617 of STC corp. : 64 or 65 Output).

■ **AC Noise Filter**

It has functions to remove noise(low frequency) coming from AC LINE and prevent surge. It gives serious effects on the safety regulations (EMC, EMI) according to AC filter.

■ **COF (Chip on Flexible)**

It impress the Va pulse to the address electrode in the address section and forms the address discharge by electric potential difference with scanning pulse to be dismissed by the Y electrode. It is made in the form of COF and one COF consists of 4 Data Drive IC (STV7610A :96 Output), otherwise single scan is made of 7 COF.]