Service Manual

ViewSonic VPW425

Model No. VLCDS22554-1W

42” Plasma TV Monitor

(VPW425-1_SM_598 - Rev. 1a – August 2002)

ViewSonic® 381 Brea Canyon Road, Walnut, California 91789 USA - (800) 888-8583

Revision History

Revision	Date	Description Of Changes	Approval
1a	8/28/02	Initial Issue – DCN2564	T. Sears

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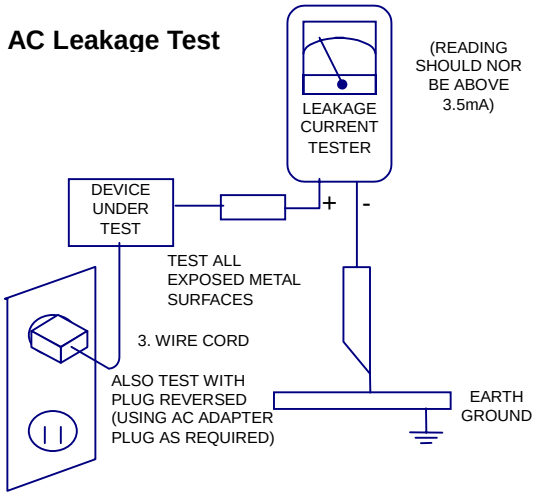
1. Before returning an instrument to the customer, always make a safety check of the entire instrument, including, but not limited to, the following items.

a. Be sure that no built-in protective devices are defective and/or have been defeated during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including, but not limited to, nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning.**

b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage, Such opening include, but are not limited to, (1) spacing between the picture tube and the cabinet mask, (2) excessively wide cabinet ventilation slots, and (3) an improperly fitted and/or incorrectly secured cabinet back cover.

c. Leakage Current Hot Check—With the instrument completely reassembled, plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institutes (ANSI) C101.1 Leakage Current for Appliances and Underwriters Laboratories (UL) 478. With the instrument AC switch first in the ON position and then in the OFF position, measure from a known earth ground (metal waterpipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle bracket, metal cabinet, screwheads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 3.5 milliamp. Reverse the instrument power cord plug in the outlet and repeat test. **ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER.**

AC Leakage Test



2. Read and comply with all caution and safety-related notes on or inside the Monitor cabinet, on the Projection Monitor chassis, or on the picture tube.

3. Design Alteration Warning—Do not alter or add to the mechanical or electrical design of this unit. Design alterations and additions, including, but not limited to, circuit modifications and the addition of the items such as auxiliary audio and/or video output connections might alter the safety characteristics of this Projection Monitor and create a hazard to the user. Any design alterations or additions will void the manufacturer's warranty and will make you, the service, responsible for personal injury or property damage resulting therefrom.

4. Hot Chassis Warning—**a.** Some Monitor chassis are electrically connected directly to one conductor of the AC power cord and may be safely serviced without an isolation transformer only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source. To confirm that the AC power plug is inserted correctly, with an AC voltmeter measure between the chassis and a known earth ground. If a voltage reading in excess of 1.0V is obtained, remove and reinsert the AC power plug in opposite polarity and again measure the voltage potential between the chassis and a known earth ground. **b.** Some Monitor chassis normally have 85V AC (RMS.), between chassis and earth ground regardless of the AC plug polarity. These chassis can be safely serviced only with an isolation transformer inserted in the power line between the receiver and the AC power source, for both personnel and test equipment protection. **c.** Some Projection Monitor chassis have a secondary ground systems in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground system are electrically separated by insulating material that must not be defeated or altered.

5. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: **a.** near sharp edges, **b.** near thermally hot parts—be sure that leads and components do not touch thermally hot parts, **c.** the AC supply, **d.** high voltage, **e.** antenna wiring. Always inspect in all areas for pinched, out-of-place, or frayed wiring. Do not change spacing between components, and between components and the printed-circuit board. Check AC power cord for damage.

6. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wireing that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.

7. PRODUCT SAFETY NOTICE—Many Monitor electrical and mechanical parts have special safety-related characteristics some of which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified in this service data by shading with a ⚠ mark on schematics and by shading or a ∗ mark in the parts list. Use of a substitute replacement part that does not have the same safety characteristics as the recommended replacement part in this service data parts list might create shock, fire, and/or other hazards.

SPECIFICATION VER1.0

1. SCOPE:
These specifications describe all the characteristics of the 42 inch color monitor.

2. ELECTRICAL REQUIREMENTS:

2.1. Display panel: Specification

a. Screen size	Diagonal 42 inch
b. Aspect ratio	16:9 wide
c. Number of pixels	852(Horizontal, RGB Trio) X 480(Vertical)pixels
d. Pixel Pitch	1.08mm X 1.08mm
e. Luminance	570cd/m^2,at APL13%
f. Chromatically	x=0.270±0.03, y=0.300±0.03(color temperature mode 1 :) at center block white pattern 100% (mosaic).

2.2. Power Source:

a. Input voltage	100 ~ 240 Vac , 50 / 60 Hz
b. Input current	3.3A
c. Inrush current	60 A p-p/20ms Max.
d. Power consumption	380±10% Watts (at 110Vac/color bar pattern)
e. Stand-by & DPMS	5 Watts Max. (at 110Vac)

2.3. Input Signal:

2.3.1 Connector Type:

RCA Jack for audio, video Y/C_B/C_R and Y/P_B/P_R
6 pin Din S-terminal
9 pin D-SUB
15 pin D-SUB
24 pin DVI

2.3.2 Video/S-Video Signal:

a. Type	Analog
b. Polarity	Positive
c. Amplitude	Video 1Vp-p , (priority S-Video) Y=1Vp-p C=0.286Vp-p
d. Frequency	H: 15.734KHz V: 60Hz(NTSC) H: 15.625KHz V: 50Hz(PAL)
e. Input impedance	75 ohms

2.3.3 Y/CB/CR or Y/PB/PR Signal:

a. Type	Analog
b. Polarity	Positive
c. Amplitude	AV: 1Vp-p (with sync) S-Video: Y: 1Vp-p ,C: 0.286Vp-p
d. Frequency	
Y/C_B/C_R Y/P_B/P_R: HDTV	H: 15.734KHz ,V: 60Hz (NTSC) H: 15.625KHz ,V: 50Hz (PAL) 1. 31KHz/60Hz (480P) 2. 45KHz/60Hz (720P) 3. 33KHz/60Hz(1080I)

2.3.4 RGB Signal:

a. Type	**TTL**
b. Polarity	**Positive or Negative**
c. Amplitude	**RGB: 0.7Vp-p**
d. Frequency	**H: support to 31K~91KHz**
	V: support to 50~85Hz

2.3.5 DVI Signal:

a. Type	**Digital**
b. Polarity	**Positive or Negative**
c. Frequency	**H: support to 31K~63KHz**
	V: support to 50~85Hz

2.3.6 Audio Signal: **Analog 500mV rms /more than 22Kohm**

2.3.7 Pin Assignments For D-SUB Connector (In / Loop Out):

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	RED	6	RED GND	11	GND
2	GREEN	7	GREEN GND	12	SDA
3	BLUE	8	BLUE GND	13	H-SYNC
4	GND	9	NC	14	V-SYNC
5	GND	10	GND	15	SCL

2.3.8 Pin Assignments For 24 Pin DVI Connector(Digital Only):

Pin	Signal Assignment	Pin	Signal Assignment	Pin	Signal Assignment
1	TMDS Data 2-	9	TMDS Data 1-	17	TMDS Data 0-
2	TMDS Data 2+	10	TMDS Data 1+	18	TMDS Data 0+
3	TMDS Data 2/4 Shield	11	TMDS Data 1/3 Shield	19	TMDS Data 0/5 Shield
4	TMDS Data 4-	12	TMDS Data 3-	20	TMDS Data 5-
5	TMDS Data 4+	13	TMDS Data 3+	21	TMDS Data 5+
6	DDC Clock	14	+5V Power	22	TMDS Clock Shield
7	DDC Data	15	Ground (For +5V)	23	TMDS Clock +
8	No Connect	16	Hot Plug Detect	24	TMDS Clock -

2.3.9 RGB/DVI For VESA Standard:

Mode No	Resolution	Refresh Rate	Horizontal Frequency	Vertical Frequency	Vertical Sync Polarity	Horizontal Sync Polarity	Dot rate
		(Hz)	(K Hz)	(Hz)	(TTL)	(TTL)	(MHz)
1	640(VGA)× 480	60	31.5	59.94	-	-	25.175
2	640(VGA)× 480	72	37.9	72.81	-	-	31.500
3	640(VGA)× 480	75	37.5	75	-	-	31.500
4	640(VGA)× 480	85	43.3	85.01	-	-	36.000
5	800(SVGA)× 600	56	35.1	56.25	+	+	36.000
6	800(SVGA)× 600	60	37.9	60.317	+	+	40.000
7	800(SVGA)× 600	72	48.1	72.19	+	+	50.000
8	800(SVGA)× 600	75	46.9	75	+	+	49.500
9	800(SVGA)× 600	85	53.7	85.06	+	+	56.250
10	1024(XGA)× 768	60	48.4	60.01	-	-	65.000
11	1024(XGA)× 768	70	56.5	70.07	-	-	75.000
12	1024(XGA)× 768	75	60.0	75.03	+	+	78.750
13	1024(XGA)× 768	85	68.7	84.99	+	+	94.500
14	1280(SXGA)× 1024	60	63.98	60.02	+	+	108.00
15◎	1280(SXGA)× 1024	75	79.98	75.03	+	+	135.00
16◎	1280(SXGA)× 1024	85	91.15	85.02	+	+	157.50
18	640(VGA)× 350	70	31.50	70	-	-	25.175
19	640(VGA)× 480	50	31.5	50	-	-	25.175
20◎	1280(HDTV)× 720P	60	45.15	60	-	-	74.250
21◎	1920(HDTV)× 1080I	60(I)	33.78	60	-	-	74.250
22	720(DOS)× 400	70	31.46	70.08	+	-	28.320
23	852(WGA)× 480	60	31.72	60.41	-	-	34.00

RGB/DVI For Apple Standard.

Mode No	Resolution	Refresh Rate	Horizontal Frequency	Vertical Frequency	Vertical Sync Polarity	Horizontal Sync Polarity	Dot rate
		(Hz)	(K Hz)	(Hz)	(TTL)	(TTL)	(MHz)
24	640× 870	75	68.85	75.00	-	-	57.283
25	832 x 624	75	49.73	74.55	-	-	57.283
26	1152 x 870	75	68.68	75.06	-	-	100.000

Attention ◎: For DVI is not supported.

2.3.10 Y/PB/PR For Component:

Mode No	Resolution	Refresh Rate
1	640 × 480P	60
2	1920 × 1080I	60
3	1280 × 720P	60

2.4. Display Performance Requirements:
The data of display performance are measured based on the following.
Conditions unless otherwise specified.

a. Ambient temperature	25±5 ℃
b. Warm up period	30 minutes Min.
c. Line input voltage :	100 Vac ~ 240 Vac (50 / 60 Hz)
d. Viewing distance	Distance from screen is 81 cm
e. Display mode	Test with window white pattern mode if not specified.
f. Brightness condition	Press recall bottom to set default brightness

2.4.1 Maximum Resolution: Support to 1280 x 1024

2.4.2 Horizontal Size (Standard) 920±8 mm (for mode 1～26)
Vertical Size (Standard) 518±8 mm (for mode 1～26)

2.4.3 Horizontal Size (Max.) Mode 1~26⇨ full-scan
Vertical Size (Max.) Mode 1~26⇨ full-scan

2.4.4 Maximum Brightness Level: Timing Mode 1

a. 100% center block white pattern(mosaic)	More than 30FL (while pressing recall button to set default brightness)
b. raster background	with contrast / brightness at Max. and black signal) less than 0.4FL

2.5. Operation:

Main unit button	Main power switch (power ON /OFF) Power ON/OFF Input Mode (Video1 -> S-Video1 -> Video2 or S-Video2 -> $Y/P_B/P_R$ 1 or $Y/C_B/C_R$ 1 -> $Y/P_B/P_R$ 1 or $Y/C_B/C_R$ 1 -> RGB -> DVI->Video1 run in circle) Menu key -,+ Adjustment -,+
IR Remote Control	Power on/off Input Mode (same as Main unit button) Volume -,+ Wide , Video/S video input:4:3/16:9/ZOOM1/ZOOM2 Analog RGB input :W4:3/W16:9 Menu -,+ Adjustment -,+ RECALL PIP ,POP ,SWAP ,MUTE

2.5.1 Adjustable Items:

AV/S-video input Y/CB/CR	Brightness, Contrast, Color , Tint, Sharpness Color Temperature
Analog RGB input	Display position : Brightness, Contrast, Vertical position, Vertical width, Horizontal position, Horizontal width, Color Temperature Clock phase, DPMS.
DVI input	Brightness, Contrast, Vertical position, Vertical width, Horizontal position, Horizontal width, Color Temperature, DPMS

3. DIMENSIONS: Without/Stand With/Stand

Width	1040mm	1040mm
Height	648 mm	690mm
Depth	95mm	375 mm

3.1. Package Dimensions:

Width	1230 mm
Height	960 mm
Depth	470 mm

3.2. Weight:

Net weight	79.4lbs/36 Kgs (w/o stand) 83.8lbs/ 38Kgs (w/ stand)
Gross weight	115lbs/52 Kgs

4. ENVIRONMENT:

4.1. Operating:

Temperature	0~40℃(32~104℉)
Relative humidity	20~80%
Pressure	800~1114hpa

4.2. Non-Operating:

Temperature	-20~60℃
Relative humidity	20~90%
Pressure	700~1114hpa
Vibration	X/Y/Z, 0.5G/10~55Hz(sweep), 10 minutes

4.3. Acoustics:
(IHF A-weighted 1meter) 40dB Max.

5. SOUND:

a. Residual hum (at volume min) 500 μW Max.
b. Practical max. Audio output (at 10% THD max.)
1.0vp-p 1K Hz input 5W +5W Max. /12 ohm
c. Sound distortion (at 250 mw 1K Hz) 1% Max.
d. Sound distortion (at
i.ovp-p 1kHz input volume max) 9% max
e. Audio output (input at 1.4V_{P-P}) $\geqq$1.0 V_{P-P}
f. Max. hum (at volume max) 1000 μW Max.
g. Sensitivity (at volume max. O/P 1W) 150mV ± 3dB
at 1KHz AV Input
h. Audio Fidelity (1KHz 0dB,corrected for emphasis characteristics)

BBE ON	60Hz	6dB ± 3dB
	10KHz	8dB ± 3dB
WOOFER & BBE OFF	100Hz	-6dB ± 3dB
	10KHz	-2dB ± 3dB

6. RF

6.1 RF Sensitivity (Peak)

VHF	CH 2 ~ CH 13	30dB Max.
UHF	CH 14 ~ CH 69	30dB Max.
CATV	CH A-5 ~ CH W+29	30dB Max.

6.2 AFT Pull-In Range

VHF	CH 2 ~ CH 13	± 0.6MHz Min.
UHF	CH 14 ~ CH 69	± 0.6MHz Min.
CATV	CH A-5 ~ CH W+29	± 0.6MHz Min.

6.3 Picture IF Rejection

VHF	CH 2 ~ CH 13	50dB Min.
UHF	CH 14 ~ CH 69	50dB Min.
CATV	CH A-5 ~ CH W+29	50dB Min.

6.4 Picture Image Rejection

VHF	CH 2 ~ CH 13	40dB Min.
UHF	CH 14 ~ CH 69	35dB Min.
CATV	CH A-5 ~ CH W+29	35dB Min.

6.5 AGC Characteristics

AGC Figure Of Merit 50dB Min.
RF signal range in which video at PDP drops 6 dB from output level obtained with 100mV input.

6.6 RF AGC Cut In Level 55dB ± 2dB

6.7 FM/AM Rejection (100mV at SIF input) 14dB min

6.8 Noise Limits Sensitivity VHF 45dB max
UHF 49dB max

7. RELIABILITY REQUIREMENT:
The MTBF needs 20000hrs under operation 25±5℃(half luminosity, motion picture)

8. REGULATORY REQUIREMENTS:

8.1 Safety Requirement:

a. UL Safety of information technology equipment including electrical business equipment
b. CSA Safety of information technology equipment including electrical business equipment
c. TUV

8.2 Emission Requirement:
The unit shall meet the EMI limits in all screen modes. For EMI testing, the unit must be failed with the screen pattern consisting of scrolling capital “H” characters also the brightness contrast will be adjusted to max. Level.

a. FCC class A part 15

8.3 Transit test

a. Drop Test **200mm max.**

b. Vibration Test

1. Forward and backward **30 minutes 1000 c.p.m**
2. Right and left **30 minutes 1000 c.p.m**
3. Up and down **30 minutes 1000 c.p.m**

8.4 Power Management:

Mode	H-sync	V-sync	Video	Power dissipation
Normal	Pulse	Pulse	Active	Normal power
Stand-by	No pulse	No pulse	No video	Power off
Power saving	Pulse	No pulse	Blanked	Less than 5 watts
	No pulse	Pulse		

This Plasma display is Energy star compliant when used with a computer equipped with DPMS.

Note: The power indicator LED color is green in normal state, yellow in stand-by and power saving state.

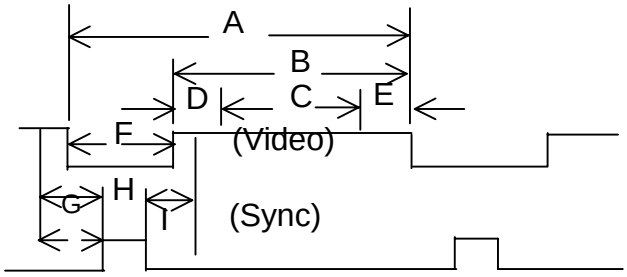
9. VIDEO & AUDIO

9.1 Video Signal Output (impedance 75 ohm) **1.0 Vp-p ± 0.2Vp-p**

(input signal at 1.0 Vp-p ± 0.2Vp-p)

APPENDIX A :

Preset Timing Chart

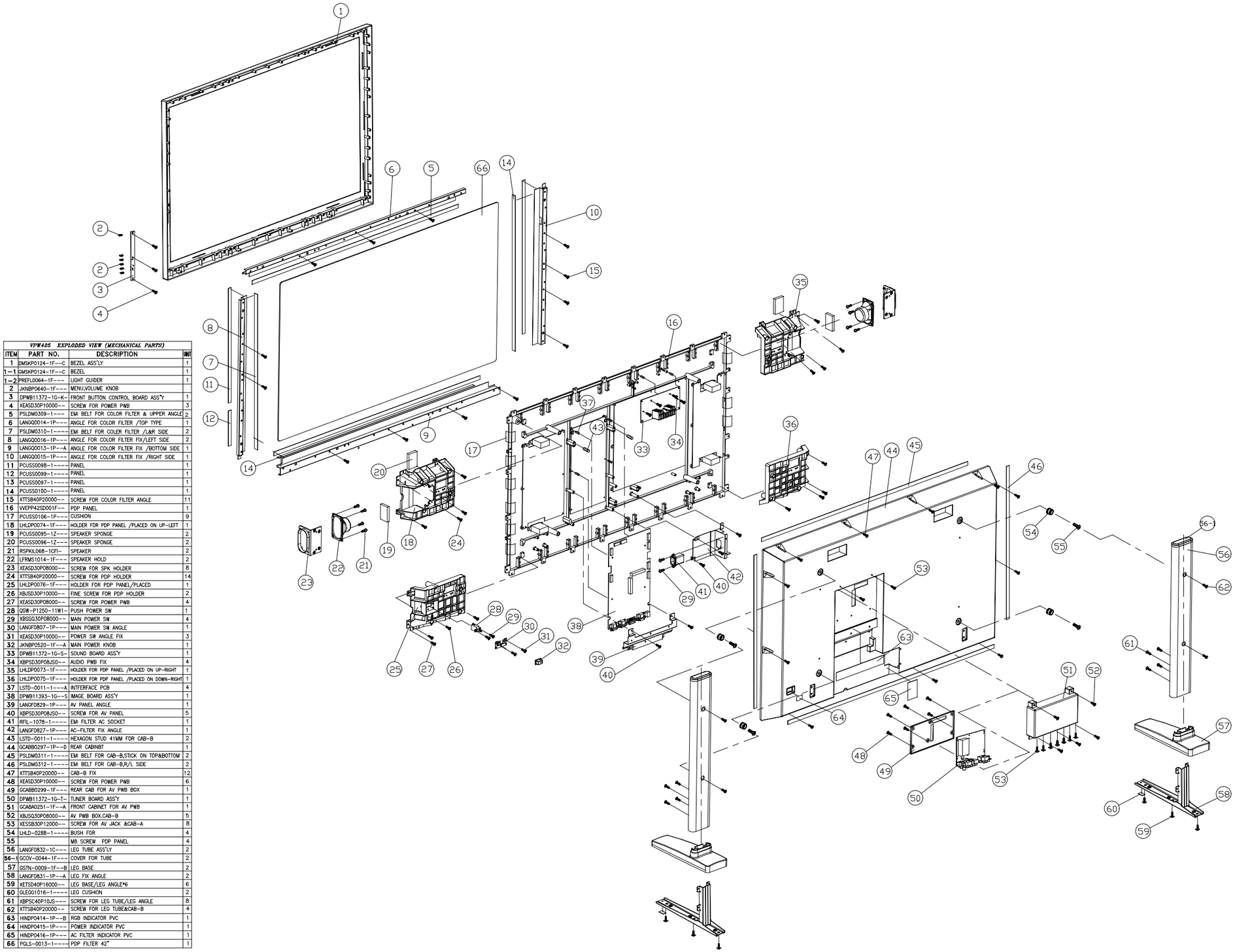


Item	Description:
A	Total time
B	Active display area including borders
C	Active display area excluding borders
D	Left/Top border
E	Right/bottom border
F	Blanking time
G	Front porch
H	Sync-width
I	Back porch

Mode No	1	2	3	4	5	6	7	8	9	
Resolution & Refresh Rate	640 480 60	640 480 72	640 480 75	640 480 85	800 600 56	800 600 60	800 600 72	800 600 75	800 600 85	Hz
Pixel	25.175	31.5	31.5	36	36	40	50	49.5	56.25	MHz
Horizontal visible	640	640	640	640	800	800	800	800	800	Dots
Horizontal total	800	832	840	832	1024	1056	1040	1056	1048	Dots
Horizontal front porch	24	32	16	56	24	40	56	16	32	Dots
Horizontal sync	96	40	64	56	72	128	120	80	64	Dots
Horizontal back porch	40	120	120	80	128	88	64	160	152	Dots
Horiz blanking time	160	192	200	192	224	256	240	256	248	Dots
Vertical visible	480	480	480	480	600	600	600	600	600	Lines
Vertical total	525	520	500	509	625	628	666	625	631	Lines
Vertical front porch	18	17	1	1	1	1	37	1	1	Lines
Vertical sync	2	3	3	3	2	4	6	3	3	Lines
Vertical back porch	25	20	16	25	22	23	23	21	27	Lines
Vertical blanking time	45	40	20	29	25	28	66	25	31	Lines
Horizontal frequency	31.469	37.9	37.5	43.3	35.1	37.9	48.1	46.9	53.7	KHz
Vertical frequency	59.94	72.81	75	85.01	56.25	60.317	72.19	75	85.06	Hz
Vertical sync polarity	-	-	-	-	+	+	+	+	+	TTL
Horiz sync polarity	-	-	-	-	+	+	+	+	+	TTL
Dot rate	25.175	31.5	31.5	36	36	40	50	49.5	56.25	MHz

Mode No	10	11	12	13	14	15	16	18	19	
Resolution & Refresh Rate	1024 768 60	1024 768 70	1024 768 75	1024 768 85	1280 1024 60	1280 1024 75	1280 1024 85	640 350 70	640 480 50	Hz
Pixel	65	75	78.75	94.5	108	135	157.5	25.175	25.175	MHz
Horizontal visible	1024	1024	1024	1024	1280	1280	1280	640	640	Dots
Horizontal total	1344	1328	1312	1376	1688	1688	1728	800	800	Dots
Horizontal front porch	24	24	16	48	48	16	64	16	16	Dots
Horizontal sync	136	136	96	96	112	144	160	96	96	Dots
Horizontal back porch	160	144	176	208	248	248	224	48	48	Dots
Horiz blanking time	320	304	288	352	408	408	448	160	160	Dots
Vertical visible	768	768	768	768	1024	1024	1024	350	480	Lines
Vertical total	806	806	800	808	1066	1066	1072	449	629	Lines
Vertical front porch	3	3	1	1	1	1	1	37	62	Lines
Vertical sync	6	6	3	3	3	3	3	2	2	Lines
Vertical back porch	29	29	28	36	38	38	44	60	85	Lines
Vertical blanking time	38	38	32	40	42	42	48	99	149	Lines
Horizontal frequency	48.4	56.5	60	68.7	63.98	79.98	91.15	31.50	31.5	KHz
Vertical frequency	60.01	70.07	75.03	84.99	60.02	75.03	85.02	70	50	Hz
Vertical sync polarity	-	-	+	+	+	+	+	-	-	TTL
Horiz sync polarity	-	-	+	+	+	+	+	-	-	TTL
Dot rate	65	75	78.75	94.5	108	135	157.5	25.175	25.175	MHz

Mode No	20	21	22	23	24	25	26			
Resolution & Refresh Rate	1280 720P 60	1920 1080I 60I	720 400 70	852 480 60	640 870 75	832 624 75	1152 870 75			Hz
Pixel	74.250	74.25	28.320	30	57.283	57.283	100.000			MHz
Horizontal visible	1266	1901	720	852	640	832	1152			Dots
Horizontal total	1650	2201	900	955	832	1152	1456			Dots
Horizontal front porch	42	68	18	19	32	32	32			Dots
Horizontal sync	63	63	108	48	80	64	128			Dots
Horizontal back porch	279	169	54	36	80	224	144			Dots
Horiz blanking time	384	300	180	103	192	320	304			Dots
Vertical visible	687	518	400	480	870	624	870			Lines
Vertical total	750	562.5	449	525	918	667	915			Lines
Vertical front porch	1	0.5	12	10	3	1	3			Lines
Vertical sync	6	6	2	2	3	3	3			Lines
Vertical back porch	56	38	35	33	42	39	39			Lines
Vertical blanking time	63	44.5	49	45	48	43	45			Lines
Horizontal frequency	45.15	33.78	31.46	31.72	68.85	49.73	68.68			KHz
Vertical frequency	60	60	70.08	60.41	75.00	74.55	75.06			Hz
Vertical sync polarity	-	-	+	-	-	-	-			TTL
Horiz sync polarity	-	-	-	-	-	-	-			TTL
Dot rate	74.25	74.25	28.32	30	57.283	57.283	100.000			MHz

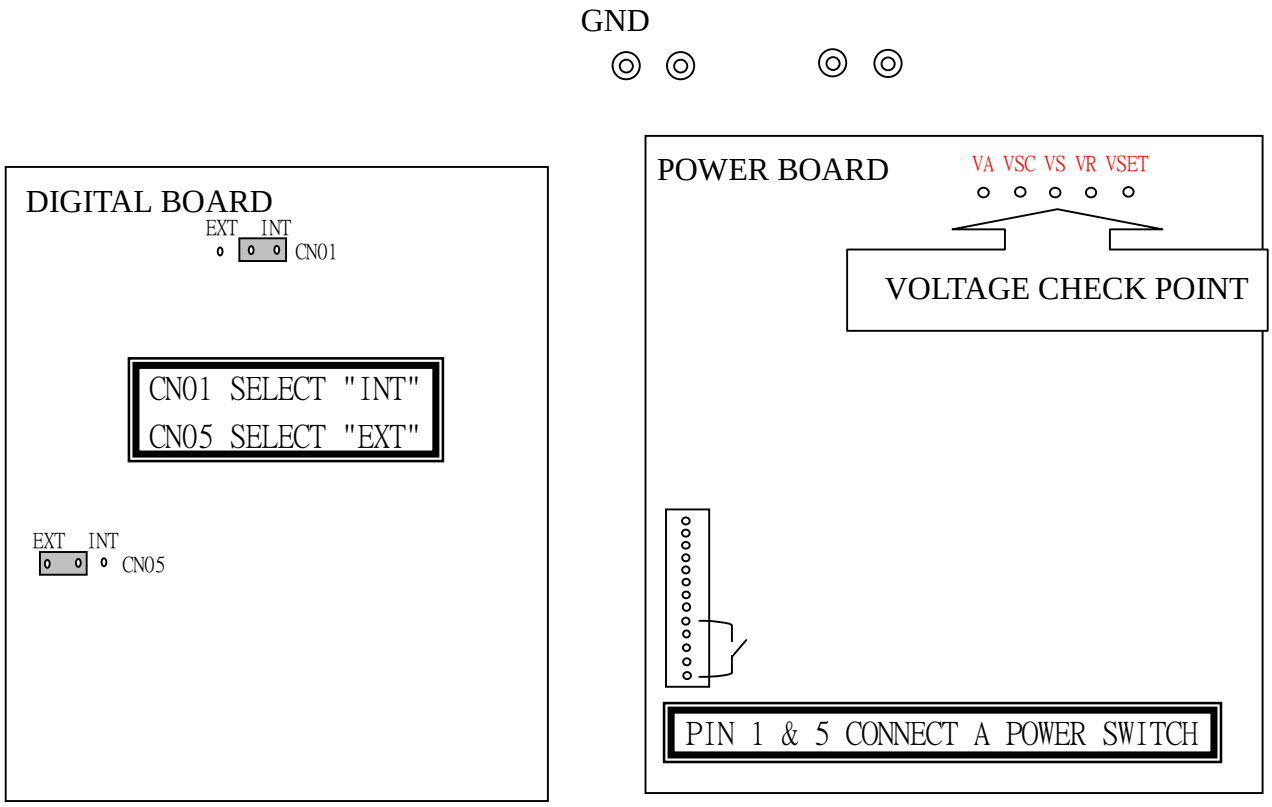


VPW425 EXPLODED VIEW (MECHANICAL PARTS)

ITEM	PART NO.	DESCRIPTION	UNIT
1	DMSKP0124-1F--C	BEZEL ASS'LY	1
1-1	DMSKP0124-1F--C	BEZEL	1
1-2	PREFL0064-1F---	LIGHT GUIDER	1
2	JKNBP0640-1F---	MENU,VOLUME KNOB	
3	DPWB11372-1G-K-	FRONT BUTTON CONTROL BOARD ASS'Y	1
4	XEASD30P10000--	SCREW FOR POWER PWB	3
5	PSLDM0309-1----	EMI BELT FOR COLOR FILTER & UPPER ANGLE	2
6	LANGQ0014-1P---	ANGLE FOR COLOR FILTER /TOP TYPE	1
7	PSLDM0310-1----	EMI BELT FOR COLER FILTER /L&R SIDE	2
8	LANGQ0016-1P---	ANGLE FOR COLOR FILTER FIX/LEFT SIDE	2
9	LANGQ0013-1P--A	ANGLE FOR COLOR FILTER FIX /BOTTOM SIDE	1
10	LANGQ0015-1P---	ANGLE FOR COLOR FILTER FIX /RIGHT SIDE	1
11	PCUSS0098-1----	PANEL	1
12	PCUSS0099-1----	PANEL	1
13	PCUSS0097-1----	PANEL	1
14	PCUSS0100-1----	PANEL	1
15	XTTSB40P20000--	SCREW FOR COLOR FILTER ANGLE	11
16	VVEPF42SD001F--	PDP PANEL	1
17	PCUSS0106-1P---	CUSHION	9
18	LHLDP0074-1F---	HOLDER FOR PDP PANEL /PLACED ON UP-LEFT	1
19	PCUSS0095-1Z---	SPEAKER SPONGE	2
20	PCUSS0096-1Z---	SPEAKER SPONGE	2
21	RSPKL068-1CF1-	SPEAKER	2
22	LFRM51014-1F---	SPEAKER HOLD	2
23	XEASD30P08000--	SCREW FOR SPK HOLDER	8
24	XTTSB40P20000--	SCREW FOR PDP HOLDER	14
25	LHLDP0076-1F---	HOLDER FOR PDP PANEL/PLACED	1
26	XBJSD30P10000--	FINE SCREW FOR PDP HOLDER	2
27	XEASD30P08000--	SCREW FOR POWER PWB	4
28	QSW-P1250-11W1-	PUSH POWER SW	1
29	XBSSQ30P08000--	MAIN POWER SW	4
30	LANGF0807-1P---	MAIN POWER SW ANGLE	1
31	XEASD30P10000--	POWER SW ANGLE FIX	3
32	JKNBP0520-1F--A	MAIN POWER KNOB	1
33	DPWB11372-1G-S-	SOUND BOARD ASS'Y	1
34	XBPSD30P08JS0--	AUDIO PWB FIX	4
35	LHLDP0073-1F---	HOLDER FOR PDP PANEL /PLACED ON UP-RIGHT	1
36	LHLDP0075-1F---	HOLDER FOR PDP PANEL /PLACED ON DOWN-RIGHT	1
37	LSTD-0011-1----A	INTERFACE PCB	4
38	DPWB11393-1G---S	IMAGE BOARD ASS'Y	1
39	LANGF0829-1P---	AV PANEL ANGLE	1
40	XBPSD30P08JS0--	SCREW FOR AV PANEL	5
41	RFIL-1078-1----	EMI FILTER AC SOCKET	1
42	LANGF0827-1P---	AC-FILTER FIX ANGLE	1
43	LSTD-0011-1-----	HEXAGON STUD 41MM FOR CAB-B	2
44	GCABB0297-1P--D	REAR CABINBT	1
45	PSLDM0311-1----	EMI BELT FOR CAB-B,STICK ON TOP&BOTTOM	2
46	PSLDM0312-1----	EMI BELT FOR CAB-B,R/L SIDE	2
47	XTTSB40P20000--	CAB-B FIX	12
48	XEASD30P10000--	SCREW FOR POWER PWB	6
49	GCABB0299-1F---	REAR CAB FOR AV PWB BOX	1
50	DPWB11372-1G-T-	TUNER BOARD ASS'Y	1
51	GCABA0251-1F--A	FRONT CABINET FOR AV PWB	1
52	XBJSQ30P08000--	AV PWB BOX,CAB-B	5
53	XESSB30P12000--	SCREW FOR AV JACK &CAB-A	8
54	LHLD-0288-1----	BUSH FOR	4
55		M8 SCREW PDP PANEL	4
56	LANGF0832-1C---	LEG TUBE ASS'LY	2
56-1	GCOV-0044-1F---	COVER FOR TUBE	2
57	GSTN-0009-1F--B	LEG BASE	2
58	LANGF0831-1P--A	LEG FIX ANGLE	2
59	XETSD40P16000--	LEG BASE/LEG ANGLE*6	6
60	GLEGG1016-1----	LEG CUSHION	2
61	XBPSC40P10JS---	SCREW FOR LEG TUBE/LEG ANGLE	8
62	XTTSB40P20000--	SCREW FOR LEG TUBE&CAB-B	4
63	HINDP0414-1P--B	RGB INDICATOR PVC	1
64	HINDP0415-1P---	POWER INDICATOR PVC	1
65	HINDP0416-1P---	AC FILTER INDICATOR PVC	1
66	PGLS-0013-1----	PDP FILTER 42"	1

1. PANEL voltage adjustment
   The power voltage should be adjusted and checked when changing the panel or power board.

POWER VOLTAGE ADJUST FOR SAMSUNG TTL PANEL



1. DIGITAL BOARD CON01 SELECT TO "INT".
2. DIGITAL BOARD CON05 SELECT TO "EXT".
3. MAKE A SW CONNECT TO POWER BOARD CON80011 PIN 1 & PIN5 FOR POWER SWITCH.
4. FOLLOW THE PANEL LABEL VOLTAGE ADJUST VR.
5. VOLTAGE CHECK FROM "CHECK POINT" WITH GRAND.
6. ADJUST SEQUENCE

1st →	2nd →	3rd →	4th →	5th
VA	VSC	VS	VR	VSET
VR8005	VR8006	VR8003	VR8001	VR8007

2. Color temperature adjustment

Push the factory service key to into the adjustment mode. The following will appear:

DVI	5400°k
X=0.335	Y=0.343
GAIN	Bias
RGB	RGB
XXX	XXX

Use the AV key to select the color to adjust and ◂ or ▸ key to adjust the level.
The required equipment is CA-100,Vp300.

a. Adjust Bias first to set Y to 0.4 on CA-100. Adjust R or B to set the value of X,Y on CA-100 to be the same as the value showing screen, The value of Y should be maintained at 0.4 during adjustment.
b. Move the cursor to adjust Gain. The value of Y should be adjusted to 25. Then adjust R or B to let the value of X,Y on CA-100 be the same as the value showing on screen. The value of Y should be maintain 25 during the adjustment.
c. Repeat to check the Bias and Gain. The value of Y,X and Y should be the same as the previous adjusted value. Then the DVI 5400°k mode is adjusted complelely.
d. Push the factory service key again to next picture. Then repeat the steps a. b. c. to adjust.
e. If the adjustment is completed, sepeat d. a. b. and c steps to adjust again.
f. When the last mode AV 13000°k is adjusted completely, push the factory service key again to leave the adjustment mode,

Note: 1. There are 12 adjusted modes(DVIx4.RGBx4 AVx4)
2. The adjusted sequence is DVI®RGB®AV.
3. DVI/RGB : Bias Y=0.4
Gain Y=25
AV : Bias Y=1
Gain Y=25

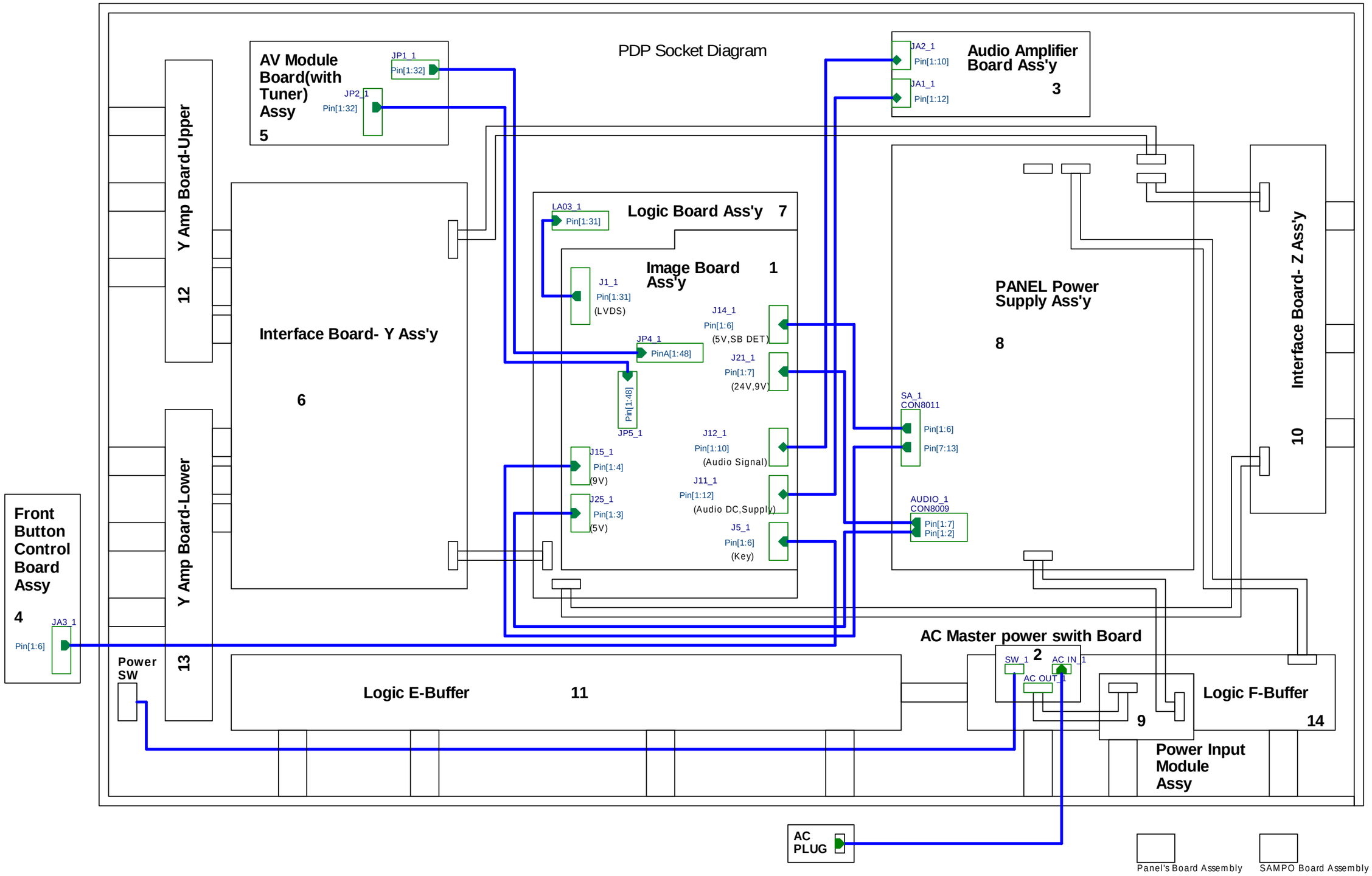

PDP Socket Diagram
AV Module Board(with Tuner) Assy
5
JP1_1
Pin[1:32]
JP2_1
Pin[1:32]
Audio Amplifier Board Ass'y
3
JA2_1
Pin[1:10]
JA1_1
Pin[1:12]
Y Amp Board-Upper
12
Interface Board- Y Ass'y
6
Logic Board Ass'y 7
LA03_1
Pin[1:31]
Image Board Ass'y
1
J1_1
Pin[1:31]
(LVDS)
JP4_1
PinA[1:48]
Pin[1:48]
JP5_1
J14_1
Pin[1:6]
(5V,SB DET)
J21_1
Pin[1:7]
(24V,9V)
J12_1
Pin[1:10]
(Audio Signal)
J11_1
Pin[1:12]
(Audio DC,Supply)
J5_1
Pin[1:6]
(Key)
J15_1
Pin[1:4]
(9V)
J25_1
Pin[1:3]
(5V)
PANEL Power Supply Ass'y
8
SA_1
CON8011
Pin[1:6]
Pin[7:13]
AUDIO_1
CON8009
Pin[1:7]
Pin[1:2]
Interface Board- Z Ass'y
10
Front Button Control Board Assy
4
JA3_1
Pin[1:6]
Y Amp Board-Lower
13
Power SW
Logic E-Buffer
11
AC Master power swith Board
2
SW_1
AC_IN_1
AC_OUT_1
Logic F-Buffer
14
9
Power Input Module Assy
AC PLUG
Panel's Board Assembly
SAMPO Board Assembly

Image Board Socket Data

Image Board ⟷ Panel					
Image Board Ass'y					
	J1 (40 Pin)	J14 (6 Pin)	J15 (4 Pin)	J21 (7 Pin)	J25 (3 Pin)
Pin 1	GND	+5VSB	VGND	+9VT	+5VA
Pin 2	NC	DGND	VGND	NC	VGND
Pin 3	RA-	DGND	NC	DGND	VGND
Pin 4	RA+	5V1	+9V	+24V	
Pin 5	GND	SB		+24V	
Pin 6	GND	DGND		GND	
Pin 7	RB-			GND	
Pin 8	RB+				
Pin 9	GND				
Pin 10	GND				
Pin 11	RC-				
Pin 12	RC+				
Pin 13	GND				
Pin 14	GND				
Pin 15	RCLK-				
Pin 16	RCLK+				
Pin 17	GND				
Pin 18	GND				
Pin 19	RD-				
Pin 20	RD+				
Pin 21	GND				
Pin 22	GND				
Pin 23	GND				
Pin 24	GND				
Pin 25	NC				
Pin 26	GND				
Pin 27	NC				
Pin 28	GND				
Pin 29	NC				
Pin 30	GND				
Pin 31	NC				
Pin 32	NC				
Pin 33	NC				
Pin 34	NC				
Pin 35	NC				
Pin 36	NC				
Pin 37	NC				
Pin 38	NC				
Pin 39	NC				
Pin 40	NC				

Image Board ⟷ AV Module Board		
Image Board	AV Module Board	Content
JP5 (48 Pin)	JP2 (48 Pin)	
A1	A16	+9VT
A2	A15	DGND
A3	A14	NC
A4	A13	DGND
A5	A12	SCL2
A6	A11	DGND
A7	A10	SDA2
A8	A9	DGND
A9	A8	NC
A10	A7	DGND
A11	A6	TV_R
A12	A5	DGND
A13	A4	TV_L
A14	A3	DGND
A15	A2	AFT_TUN
A16	A1	TUN_DETn
B1	B16	DVI_L
B2	B15	DVI_R
B3	B14	AGND
B4	B13	L_OUT
B5	B12	R_OUT
B6	B11	SUB_WFR
B7	B10	PWR_CTL
B8	B9	AGND
B9	B8	AGND
B10	B7	AGND
B11	B6	AGND
B12	B5	AGND
B13	B4	AGND
B14	B3	D_CTL
B15	B2	RESETQ
B16	B1	SD
C1	C1	AS_MP
C2	C2	AS_SP
C3	C3	RST_DPTV
C4	C4	SV2_SW
C5	C5	V2B_DETn
C6	C6	YUVn_RGB
C7	C7	15Kn_MP
C8	C8	15Kn_SP
C9	C9	SB5V
C10	C10	TDO
C11	C11	TDI
C12	C12	NC
C13	C13	NC
C14	C14	TMS
C15	C15	DGND
C16	C16	TCK

Image Board ⟷ AV Module Board		
Image Board	AV Module Board	Content
JP5 (48 Pin)	JP2 (48 Pin)	
A1	A16	COMPOSITE
A2	A15	VGND
A3	A14	S2_Y
A4	A13	S2_C
A5	A12	VGND
A6	A11	Y1
A7	A10	PB1_CB1
A8	A9	PR1_CR1
A9	A8	VGND
A10	A7	Y2
A11	A6	PB2_CB2
A12	A5	PR2_CR2
A13	A4	VGND
A14	A3	AVB_DETn
A15	A2	TV
A16	A1	VGND
B1	B16	AV1_L
B2	B15	AV1_R
B3	B14	AGND
B4	B13	S2_L
B5	B12	S2_R
B6	B11	AGND
B7	B10	YUV1_L
B8	B9	YUV1_R
B9	B8	AGND
B10	B7	YUV2_L
B11	B6	YUV2_R
B12	B5	AGND
B13	B4	RGB_L
B14	B3	RGB_R
B15	B2	AGND
B16	B1	AGND
C1	C1	PCn_MPU
C2	C2	PCSCS
C3	C3	PCSI
C4	C4	PCSCLK
C5	C5	SSO
C6	C6	DGND
C7	C7	P5V
C8	C8	SCL2
C9	C9	SDA2
C10	C10	DGND
C11	C11	SCL_SP
C12	C12	SDA_SP
C13	C13	DGND
C14	C14	SCL2_33
C15	C15	SDA2_33
C16	C16	DGND

Image Board ⟷ Audio Amplifier Board		
Image Board	Audio Amplifier Board	Content
J11 (12 Pin)	JA1 (12 Pin)	
Pin 1	Pin 1	24V
Pin 2	Pin 2	24V
Pin 3	Pin 3	DGND
Pin 4	Pin 4	SB5V
Pin 5	Pin 5	DGND
Pin 6	Pin 6	AO_SEL
Pin 7	Pin 7	SDA2
Pin 8	Pin 8	SCL2
Pin 9	Pin 9	A_MUTEn
Pin 10	Pin 10	SURR1
Pin 11	Pin 11	SURR2
Pin 12	Pin 12	DGND

Image Board ⟷ Audio Amplifier Board		
Image Board	Audio Amplifier Board	Content
J12 (10 Pin)	JA2 (10 Pin)	
Pin 1	Pin 1	L_IN
Pin 2	Pin 2	R_IN
Pin 3	Pin 3	AGND
Pin 4	Pin 4	L_OUT
Pin 5	Pin 5	R_OUT
Pin 6	Pin 6	AGND
Pin 7	Pin 7	SUB_WFR
Pin 8	Pin 8	SPK_CTL
Pin 9	Pin 9	PWR_CTL
Pin 10	Pin 10	NC

Image Board ⟷ Front Button Control Board		
Image Board	Front Button Control Board	Content
J5 (6 Pin)	JA3 (6 Pin)	
Pin 1	Pin 1	RC_OUT
Pin 2	Pin 2	SW_OUT
Pin 3	Pin 3	ON_LED
Pin 4	Pin 4	SB_LED
Pin 5	Pin 5	DGND
Pin 6	Pin 6	SB5V

Image Board Signal Block Diagram

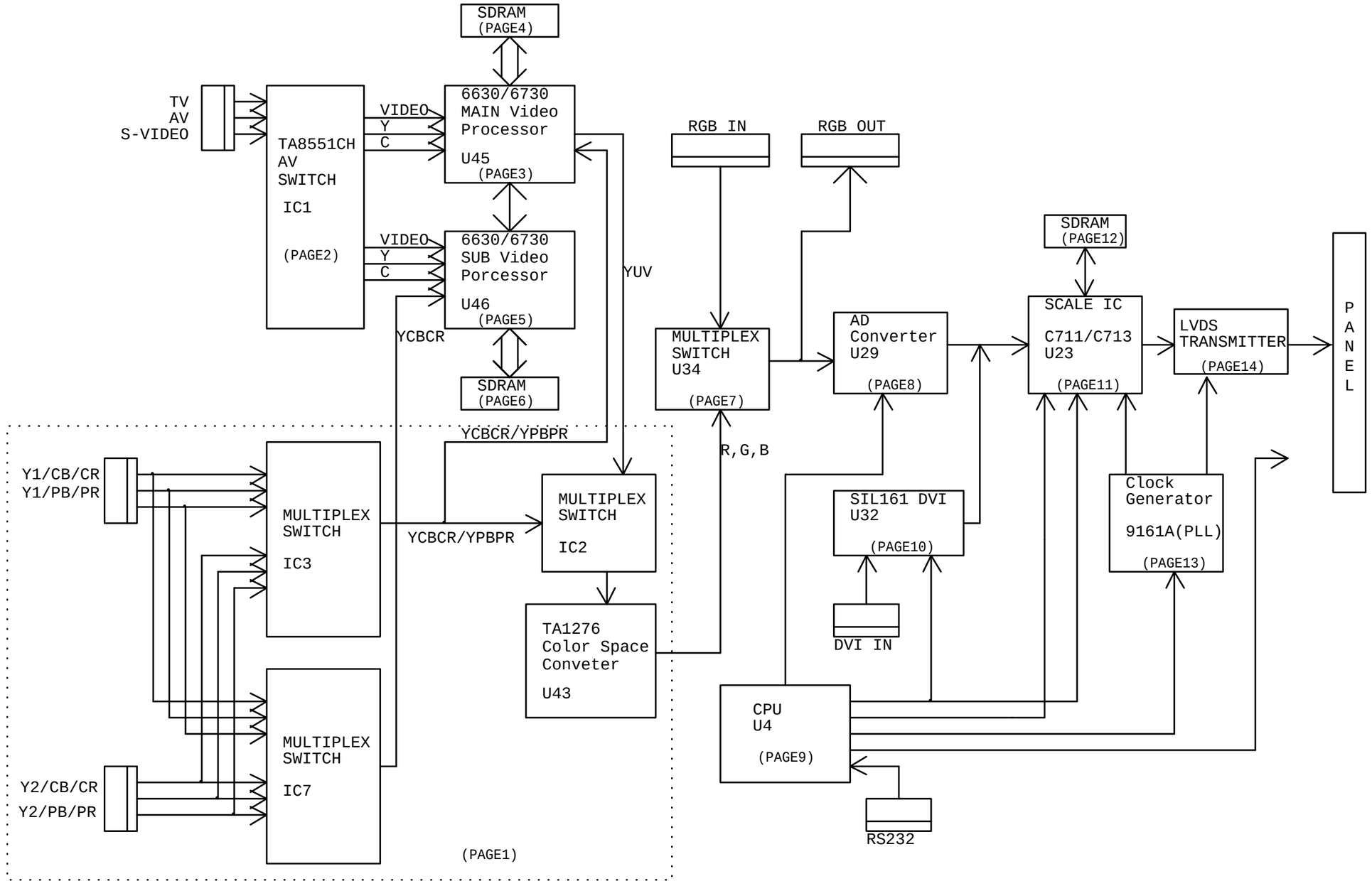
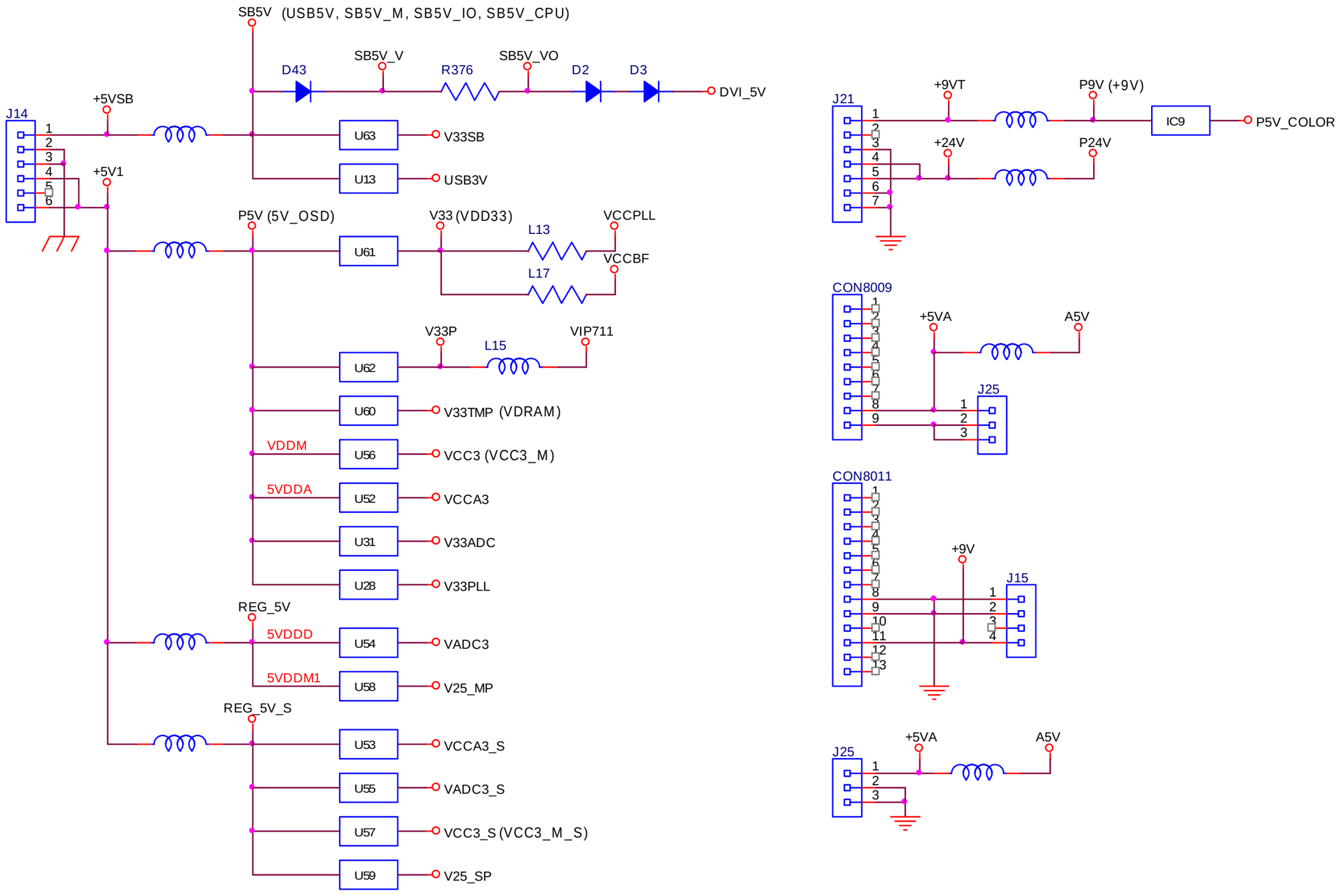
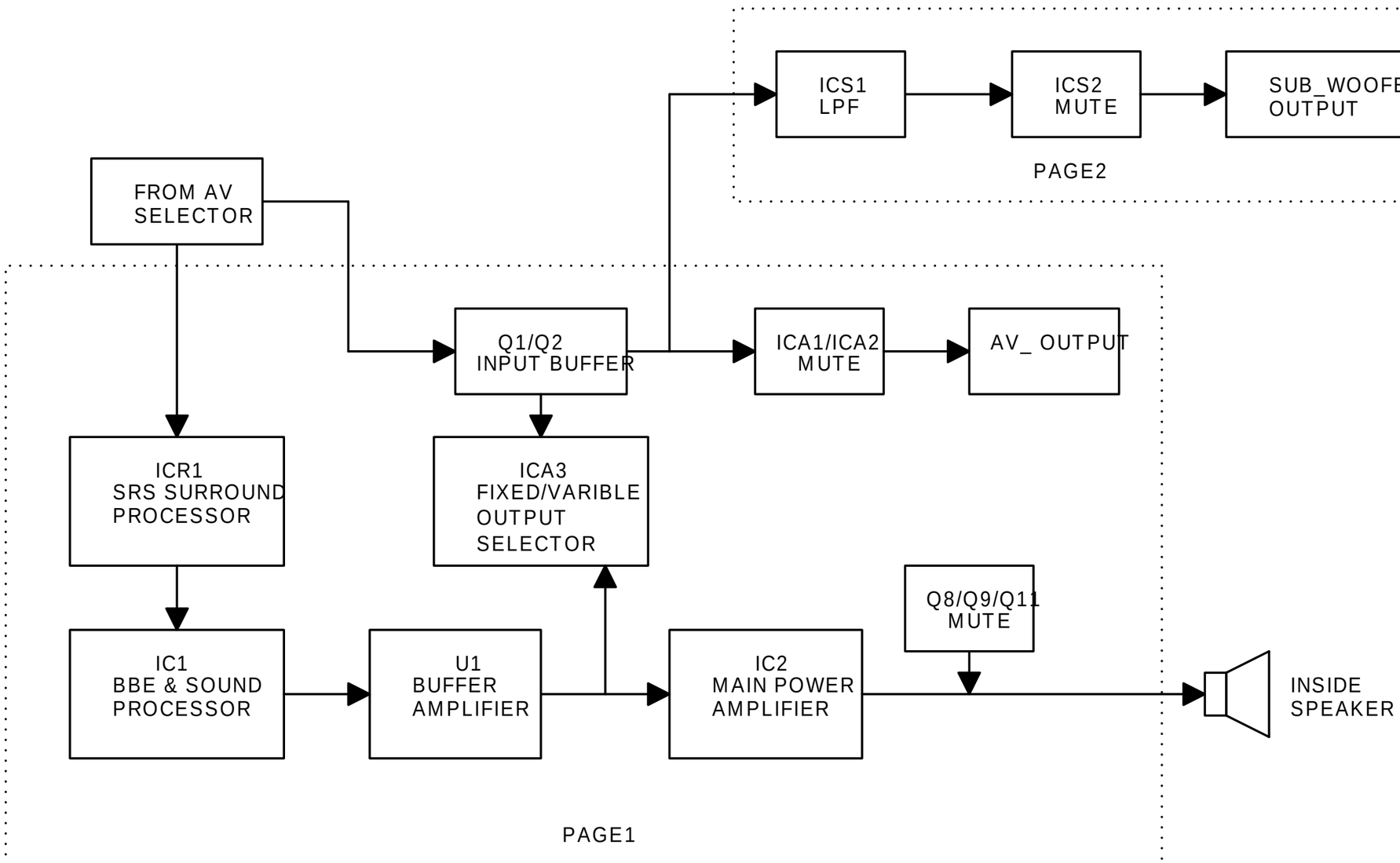


Image board Power Block Diagram

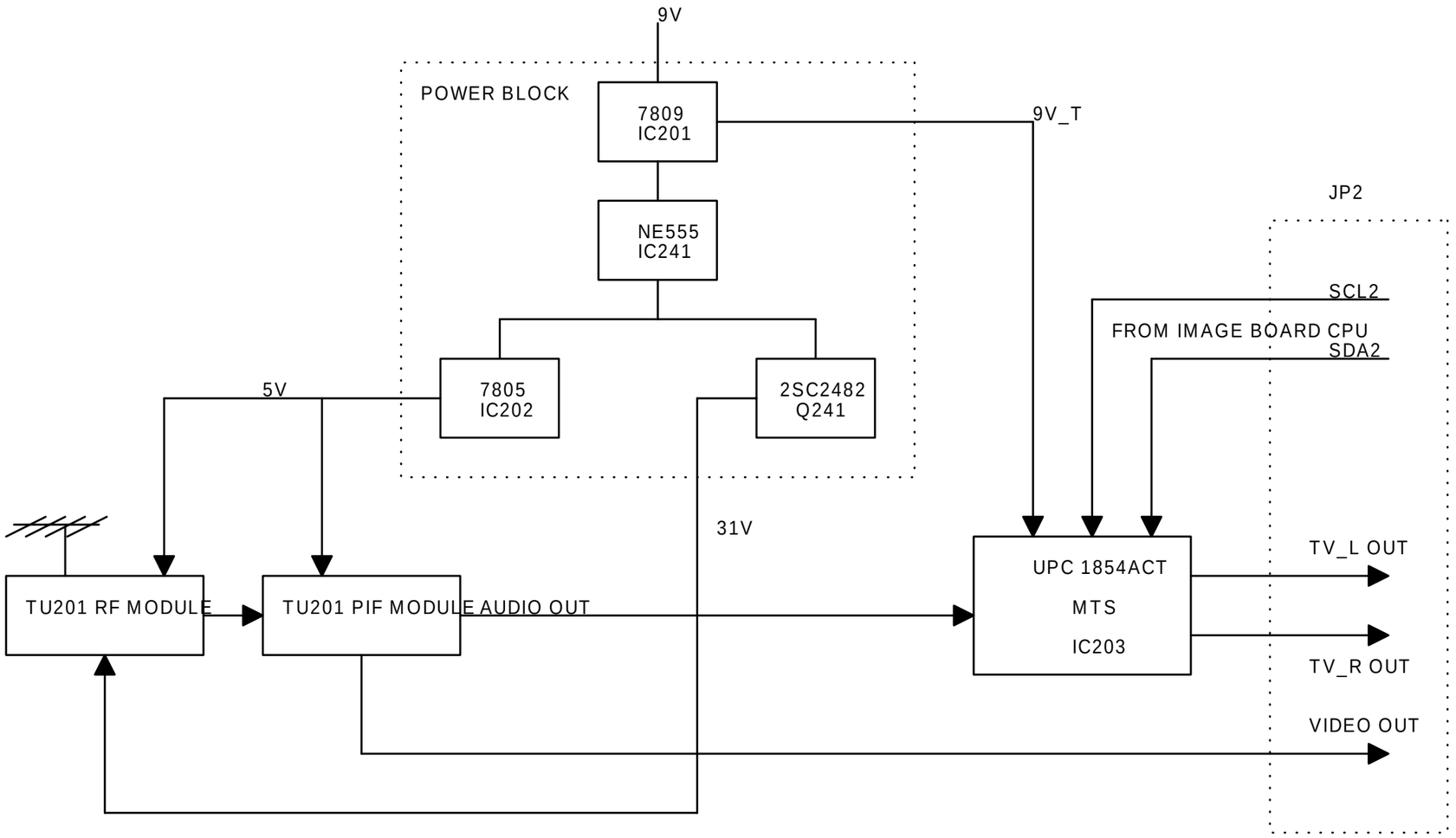


PDP Sound Block Diagram



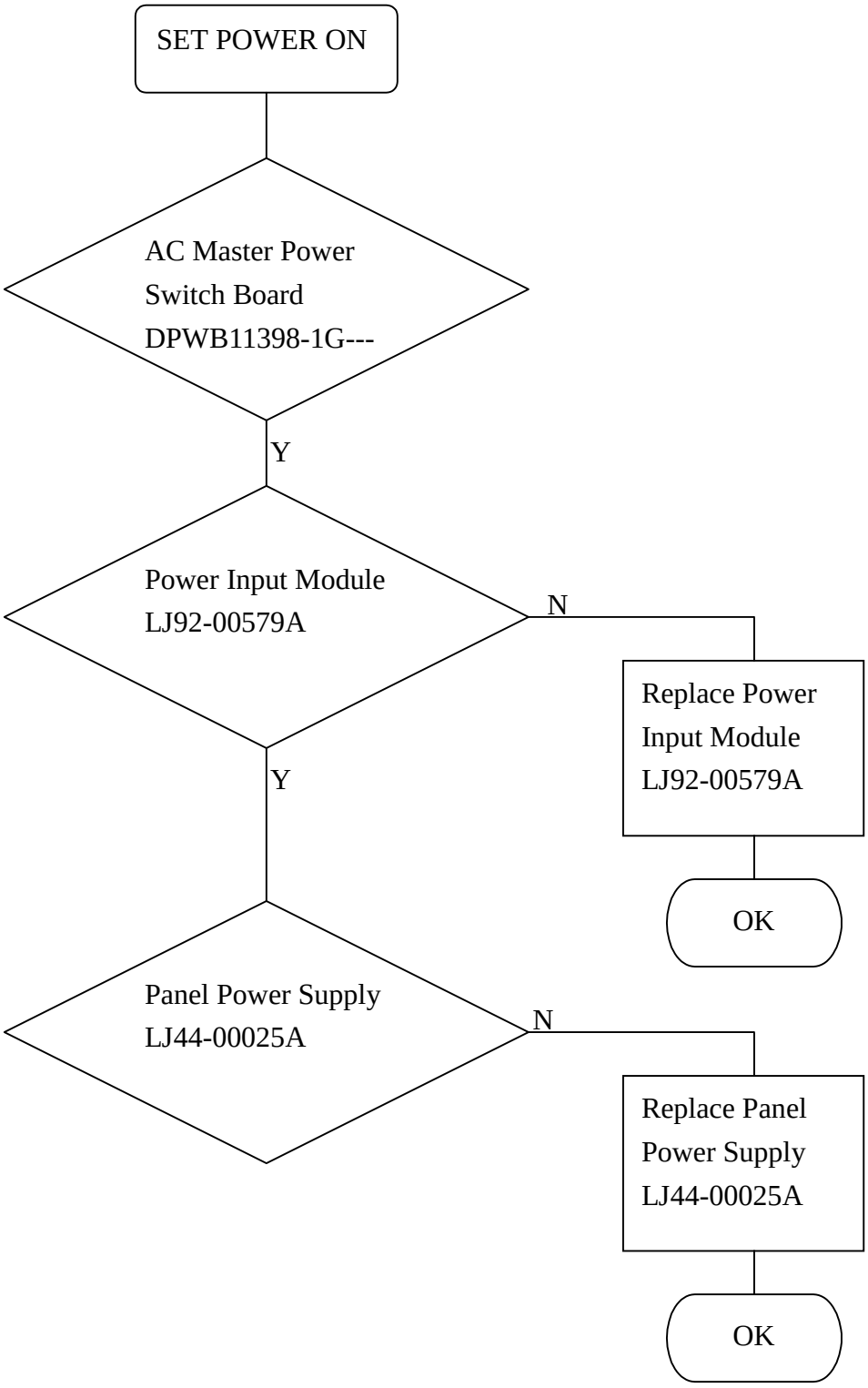
DPWB11372-1G-S-

Tuner Signal Block Diagram

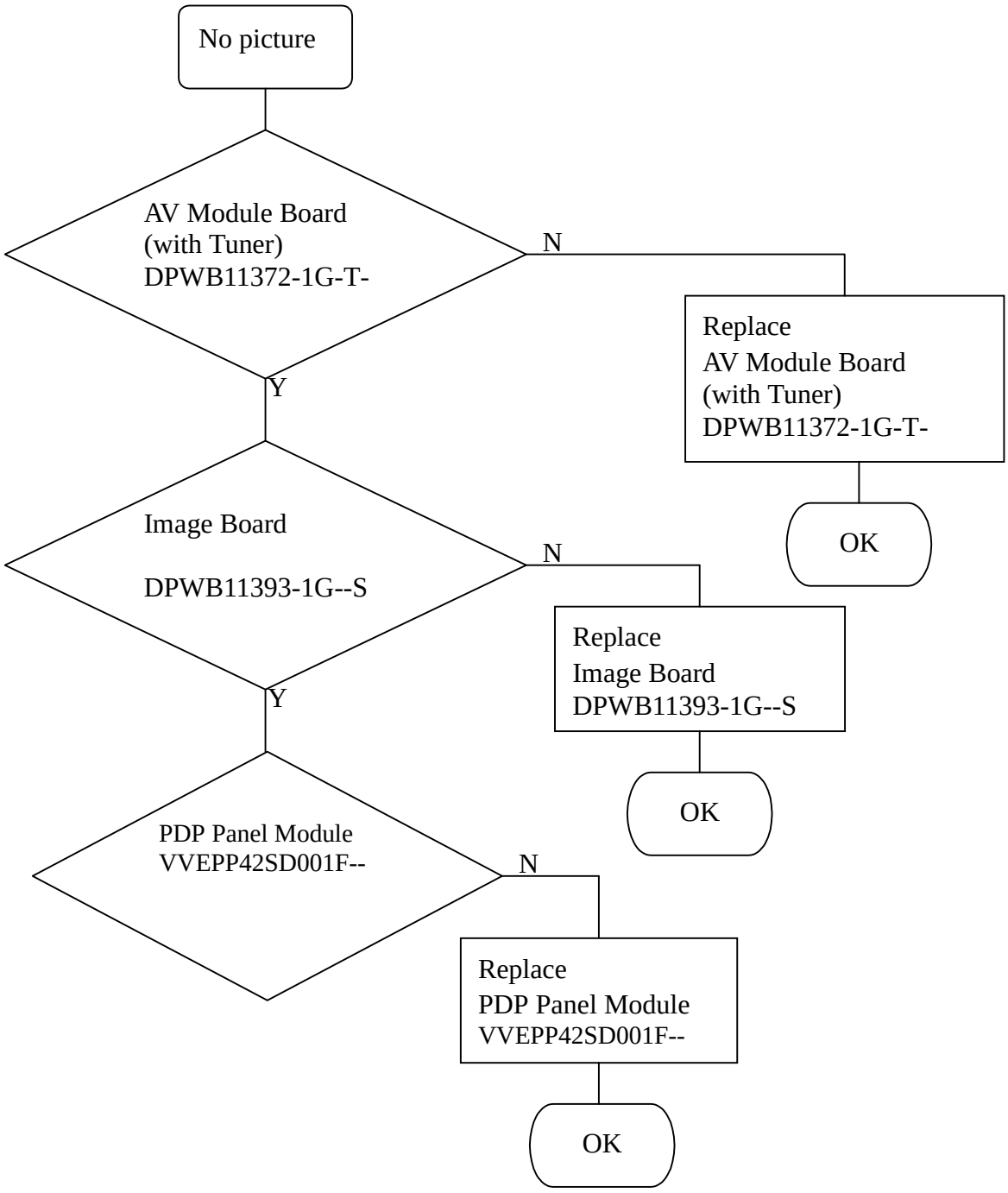


DPWB11372-1G-T-

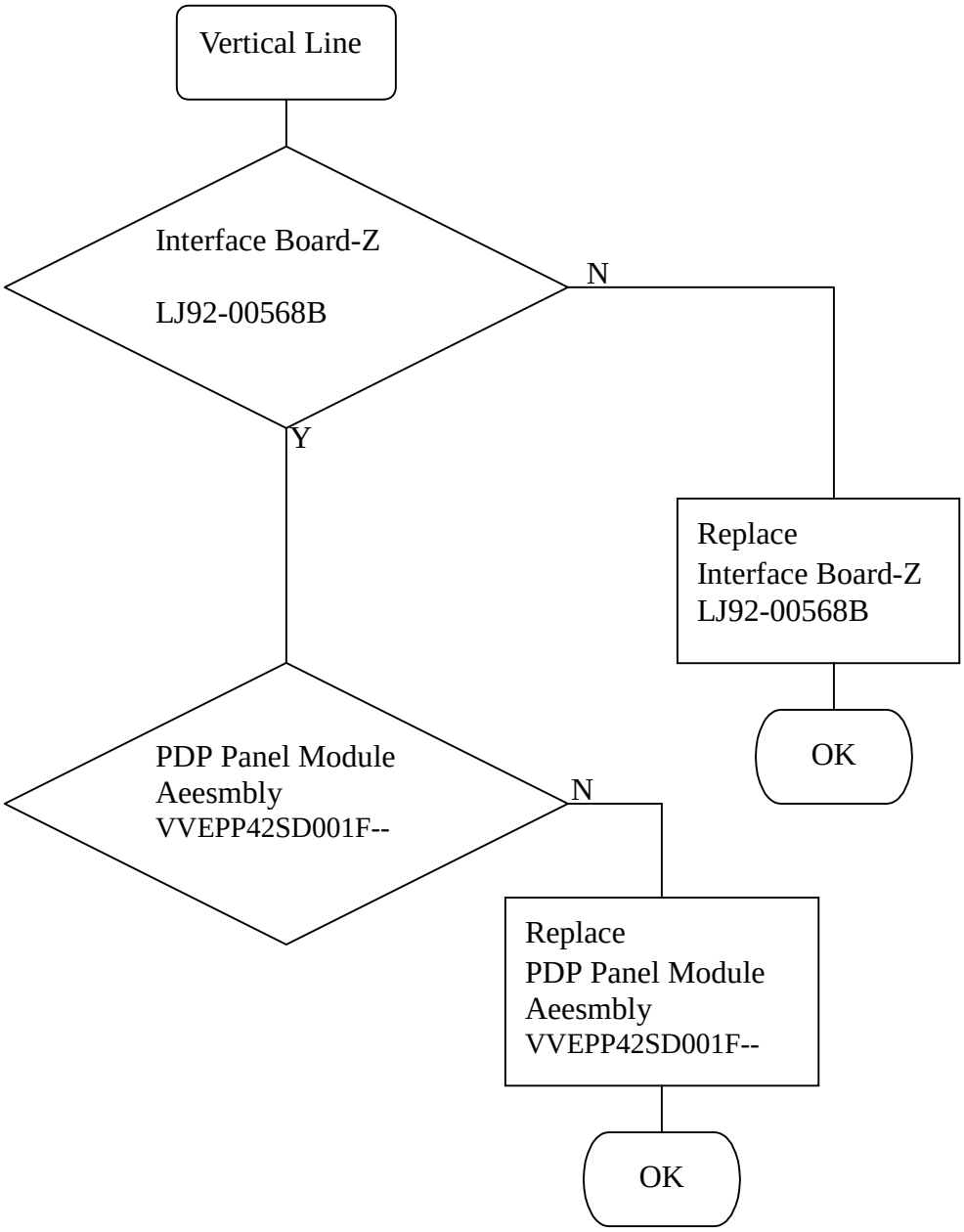
NO POWER


SET POWER ON
AC Master Power
Switch Board
DPWB11398-1G---
Y
Power Input Module
LJ92-00579A
N
Replace Power
Input Module
LJ92-00579A
OK
Y
Panel Power Supply
LJ44-00025A
N
Replace Panel
Power Supply
LJ44-00025A
OK

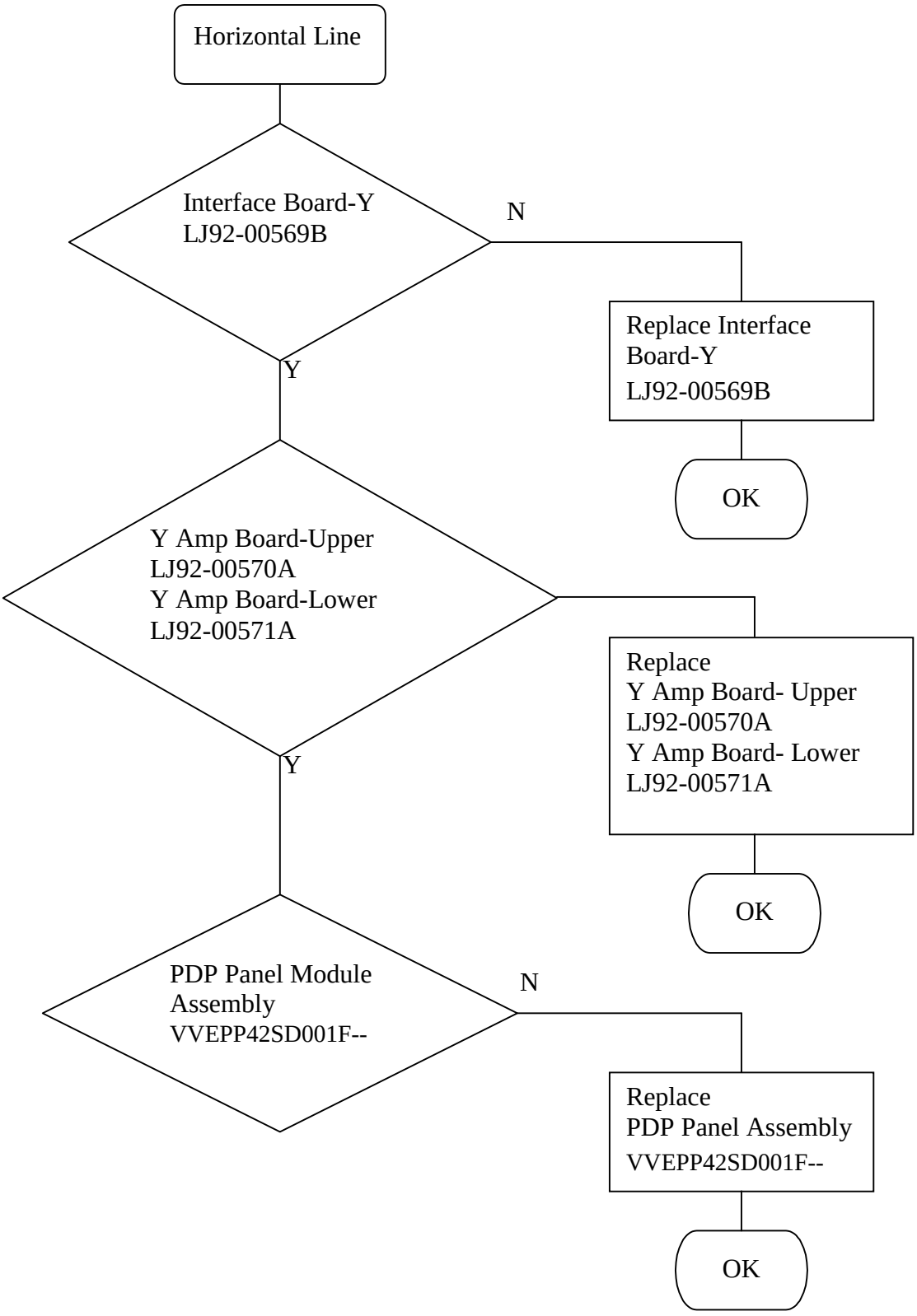
No picture


No picture
AV Module Board
(with Tuner)
DPWB11372-1G-T-
N
Y
Replace
AV Module Board
(with Tuner)
DPWB11372-1G-T-
OK
Image Board
DPWB11393-1G--S
N
Y
Replace
Image Board
DPWB11393-1G--S
OK
PDP Panel Module
VVEPP42SD001F--
N
Replace
PDP Panel Module
VVEPP42SD001F--
OK

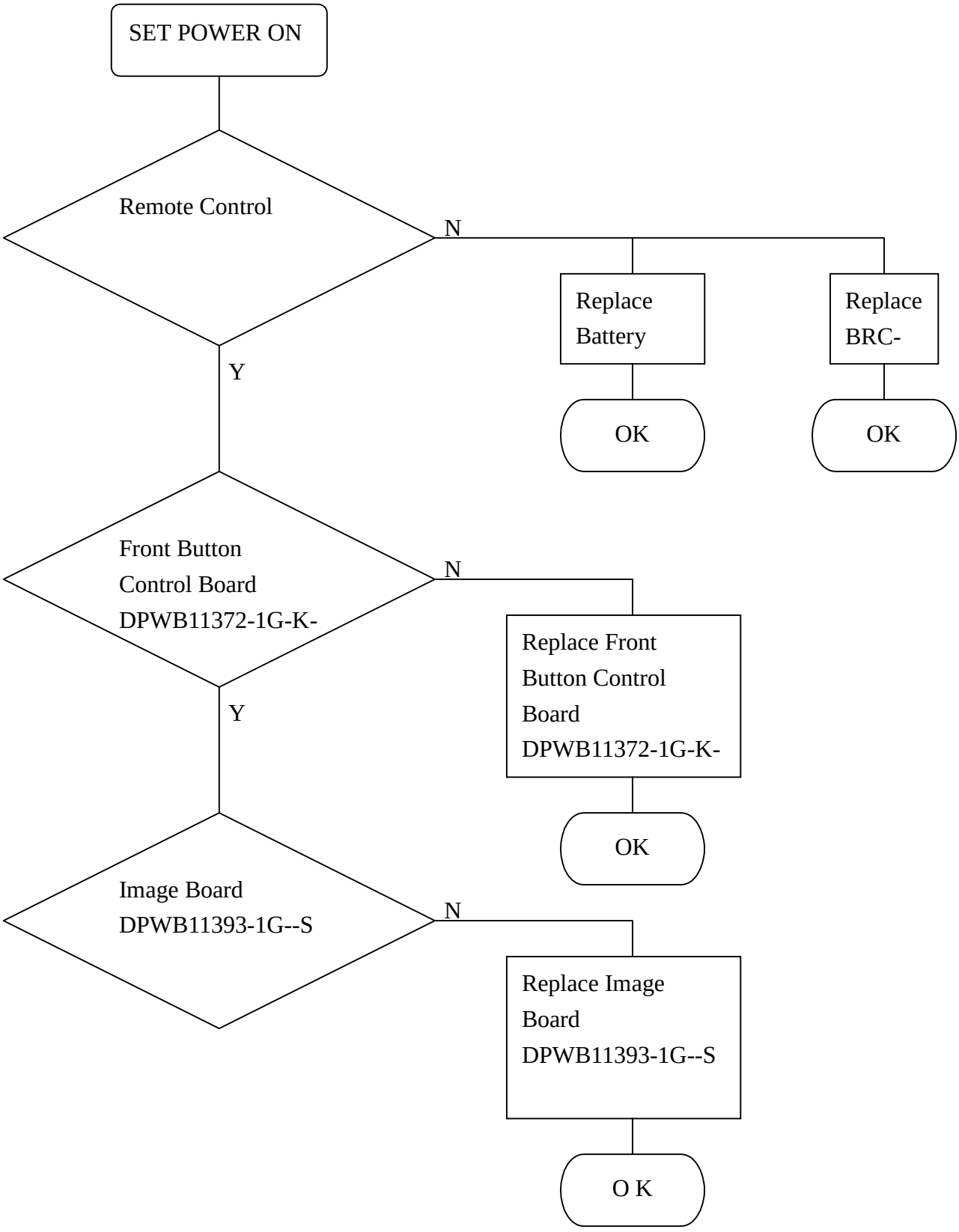
Vertical Line failure



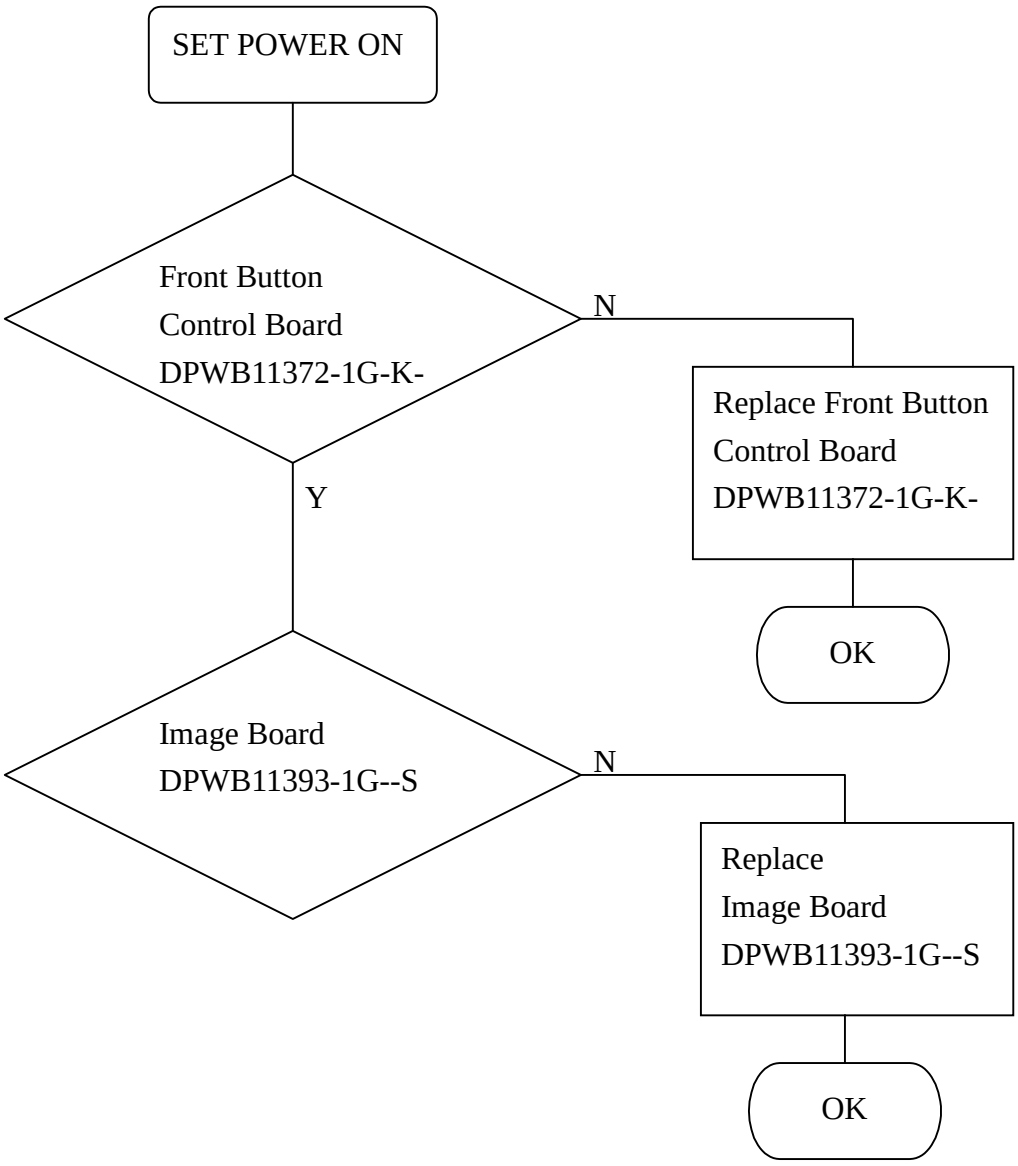
Horizontal Line Failure



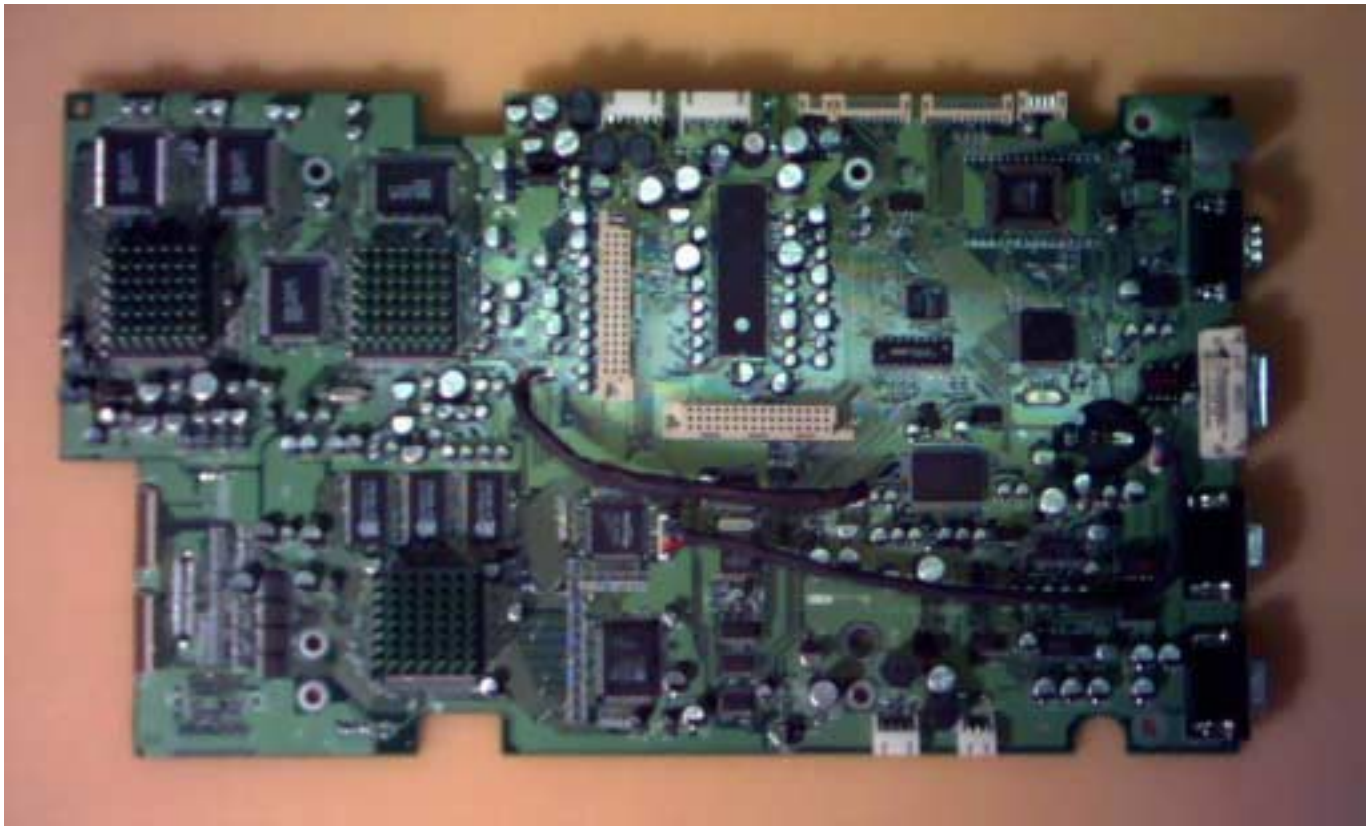
NO Remote Control



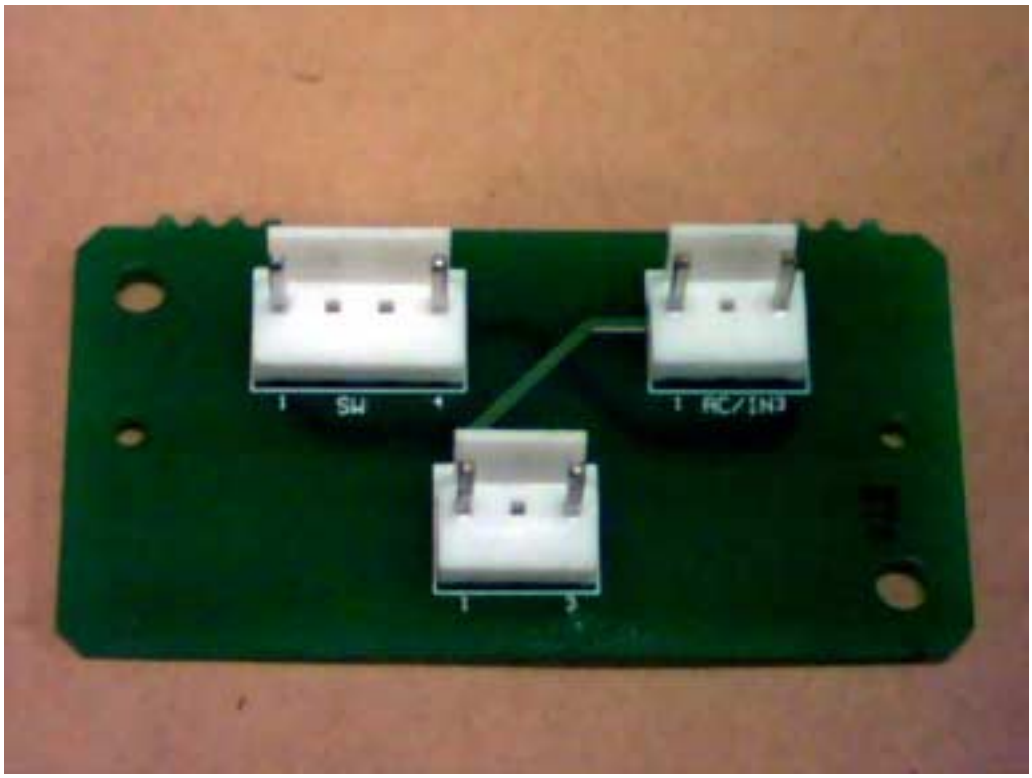
Front Button Failure



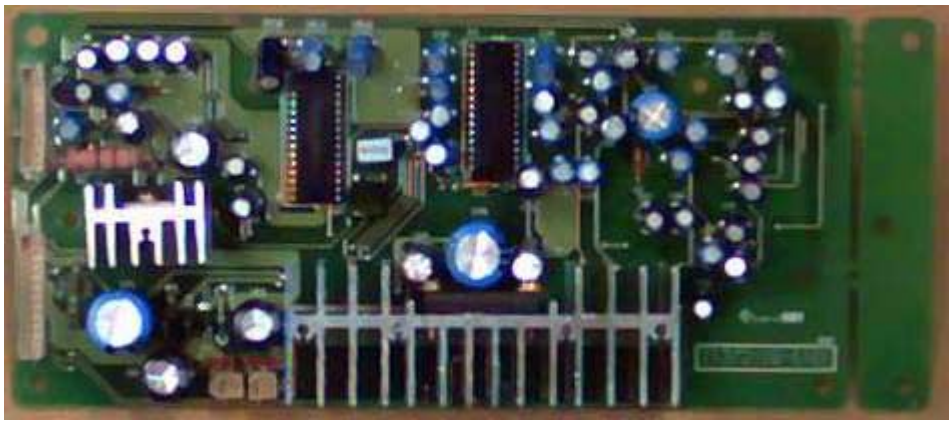
P.C. BOARD TOP VIEW VER1.0



MODULE NAME	PARTS NO.
IMAGE BOARD ASS'Y	DPWB11393-1G--S



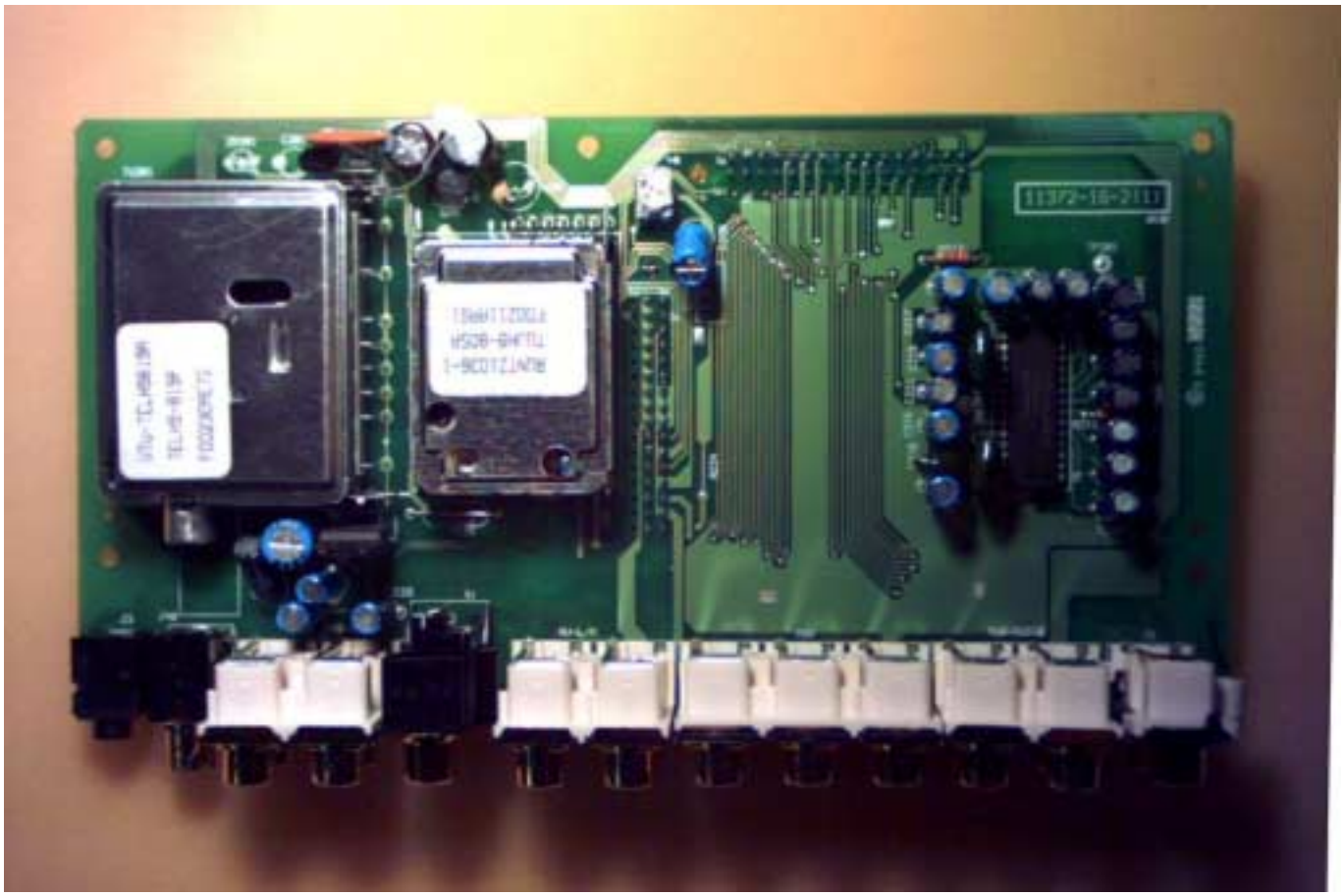
MODULE NAME	PARTS NO.
AC MASTER POWER SWITCH B/D ASS'Y	DPWB11398-1G---



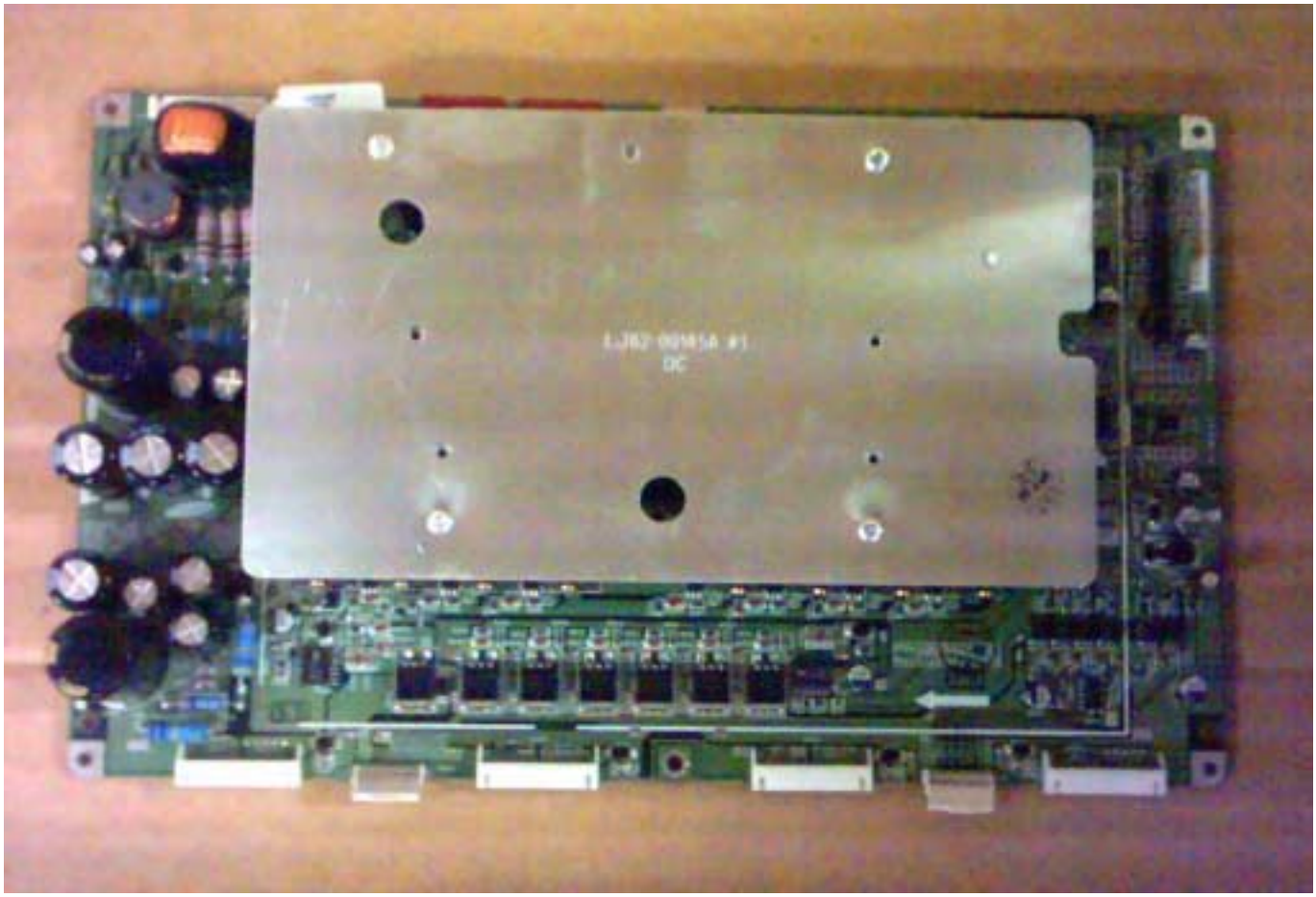
MODULE NAME	PARTS NO.
AUDIO AMPLIFIER BOARD ASS'Y	DPWB11372-1G-S-

MODULE NAME	PARTS NO.
FRONT BUTTON CONTROL BOARD ASS'Y	DPWB11372-1G-K-

P.C. BOARD TOP VIEW VER1.0



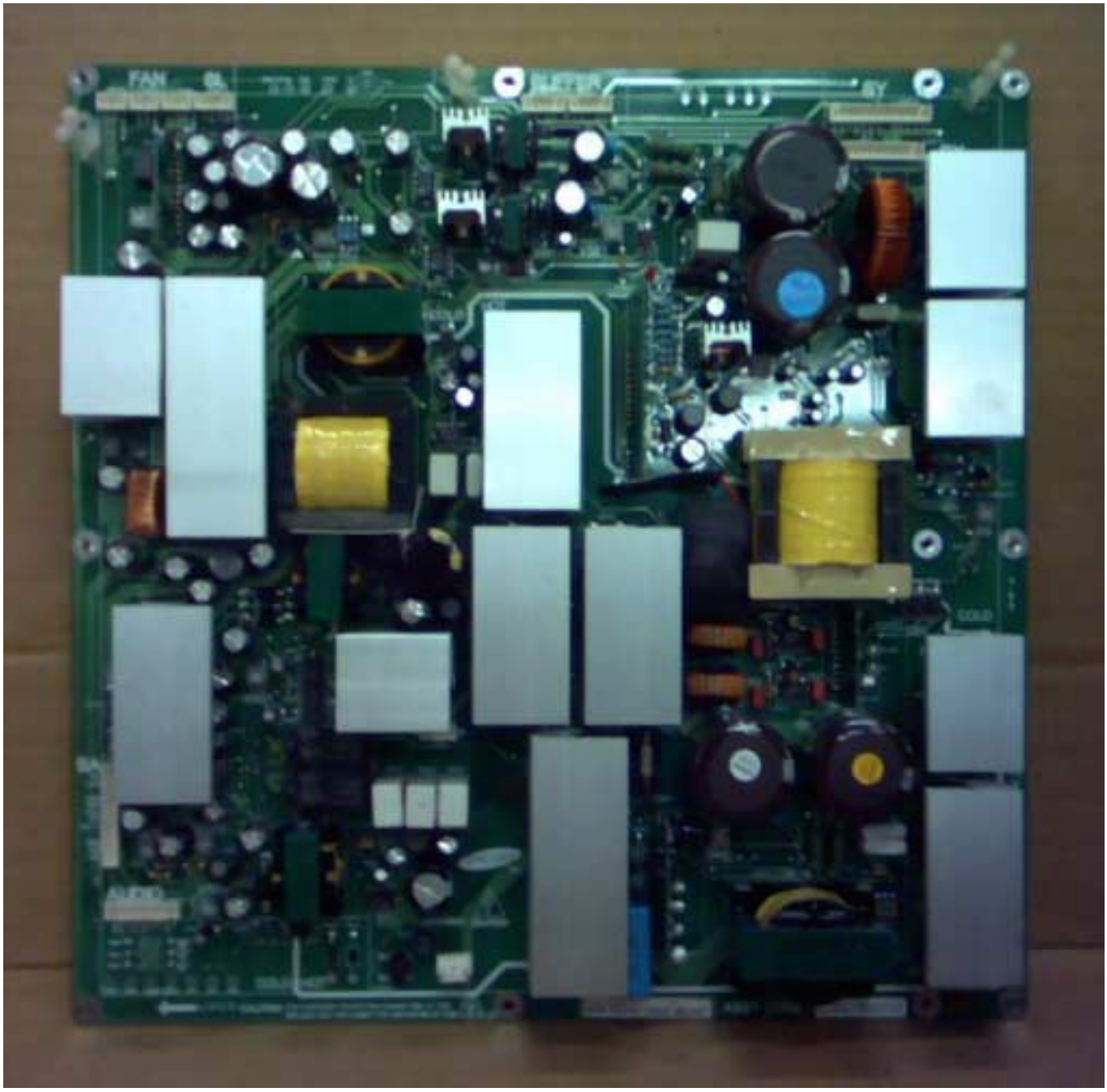
MODULE NAME	PARTS NO.
AV MODULE BOARD ASS'Y	DPWB11372-1G-T-



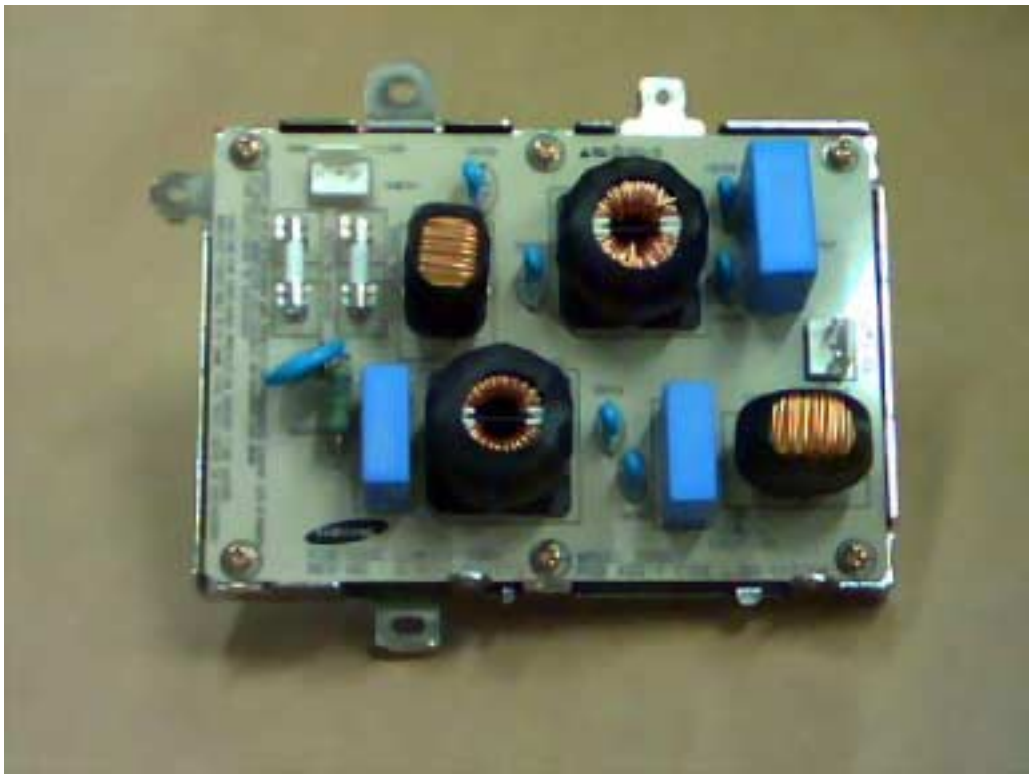
MODULE NAME	PARTS NO.
INTERFACE BOARD- Y A'SSY	LJ92-00569B

MODULE NAME	PARTS NO.
LOGIC BOARD ASS'Y	LJ92-00573

P.C. BOARD TOP VIEW VER1.0



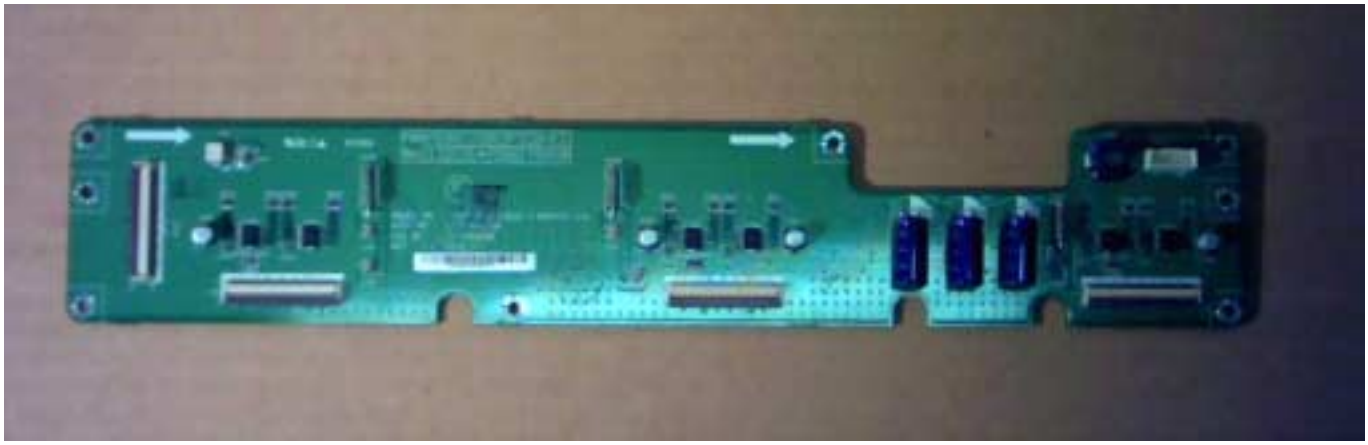
MODULE NAME	PARTS NO.
PANEL POWER SUPPLY ASS'Y	LJ44-00025A



MODULE NAME	PARTS NO.
POWER INPUT MODULE ASS'Y	LJ92-00579A

P.C. BOARD TOP VIEW VER1.0

MODULE NAME	PARTS NO.
INTERFACE BOARD- X ASS'Y	LJ92-00568B



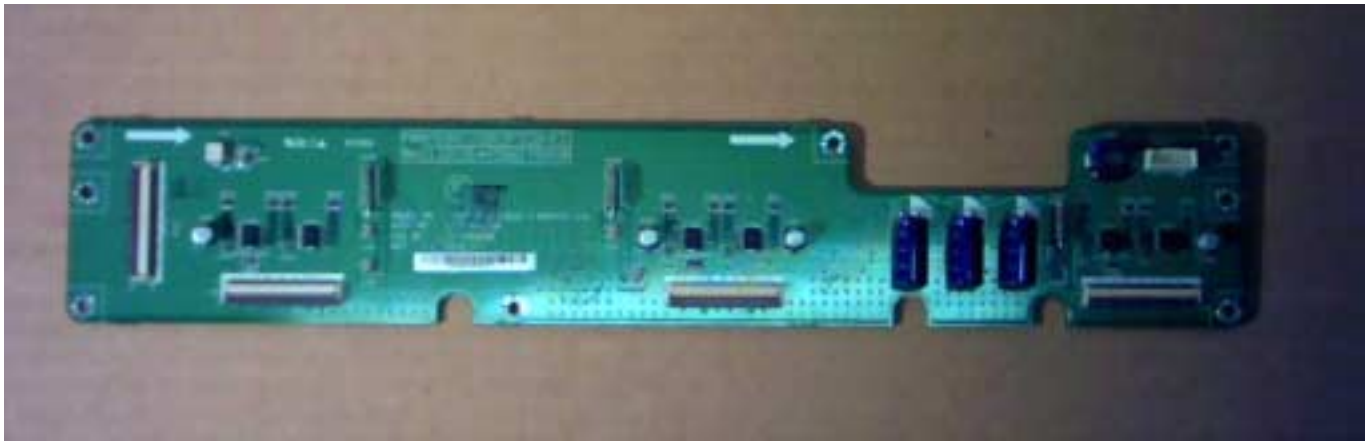
MODULE NAME	PARTS NO.
LOGIC E-BUFFER ASS'Y	LJ92-00581A

P.C. BOARD TOP VIEW VER1.0

MODULE NAME	PARTS NO.
Y AMP BOARD-UPPER ASS'Y	LJ92-00570A

P.C. BOARD TOP VIEW VER1.0

MODULE NAME	PARTS NO.
Y AMP BOARD-LOWER ASS'Y	LJ92-00571A



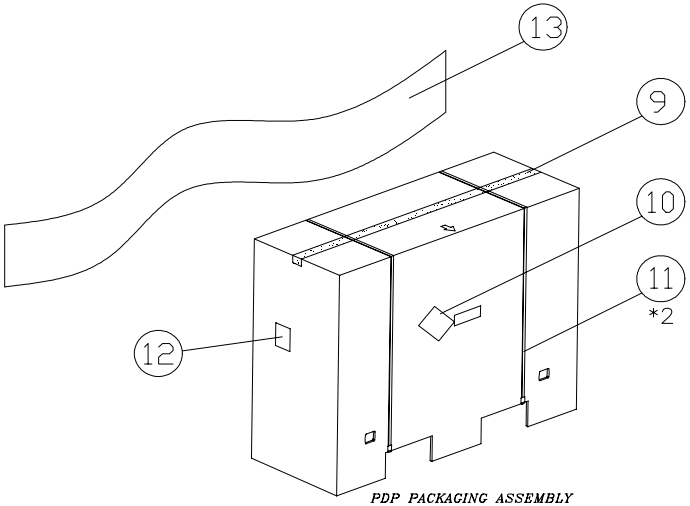
MODULE NAME	PARTS NO.
LOGIC F-BUFFER ASS'Y	LJ92-00582A

P.C. BOARD TOP VIEW

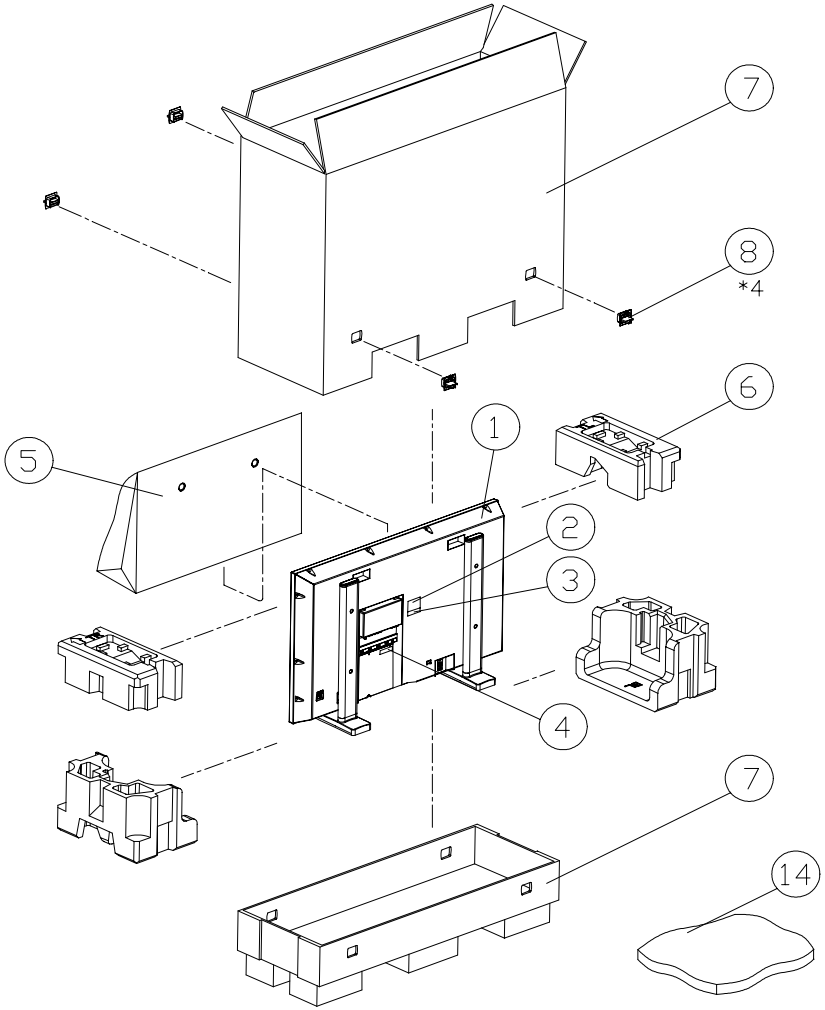
MODULE NAME	PARTS NO.
PDP PANEL MODULE ASS'Y	VVEPP42SD001F--

ELECTRONIC MODULES LIST VER1.0

Model Name: VPW425									
No.	**Module**	**Supplier**	**Supplier's Designator / Part #**	**Quantity Per Final Assembly**	**Sub-Con Name**	**Sub-Con Location**	**Projected MTBF**	**Projected AFR**	**Current Revision Level**
1	Image Board	Sampo	DPWB11393-1G--S	1					
2	AC Master Power Switch Board	Sampo	DPWB11398-1G---	1					
3	Audio Amplifier Board	Sampo	DPWB11372-1G-S-	1					
4	Front Button Control Board	Sampo	DPWB11372-1G-K-	1					
5	AV Module Board (with tuner)	Sampo	DPWB11372-1G-T-	1					
6	Interface Board- Y	Samsung	LJ92-00569B	1					
7	Logic Board	Samsung	LJ92-00573A	1					
8	Panel Power Supply	Samsung	LJ44-00025A	1					
9	Power Input Module	Samsung	LJ92-00579A	1					
10	Interface Board- X	Samsung	LJ92-00568B	1					
11	Logic E- Buffer	Samsung	LJ92-00581A	1					
12	Y Amp Board- Upper	Samsung	LJ92-00570A	1					
13	Y Amp Board- Lower	Samsung	LJ92-00571A	1					
14	Logic F- Buffer	Samsung	LJ92-00582A	1					
15	PDP Panel Module	Samsung	VVEPP42SD001F--	1					



PDP PACKAGING ASSEMBLY



VPW425 EXPLODED VIEW (MECHANICAL PARTS)

ITEM	PART NO.	DESCRIPTION	UNIT
1	SET	VPW425	1
2	TLABM1178-1----	MODEL LABEL	1
3	TLABD1142-1----	BAR CODE	1
4	TLABD1139-1B---	SRS LABEL	1
5	SSAKH0184-1--A	EPE BAG	1
6	SPAKA0640-1F--A	POLYFOAM	1
7	SPAKC0693-1R--G	CARTON	1
8	JHNDP0020-1----	CASE HANDLE	4
9	ZTAPEQ075T050--	TAPE	1
10	TLABW0056-1----	G METER	1
11	ZTIE-P155Y1600-	WRAPPING	2
12	TLABD1140-1B---	UPC CODE	1
13	ZTAPEZ500T500--	PE FILM	1
14	QACCF1066-1DX--	POWER CORD (ACCESSORY)	1
	RDISC1035-1---A	MANUAL	1
	BRC-241BVIEWSON	R/C	1
	QCODS1028-1D---	RGB CABLE	1
	RBATB0221-1DC--	BATTERY	2
	TMAPT1009-1---A	QUICK STARE GUIDE	1
	QCOPS1045-1D---	S-VIDEO	1
	QPLGR1216-103--	YPBPR LABLE	1
	QPLGR1211-103--	AV CABLE	1