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LCD TV **SERVICE MANUAL**

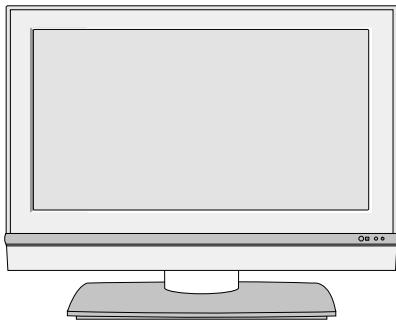
CHASSIS : LD61A

FACTORY NAME : 32LC2D(B)-EC/37LC2D(B)-EC/42LC2D(B)-EC

MODEL : 32LC2D(B)/37LC2D(B)/42LC2D(B)

CAUTION

BEFORE SERVICING THE CHASSIS,
READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



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SVC. SHEET	

SAFETY PRECAUTIONS

IMPORTANT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These parts are identified by  in the Schematic Diagram and Replacement Parts List.

It is essential that these special safety parts should be replaced with the same components as recommended in this manual to prevent Shock, Fire, or other Hazards.

Do not modify the original design without permission of manufacturer.

General Guidance

An **isolation Transformer** should always be used during the servicing of a receiver whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks.

It will also protect the receiver and its components from being damaged by accidental shorts of the circuitry that may be inadvertently introduced during the service operation.

If any fuse (or Fusible Resistor) in this TV receiver is blown, replace it with the specified.

When replacing a high wattage resistor (Oxide Metal Film Resistor, over 1W), keep the resistor 10mm away from PCB.

Keep wires away from high voltage or high temperature parts.

Before returning the receiver to the customer,

always perform an **AC leakage current check** on the exposed metallic parts of the cabinet, such as antennas, terminals, etc., to be sure the set is safe to operate without damage of electrical shock.

Leakage Current Cold Check(Antenna Cold Check)

With the instrument AC plug removed from AC source, connect an electrical jumper across the two AC plug prongs. Place the AC switch in the on position, connect one lead of ohm-meter to the AC plug prongs tied together and touch other ohm-meter lead in turn to each exposed metallic parts such as antenna terminals, phone jacks, etc.

If the exposed metallic part has a return path to the chassis, the measured resistance should be between $1M\Omega$ and $5.2M\Omega$.

When the exposed metal has no return path to the chassis the reading must be infinite.

An other abnormality exists that must be corrected before the receiver is returned to the customer.

Leakage Current Hot Check (See below Figure)

Plug the AC cord directly into the AC outlet.

Do not use a line Isolation Transformer during this check.

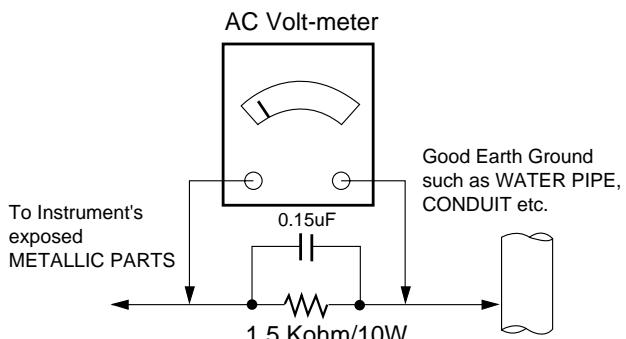
Connect 1.5K/10watt resistor in parallel with a 0.15uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

Measure the AC voltage across the resistor using AC voltmeter with 1000 ohms/volt or more sensitivity.

Reverse plug the AC cord into the AC outlet and repeat AC voltage measurements for each exposed metallic part. Any voltage measured must not exceed 0.75 volt RMS which corresponds to 0.5mA.

In case any measurement is out of the limits specified, there is possibility of shock hazard and the set must be checked and repaired before it is returned to the customer.

Leakage Current Hot Check circuit



SERVICING PRECAUTIONS

CAUTION: Before servicing receivers covered by this service manual and its supplements and addenda, read and follow the **SAFETY PRECAUTIONS** on page 3 of this publication.

NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Precautions

1. Always unplug the receiver AC power cord from the AC power source before:
 - a. Removing or reinstalling any component, circuit board module or any other receiver assembly.
 - b. Disconnecting or reconnecting any receiver electrical plug or other electrical connection.
 - c. Connecting a test substitute in parallel with an electrolytic capacitor in the receiver.
- CAUTION:** A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc) equipped with a suitable high voltage probe.
Do not test high voltage by "drawing an arc".
3. Do not spray chemicals on or near this receiver or any of its assemblies.
4. Unless specified otherwise in this service manual, clean electrical contacts only by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable non-abrasive applicator; 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength)
CAUTION: This is a flammable mixture.
Unless specified otherwise in this service manual, lubrication of contacts is not required.
5. Do not defeat any plug/socket B+ voltage interlocks with which receivers covered by this service manual might be equipped.
6. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
7. Always connect the test receiver ground lead to the receiver chassis ground before connecting the test receiver positive lead.
Always remove the test receiver ground lead last.
8. *Use with this receiver only the test fixtures specified in this service manual.*

CAUTION: Do not connect the test fixture ground strap to any heat sink in this receiver.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid-state) devices can be damaged easily by static electricity. Such components commonly are called

Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed to prevent potential shock reasons prior to applying power to the

unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
 3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
 4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
 5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
 6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
 7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
- CAUTION:** Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range of 500° F to 600° F.
2. Use an appropriate gauge of RMA resin-core solder composed of 60 parts tin/40 parts lead.
3. Keep the soldering iron tip clean and well tinned.
4. Thoroughly clean the surfaces to be soldered. Use a small wire-bristle (0.5 inch, or 1.25cm) brush with a metal handle.
Do not use freon-propelled spray-on cleaners.
5. Use the following unsoldering technique
 - a. Allow the soldering iron tip to reach normal temperature. (500° F to 600° F)
 - b. Heat the component lead until the solder melts.
 - c. Quickly draw the melted solder with an anti-static, suction-type solder removal device or with solder braid.
CAUTION: Work quickly to avoid overheating the circuitboard printed foil.
6. Use the following soldering technique.
 - a. Allow the soldering iron tip to reach a normal temperature (500° F to 600° F)
 - b. First, hold the soldering iron tip and solder the strand against the component lead until the solder melts.
 - c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
 - d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.

IC Remove/Replacement

Some chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.
2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.
2. Carefully bend each IC lead against the circuit foil pad and solder it.
3. Clean the soldered areas with a small wire-bristle brush.
(It is not necessary to reapply acrylic coating to the areas).

"Small-Signal" Discrete Transistor

Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.
2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.
3. Bend into a "U" shape the replacement transistor leads.
4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact then solder each connection.

Power Output, Transistor Device

Removal/Replacement

1. Heat and remove all solder from around the transistor leads.
2. Remove the heat sink mounting screw (if so equipped).
3. Carefully remove the transistor from the heat sink of the circuit board.
4. Insert new transistor in the circuit board.
5. Solder each transistor lead, and clip off excess lead.
6. Replace heat sink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.
2. Bend the two remaining leads perpendicular y to the circuit board.
3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.
4. Securely crimp each connection and solder it.
5. Inspect (on the circuit board copper side) the solder joints of the two "original" leads. If they are not shiny, reheat them and if necessary, apply additional solder.

Fuse and Conventional Resistor

Removal/Replacement

1. Clip each fuse or resistor lead at top of the circuit board hollow stake.
2. Securely crimp the leads of replacement component around notch at stake top.
3. Solder the connections.

CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board causing the foil to separate from or "lift-off" the board. The following guidelines and procedures should be followed whenever this condition is encountered.

At IC Connections

To repair a defective copper pattern at IC connections use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections).

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary).
2. carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.
3. Bend a small "U" in one end of a small gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.
4. Route the jumper wire along the path of the out-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area and clip off any excess jumper wire.

At Other Connections

Use the following technique to repair the defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.

1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure that a hazardous condition will not exist if the jumper wire opens.
2. Trace along the copper pattern from both sides of the pattern break and locate the nearest component that is directly connected to the affected copper pattern.
3. Connect insulated 20-gauge jumper wire from the lead of the nearest component on one side of the pattern break to the lead of the nearest component on the other side.
Carefully crimp and solder the connections.

CAUTION: Be sure the insulated jumper wire is dressed so the it does not touch components or sharp edges.

SPECIFICATION

NOTE : Specifications and others are subject to change without notice for improvement.

1.General Specification(TV)

No	Item	Specification	Remark
1.	Video input applicable system	PAL-D/K, B/G, I, NTSC-M, SECAM NTSC 4.43	
2.	Receivable Broadcasting System	1) PAL/SECAM BG 2) PAL/SECAM DK 3) PAL I/I 4) SECAM L/L' 5) PAL-N/M 6) NTSC M	EU/Non-EU (PAL Market) 5),6) South America Market
3.	RF Input Channel	VHF : E2 ~ E12 UHF : E21 ~ E69 CATV : S1 ~ S20 HYPER : S21~ S47 L/L' : B, C, D VHF : 2~13 UHF : 14~69 CATV : 1~125 VHF Low : 1 ~ M10 VHF High : 4~S22 UHF : S23~62	PAL FRANCE NTSC JAPAN
4.	Input Voltage	AC 100 ~ 240V/50Hz, 60Hz	
5.	Market	UK	
6.	Picture Size	800.4mm 940.3mm 1067.308mm	32inch 37inch 42inch
7.	Tuning System	FVS 100 program FS	PAL, 200 PR.(Option) NTSC
8.	Operating Environment	1) Temp : 0 ~ 40 deg 2) Humidity : 10~90 %	
9.	Storage Environment	3) Temp : -20 ~ 50 deg 4) Humidity : 10~90 %	
10.	Display	LCD Module	LPL

2. General Specification

No	Item	Specification			Remark	
1	Panel	32", 37", 42" TFT WXGA LCD				
2	Frequency range	H : 31 ~ 61Khz V : 56 ~ 75Hz			PC Input	
3	Control Function	1) Contrast/Brightness 2) H-Position / V-Position 3) Tracking : Clock / Phase 4) Auto Configure 5) Reset				
4	Component Jack	1 : Y 3 : Pb 5 : Pr			Middle east / NTSC Area	
5		H/V-Sync	Video	Power consumption	LED	
	Power ON	-	-	≤ 150W(32") ≤ 190W(37") ≤ 240W(42") ≤ 3.0W	Green Green	
	Stand by	-	-	-	Red	
	Power off	-	-	-	*	
6	LCD Module	Type Size	32"	760.0x450.0x48.0(mm)	(H)x(V)x(D)	
			37"	877.0 x 516.8 x 55.5(mm)		
			42"	1006 x 610 x 56(mm)		
		Pixel Pitch	32"	0.1702 x 0.5107 x RGB(mm)		
			37"	0.200 x 0.600 x RGB		
			42"	0.227 x 0.681 x RGB		
		Pixel Format	1366 horiz. By 768 vert. Pixels RGB strip arrangement			
		Coating	Hard coating(3H), Anti-glare treatment of the front polarizer,			
		Back Light	32"	18EEFL		
			37"	20EEFL		
			42"	20CCFL		

3.Optical Feature(LCD Module)

No	Item	Specification		Min.	Typ.	Max.	Remark	
1	Viewing Angle <CR>10>	R/L, U/D		178, 178				
2	Luminance	Luminance(cd/m ²)		400	500		32/37/42	
		Variation				1.3	MAX/MIN	
3	Contrast Ratio	CR(32", 37")		600	800		All White/All Black	
		CR(42")		400	550		All White/All Black	
		CR _D (32", 37")		1200	1600		All White/All Black	
		CR _D (42")		800	1100			
4	CIE Color Coordinates	White	Wx	Typ -0.03	0.285	Typ +0.03	LPL(32")	
			Wy		0.293			
		Red	Xr		0.640			
			Yr		0.343			
		Green	Xg		0.280			
			Yg		0.605			
		Blue	Xb		0.145			
			Yb		0.065			
		White	Wx	Typ -0.03	0.285	Typ +0.03	LPL(37")	
			Wy		0.293			
		Red	Xr		0.640			
			Yr		0.341			
		Green	Xg		0.287			
			Yg		0.610			
		Blue	Xb		0.146			
			Yb		0.069			
		White	Wx	Typ -0.03	0.281	Typ +0.03	LPL(42")	
			Wy		0.293			
		Red	Xr		0.639			
			Yr		0.340			
		Green	Xg		0.284			
			Yg		0.604			
		Blue	Xb		0.145			
			Yb		0.064			

4.Component Video Input (Y, Pb, Pr)

No	Specification				Proposed
	Resolution	H-freq(kHz)	V-freq(Hz)		
1.	720x480	15.73	60	SDTV, DVD 480i	
2.	720x480	15.63	59.94	SDTV, DVD 480i	
3.	720x480	31.47	59.94	EDTV 480p	
4.	720x576	15.625	50.00	SDTV, DVD 625 Line	
5.	720x576	31.25	50.00	HDTV 576p	
6.	1280x720	45.00	60.00	HDTV 720p	
7.	1280x720	44.96	59.94	HDTV 720p	
8.	1920x1080	31.25	50.00	HDTV 1080i	
9.	1920x1080	33.75	60.00	HDTV 1080i	
10.	1920x1080	33.72	59.94	HDTV 1080i	

5. RGB PC INPUT Mode Table

No	Resolution	H-freq(kHz)	V-freq.(Hz)	Pixel clock(MHz)	Proposed
	Analog RGB, Digital RGB				
1	720x400	31.468	70.8	28.321	
2	640x480	31.469	59.94	25.17	VESA
		37.684	75.00	31.5	VESA
3	800x600	37.879	60.31	40.00	VESA
		46.875	75	49.5	VESA
4	832x624	49.725	74.55	57.283	
5	1024x768	48.363	60.00	65.00	VESA(XGA)
		56.47	70.00	75.00	VESA(XGA)
		60.123	75.029	78.75	VESA(XGA)
6	1280x768	47.776	59.870	79.50	VESA(WXGA)
7	1360x768	47.720	59.799	84.75	VESA(WXGA)
8	1366x768	47.720	59.799	84.75	Supported

6. RGB DTV INPUT Mode Table

No	Resolution	H-freq(kHz)	V-freq.(Hz)	Pixel clock(MHz)	Proposed
1	720x576	31.25	50.00	SDTV 576p 50Hz	
2	720x480	31.47	59.94	SDTV 480p 60Hz	
3	1280x720	45.00	50.00	HDTV 720p 50Hz	HDCP
4	1280x720	44.96	59.94	HDTV 720p 60Hz	HDCP
5	1920x1080	28.13	50.00	HDTV 1080i 50Hz	HDCP
6	1920x1080	33.72	59.94	HDTV 1080i 60Hz	HDCP

* RGB-PC EDID DATA

	0x00	0x01	0x02	0x03	0x04	0x05	0x06	0x07	0x08	0x09	0x0A	0x0B	0x0C	0x0D	0x0E	0x0F
0x00	00	FF	FF	FF	FF	FF	FF	00	1E	6D	Product code		Serial No			
0x01	Month/Year		01	03	01	46	27	78	EA	D9	B0	A3	57	49	9C	25
0x02	11	49	4B	A5	6E	80	31	40	01	01	01	01	45	40	01	01
0x03	61	40	01	01	01	01	1B	21	50	A0	51	00	1E	30	48	88
0x04	35	00	BC	88	21	00	00	1C	4E	1F	00	80	51	00	1E	30
0x05	40	80	37	00	BC	88	21	00	00	18	00	00	00	FD	00	38
0x06	4B	1F	3D	09	00	0A	20	20	20	20	20	20	00	00	00	FC
0x07	00	Model Name								0A	20	20	20	00	C/S	

* Product code

Model Name	Product Code	Product Code
		EDID Table
32LC2D	30066	7572
37LC2D	30068	7574
42LC2D	40028	9C5C

* Serial No. : Controlled on production line

* Month, Year : Controlled on production line : ex) Monthly : '03' => '03', Year. '2005' => '0F'

* Model Name(Hex) :

Model Name	Model Name(Hex)
32LC2D	33324C4332442D4543
37LC2D	33374C4332442D4543
42LC2D	34324C4332442D4543

* Checksum : Changeable by total EDID data

7. HDMI INPUT Mode Table

No	Resolution	H-freq(kHz)	V-freq.(Hz)	Pixel clock(MHz)	Proposed
	Analog RGB, Digital RGB				
1	720x400	31.468	70.8	28.321	
2	640x480	31.469	59.94	25.17	VESA
		37.684	75.00	31.5	VESA
3	800x600	37.879	60.31	40.00	VESA
		46.875	75	49.5	VESA
4	832x624	49.725	74.55	57.283	
5	1024x768	48.363	60.00	65.00	VESA(XGA)
		56.47	70.00	75.00	VESA(XGA)
		60.123	75.029	78.75	VESA(XGA)
6	1280x768	47.776	59.870	79.50	VESA(WXGA)
7	1360x768	47.720	59.799	84.75	VESA(WXGA)
8	1366x768	47.720	59.799	84.75	Supported

8. HDMI DTV Mode Table

No	Resolution	H-freq(kHz)	V-freq.(Hz)	Pixel clock(MHz)	Proposed
1	720x576	31.25	50.00	SDTV 576p 50Hz	
2	640x480	31.5	59.94/60	SDTV 480p 60Hz	
3	720x480	31.47	59.94/60	SDTV 480p 60Hz	
4	1280x720	45.00	50.00	HDTV 720p 50Hz	HDCP
5	1280x720	44.96	59.94/60	HDTV 720p 60Hz	HDCP
6	1920x1080	28.13	50.00	HDTV 1080i 50Hz	HDCP
7	1920x1080	33.72	59.94/60	HDTV 1080i 60Hz	HDCP

* HDMI EDID DATA

	0x00	0x01	0x02	0x03	0x04	0x05	0x06	0x07	0x08	0x09	0x0A	0x0B	0x0C	0x0D	0x0E	0x0F	
0x00	00	FF	FF	FF	FF	FF	FF	00	1E	6D	Product code			Serial No			
0x01	Month/Year	01	03	80	46	27	78	EA	D9	B0	A3	57	49	9C	25		
0x02	11	49	4B	A5	6E	80	31	40	01	01	01	45	40	01	01		
0x03	61	40	01	01	01	01	1B	21	50	A0	51	00	1E	30	48	88	
0x04	35	00	BC	88	21	00	00	1C	4E	1F	00	80	51	00	1E	30	
0x05	40	80	37	00	BC	88	21	00	00	18	00	00	00	FC	00		
0x06	Model Name								0A	20	20	00	00	00	00	FD	
0x07	00	38	4B	1F	3D	09	00	0A	20	20	20	20	20	20	01	C/S	
0x00	02	03	24	F1	49	85	04	02	01	03	11	12	13	14	23	09	
0x01	07	07	23	09	07	07	23	09	07	07	83	01	00	00	65	03	
0x02	0C	00	10	00	01	1D	00	80	51	D0	1C	20	40	80	35	00	
0x03	BC	88	21	00	00	1E	8C	0A	D0	8A	20	E0	2D	10	10	3E\	
0x04	96	00	13	8E	21	00	00	18	2A	12	00	10	41	43	17	20	
0x05	28	60	35	00	00	00	32	00	00	1C	01	1D	80	18	71	1C	
0x06	16	20	58	2C	25	00	C4	8E	21	00	00	9E	00	00	00	00	
0x07	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	6B	

7. Mechanical specification

<32LC2D>

No.	Item		Content								Remark
1	Product Dimension			Width(W)(32"/37"/42")		Length(D)(32"/37"/42")		Height(H)(32"/37"/42")			
		Before Packing	811	944	1054	235	286	302	630	726	813.5
		After Packing	896	1052	1166	300	383	402	720	855	950
2	Product Weight	Only SET	22Kg(32")/31Kg(37")/37.0Kg(42")								With Stand
		With Box	25.5Kg(32")/33.3Kg(37")/42.3Kg(42")								

8. Mechanical specification

<Table 1> Scart Arrangement 1.(Full Scart)

Pin	Signal	Signal Level	Impedance
1	Audio Output B (right)	0.5 Vrms	< 1 kΩ
2	Audio Input B (right)	0.5 Vrms	> 10 kΩ
3	Audio Output A (left)	0.5 Vrms	< 1 kΩ
4	Ground (audio)	-	-
5	Ground (blue)	-	-
6	Audio input A (left)	0.5 Vrms	> 10 kΩ
7	Blue input	0.7 V	75 Ω
8	Function Select (AV control)	High (9.5 - 12V) - AV Mode Mid (5 - 8V) - Wide Screen Low (0 - 2V) - TV Mode	> 10 kΩ
9	Ground (Green)	-	-
10	Comms Data 2		
11	Green input	0.7 V	75 Ω
12	Comms Data 1		
13	Ground (Red)	-	-
14	Ground (Blanking)	-	-
15	Red input	0.7 V	75 Ω
16	RGB Switching Control	High (1 - 3V) - RGB Low (0 - 0.4V) - Composite	75 Ω
17	Ground (Video input & Output)	-	-
18	Ground (RGB Switching Control)	-	-
19	Video input (Composite)	1V including sync(0.85<Typ<1.15)	75 Ω

<Table 2> Scart Arrangement 2.(Half Scart)

Pin	Signal	Signal Level	Impedance
1	Audio Output B (right)	0.5 Vrms	< 1 kΩ
2	Audio Input B (right)	0.5 Vrms	> 10 kΩ
3	Audio Output A (left)	0.5 Vrms	< 1 kΩ
4	Ground (audio)	-	-
5	Ground (blue)	-	-
6	Audio input A (left)	0.5 Vrms	> 10 kΩ
7	-	-	-
8	Function Select (AV control)	High (9.5 - 12V) - AV Mode Mid (5 - 8V) - Wide Screen Low (0 - 2V) - TV Mode	> 10 kΩ
9	Ground (Green)	-	-
10	Comms Data 2		
11	-	-	-
12	Comms Data 1		
13	Ground (Red)	-	-
14	Ground (Blanking)	-	-
15	Red input		
16	-	-	-
17	Ground (Video input & Output)	-	-
18	-	-	-
19	Video output (Composite)	1V including sync (0.85<Typ<1.15)	75 Ω
20	Video input (Composite)	1V including sync (0.85<Typ<1.15)	75 Ω
21	Common ground (Shield)	-	-

ADJUSTMENT INSTRUCTION

1. Application Range

This spec. sheet is applied to all of the LD61A chassis manufactured at LG TV Plant all over the world.

2. Specification.

- 2.1 Because this is not a hot chassis, it is not necessary to use an isolation transformer.
However, the use of isolation transformer will help to protect test instruments
- 2.2 Adjustment must be done in the correct sequence.
- 2.3 The adjustment must be performed at $25\pm5^{\circ}\text{C}$ temperature and $65\pm10\%$ relative humidity if there is no specified designation.
- 2.4 The input voltage of the receiver must be kept between 100~220V, 50/60Hz.
- 2.5 Before adjustment, execute Heat-Run for 30 minutes at RF no signal.

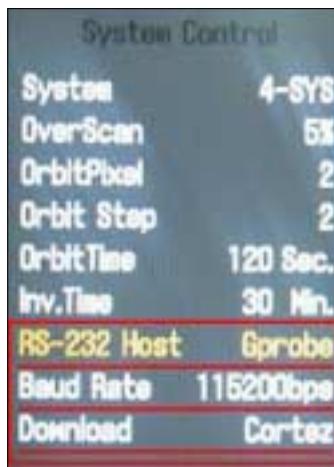
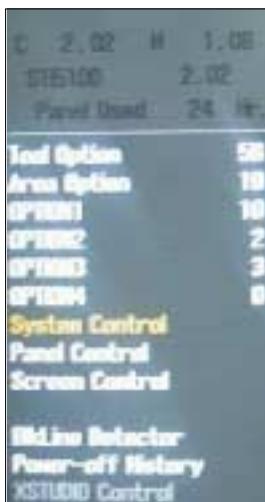
3. Channel Memory

3.1 Setting up the LGIDS

- 1) Install the LGIDS
- 2) After installation, restart your PC.
- 3) Extract [files.zip] to folder [c:\LGIDS\files]
- 4) Start LGIDS.

3.2 Channel memory method

- 1) Press TILT key in Adjust remocon(Automatic setting).
- 2) Setting up like bottom figure
(Confirmation: Press ADJ Key in the Adjust remocon.
Select "System Control" by using $\blacktriangle/\blacktriangledown$ (CH+/-) key, and press ■ (ENTER))



- 3) Connect RS232 cable .(Use the general RS-232C Twisted Serial Cable).
- 4) Operate LGIDS
- 5) Select "Hurricane" and "ALL" on Model dialog and check your connection in Communication dialog.
(If your connection is 'NG', then set your PORT(COM1,2,3,...) correctly. If your connection has completed, you can see Ready)

- 6) Select proper CH_memory file (*.nvm) for each model at [Channel Download] => [Write Batch].
Next, select proper binary file (*.bin) including the CH information for each model at [Channel Download] => [NVRAM File].



- 7) Click the [Download] button.

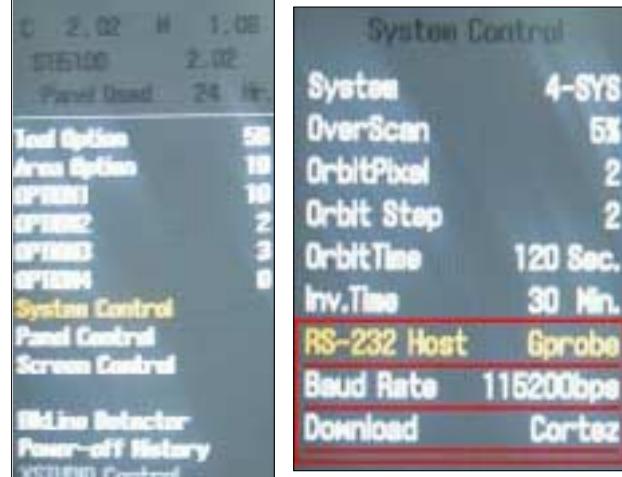
It means the completion of the CH memory download if all items show 'OK' and Status is changed by 'PASS' at the lower right corner of the window



4. Hudson Download

4.1 Hudson Download method

- 1) Press TILT key in Adjust remocon(Automatic setting).
- 2) Setting up like bottom figure
(Confirmation: Press ADJ Key in the Adjust remocon.
Select "System Control" by using $\blacktriangle/\blacktriangledown$ (CH+/-) key, and

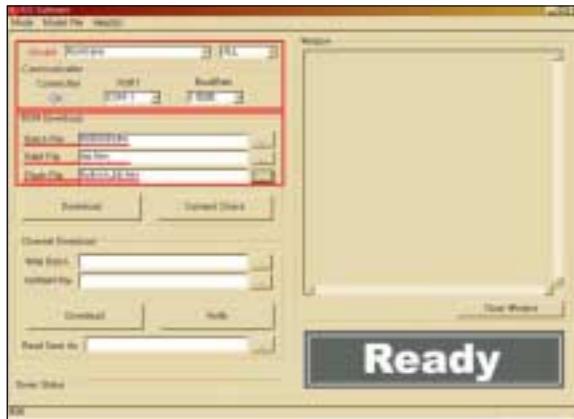


- 3) Connect RS232 cable(Use Download Jig and general RS-232C Twisted Serial Cable).



**Before upgrading "Hudson flash memory", push the switch on the download jig 'inside'.*

- 4) Operate LGIDS.
- 5) Select "Hurricane" and "ALL" on Model dialog and check your connection in Communication dialog.
(If your connection is 'NG', then set your PORT (COM1, 2, 3,...) correctly. If your connection has completed, you can see **Ready**)
- 6) First, select proper *Batch file*(*.flm) for each model at [ROM Download] => [Batch File].
Second, select proper *RAM file*(*.hex) for each model at [ROM Download] => [RAM File].
Third, select proper *Flash File*(*.hex) for each model at [ROM Download] => [Flash File].



- 7) Click the [Download] button.

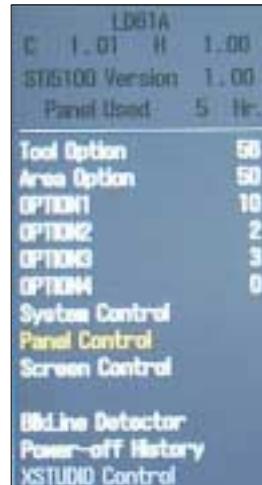
It means the completion of the Hudson download if all items show 'OK' and Status is changed by 'PASS' at the lower right corner of the window.



Before AV ADC Calibration, should be executed the "Panel size selection"

5. Select method of Panel size

- 5.1 Press ADJ Key in the Adjust remocon
- 5.2 Select "Panel Control" by using ▲/▼ (CH+/-) key, and press ■ (ENTER)



- 5.3 Select "Panel Size", and change the panel size among 32, 37, 42 according to the inch of model name.
(If the model name is 37LC2D-EC, change the Panel size from default value to 37.)



- 5.4 After changing the panel size, push the EXIT Key

6. ADC Calibration

ADC	RF/AV/S-VIDEO	Component	RGB-PC
MSPG925F	PAL	Model:217 (720P)	Model: 37
	INPUT SELECT AV4	Pattern:33	(1024*768
	Model: 202 (PAL-BGDHL)	720P/60Hz 100%	60Hz)
	Pattern: 33	Color Bar	Pattern: 33
	PAL 100% Color Bar		

=> Caution: -System control RS-232 Host should be "PC" for adjustment.

Before AV ADC Calibration, execute the "Panel size selection"

6.1 Adjustment of RF/AV/S-VIDEO

* Required Equipments

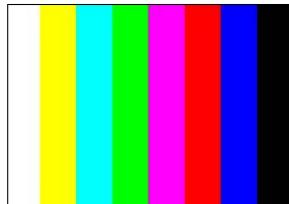
- Remote controller for adjustment
- MSPG-925F Pattern Generator (Which has Video Signal:
100% Color Bar Pattern shown in Fig. 1)
=> Model: 202 / Pattern: 33

Case1) EC and FC model use PAL-BGDHI (composite signal)

6.1.1 Method of Auto RF/AV/S-VIDEO Color Balance.

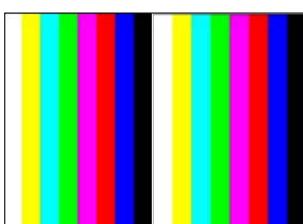
1) Input the Video Signal: 100% Color Bar signal into AV4

2) Set the PSM to Dynamic mode in the Picture menu



[Fig.1]

3) Press IN-START key on R/C for adjustment.



4) Press the ▶(Vol.+) key to operate the set, then it becomes automatically.

5) Auto-RGB OK means the adjustment is completed.

6.2 Adjustment of Component.

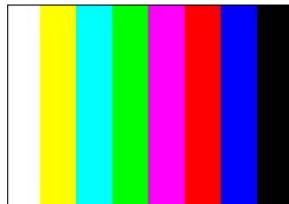
* Required Equipments

- Remote controller for adjustment
- I MSPG-925F Pattern Generator => Model: 217/Pattern: 33
(Which has 720p/60Hz YPbPr output Pattern shown in Fig. 2)

6.2.1 Method of Auto Component Color Balance

1) Input the Component 720p/60Hz 100% Color Bar(MSPG-925F model:217, pattern:33) signal into Component.

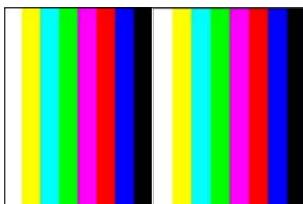
2) Set the PSM to Dynamic mode in the Picture menu



[Fig.2]

3) Press the IN-START key on R/C for adjustment.

4) Press the ▶(Vol.+) key to operate the set , then it becomes automatically.



5) Auto-RGB OK means the adjustment is completed.

6.3 Adjustment of RGB

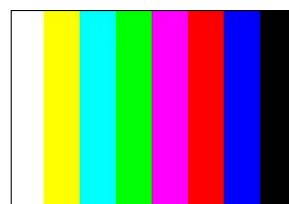
* Required Equipments

- Remote controller for adjustment
- I MSPG-925F Pattern Generator
(Which has XGA [1024*768] 60Hz 100% Color Bar pattern shown in Fig. 3)

6.3.1 Method of Auto RGB Color Balance

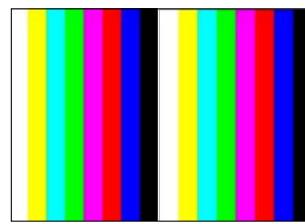
1) Input the PC 1024x768@60Hz 100% Color Bar pattern (MSPG-925F model:37, pattern:33) into RGB.
(Using D-sub to D-sub cable)

2) Set the PSM to Dynamic mode in Picture menu.
3) Press the IN-START key on R/C for adjustment



[Fig.3]

4) Press the ▶(Vol.+) key operate To set , then it becomes automatically.



5) Auto-RGB OK means adjustment is completed.

Before White-balance, the AV ADC should be done.

7. White Balance

White balance		AV4
MSPG925F	High *239Gray	Model : 202 Pattern : 47 *Pal Video

=> Caution: - System control RS-232 Host should be "PC" for adjustment.

- AV ADC should be done before White-balance.

* Test Equipment

Color Analyzer (CA-110)

PC (for communication through RS-232C) => UART Baud rate : 115200

Pattern Generator (MSPG-925F)

* Target Value (PSM: Dynamic, CSM: Normal)

- Normal(9300K) x:0.283±0.003, y: 0.298±0.003

- Luminance(Y) AV/COMP: 250 Cd/m² (Typ: 300 Cd/m²)
PC : 300 Cd/m² (Typ: 350 Cd/m²)

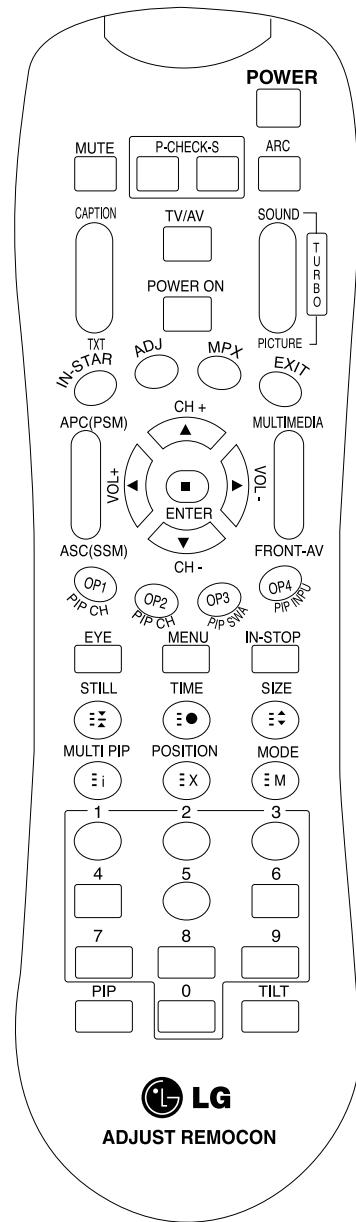
> Reference Value(Automatically fixed)

- Cool(11000K) - x: 0.274±0.003, y: 0.286±0.003

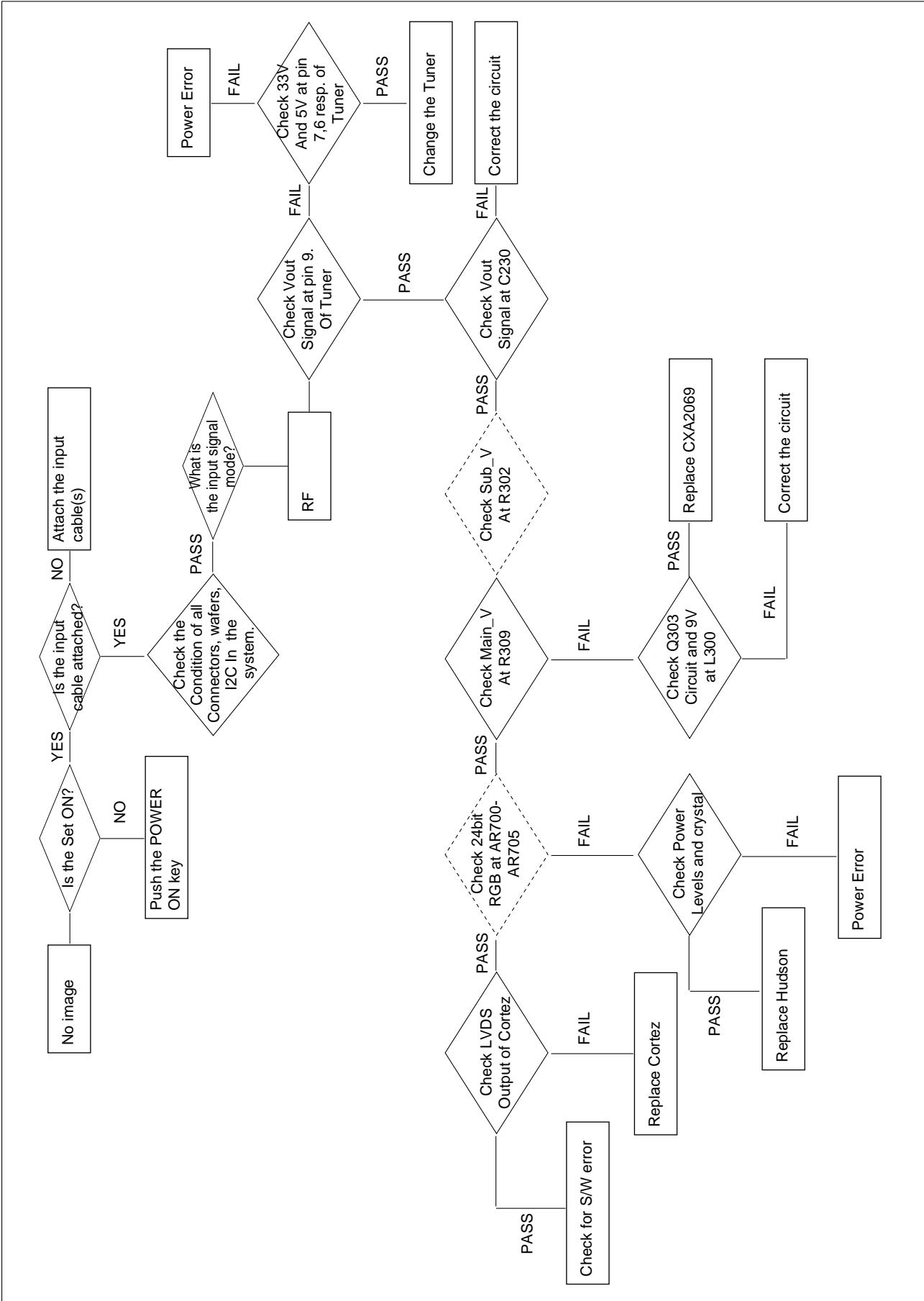
- Warm(7200K) - x:0.303±0.003, y: 0.319±0.003

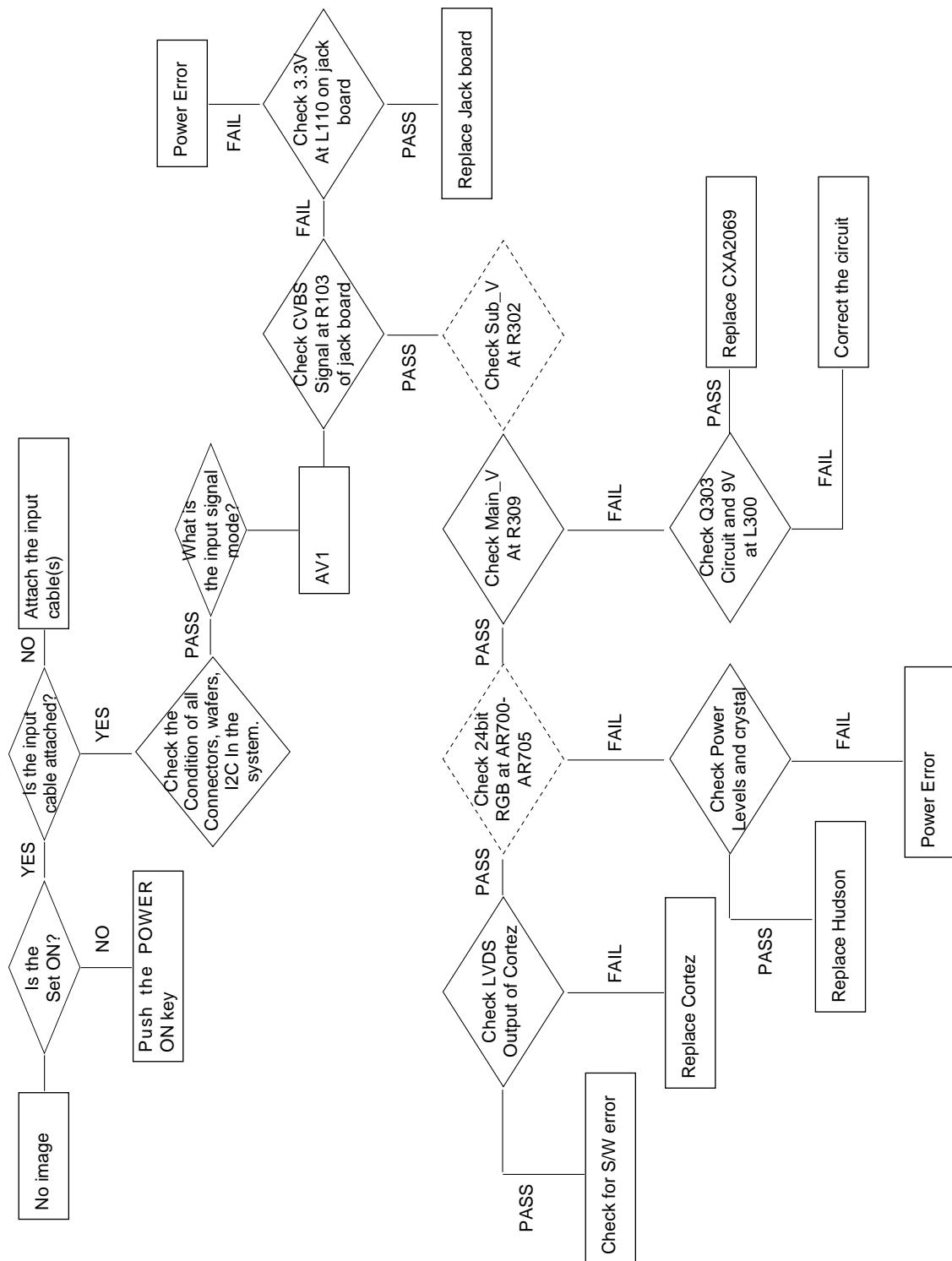
SVC REMOCON

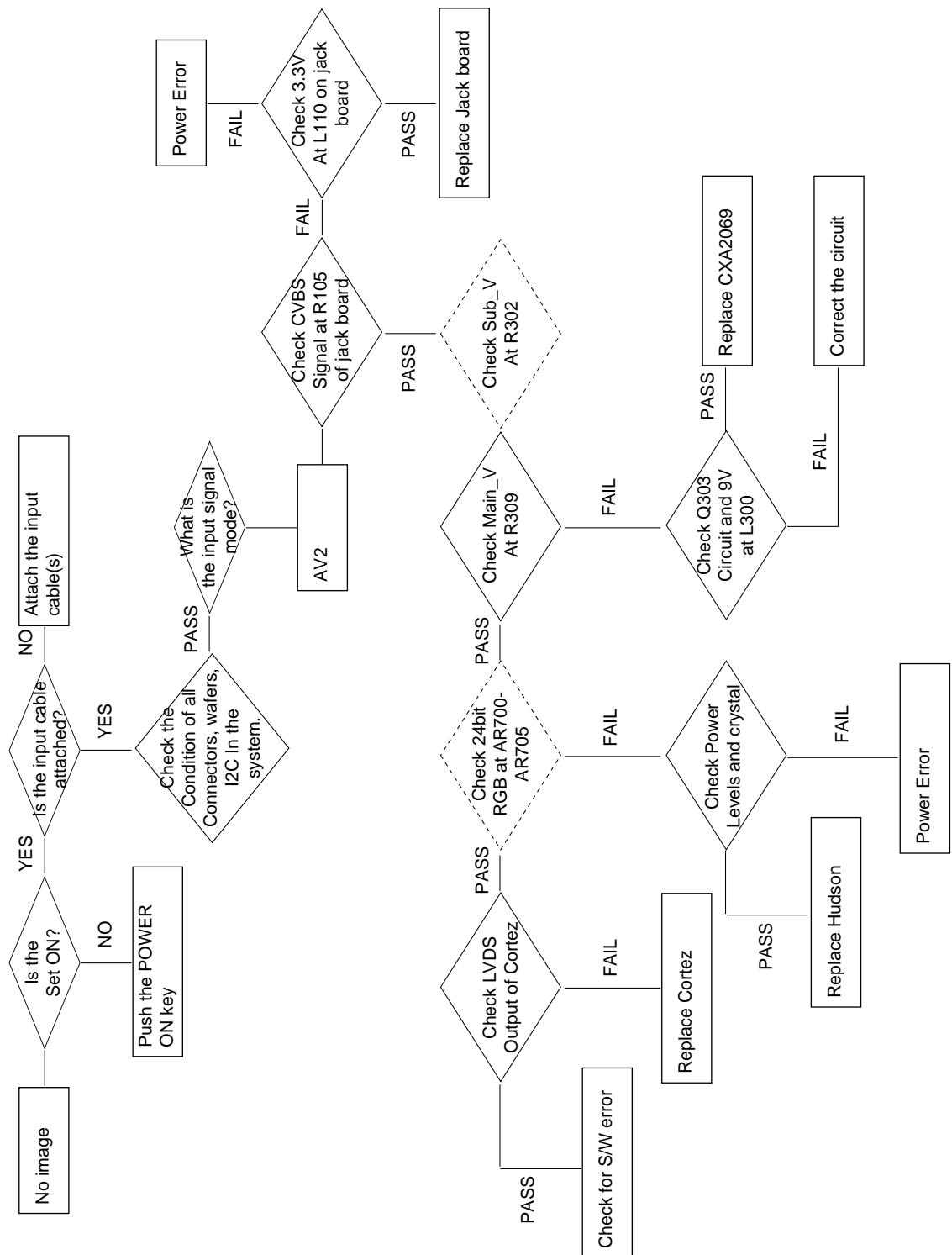
NO	KEY	FUNTION	REAMARK
1	POWER	To turn the TV on or off	
2	POWER ON	To turn the TV on automatically if the power is supplied to the TV. (Use the POWER key to deactivate): It should be deactivated when delivered.	
3	MUTE	To activate the mute function.	
4	P-CHECK	To check TV screen image easily.	Shortcut keys
5	S-CHECK	To check TV screen sound easily	Shortcut keys
6	ARC	To select size of the main screen (Normal, Spectacle, Wide or Zoom)	Shortcut keys
7	CAPTION	Switch to closed caption broadcasting	
8	TXT	To toggle on/off the teletext mode	
9	TV/AV	To select an external input for the TV screen	
10	TURBO SOUND	To start turbo sound	
11	TURBO PICTURE	To start turbo picture	
12	IN-START	To enter adjustment mode when manufacturing the TV sets.	Use the AV key to enter the screen W/B adjustment mode.
		To adjust the screen voltage (automatic): In-start → mute → Adjust → AV(Enter into W/B adjustment mode)	
		W/B adjustment (automatic): After adjusting the screen →W/B adjustment →Exit two times (Adjustment completed)	
		To enter into the adjustment mode. To adjust horizontal line and sub-brightness.	
13	ADJ	To select the multiple sound mode (Mono, Stereo or Foreign language)	
14	MPX	To release the adjustment mode	
15	EXIT	To easily adjust the screen according to surrounding brightness	
16	ASC(SSM)	To easily adjust sound according to the program type	
17	MULTIMIDIA	To check component input	Shortcut keys
18	FRONT-AV	To check the front AV	Shortcut keys
19	CH±	To move channel up/down or to select a function displayed on the screen.	
20	VOL±	To adjust the volume or accurately control a specific function.	
21	ENTER	To set a specific function or complete setting.	
22	PIP CH-(OP1)	To move the channel down in the PIP screen. To use as a red key in the teletext mode	
23	PIP CH+(OP2)	To move the channel in the PIP screen To use as a green key in the teletext mode	
24	PIP SWAP(OP3)	To switch between the main and sub screens To use as a yellow key in the teletext mode	
25	PIP INPUT(OP4)	To select the input status in the PIP screen To use as a blue key in the teletext mode	
26	EYE	To set a function that will automatically adjust screen status to match the surrounding brightness so natural color can be displayed.	
27	MENU	To select the functions such as video, voice, function or channel.	
28	IN-STOP	To set the delivery condition status after manufacturing the TV set.	
29	STILL	To halt the main screen in the normal mode, or the sub screen at the PIP screen. Used as a hold key in the teletext mode (Page updating is stopped.)	
30	TIME	Displays the teletext time in the normal mode Enables to select the sub code in the teletext mode	
31	SIZE	Used as the size key in the PIP screen in the normal mode Used as the size key in the teletext mode	
32	MULTI PIP	Used as the index key in the teletext mode (Top index will be displayed if it is the top text.)	
33	POSITION	To select the position of the PIP screen in the normal mode Used as the update key in the teletext mode (Text will be displayed if the current page is updated.)	
34	MODE	Used as Mode in the teletext mode	
35	PIP	To select the simultaneous screen	
36	TILT	To adjust screen tilt	Shortcut keys
37	0~9	To manually select the channel.	

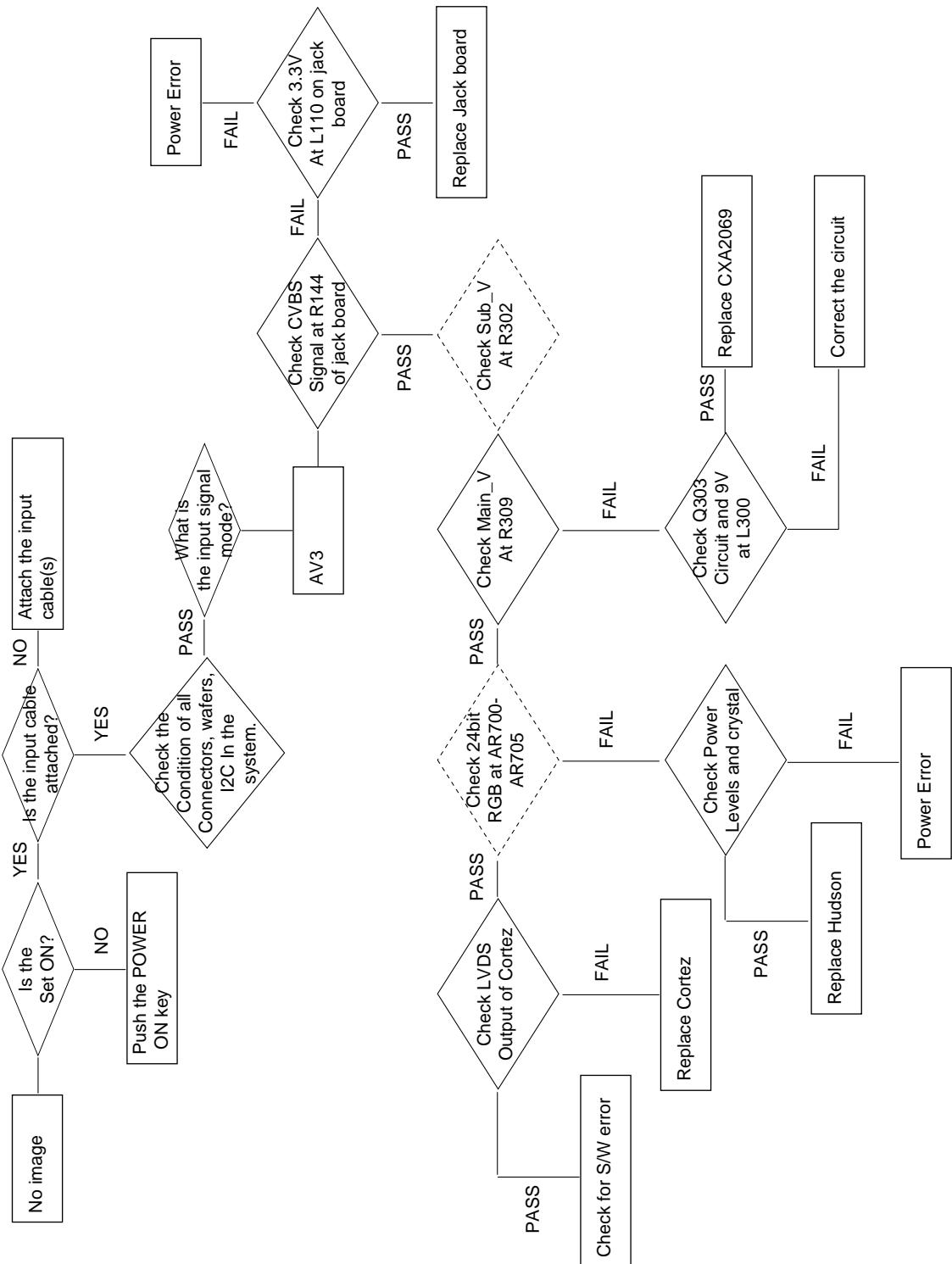


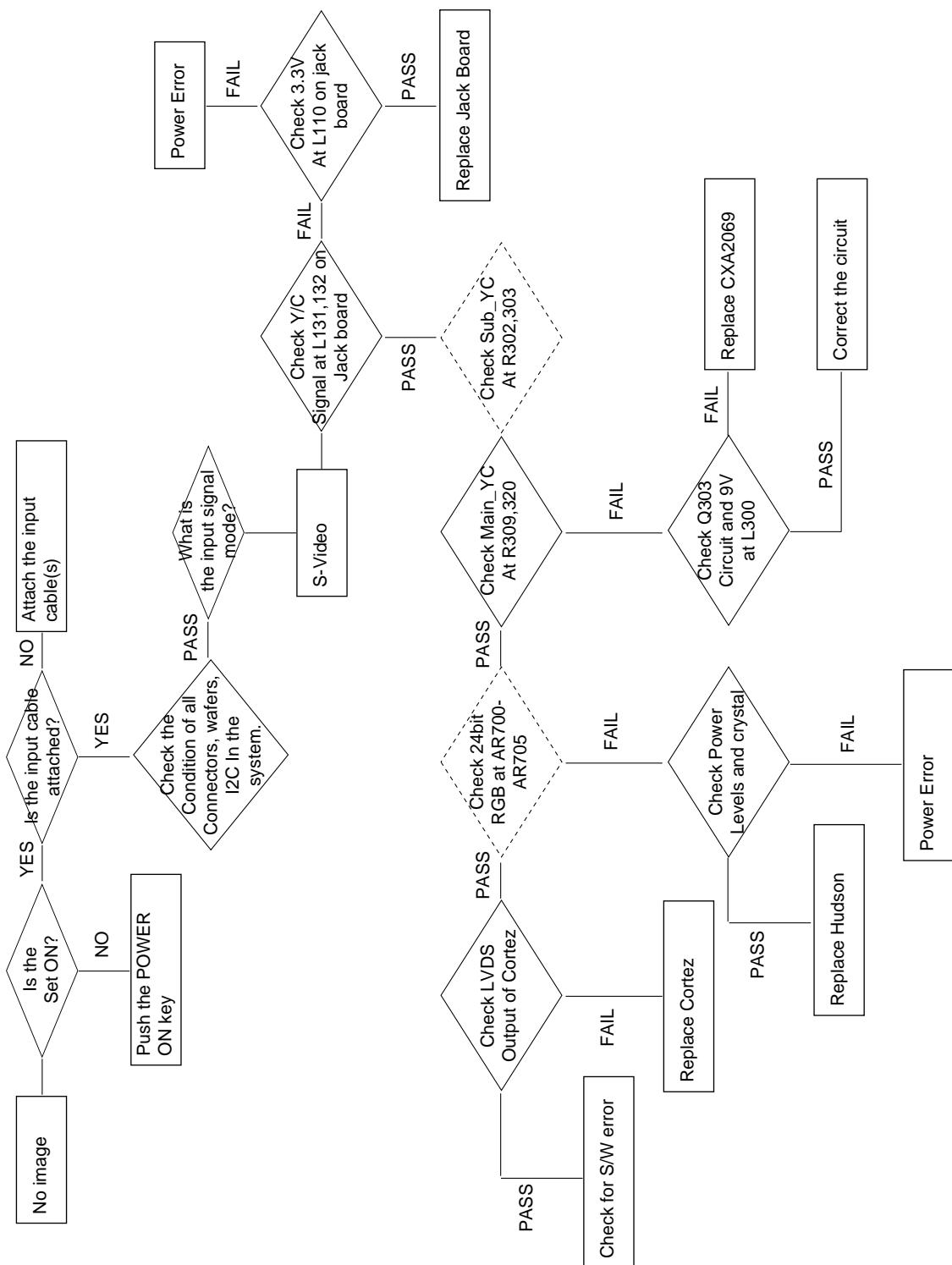
TROUBLESHOOTING

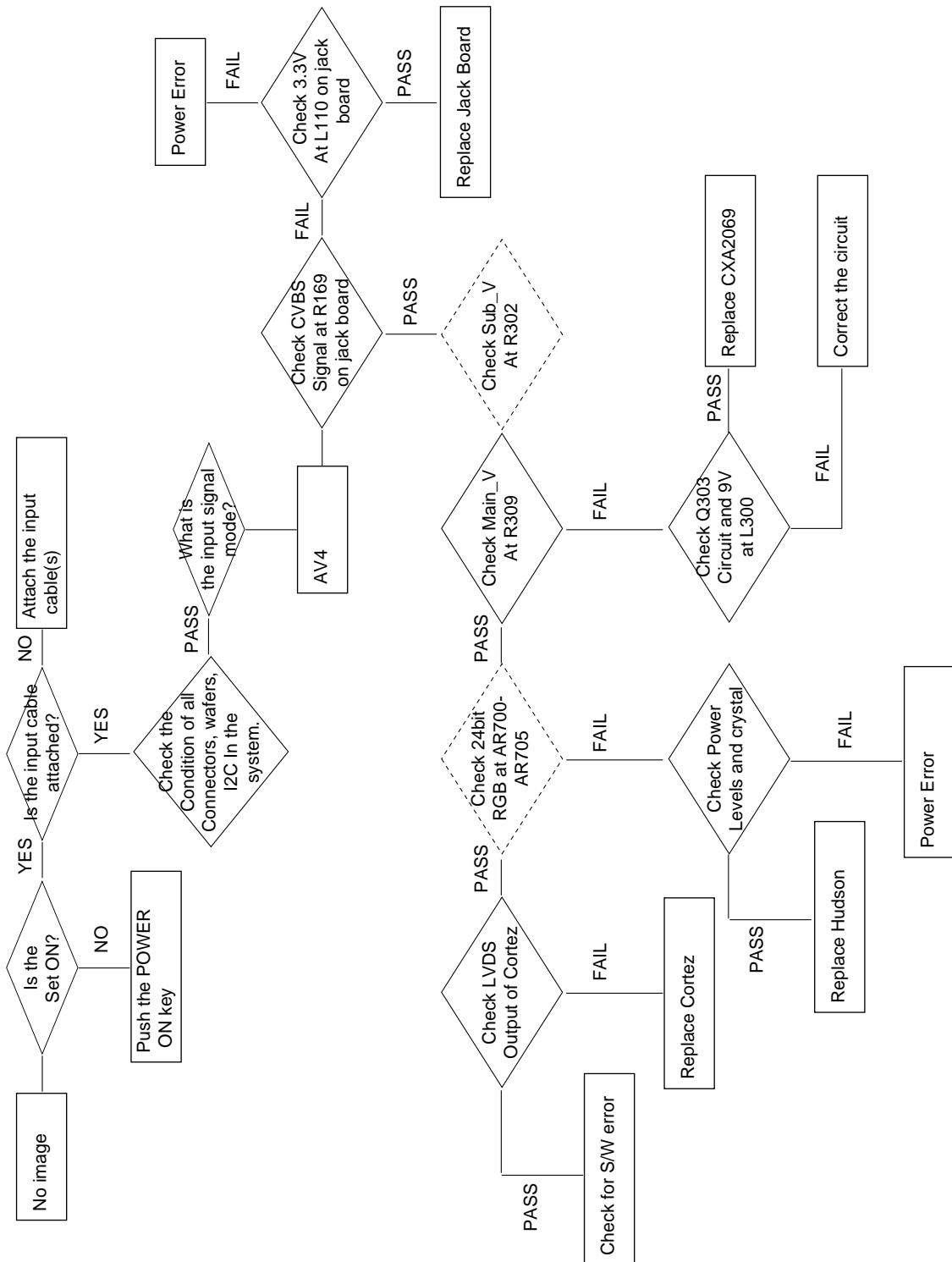


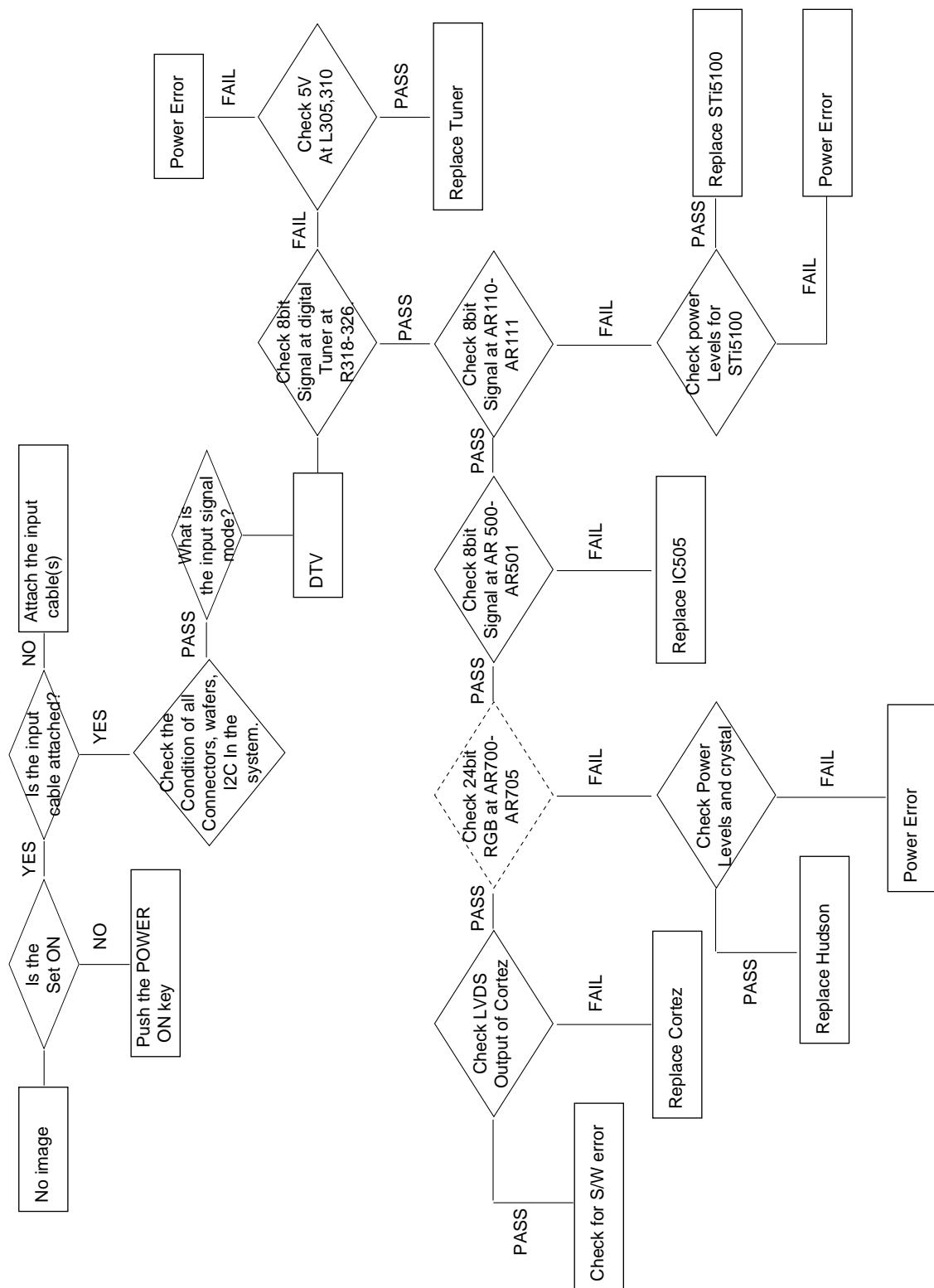


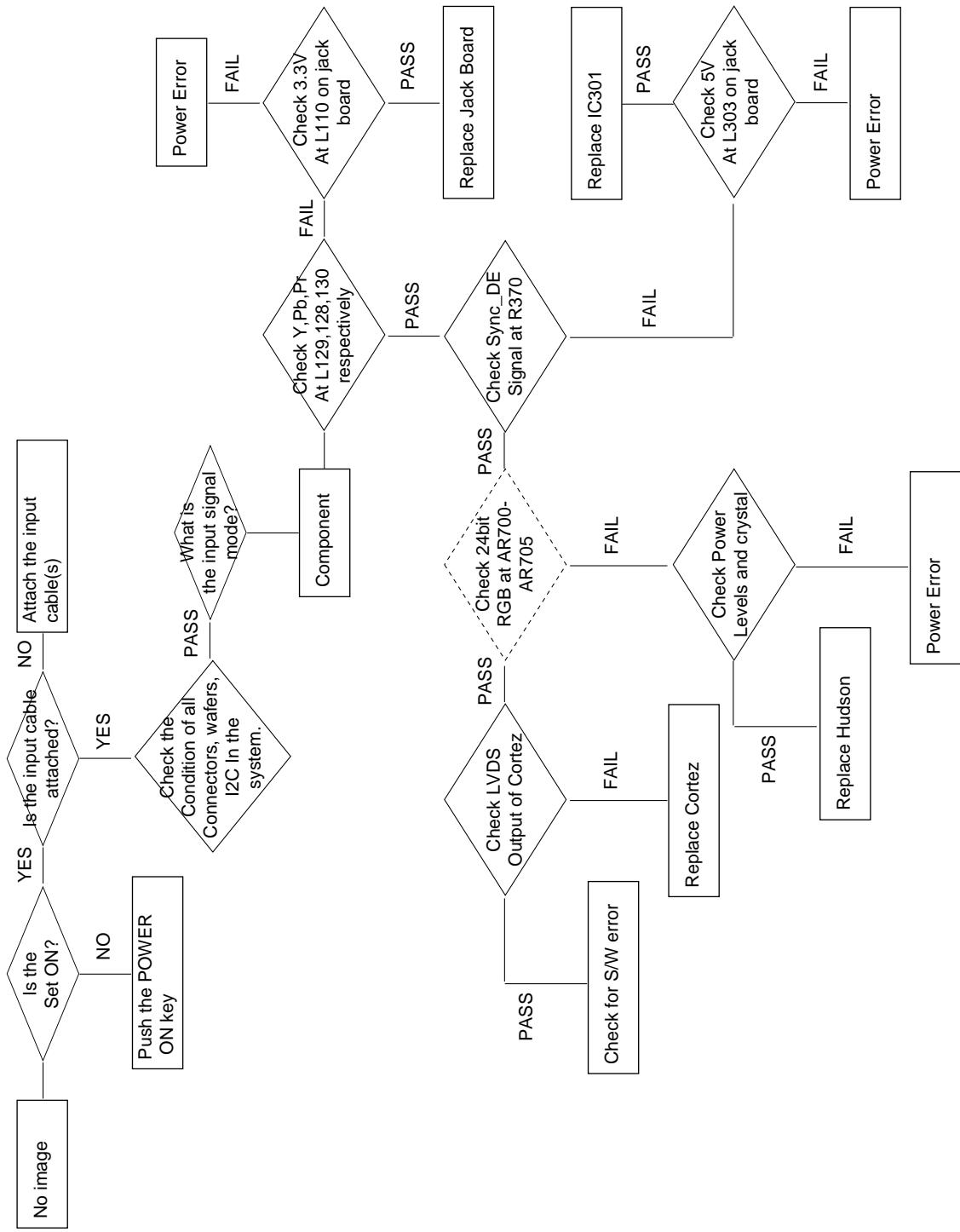


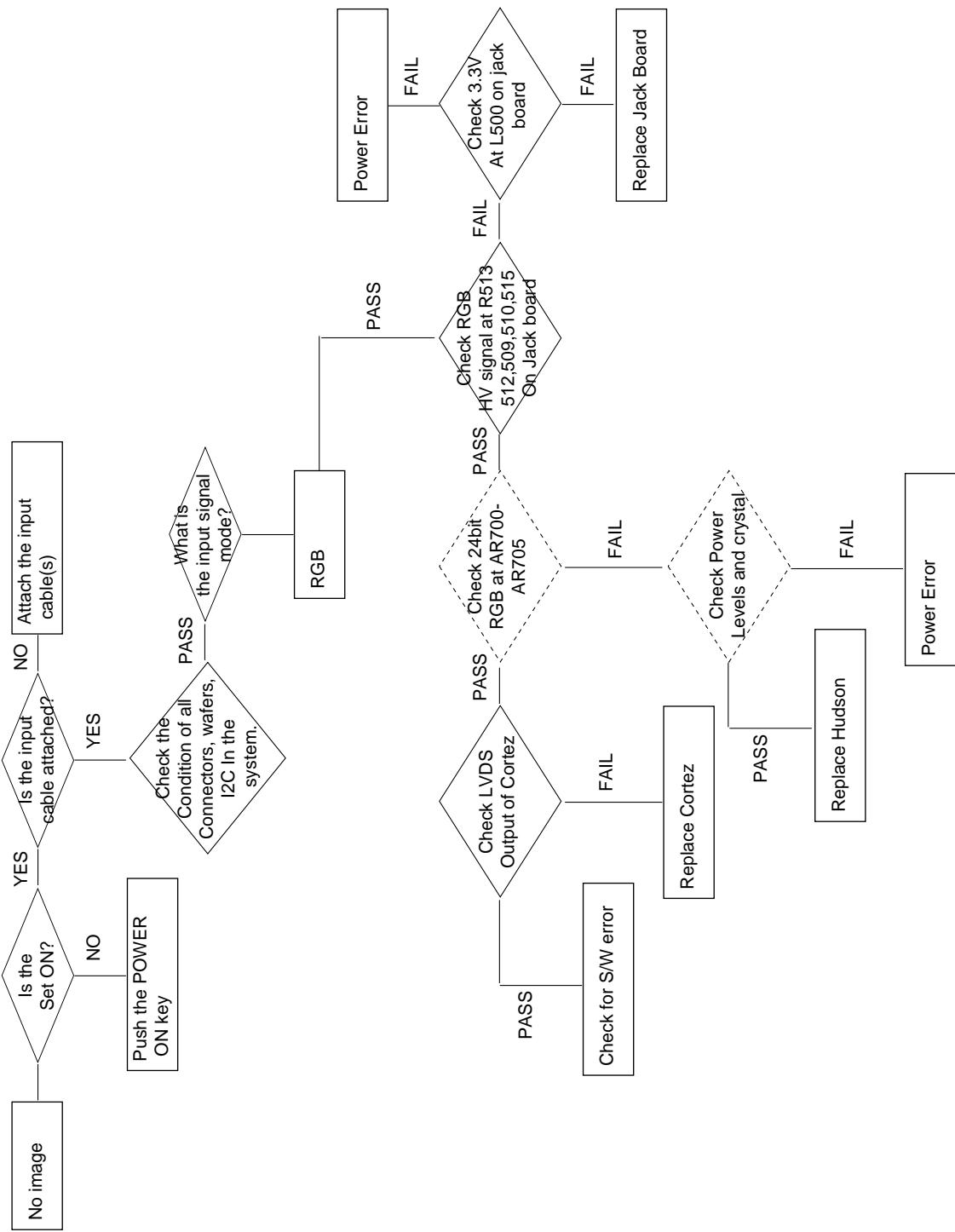


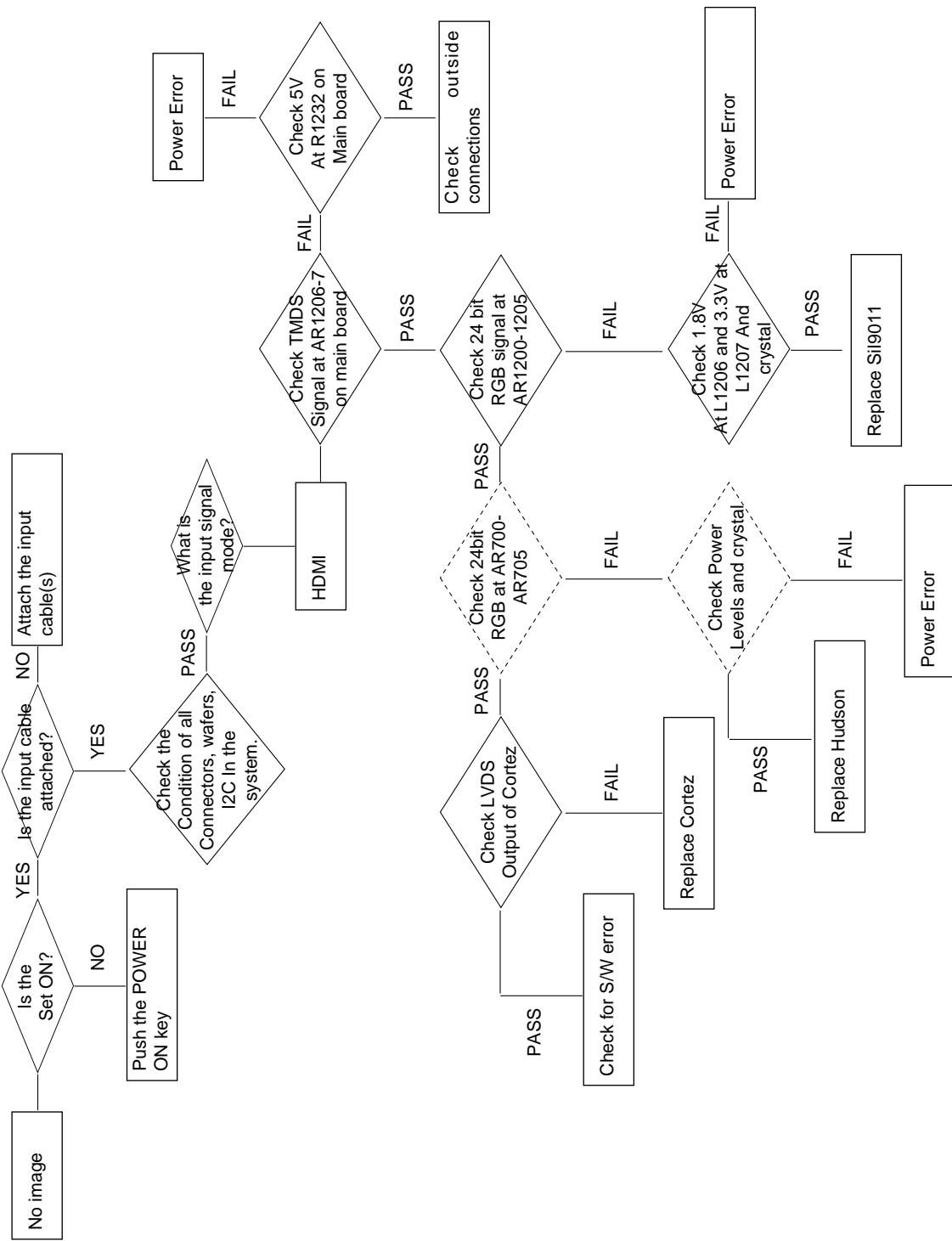




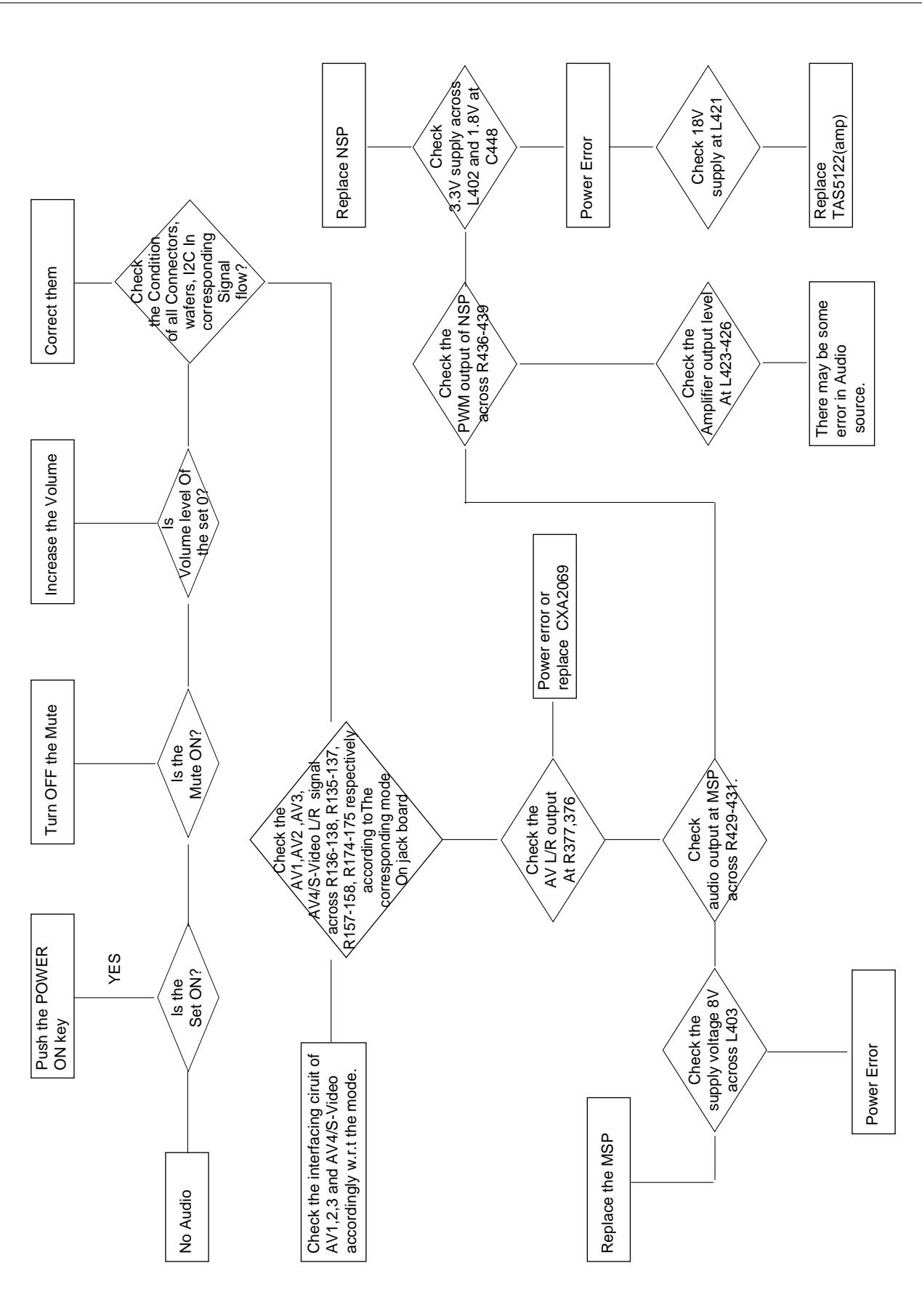




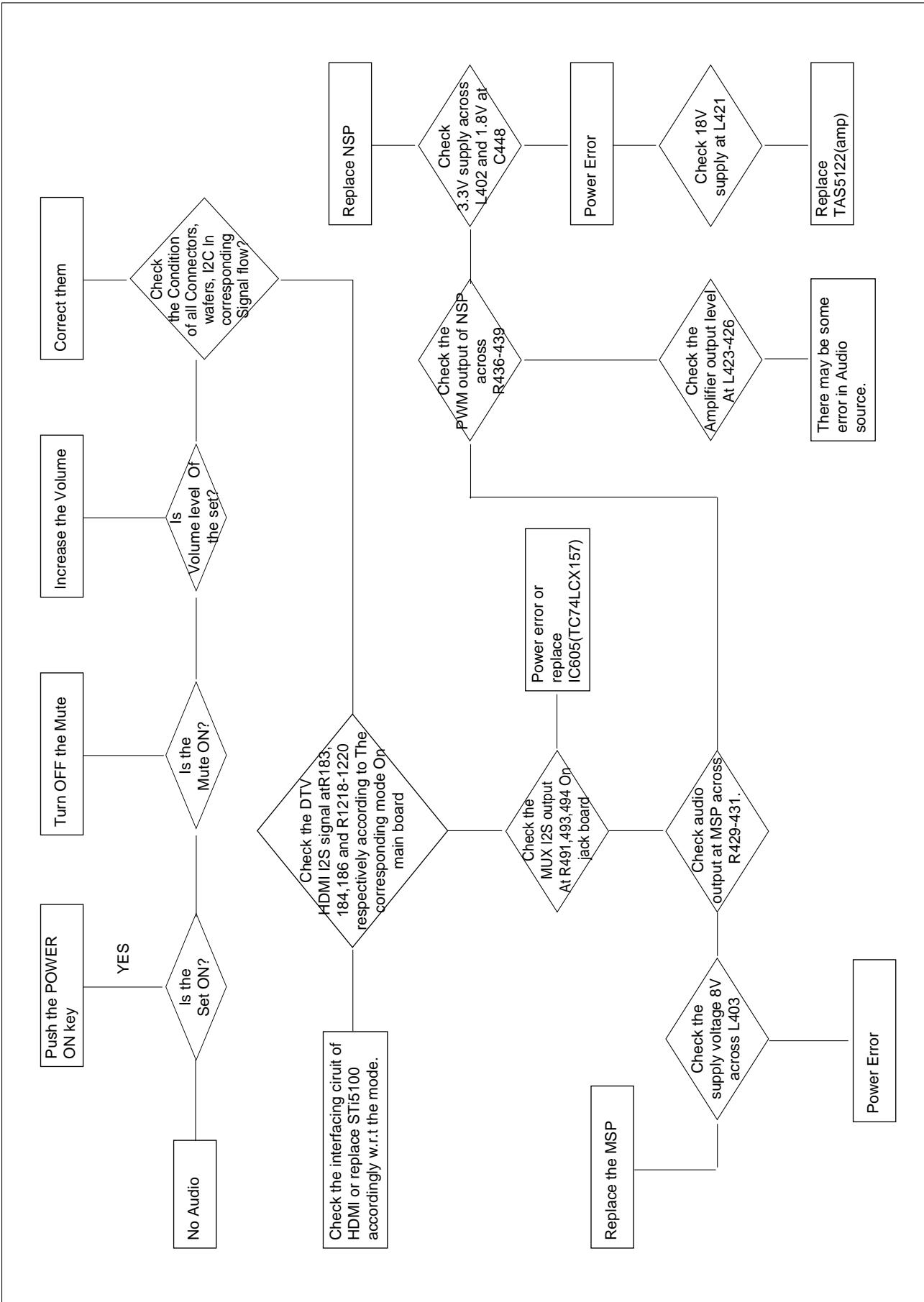




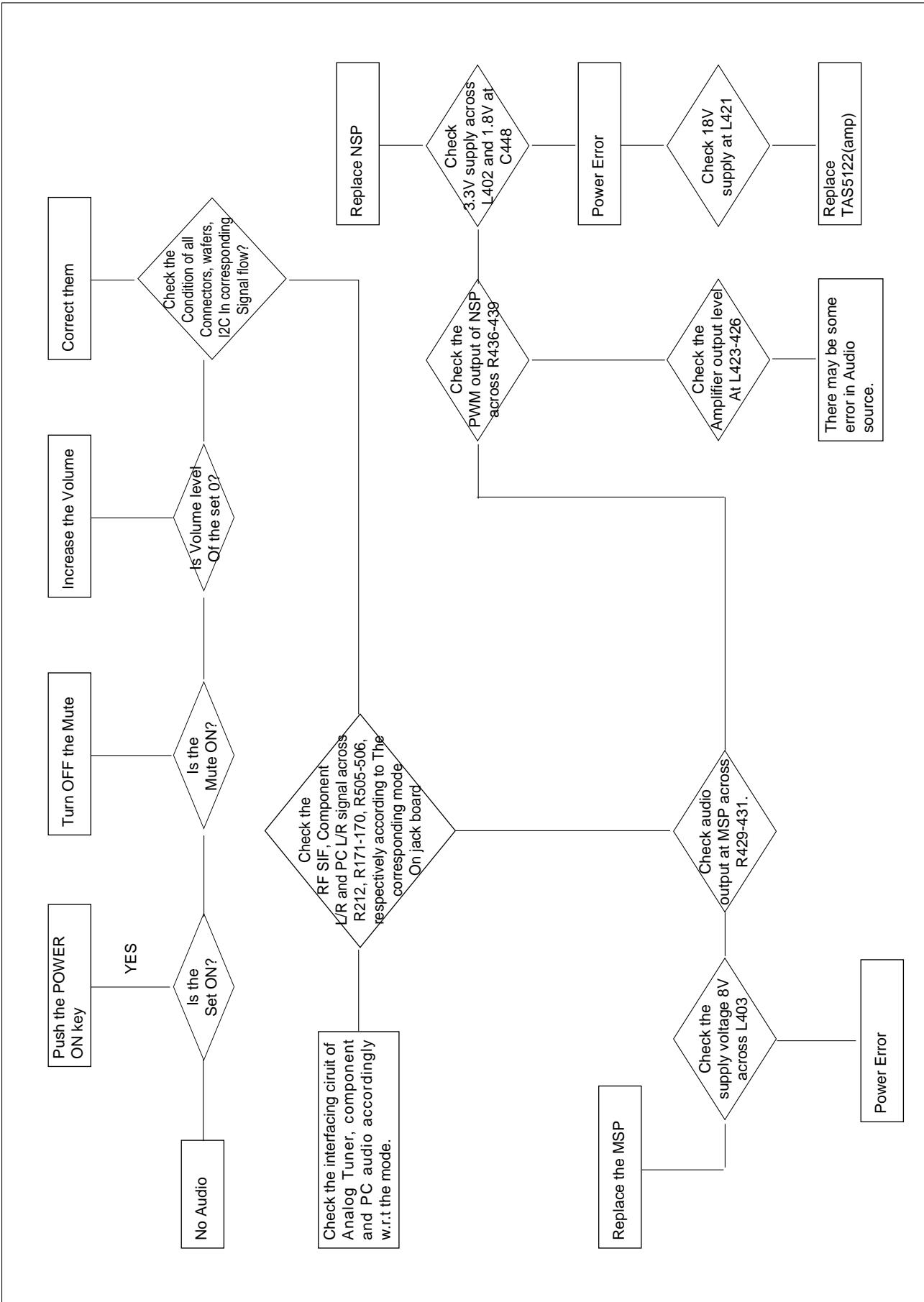
TROUBLESHOOTING AV1, 2, 3, 4/S-Video



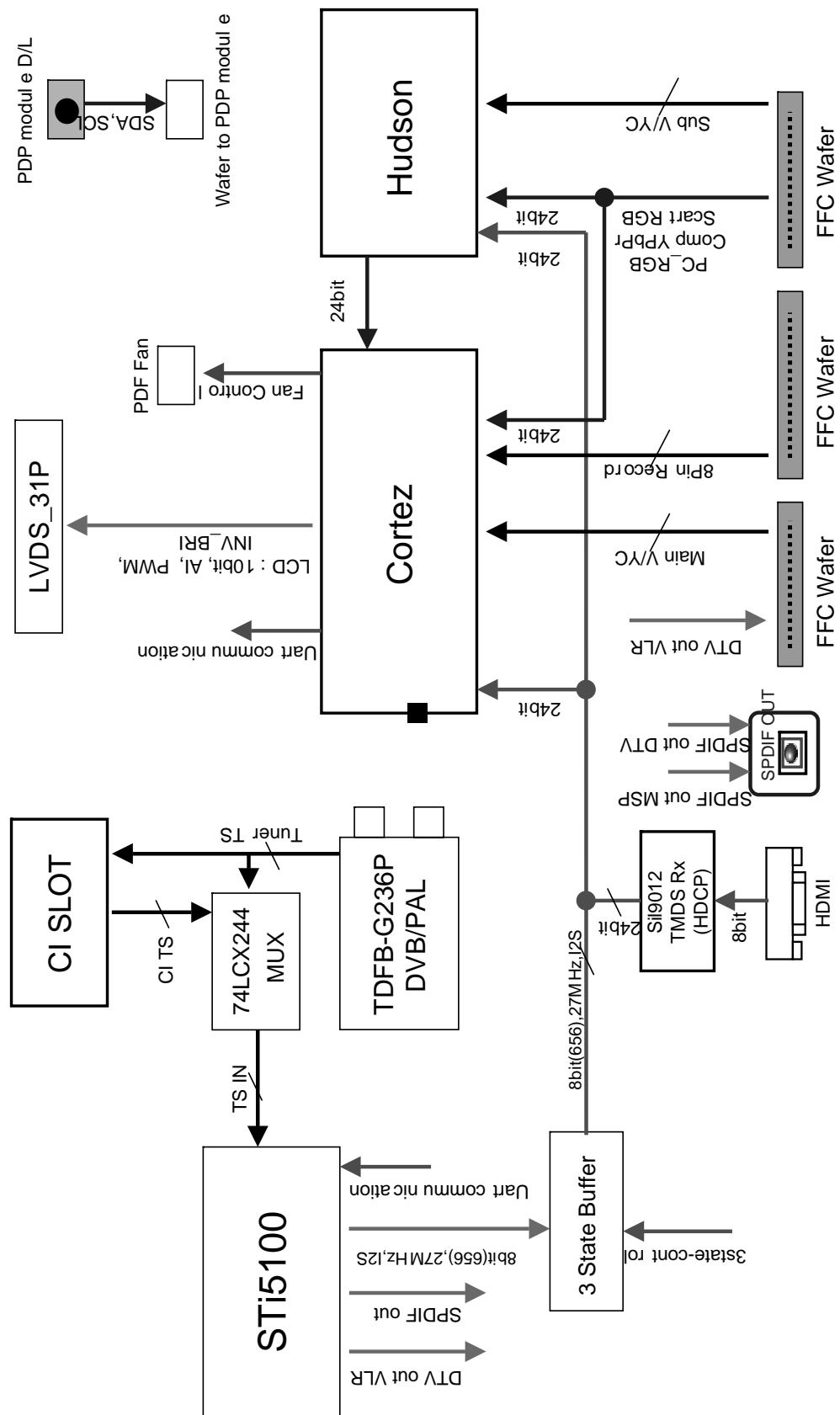
TROUBLESHOOTING DTV/HDMI-Audio



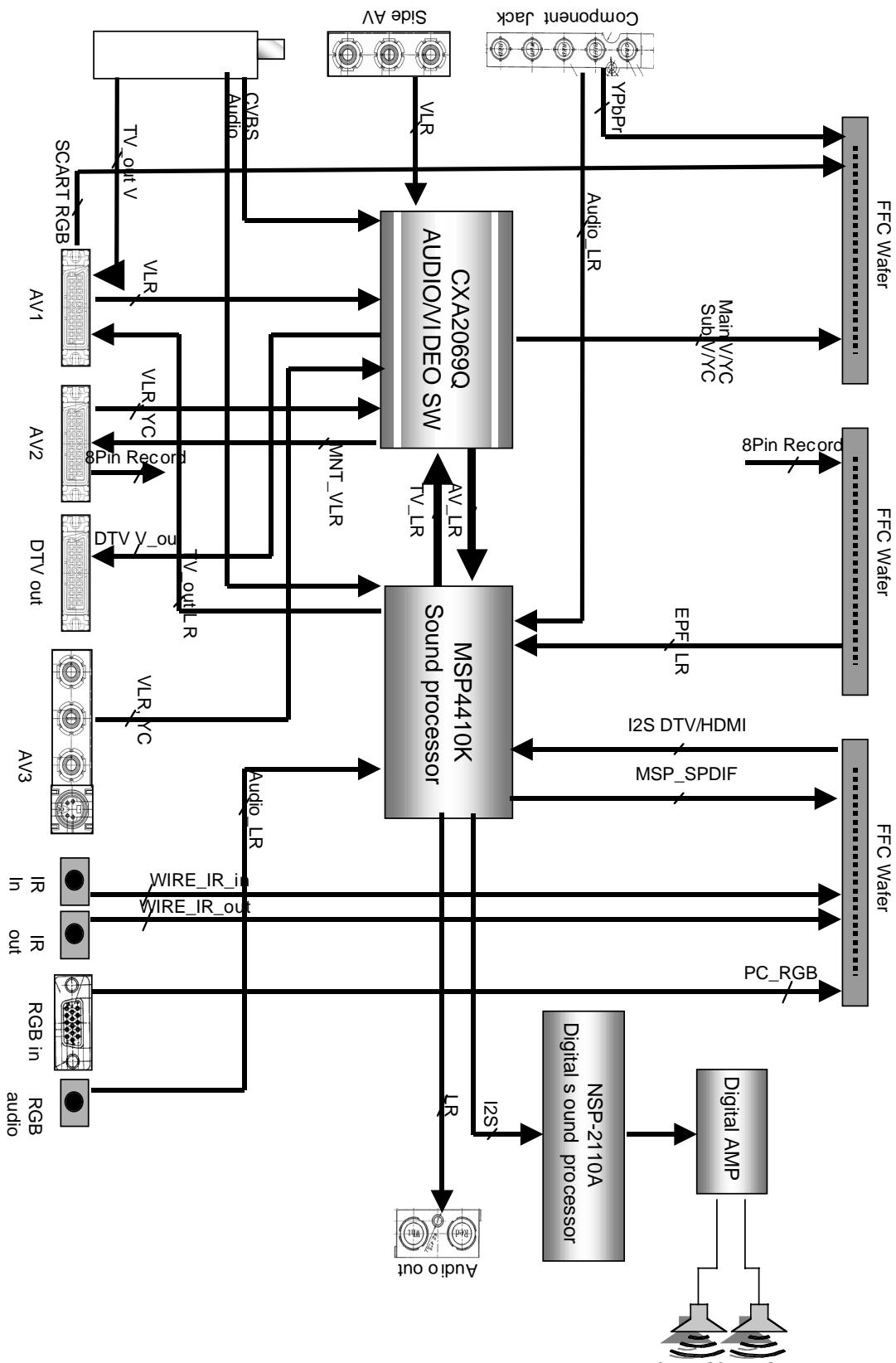
TROUBLESHOOTING RF/Component/PC



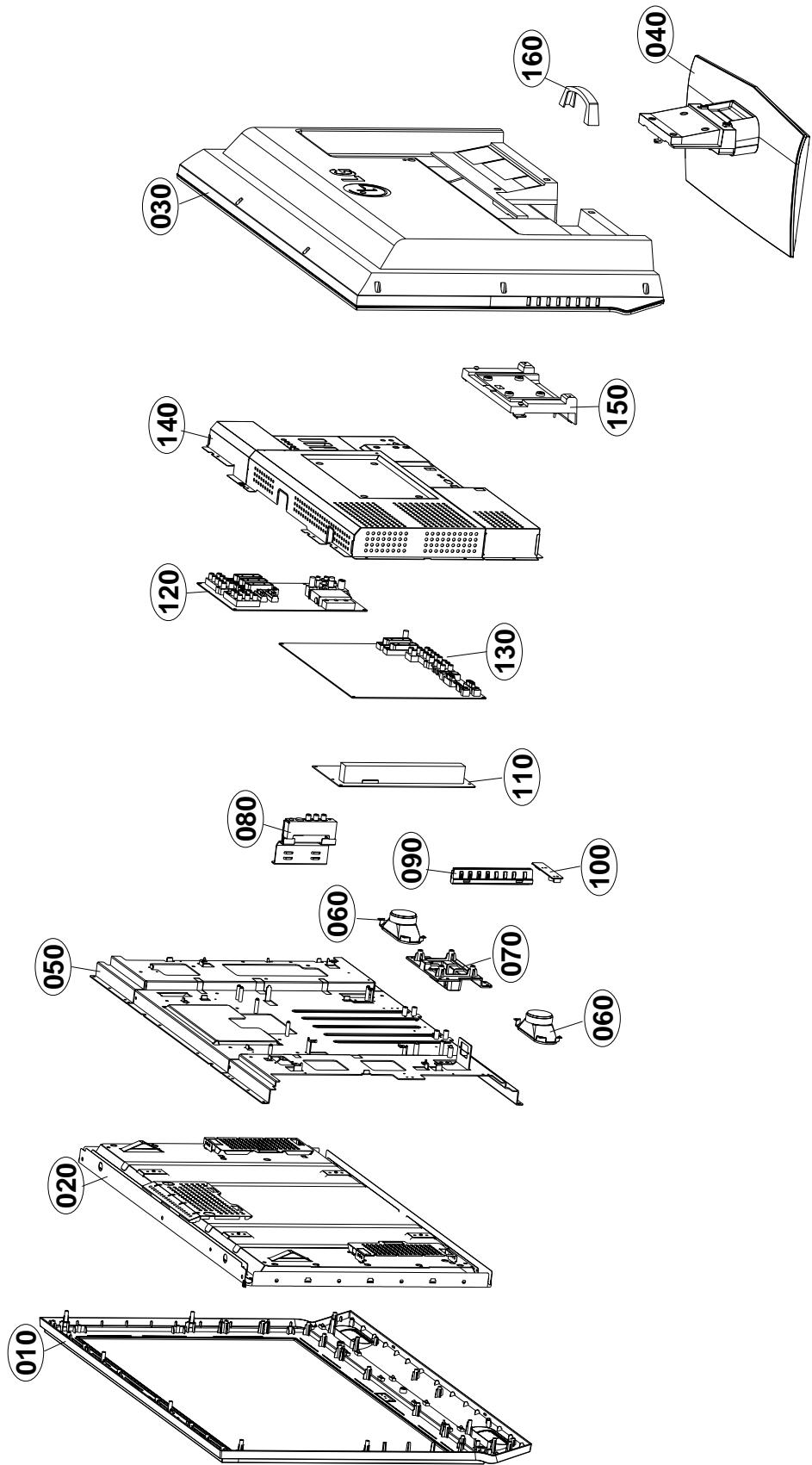
BLOCK DIAGRAM(Main)



BLOCK DIAGRAM(Jack)



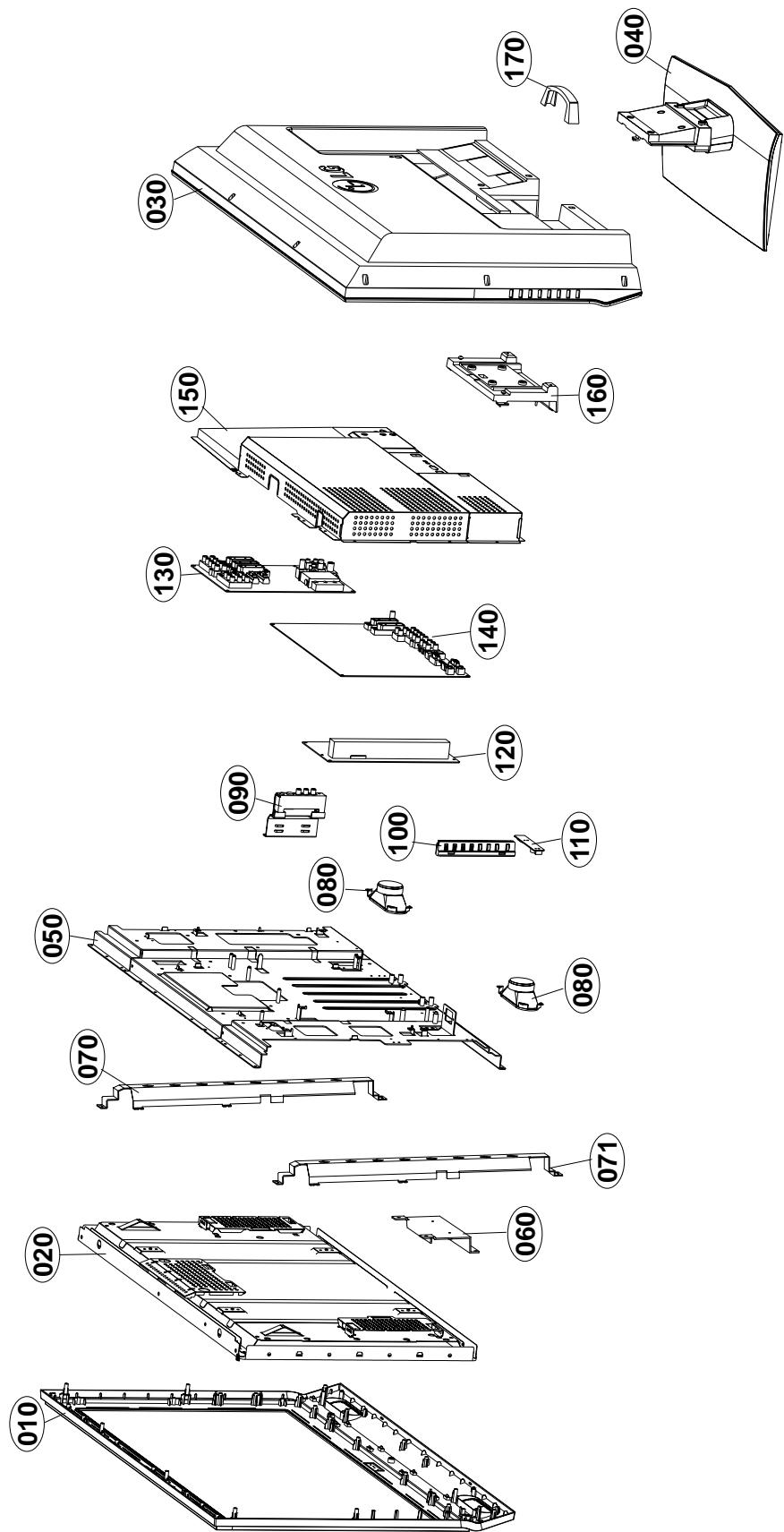
EXPLODED VIEW(32LC2D)



EXPLODED VIEW PARTS LIST(32LC2D)

No.	PART NO.	DESCRIPTION
010	ACQ30347104	Cover Assembly, 32LC2D-EC . 32" 51SF, BK 1TONE(197), LGEMA PHANTOM
	ACQ30347106	Cover Assembly, 32LC2DB-EC LB61A 32" 51SF, BK & SILVER 2TONE(197 & 188), LGEMA PHANTOM
020	6304FLP359A	LCD,Panel-TFT, LC320W01-SL11 32INCH 1366X768 500CD COLOR 72% -
	or EAJ30768801	LCD Module, LC320W01-SL14 WXGA 32.0INCH 1366X768 500CD COLOR 72% 16/9 800 NEC Lamp
030	3809900159U	Cover Assembly, 32LC2D/2DB LP61 32" Digital LGEMA Phantom
040	3043900026K	Base Assembly, STAND [32LC2R-ZJ] LP61C BK (LGEMA Phantom)
	3043900026L	Base Assembly, STAND [32LC2RB/RA-ZJ] LP61C Silver (LGEMA Phantom)
050	49519S0031H	Plate Assembly, FRAME IDTV 32LC2D-EC LPL C/SKD
060	6400GESF01A	Speaker,Fullrange, C112K01K1450 FERRITE 15W 8OHM 93DB 170HZ 116X42X38.5mM LUG
070	49509K0195B	Plate, FRAME SUPPORT 32LC2 C/SKD
080	68719ST700A	PCB Assembly,Sub, SUB T.T LD61A 32LC2D-EC ALUKLFX SIDE AV
090	68719ST898B	PCB Assembly,Sub, SUB T.T LD61A 32LC2D-EC ALUKLFX CONTROL KEY
100	68719ST888B	PCB Assembly,Sub, SUB T.T LD61A 32LC2D-EC ALUKLFX LED/IR
110	6709900016C	SMPS,AC/DC, LGLP2637HEP 90.0VTO264.0V 215W 47TO63HZ UL/CSA/SEMKO YY / AT / H&E
	or 6709900016A	Power Supply Assembly, FREE H3/E2 LCD MODEL LCD LG ELECTRONICS LB LC
120	68719ST100A	PCB Assembly,Sub, SUB T.T LD61A 32LC2D-EC ALUKLFX JACK BOARD
130	33139D3075A	Main Total Assembly, 32LC2D(B)-EC BRAND LD61A
140	49519K0139G	Plate Assembly, SHIELD 32LC2D-EC C/SKD
150	35509K0199C	Cover, MOLD ABS 380 32LC2R/RA/RB ABS, HF-380 LGEMA Phantom
160	35509K0197A	Cover, MOLD HIPS 32LC2 CABLE MANAGEMENT

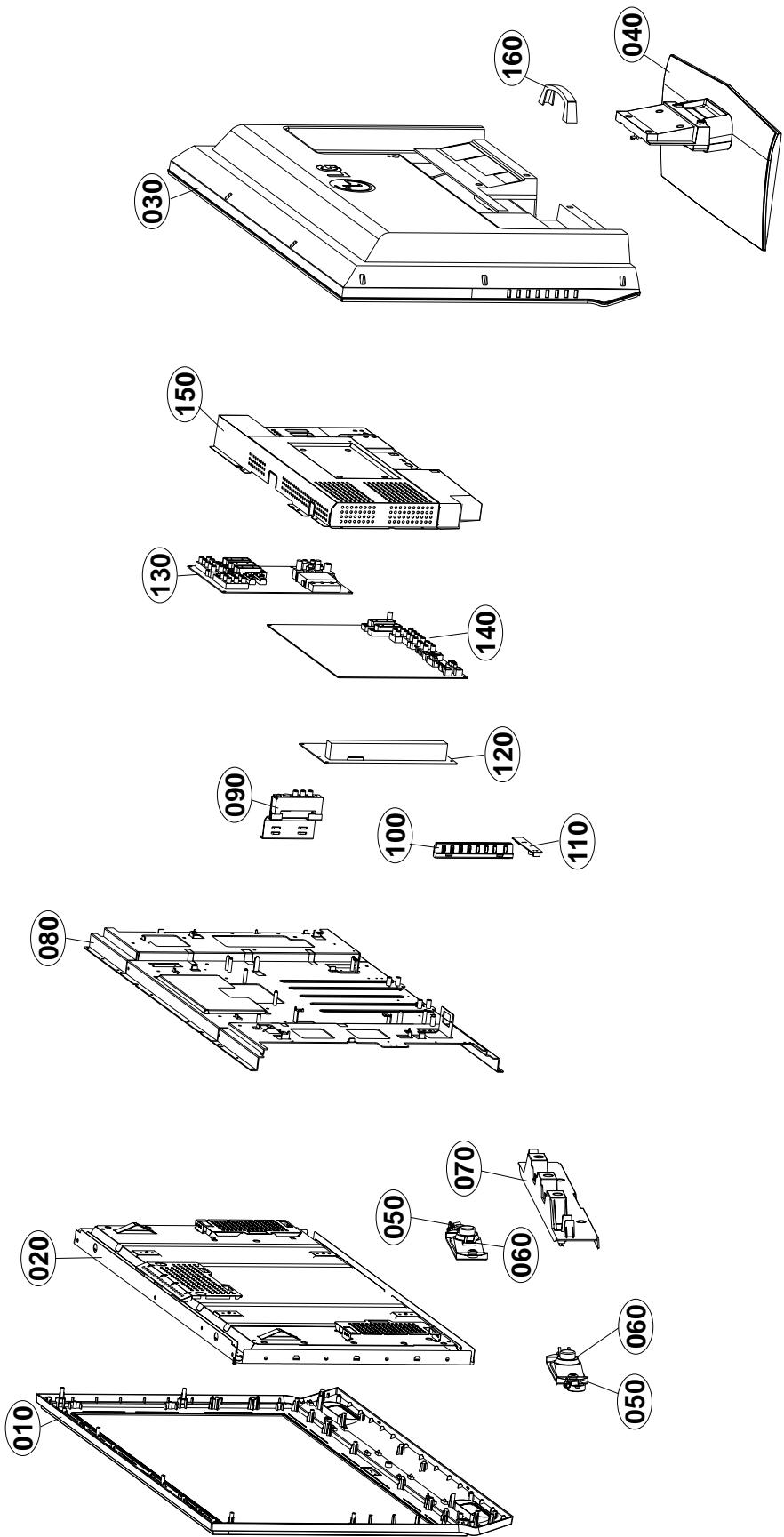
EXPLODED VIEW(37LC2D)



EXPLODED VIEW PARTS LIST(37LC2D)

No.	PART NO.	DESCRIPTION
010	ACQ30192605	Cover Assembly, 37LC2D-EC LP62A 37" LGEMA PAHNTOM CABINET ASSY
	ACQ30192606	Cover Assembly, 37LC2DB-EC LP62A 37" LGEMA PAHNTOM CABINET ASSY(2 TONE)
020	6304FLP360A	LCD,Panel-TFT, LC370WX1-SL11 37INCH 1365X768 500CD COLOR 72% -
	or 6304FLP367A	LCD,Panel-TFT, LC370WX1-SL13 37INCH 1365X768 500CD COLOR 72% -
030	3809900164K	Cover Assembly, 37LC2D-EC LP62A 37" LGEMA PHANTOM BACKCOVER ASSY
040	3043900032M	Base Assembly, STAND 37LC2R-ZH LP62A LGEMA PHANTOM ASSY
	3043900032N	Base Assembly, STAND 37LC2R-ZH LP62A (DARK TITAN)LGEMA PHANTOM ASSY
050	4950TKA361K	Plate, FRAME MAIN 37LC2D(C/SKD)
060	49509K0222A	Plate, PRESS SBHG T2.0 SUPPORT STAND 37LC2
070	49509K0024F	Plate, PRESS SBHG T1.6 SIDE SUPPORTER LEFT FOR 37LC2(C/SKD)
071	49509K0023D	Plate, SIDE SUPPORTER RIGHT FOR 37LC2(C/SKD)
080	6400WMCX03A	Speaker,Woofer, G1560102 ND35 15W 8OHM 82DB 100HZ 193X57mM LUG
090	68719ST102A	PCB Assembly,Sub, SUB T.T LD61A 37LC2D-FC ALFRLLX SIDE A/V TOTAL
100	68719ST098A	PCB Assembly,Sub, SUB T.T LD61A 37LC2D-FC ALFRLLX CONTROL TOTAL
110	68719ST099A	PCB Assembly,Sub, SUB T.T LD61A 37LC2D-FC ALFRLLX IR/LED TOTAL
120	6709900016D	SMPS,AC/DC, LGLP2637HEP 90.0VTO264.0V 215W 47TO63HZ UL/CSA/SEMKO YY / AT / HE
	or 6709900016B	Power Supply Assembly, FREE H3/E2 LCD MODEL LCD LG ELECTRONICS LB LC 37INCH
130	68719ST100A	PCB Assembly,Sub, SUB T.T LD61A 32LC2D-EC ALUKLFX JACK BOARD
140	33139D3061A	Main Total Assembly, 37LC2D-EC BRAND LD61A
150	4950TKA363K	Plate, REAR SHILED DIGITAL AV 37LC2D-EC(C/SKD)
160	35509K0217B	Cover, MOLD HIPS 37LC2R-ZH HIPS 405AF LGEMA PHANTOM
170	35509K0197A	Cover, MOLD HIPS 32LC2 CABLE MANAGEMENT

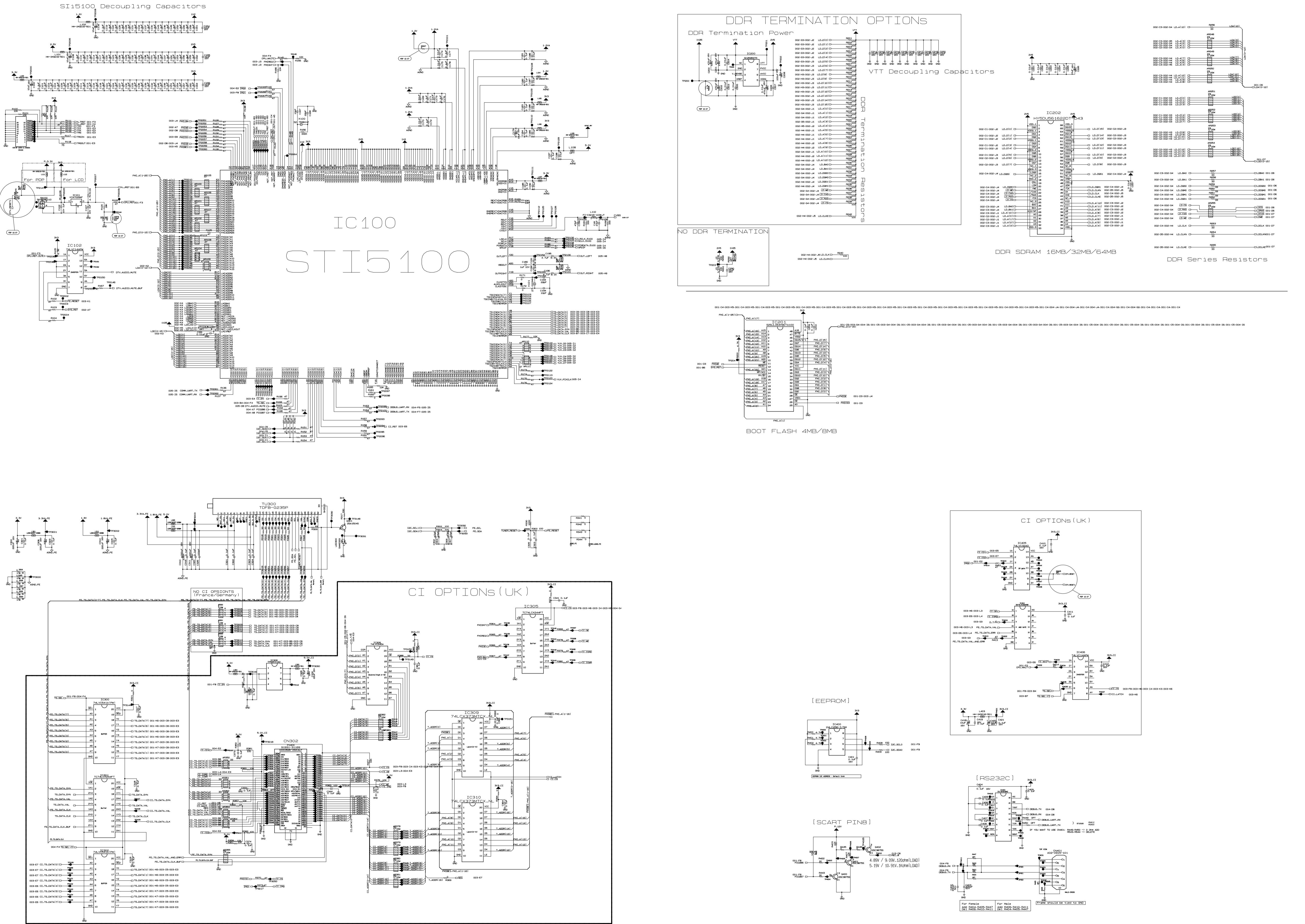
EXPLoded VIEW(42LC2D)

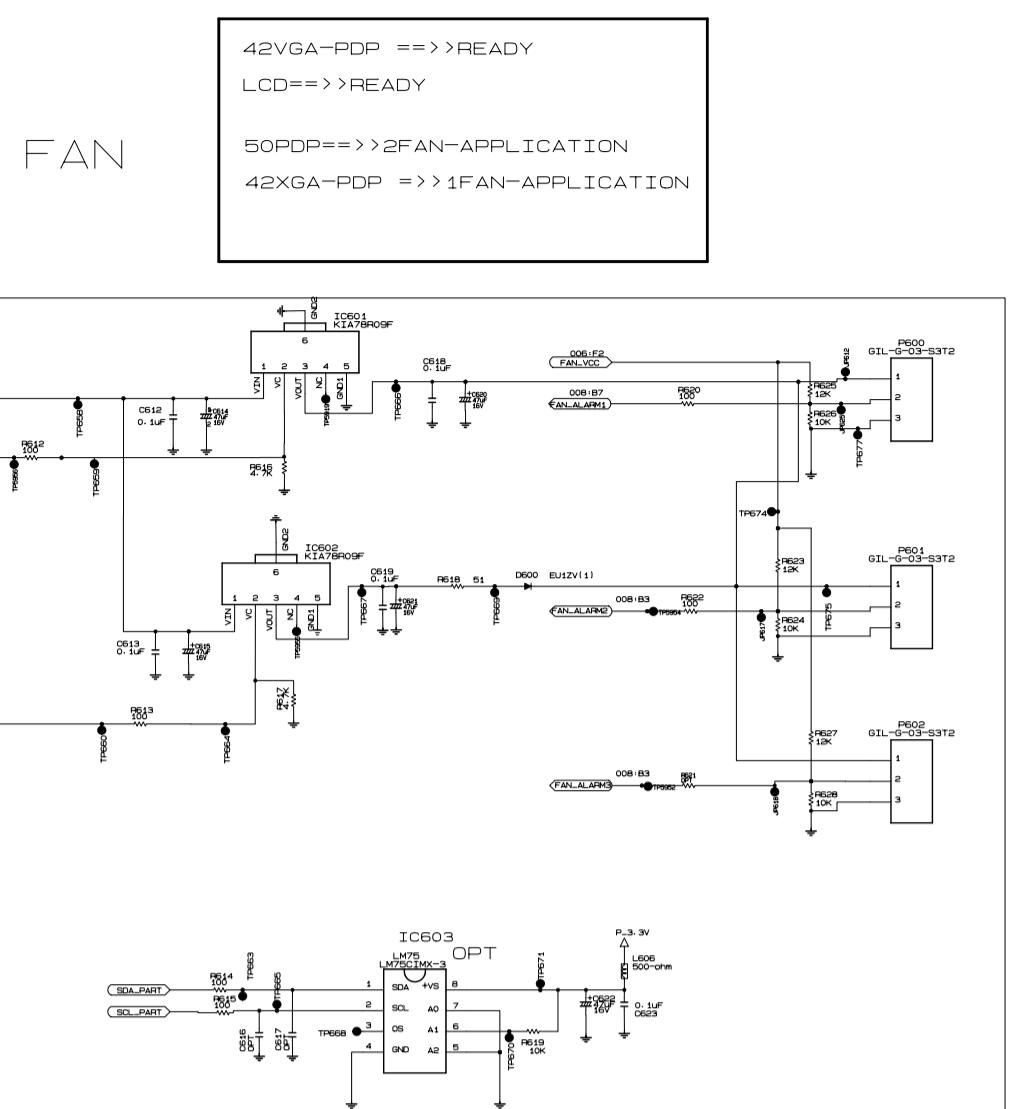
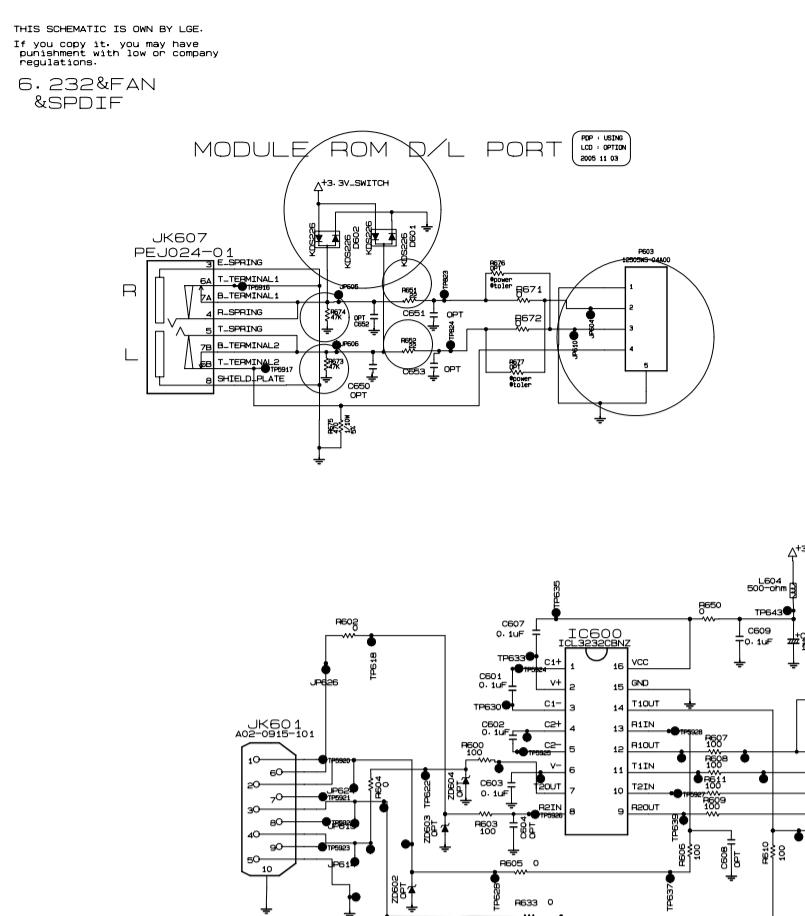
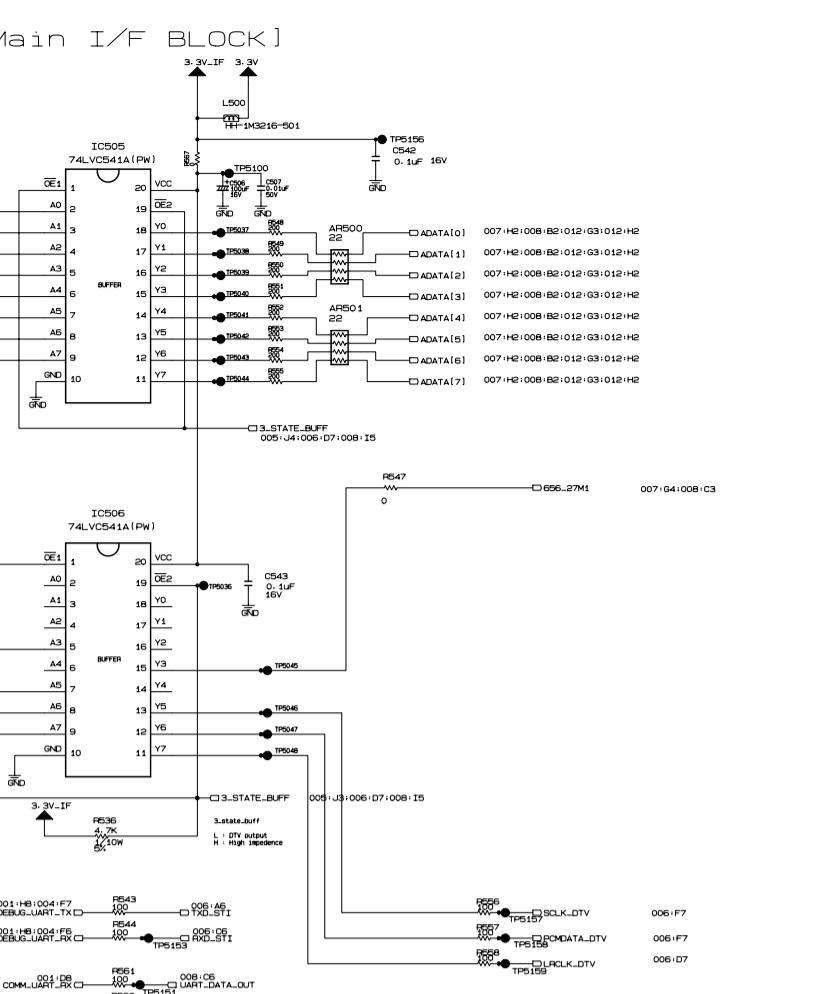
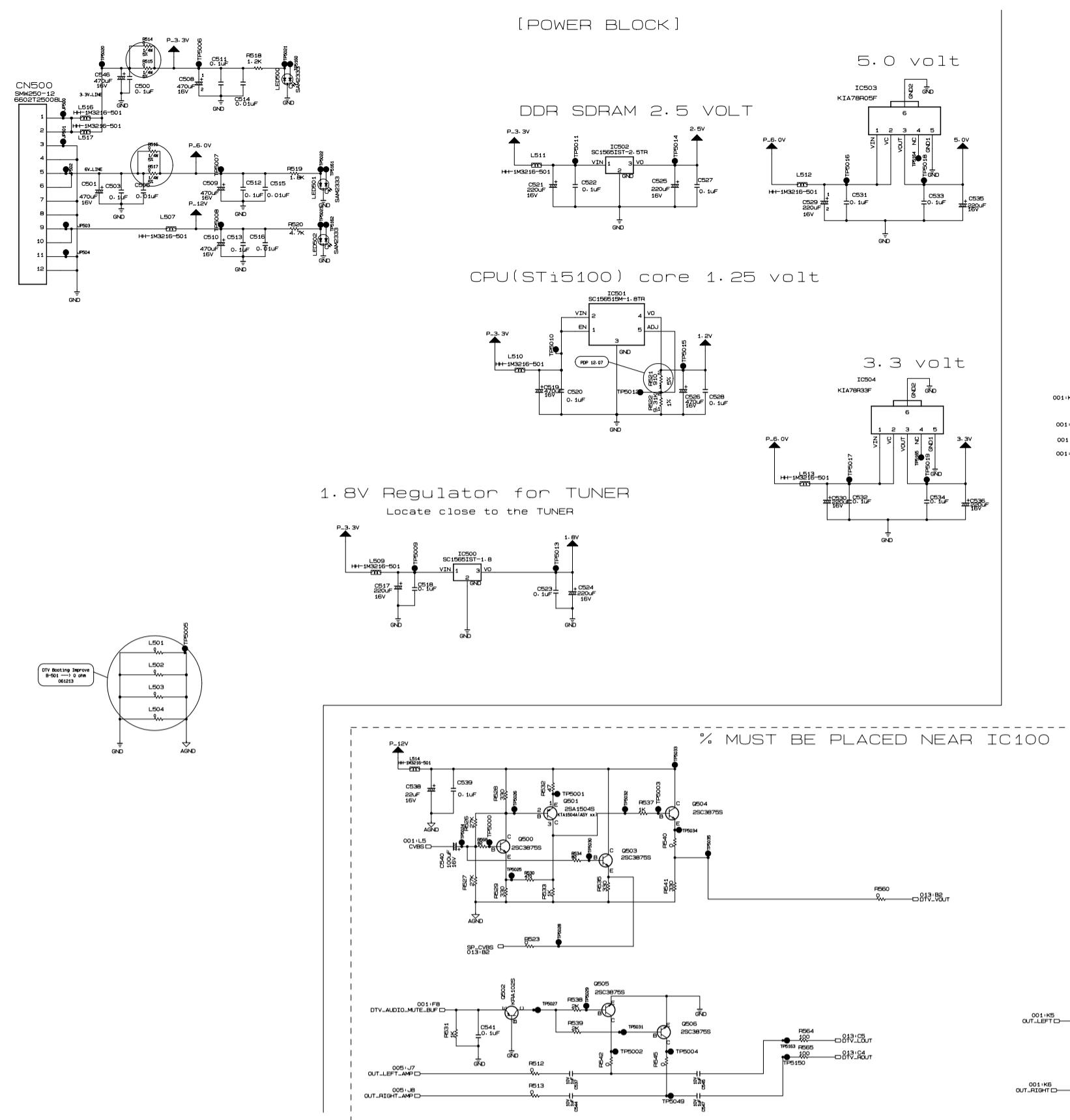


EXPLODED VIEW PARTS LIST(42LC2D)

No.	PART NO.	DESCRIPTION
010	30919E0047G	Cover Assembly, 42LC2D BRAND 30909E0028 EC C/SKD
	30919E0047L	Cover Assembly, 42LC2DB BRAND 30909E0028 EC C/SKD
020	6304FLP363A	LCD,Panel-TFT, LC420W02-SLA1 42INCH 1365X768 500CD COLOR 72% -
030	3809900165K	Cover Assembly, 42LC2D 2PHONE EC C/SKD, SPRAY
040	3043900034C	Base Assembly, 42LC2 42LC2 FOR USA C/SKD
	3043900034F	Base Assembly, 42LC2RA/RB - ZH C/SKD
050	6400DTTX02A	Speaker,Tweeter, EN15D-6629-2 ND 15W 25OHM 81DB 0HZ D1:29.8 LUG
060	6400WMCX03A	Speaker,Woofe, G1560102 ND35 15W 8OHM 82DB 100HZ 193X57mM LUG
070	35519K0030D	Cover Assembly, 42LC2 STAND 35509K0220B SUPPORT C/SKD
080	49519S0036E	Plate Assembly, FRAME MAIN 42LC2D-EC C/SKD
090	68719ST981A	PCB Assembly,Sub, SUB T.T LD61A 42LC2D-EC ALUKLFX SIDE AV
100	68719ST983A	PCB Assembly,Sub, SUB T.T LD61A 42LC2D-EC ALUKLFX CONTROL
110	68719ST982A	PCB Assembly,Sub, SUB T.T LD61A 42LC2D-EC ALUKLFX LED/IR
120	6709900017B	SMPS,AC/DC, YP4201 90.0VTO264.0V 280W 47TO63HZ UL/CSA/TUV/SEMKO 42" LCD
130	68719ST100A	PCB Assembly,Sub, SUB T.T LD61A 32LC2D-EC ALUKLFX JACK BOARD
140	33139D4021A	Main Total Assembly, 42LC2D-EC BRAND LD61A
150	49519K0115J	Plate Assembly, SHIELD MAIN DIGITAL 42LC2D-EC(C/SKD)
160	35509K0197A	Cover, MOLD HIPS 32LC2 CABLE MANAGEMENT

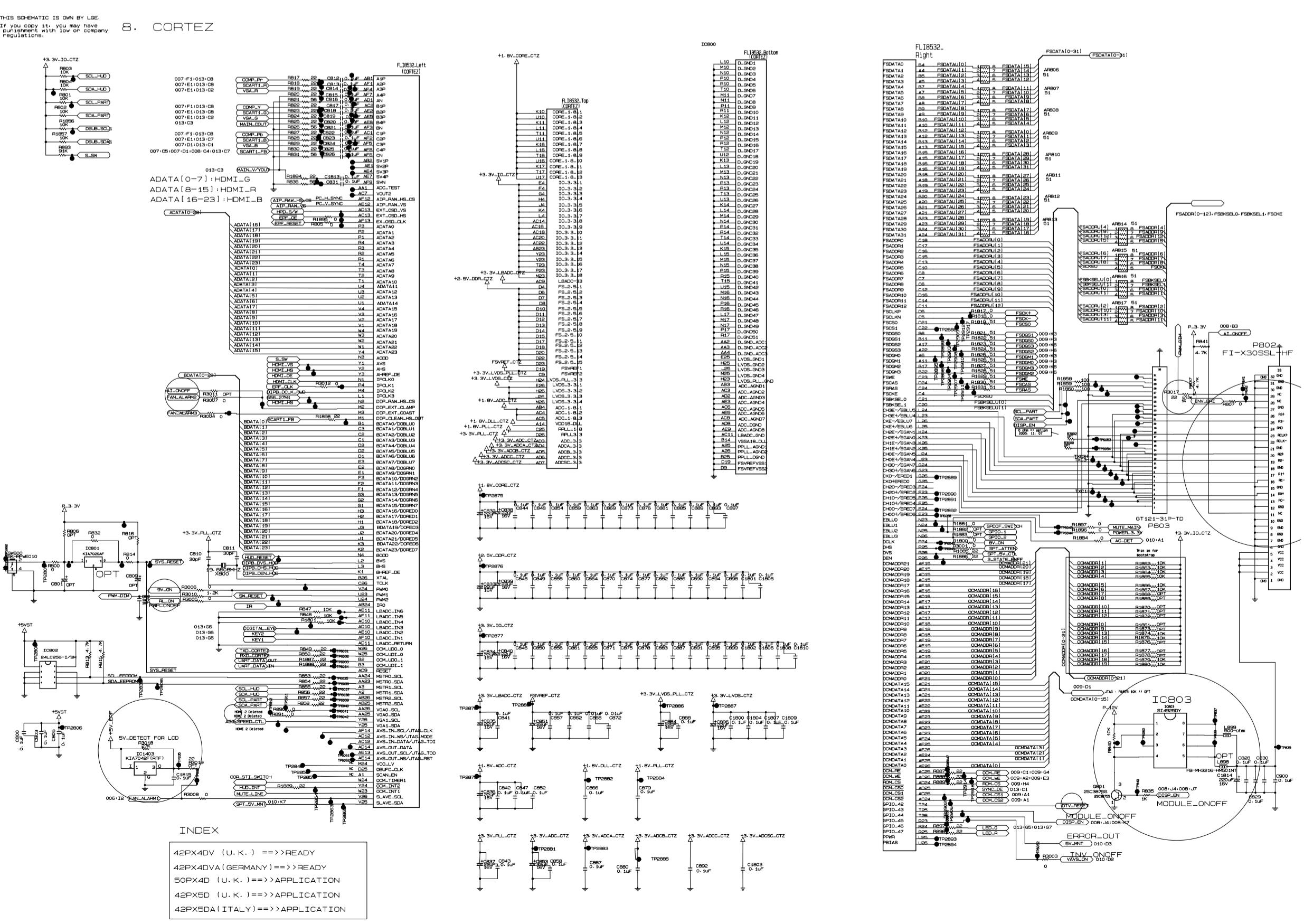
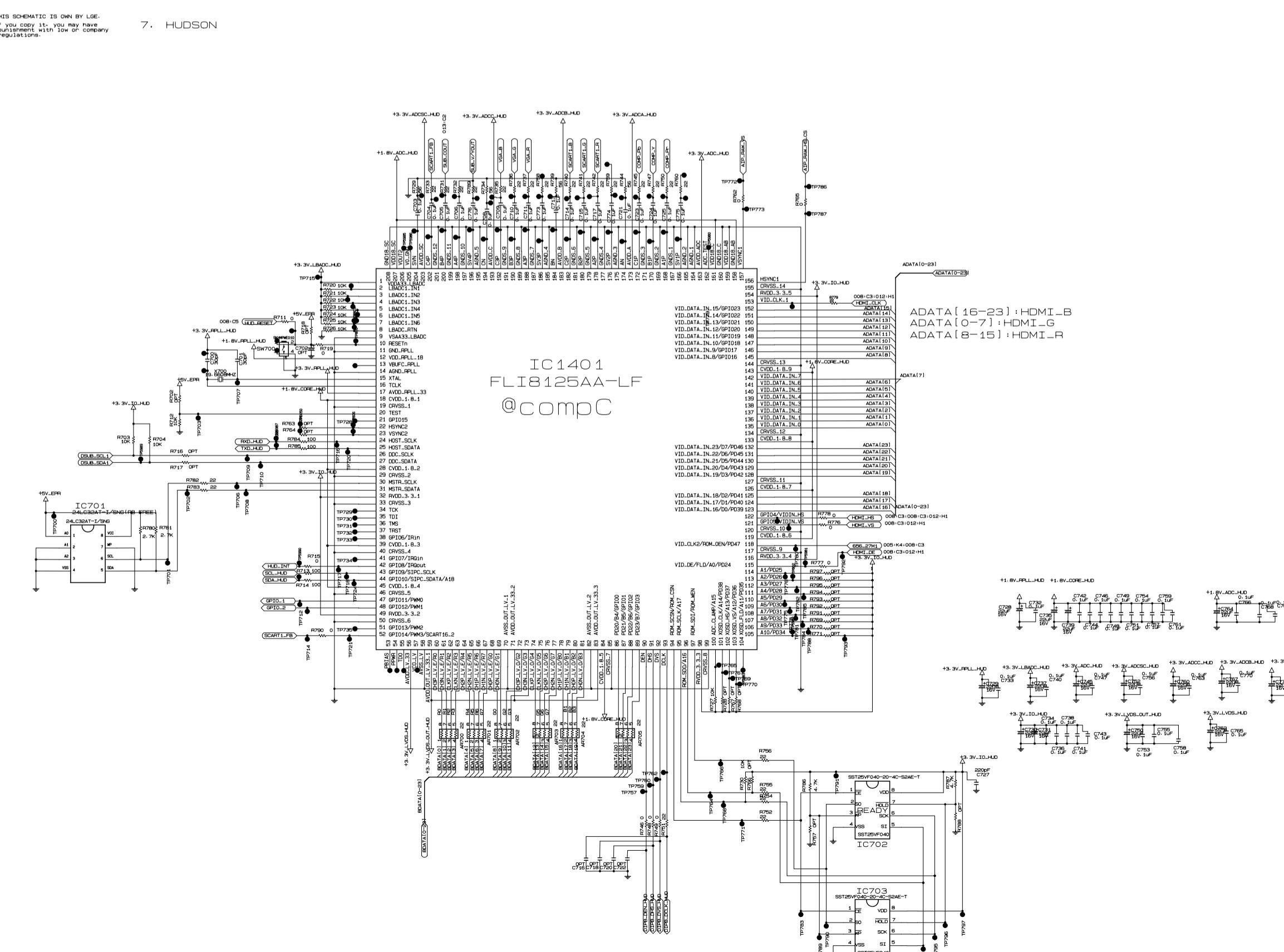
DATE: 2006. 05. 18.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		SW104 SW105 SW106 SW107 SW108 ZD101 ZD102	140-313A 140-313A 140-313A 140-313A 140-313A 0DZ510009AK 0DZ510009AK	THVV501BBC 1C1P 12VDC 0.05A THVV501BBC 1C1P 12VDC 0.05A THVV501BBC 1C1P 12VDC 0.05A THVV501BBC 1C1P 12VDC 0.05A THVV501BBC 1C1P 12VDC 0.05A GDZJ5.1B 5.1V 4.94TO5.2V 80 GDZJ5.1B 5.1V 4.94TO5.2V 80
SIDE A/V BOARD				
		C101 C102 C103 C104 L101 L102 R104 R105 R106 R107 R108 R109 R110 ZD104 ZD105 ZD106	0CH6102K406 0CH6102K406 0CH6102K406 0CH6102K406 6210TCE001A 6210TCE001A 0RH0000D622 0RH0000D622 0RH0000D622 0RH0000D622 0RH0000D622 0RH4703D622 0RH4703D622 0DZRM00178A 0DZRM00178A 0DZRM00178A	C2012S2L1H102JT 1nF 5% 50V C2012S2L1H102JT 1nF 5% 50V C2012S2L1H102JT 1nF 5% 50V C2012S2L1H102JT 1nF 5% 50V HB-1S2012-080JT 8OHM 2X1.25 HB-1S2012-080JT 8OHM 2X1.25 MCR10EZHJ000 0OHM 5% 1/8W 2 MCR10EZHJ000 0OHM 5% 1/8W 2 MCR10EZHJ000 0OHM 5% 1/8W 2 MCR10EZHJ000 0OHM 5% 1/8W 2 MCR10EZHJ000 0OHM 5% 1/8W 2 MCR10EZHJ474 470KOHM 5% 1/8 MCR10EZHJ474 470KOHM 5% 1/8 UDZS5.1B 5.1V 4.98TO5.2V 80 UDZS5.1B 5.1V 4.98TO5.2V 80 UDZS5.1B 5.1V 4.98TO5.2V 80
IR/LED BOARD				
		C101 C102 C104 C105 L101 Q101 Q102 R101 R102 R103 R104 R105 C103 LED1	0CH5471K416 0CH5101K416 0CH5471K416 0CH5471K416 0RH1000D622 0TR387500AA 0TR387500AA 0LCML00003B 0LCML00003B 0LCML00003B 0RH4701D622 0RH4701D622 0CE4763F618 0DL200000CA	C2012C0G1H471JT 470pF 5% 50 C2012C0G1H101JT 100pF 5% 50 C2012C0G1H471JT 470pF 5% 50 C2012C0G1H471JT 470pF 5% 50 MCR10EZHJ101 100OHM 5% 1/8W 2SC3875S(ALY) NPN 5V 60V 50 2SC3875S(ALY) NPN 5V 60V 50 MLB-201209-0120P-N2 120OHM MLB-201209-0120P-N2 120OHM MLB-201209-0120P-N2 120OHM MCR10EZHJ472 4.7KOHM 5% 1/8 MCR10EZHJ472 4.7KOHM 5% 1/8 ESF476M016T1A5E05G 47uF 20% SAM5670(DL-2LRG) ROUND 4.8M





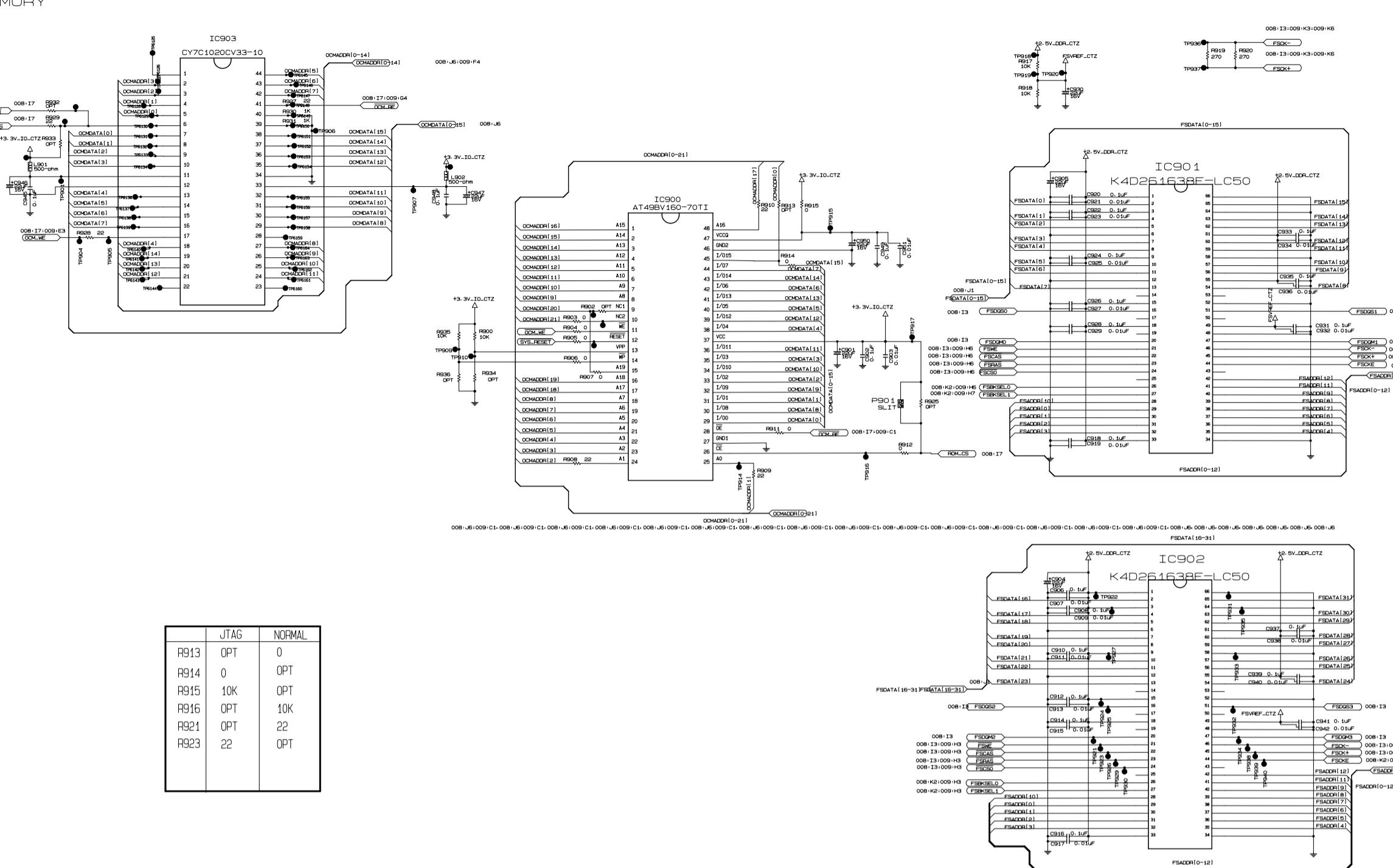
SPDIF SWITCHING IC

42PX4DV (U.K.) ==> READY
42PX4DVA (GERMANY) ==> APPLICATION
50PX4D (U.K.) ==> READY
42PX5D (U.K.) ==> READY
42PX5DA (ITALY) ==> APPLICATION



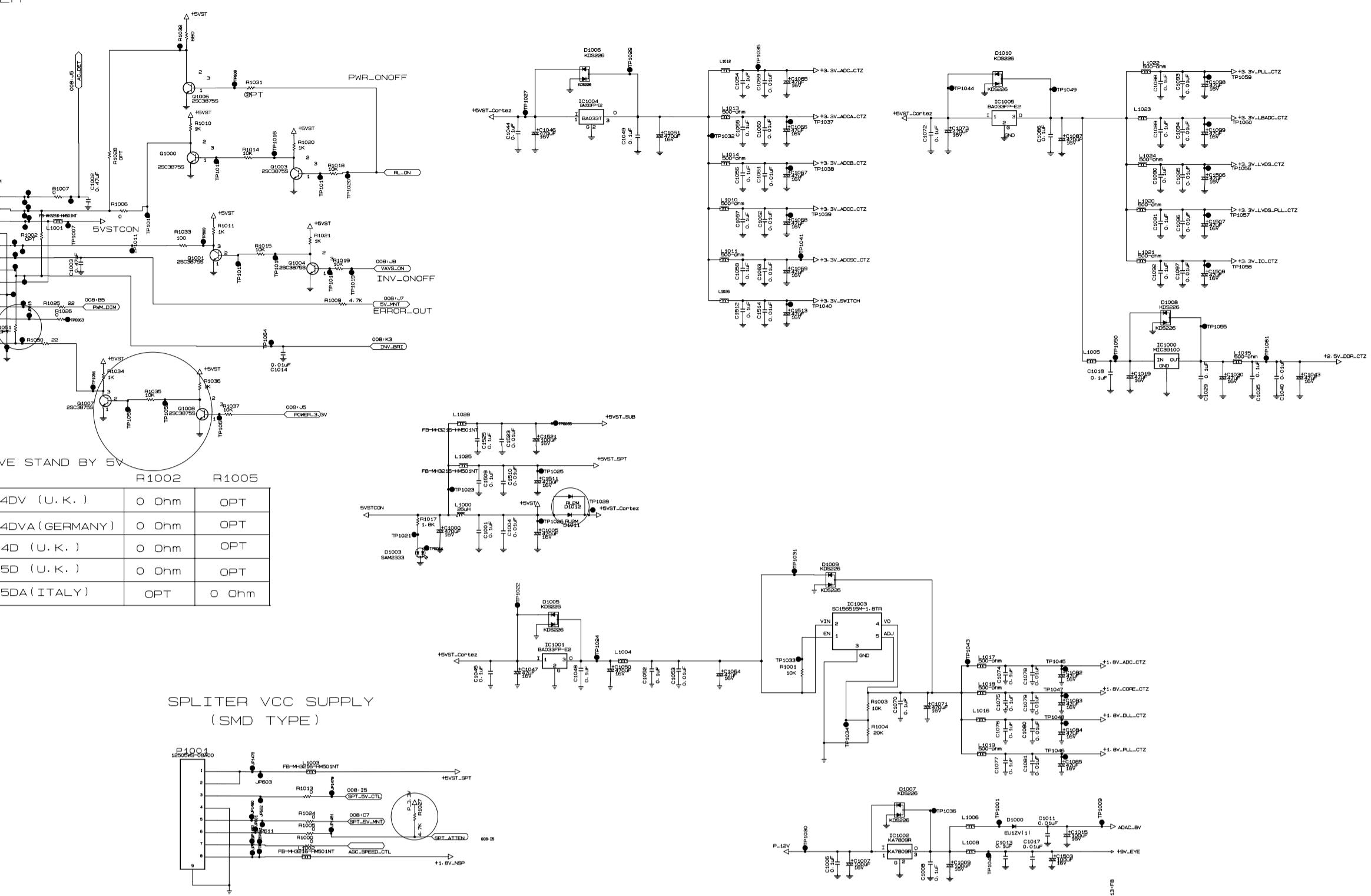
THIS SCHEMATIC IS OWN BY LGE.
If you copy it, you may have
to pursue it with law or company
regulations.

9. DDR MEMORY



	JTAG	NORMAL
R913	OPT	0
R915	0	OPT
R916	10K	OPT
R917	OPT	10K
R921	OPT	22
R923	22	OPT

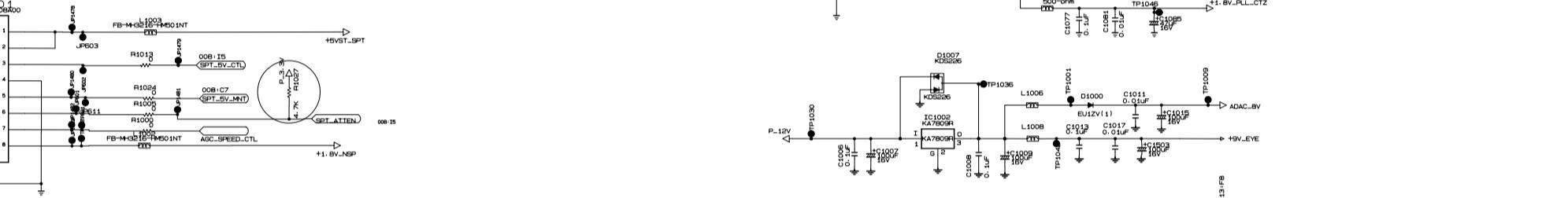
10. POWER



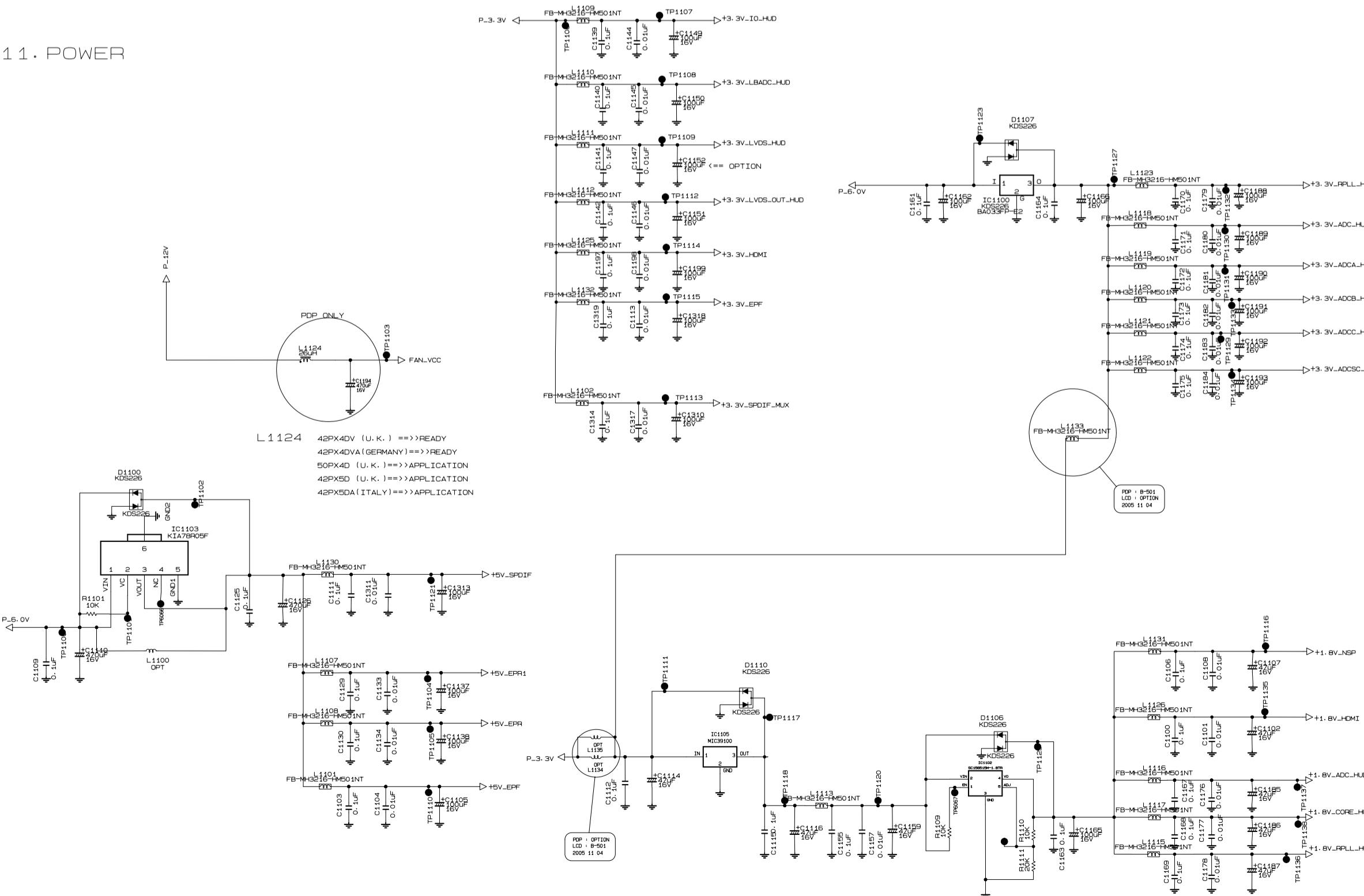
ACTIVE STAND BY BY

42PX4DV (U. K.)	0 Ohm	OPT
42PX4DVA (GERMANY)	0 Ohm	OPT
50PX4D (U. K.)	0 Ohm	OPT
42PX5D (U. K.)	0 Ohm	OPT
42PX5DA (ITALY)	OPT	0 Ohm

SPLITTER VCC SUPPLY (SMD TYPE)

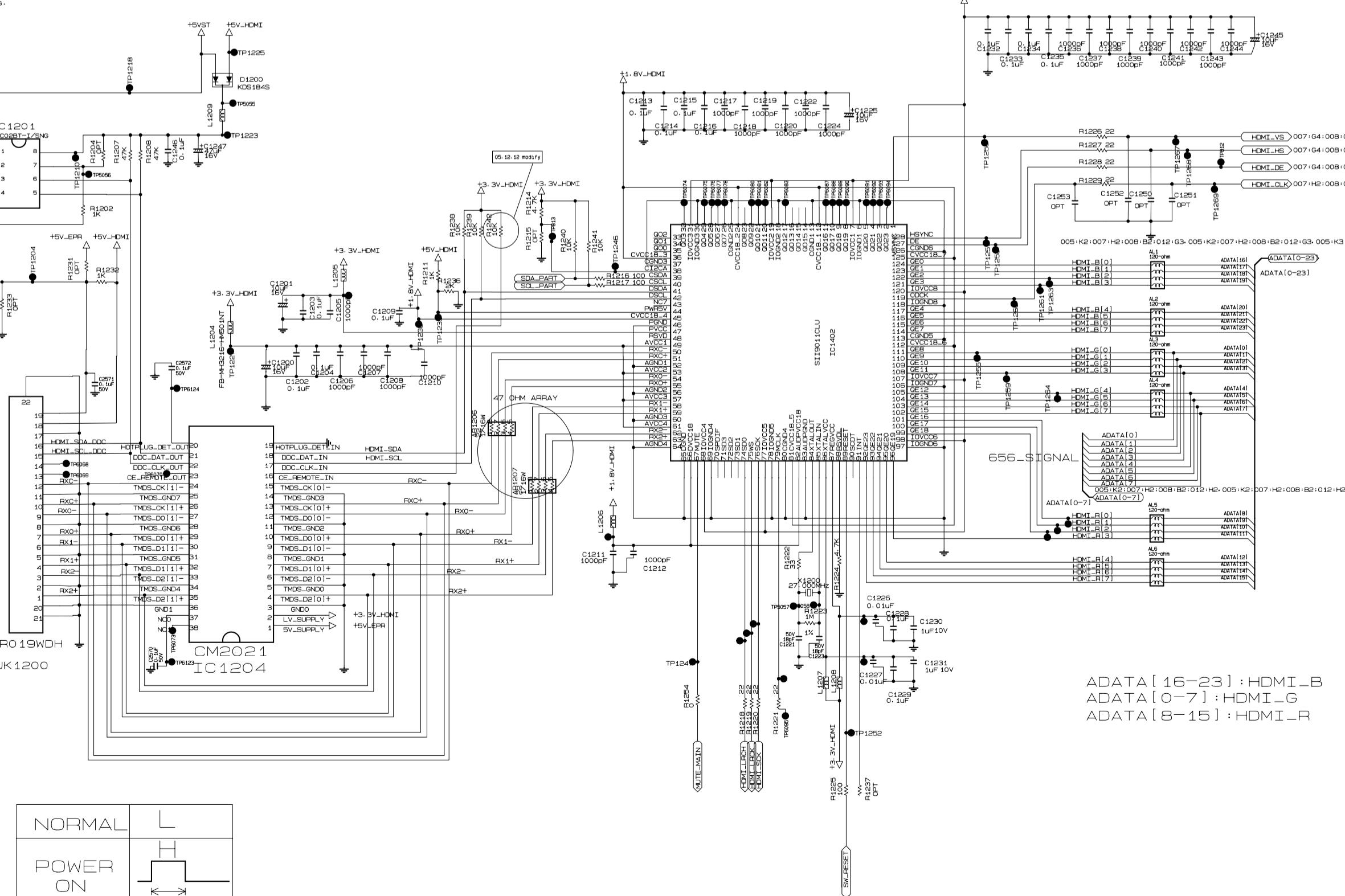


11. POWER



THIS SCHEMATIC IS OWN BY LGE. If you copy it, you may have to pursue it with law or company regulations.

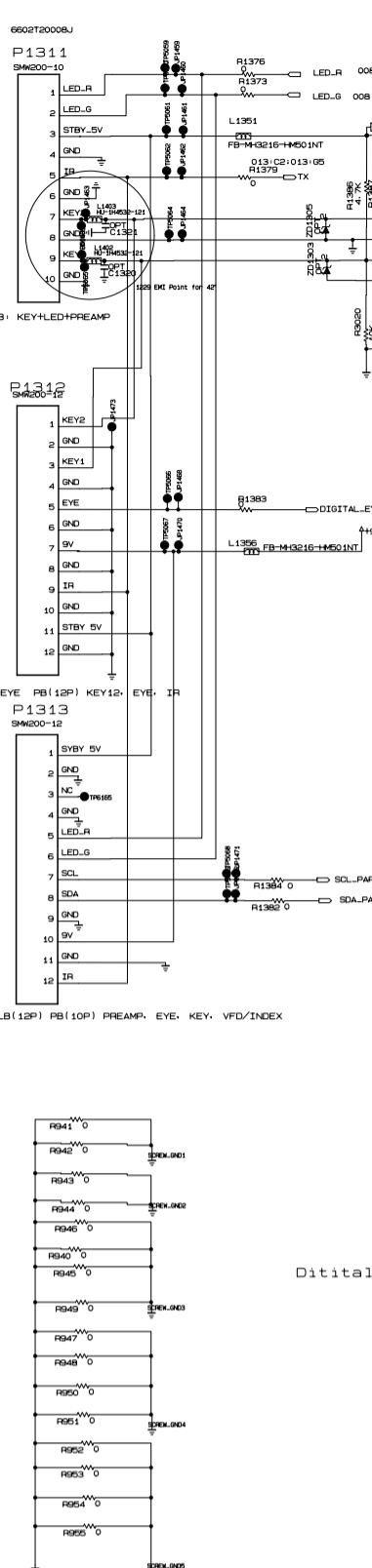
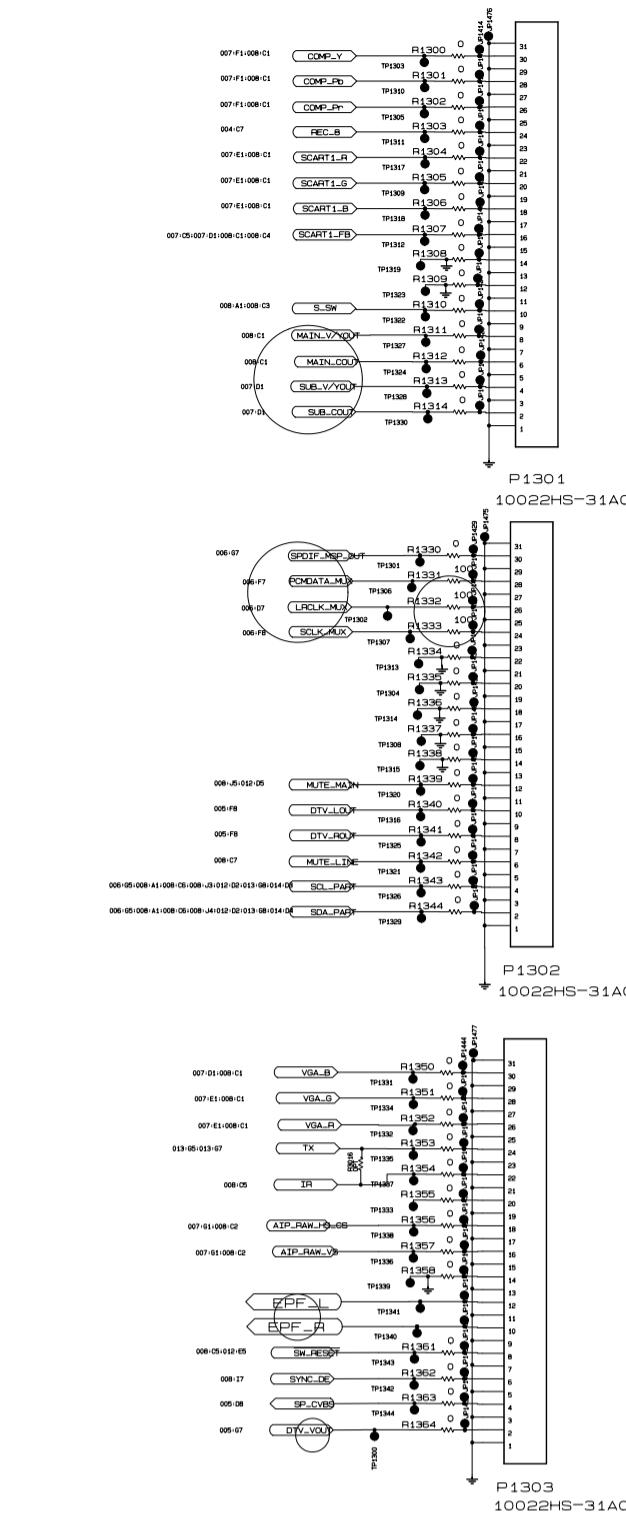
12. HDMI RX



ADATA [16-23] : HDMI_B
ADATA [0-7] : HDMI_G
ADATA [8-15] : HDMI_R

HPD OPERATION

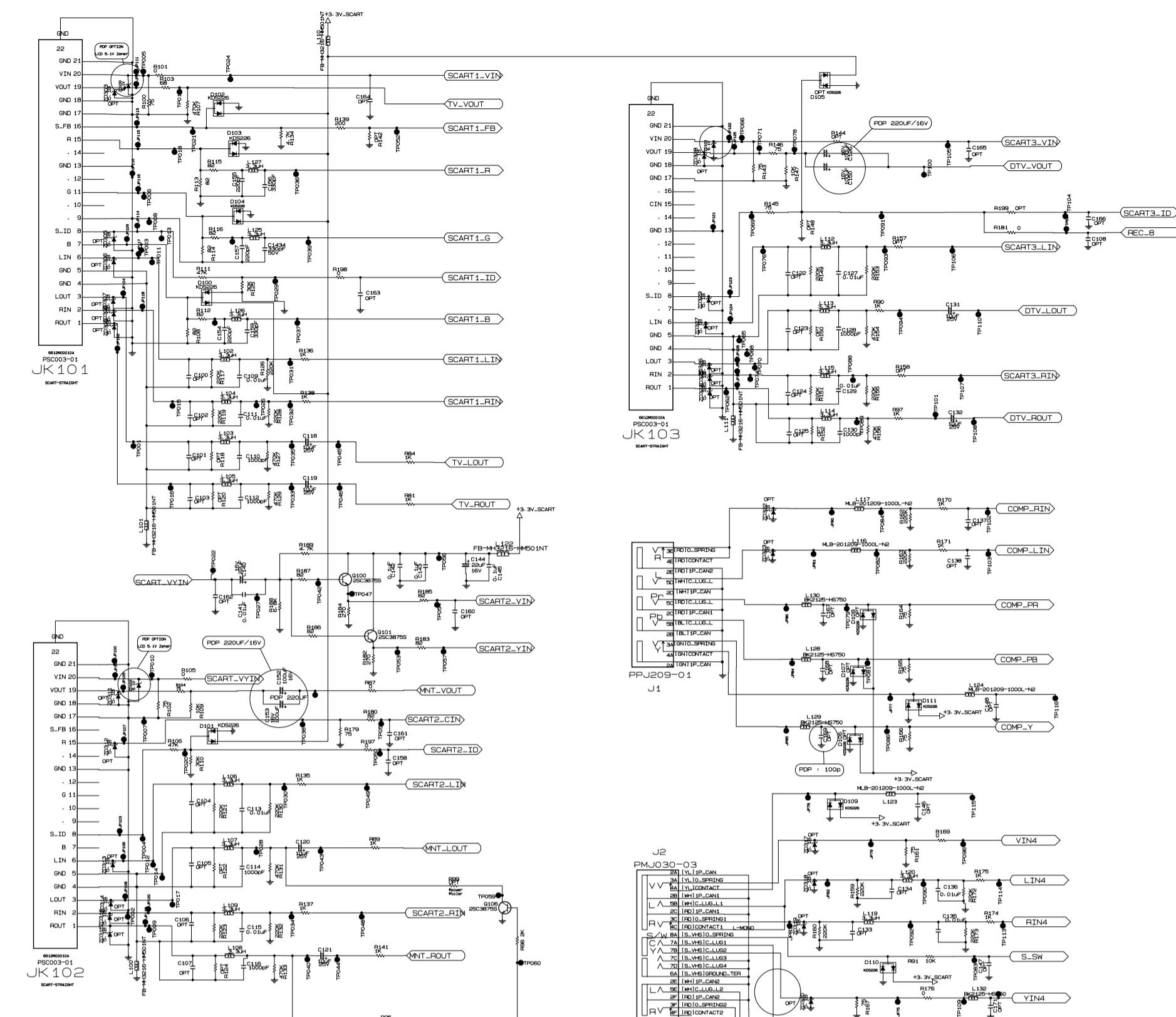
NORMAL	—
POWER ON	



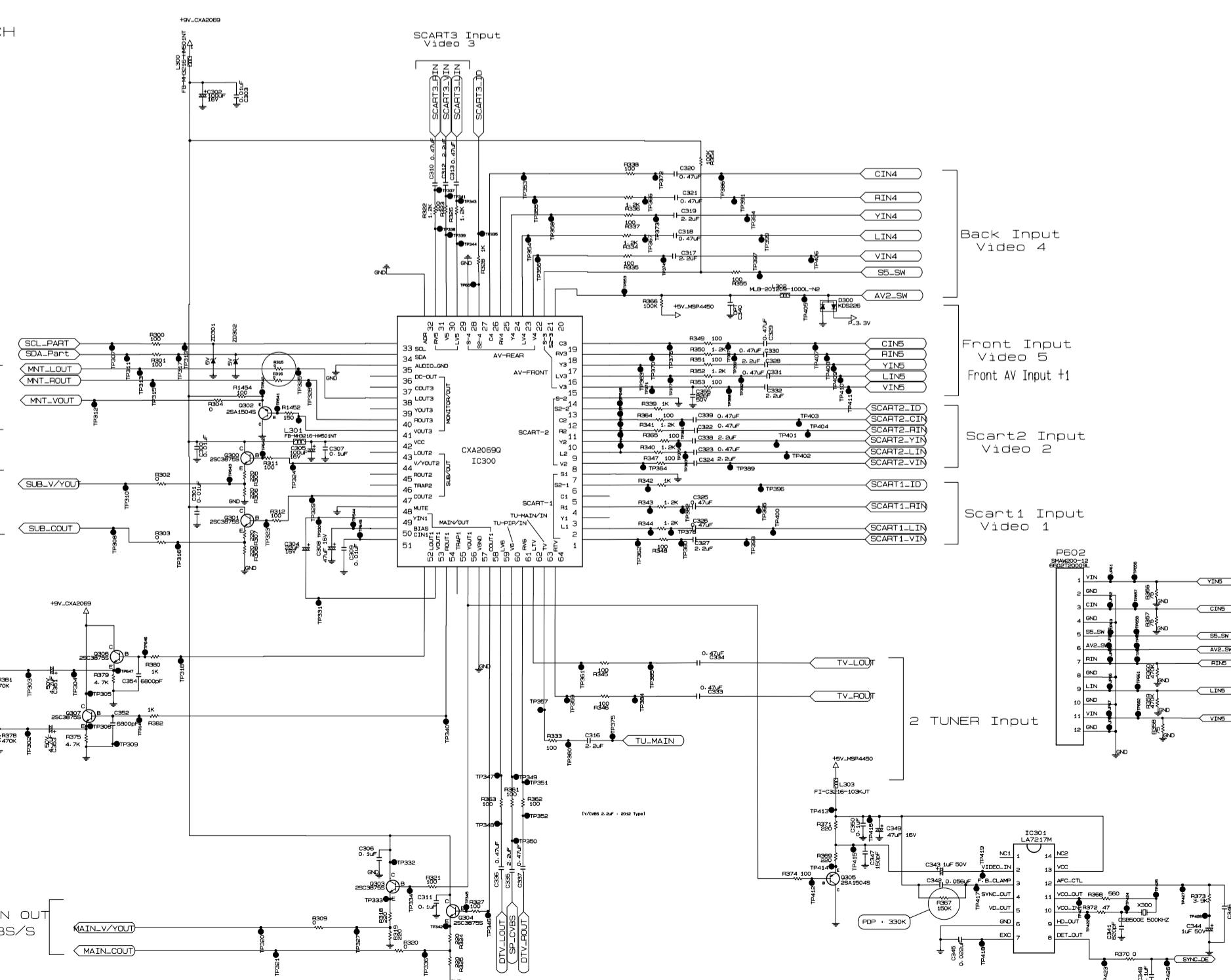
OPTION

LC2/PC1/PC3 : P1311(10P)
LB : P1312(8P), P1313(12P)
PB : P1312(12P), P1313(10P)

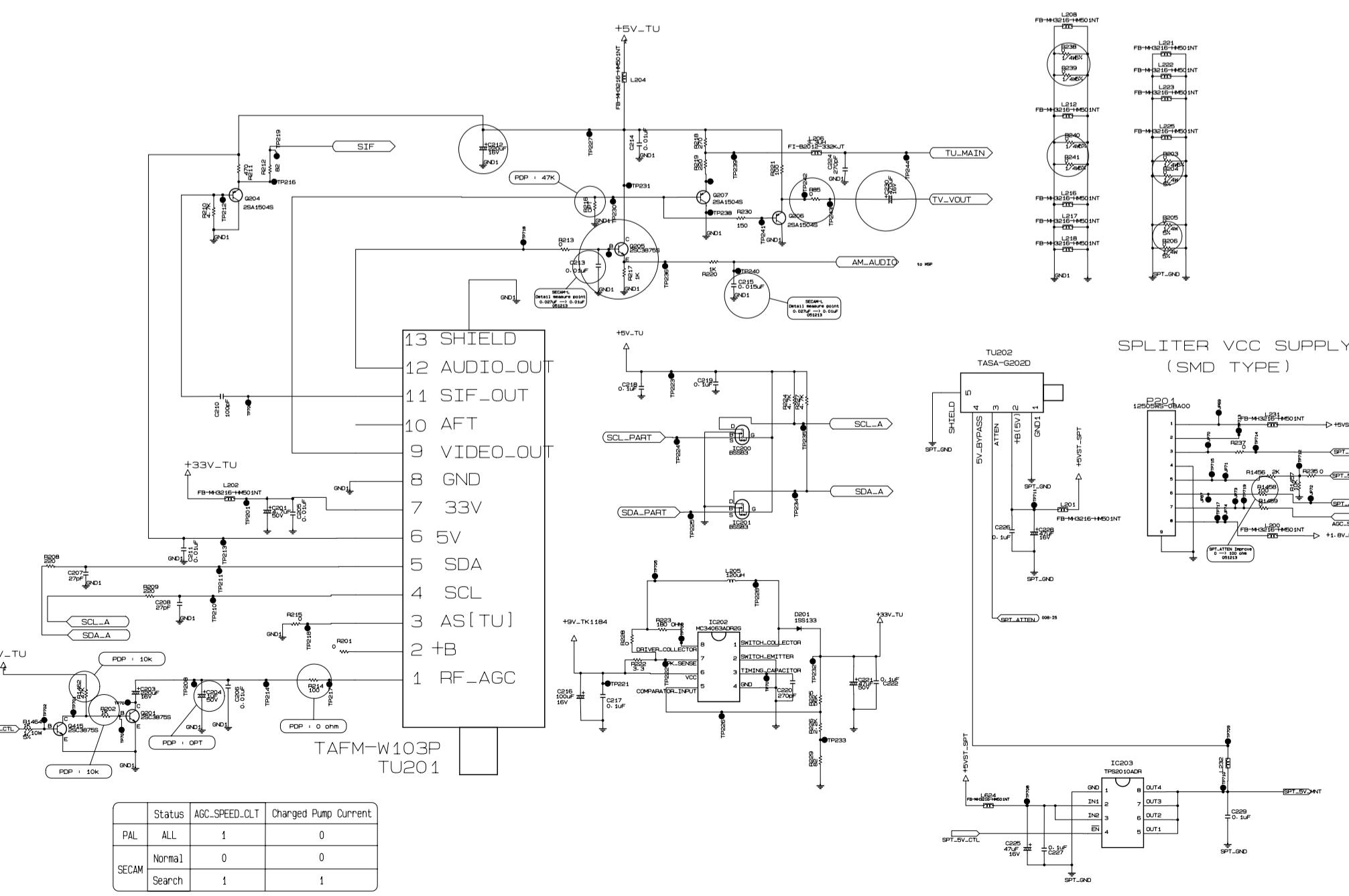
1. SCART & AV JACK



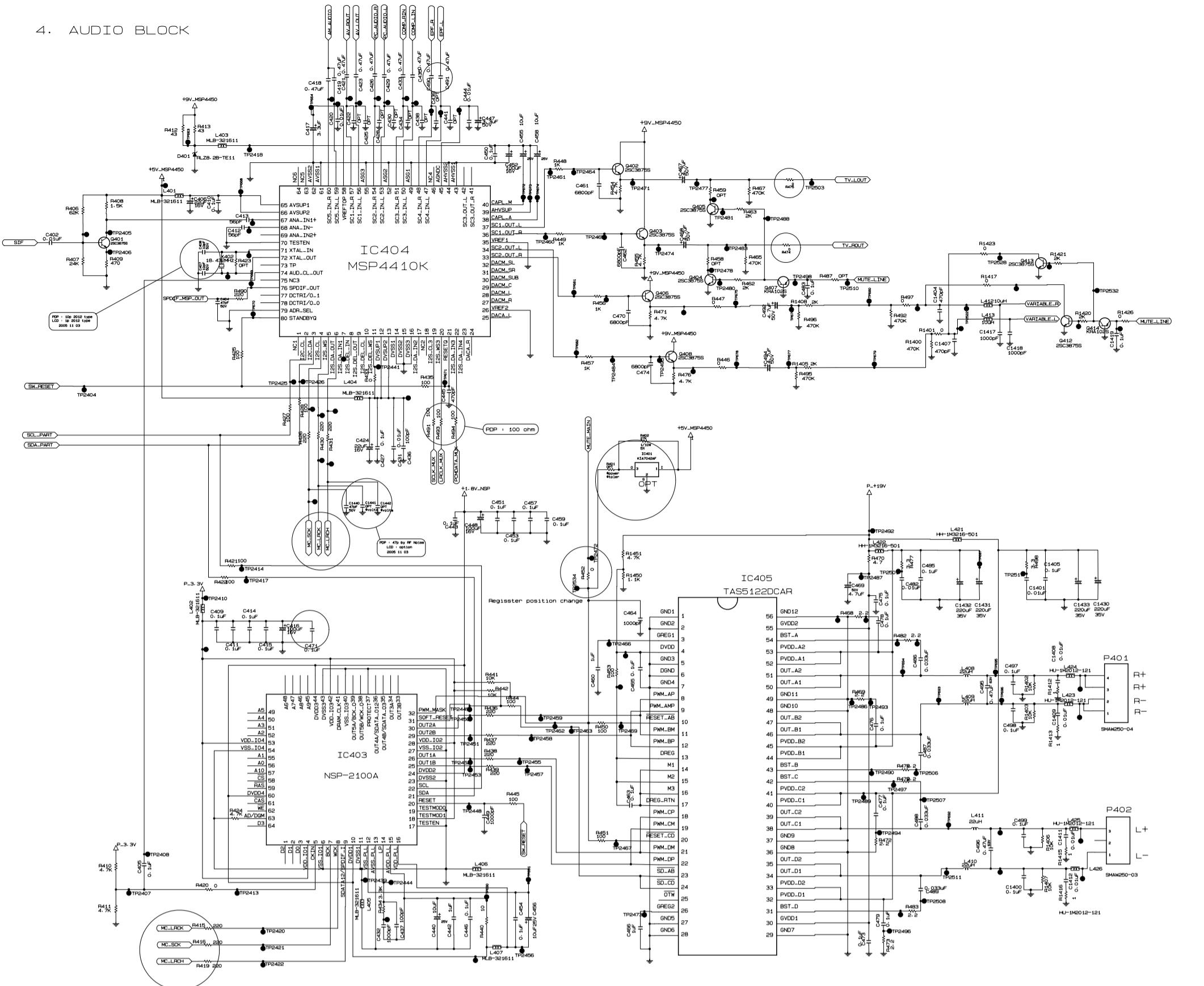
3. AV SWITCH



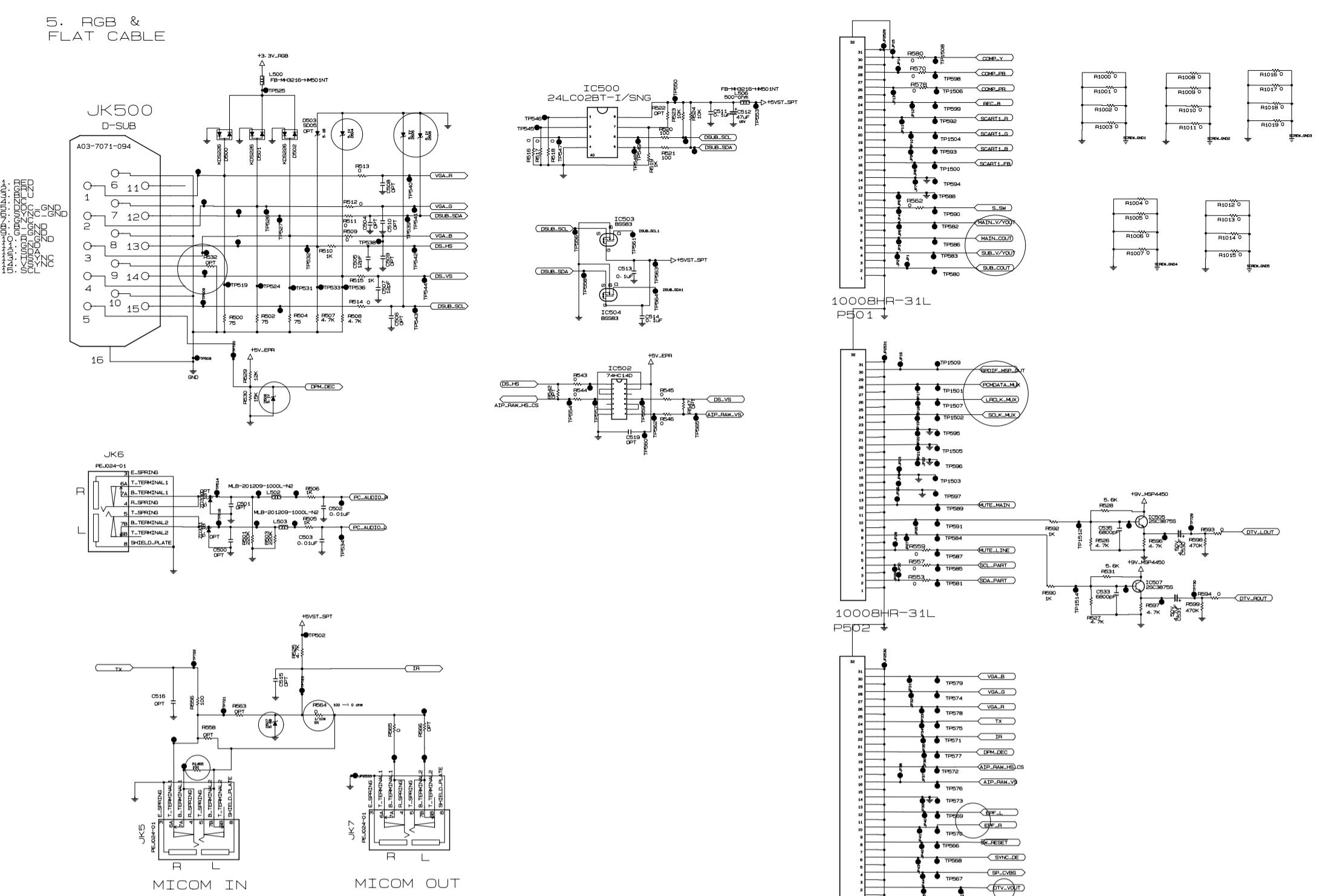
2. TUNER



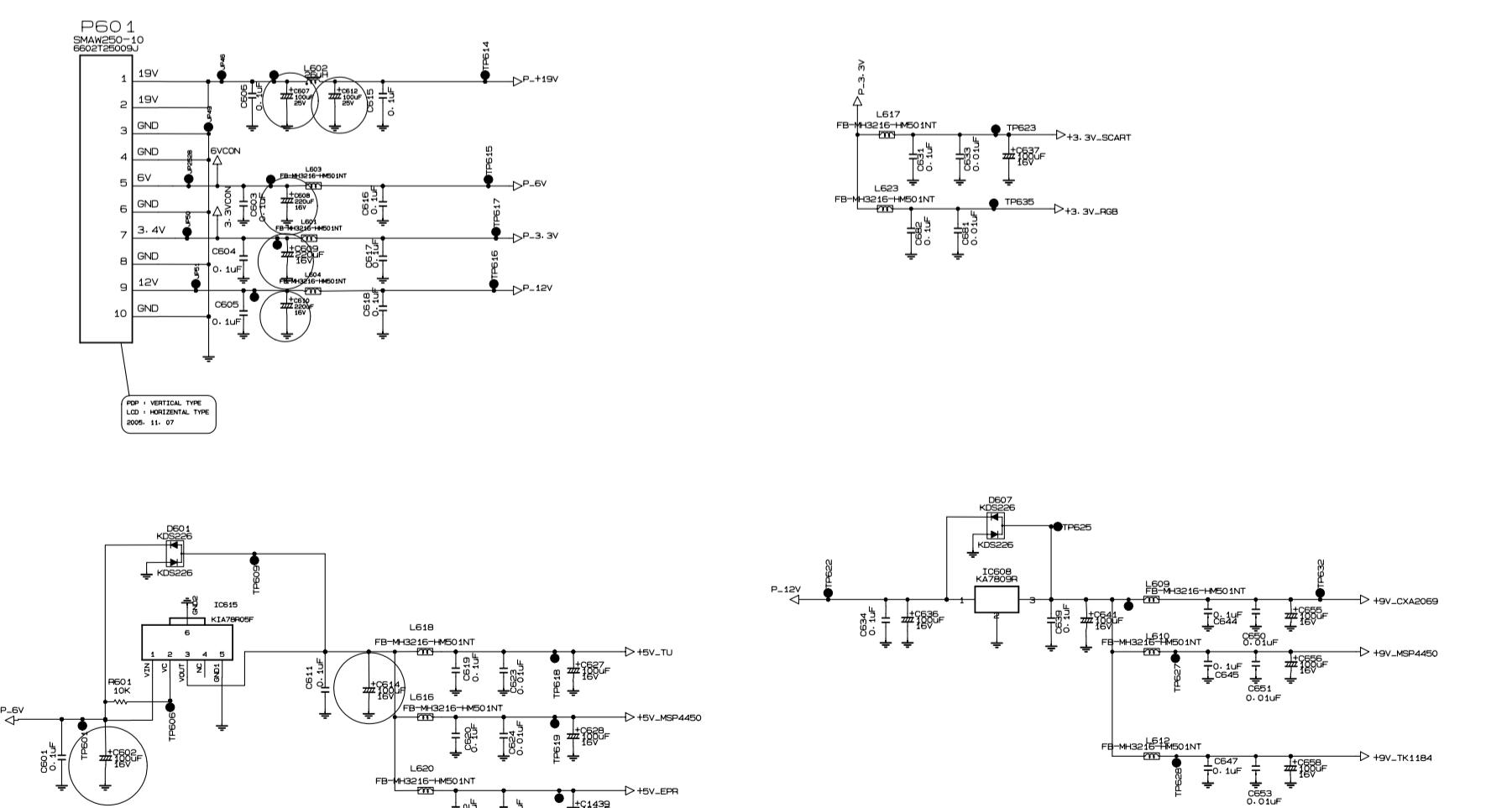
4. AUDIO BLOCK



5. RGB & FLAT CABLE



6. POWER





LG Electronics Inc.

P/NO : 38289S0043

May., 2006
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