



website: <http://biz.LGservice.com>

LCD TV

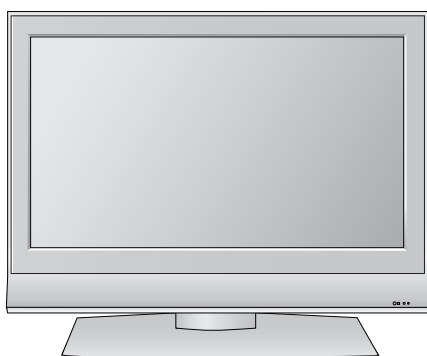
SERVICE MANUAL

CHASSIS : LP78A

MODEL : 26LC51(C) 26LC51(C)-ZA
26LC7R 26LC7R-ZA

CAUTION

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



CONTENTS

CONTENTS	2
SAFETY PRECAUTIONS	3
SPECIFICATION	6
ADJUSTMENT INSTRUCTION	9
TROUBLE SHOOTING	17
BLOCK DIAGRAM.....	25
EXPLODED VIEW	26
EXPLODED VIEW PARTS LIST	27
REPLACEMENT PARTS LIST	28
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 $\triangle$ 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.

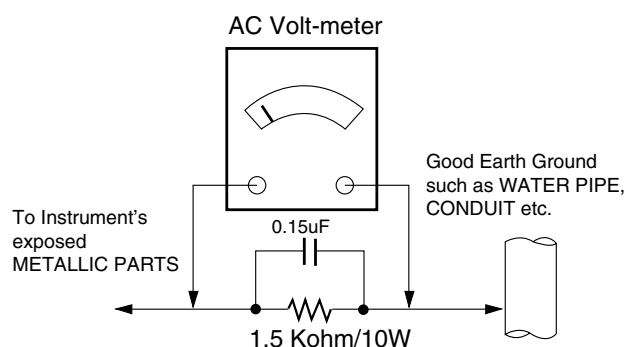
Connect 1.5K/10watt resistor in parallel with a 0.15uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

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 or 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 mall 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 circuit board 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.
CAUTION: Work quickly to avoid overheating the circuit board printed 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. Application range

This specification is applied to LP78A chassis.

2. Requirement for Test

Testing for standard of each part must be followed in below condition.

- (1) Temperature : $25 \pm 5^{\circ}\text{C}$ ($77 \pm 9^{\circ}\text{F}$), CST : $40 \pm 5^{\circ}\text{C}$
- (2) Humidity : $65\% \pm 10\%$
- (3) Power : Standard input voltage (100-240V~, 50/60Hz)
- *Standard Voltage of each products is marked by models

(4) Specification and performance of each parts are followed each drawing and specification by part number in accordance with BOM.

(5) The receiver must be operated for about 20 minutes prior to the adjustment.

3. Test method

3.1 Performance : LGE TV test method followed

3.2 Demanded other specification

Safety : CE, IEC Specification

EMC : CE, IEC

4. General Specification(LCD Module)

Item	Specification			Measurement	Result	Remark	
Display Screen Device	26/27/32/37/42" wide Color Display Module					LCD	
Aspect Ratio	16:9						
LCD Module	26/27/32/37/42" TFT WXGA LCD					MAKER : AUO/CMO/LPL/CPT	
Operating Environment	Temp. : 0 ~ 40 deg, Humidity : 0 ~ 85%					LGE SPEC	
Storage Environment	Temp. : -20 ~ 60 deg, Humidity : 0 ~ 85 %						
Input Voltage	100-240V~, 50/60Hz						
Power Consumption	Power on (Green) ≤ TBD (42") ≤ max (26", 27", 32", 37")					Volume: 1/8 volume of sound distortion point	
	St-By (Red) : 1.0 W						
	LCD Module	AUO	Outline Dimension	26"	626.0 x 373.0 x 47.5	mm	(H) x (V) x (D) [with inverter]
32"				760.0 x 450.0 x 45	mm		
37"				877.0 x 514.6 x 54.7	mm		
Pixel Pitch			26"	0.4215	mm	(H) x (W)	
			32"	0.51075			
			37"	0.6 x 0.6			
Back Light			26",32"	8 U-lamp			
			37"	10 U-lamp			
CMO			Outline Dimension	27"	637.55 x 379.8 x 40.7	mm	(H) x (V) x (D) [with inverter]
				32"	760 x 450 x 47.53		
		Pixel Pitch	27"	0.1455 x 0.4365	mm	(H) x (V)	
			32"	0.1730 x 0.5190			
		Back Light	27"	14 CCFL			
			32"	16 CCFL			
LPL		Outline Dimension	26"	626 x 373 x 44.1	mm	(H) x (V) x (D) [with inverter] (H) x (V)	
			32"	760.0 x 450.0 x 48.0			
			37"	877.0 x 516.8 x 55.5			
			42"	1006 x 610 x 56			
		Pixel Pitch	26"	0.1405 x 0.4215	mm		
			32"	0.17025 x 0.51075			
			37"	0.200 x 0.600			
			42"	0.227 x 0.681			
		Back Light	26"	18 EEFL (17 EEFL)		(LC260WX2-SLB3)	
			32"	18 EEFL			
			37"	20 EEFL			
			42"	20 CCFL			
		Display Colors			16.7M (16,777,216)		(LPL 26")
		Coating			3H, AG		

5. Model Specification(EU)

Item	Specification		Remark	
Market	EU			
Broadcasting system	PAL BG/DK, PAL I/II, SECAM L/L'			
Available Channel	BAND	PAL		
	VHF/UHF	C1_C69		
	CATV	S1_S47		
Receiving system	Upper Heterodyne			
SCART Input(2EA)	PAL, SECAM, NTSC		Full Scart 1EA, Harf 1EA	
Video Input (1EA)	PAL, SECAM, NTSC		Side AV	
S-Video Input (1EA)	PAL, SECAM, NTSC		Side AV	S-Video Priority
Component Input (1EA)	Y/Cb/Cr, Y/ Pb/Pr			
RGB Input (1EA)	RGB-PC			
HDMI Input (2EA)	HDMI-DTV			
Audio Input (4EA)	PC Audio, AV (3A), Component (1EA)		L/R Input(PC 1EA,SCART 2EA, SIDE AV 1EA, Component 1EA)	
Variable Audio out(1EA)				

6. Component Video Input (Y, P_B, P_R)

Resolution	H-freq(kHz)	V-freq(kHz)	Pixel clock(MHz)	Proposed
720*480	15.73	59.94	13.500	SDTV, DVD 480I(525I)
720*480	15.75	60.00	13.514	SDTV, DVD 480I(525I)
720*576	15.625	50.00	13.500	SDTV, DVD 576I(625I) 50Hz
720*480	31.47	59.94	27.000	SDTV 480P
720*480	31.50	60.00	27.027	SDTV 480P
720*576	31.25	50.00	27.000	SDTV 576P 50Hz
1280*720	44.96	59.94	74.176	HDTV 720P
1280*720	45.00	60.00	74.250	HDTV 720P
1280*720	37.50	50.00	74.25	HDTV 720P 50Hz
1920*1080	33.72	59.94	74.176	HDTV 1080I
1920*1080	33.75	60.00	74.250	HDTV 1080I
1920*1080	28.125	50.00	74.250	HDTV 1080I 50Hz

7. RGB Input (Analog PC)

Resolution	H-freq(kHz)	V-freq(kHz)	Pixel clock(MHz)	Proposed	Remark
640*350	31.468	70.80	25.17	EGA	
720*400	31.469	70.80	28.321	DOS	
640*480	31.469	59.94	25.17	VESA(VGA)	
800*600	37.879	60.31	40.00	VESA(SVGA)	
1024*768	48.363	60.00	65.00	VESA(XGA)	
1280*768	47.776	59.87	79.50	WXGA	XGA only
1360*768	47.720	59.799	84.75	WXGA	XGA only
1366*768	47.720	59.799	84.75	WXGA	XGA only

8. HDMI input (DTV)

Resolution	H-freq(kHz)	V-freq(kHz)	Pixel clock(MHz)	Proposed
720*480	15.75	60.00	13.514	SDTV, DVD 480I(525I)
720*480	15.73	59.94	13.500	SDTV, DVD 480I(525I)
720*576	15.625	50.00	13.500	SDTV, DVD 576I(625I) 50Hz
720*480	31.47	59.94	27.000	SDTV 480P
720*480	31.50	60.00	27.027	SDTV 480P
720*576	31.25	50.00	27.000	SDTV 576P 50Hz
1280*720	44.96	59.94	74.176	HDTV 720P
1280*720	45.00	60.00	74.250	HDTV 720P
1280*720	37.50	50.00	74.25	HDTV 720P 50Hz
1920*1080	33.72	59.94	74.176	HDTV 1080I
1920*1080	33.75	60.00	74.250	HDTV 1080I
1920*1080	28.125	50.00	74.250	HDTV 1080I 50Hz
1920*1080	67.432	59.94	148.350	HDTV 1080P
1920*1080	67.5	60	148.5	HDTV 1080P
1920*1080	56.250	50	148.5	HDTV 1080P 50Hz

ADJUSTMENT INSTRUCTION

1. Application Range

This spec sheet is applied all of the 26/32/37/42" LCD TV(LP78A) by manufacturing LG TV Plant all over the world.

2. Specification

- 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 protect test instrument.
- 2) Adjustment must be done in the correct order.
- 3) The adjustment must be performed in the circumstance of $25 \pm 5^\circ\text{C}$ of temperature and $65 \pm 10\%$ of relative humidity if there is no specific designation.
- 4) The input voltage of the receiver must keep 100~220V, 50/60Hz.
- 5) Before adjustment, execute Heat-Run for 30 minutes at RF no signal.

3. Adjustment items

3.1. PCB assembly adjustment items

- 1) Download the VCTP main software (IC500,VCT_Pro)
- 2) Channel memory (IC501,EEPROM)
- 3) Color carrier Adjustment

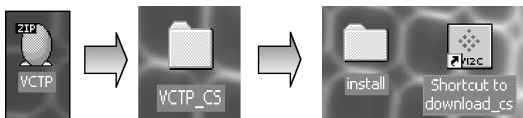
3.2. SET assembly adjustment items

- 1) DDC Data input.
- 2) Adjustment of White Balance.
- 3) Factoring Option Data input.

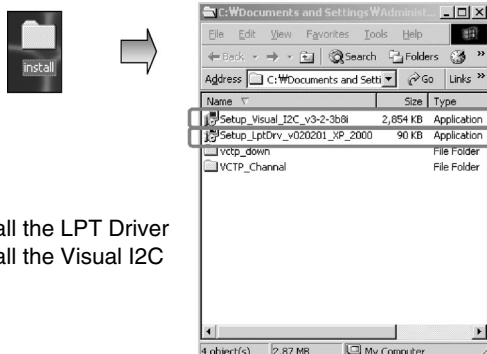
4. PCB assembly adjustment method (Using VCTP Download program)

4.1. Download program installation

- (1) Extract a Zip file



- (2) Visual I2C & LPT Driver Installation



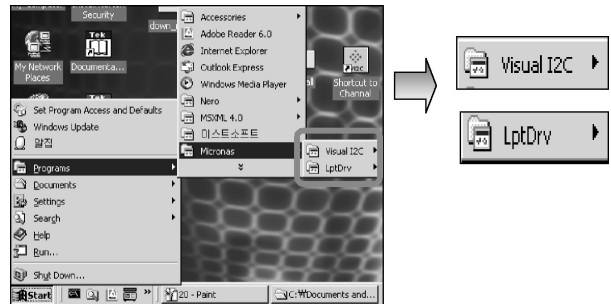
LPT Port Driver (LptDrv) Setups : Program Files > Micronas > Visual I2C > Port_Driver

*Use for Windows 95/98 : Setup_LptDrv_v0104_9x.exe

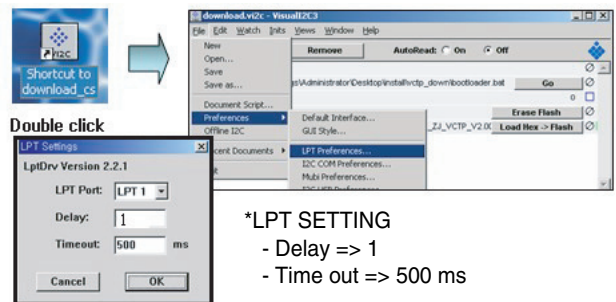
*Use for Windows 2000/XP : Setup_LptDrv_v0202_XP_2000.exe

*Use for Windows NT : Setup_LptDrv_v0104_NT.exe

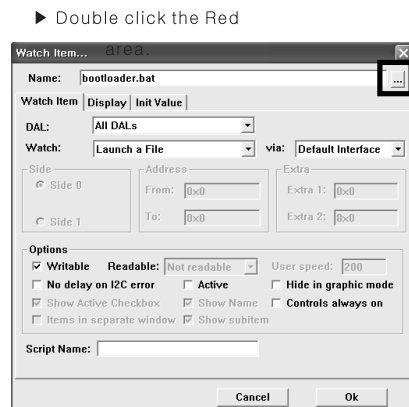
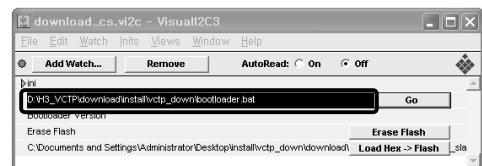
- (3) Verification (Start > Programs > Micronas > Visual I2C or LptDrv)

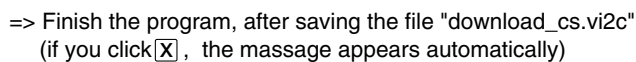
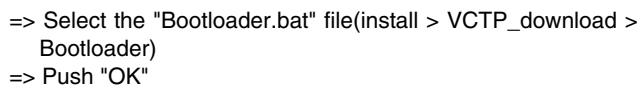


- (4) LPT delay setting(File > Preference > LPT preferences)



- (5) Exchange the bootloader.bat file.

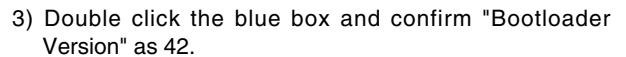




(1) Download method 1 (PCB Ass'y)

- 1) Connect the download jig to D-sub jack
- 2) Execute 'Download.vi2c' program in PC, then a main window will be opened

Double click



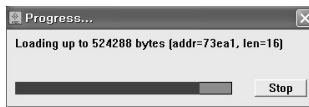
- 4) Click the "Erase Flash" button

- 5) Double click the download file low, then "edit" window will be opened

- 6) Click the choice button in the “edit window”, then “file choice window” will be opened.

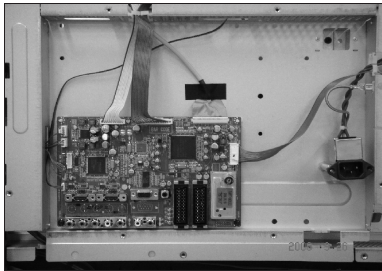
- 7) Choose the Hex file in folder and execute downloading with click " open" button.

- 8) Click OK button at the "edit window".
- 9) Under Downloading process

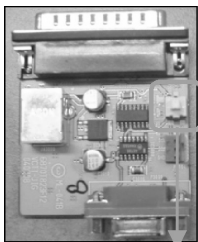


- 10) If download is failed, for example "No acknowledge from slave". Execute download again from(1).

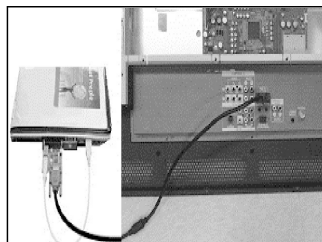
(2) Download method 2 (AV Plate Ass'y)



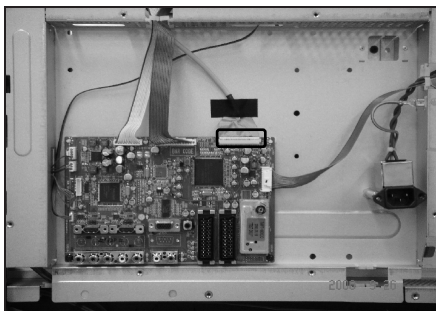
- 1) Push S/W 'ON' (connect SCL to GND using switch at Jig) and connect the download jig to D-sub jack.



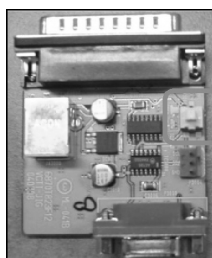
Push S/W



- 2) Supply the power (Stand-by 5V) and wait for 3 seconds.



- 3) Push the S/W off (Disconnect SCL to GND using switch at jig).

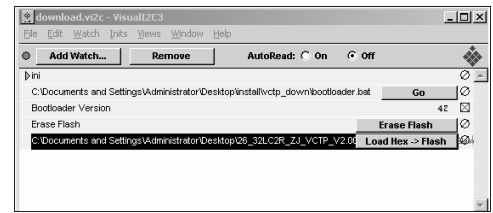


Push S/W

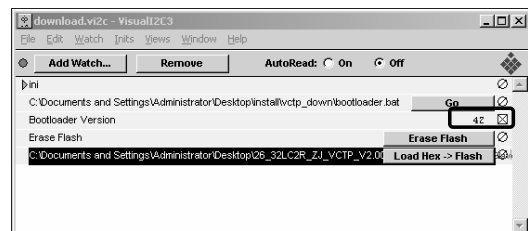
- 4) Execute 'Download.vi2c' program in PC, then a main widow will be opened.



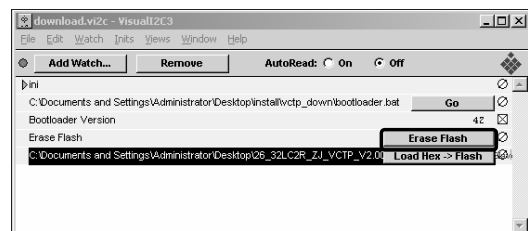
Double click



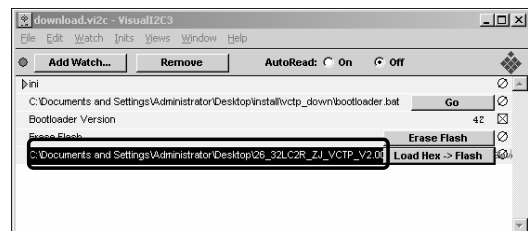
- 5) Double click the blue box and confirm "Bootloader Version" as 42.



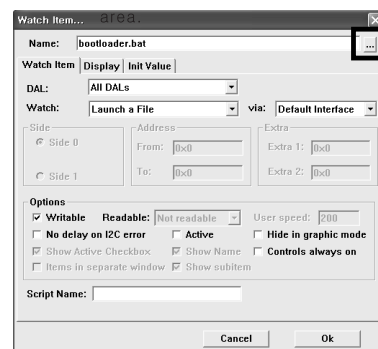
- 6) Click the "Erase Flash" button.



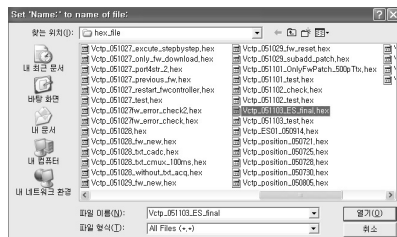
- 7) Double click the download file low then, "edit" window will be opened.



- 8) Chlick the choice button I n the "edit window", then "file choice window' will be opened.



9) Choose the Hex file in folder and execute downloading with click "open button".



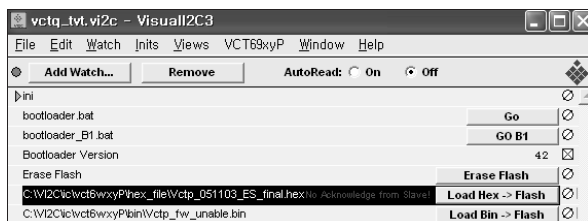
10) Click OK button at the "edit window"



11) Under Downloading progress.

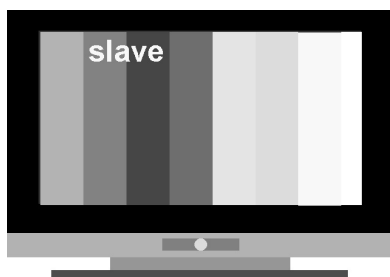


12) If download is failed, for example "No acknowledge from slave", execute download again from (1).

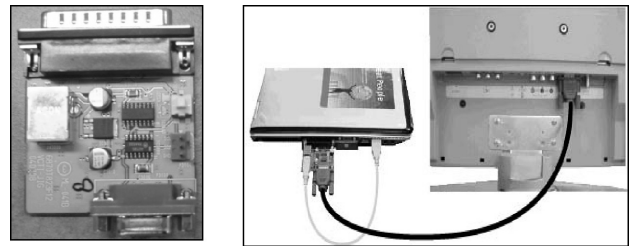


(3) Download method 3 (SET)

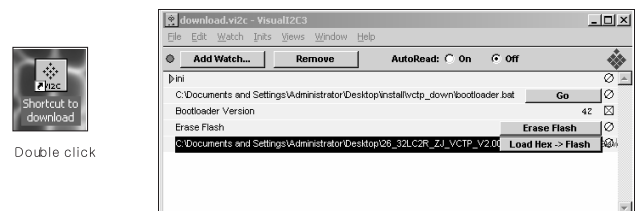
1) Push the "Tilt" button in an Adjust Remocon Then the LCD TV will change a "slave mode".



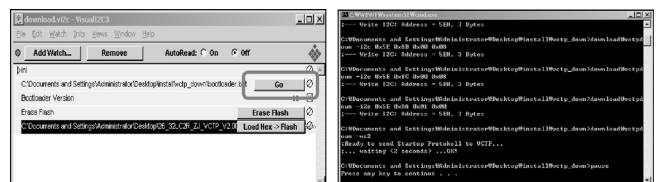
2) Connect Zig to TV using a D-sub cable.



3) Execute 'Download_CS.vi2c' program in PC, then a main widow will be opened.

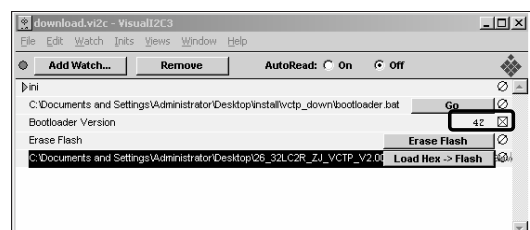


4) Click "GO" button.

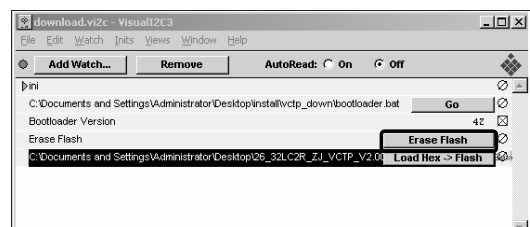


If you don't push the "go", the Hex file would not be downloaded although the download proceeds normally at first glance.

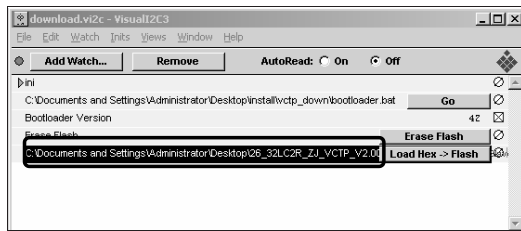
5) Double click the blue box and confirm "Bootloader Version" as 42.



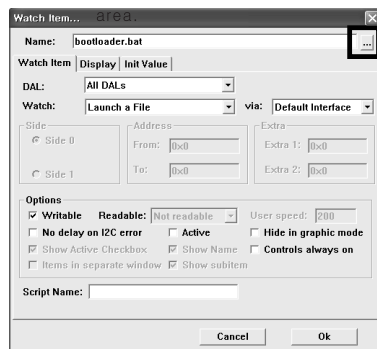
6) Click the "Erase Flash" button



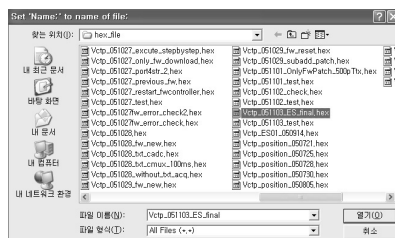
7) Double click the download file low then, "edit" window will be opened.



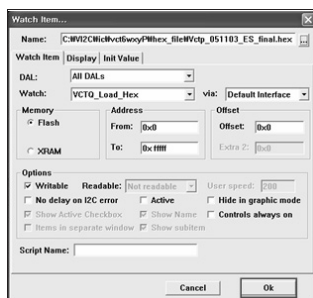
8) Click the choice button in the "edit window", then "file choice window" will be opened



9) Choose the Hex file in folder and execute downloading with click "open button"



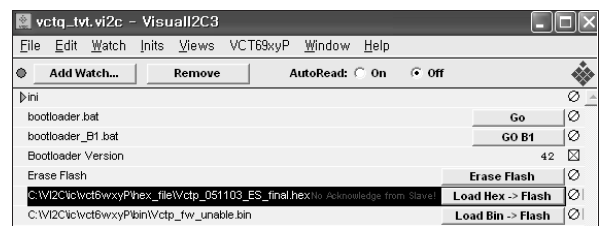
10) Click OK button at the "edit window"



11) Downloading



12) If download is failed, for example "No acknowledge from slave", execute download again from (1).



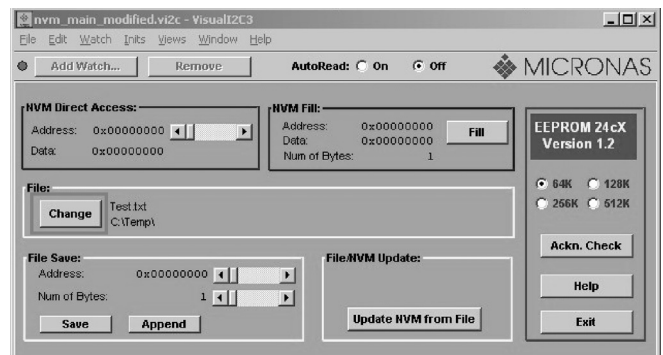
4.3. Channel memory download

(1) Connect the download jig to D-sub jack.

(2) Execute 'Channel.vi2c' program in PC, then a main window will be opened.

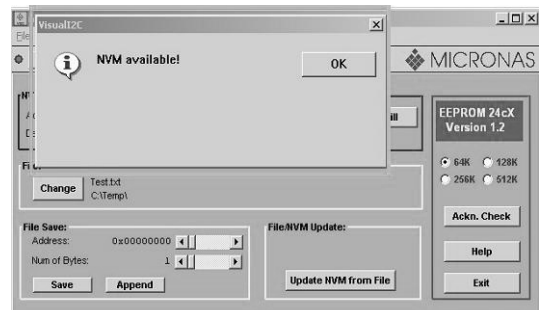


(3) Push the button change and select the Channel memory data.

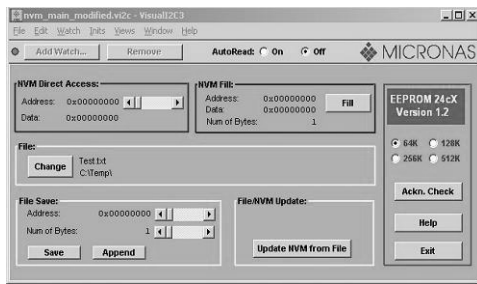


(4) Check the communication is OK or not.

=> Push the Read area (Ackn. Check) and check Cyan area is OK message.



(5) Push the Update NVM from File



4.4. Tool Option Area Option Change

Before PCB check, have to change the Tool option and Area option

Option values are below

(If on changed the option, the input menu can differ the model spec.)

The input methods are same as other chassises(Use adj Key on the Adjust Remocon)

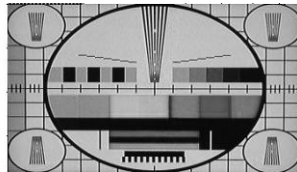
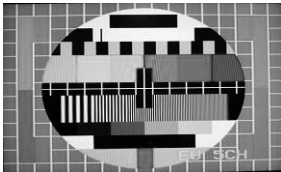
Tool Option		
Inch	ZA	TA
26	02240	04288
32	02256	04304
37	02264	04312
42	02272	04320
Area Option	Depend on PR	

4.5. Color carrier Adjustment (Inspection process)

(1) Tuning the RF signal

ZA, TA : PAL Philips Pattern(with color Bar)

MA : NTSC Digital Pattern(with color Bar)

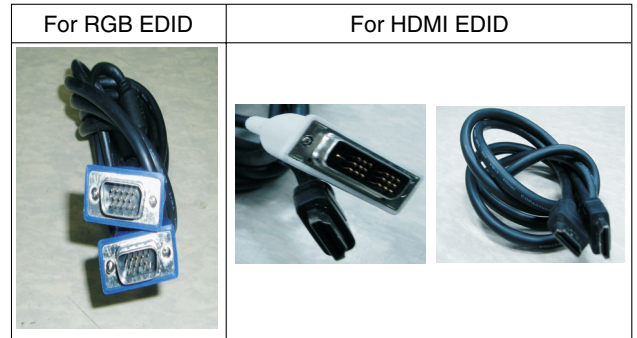


(2) push the "adj" key in the adjustment remocon.

5. EDID(The Extended Display Identification Data) /DDC(Display Data Channel) download

* Caution

- Use the proper signal cable for EDID Download.
- Never connect HDMI & D-SUB Cable at the same time.
- Use the proper cables below for EDID Writing.



* EDID Data

Item	Condition	Data
Manufacturer ID	GSM	1E6D
Version	Digital : 1	01
Revision	Digital :3	03

<EDID DATA Analog Set : 128bytes>

Addr	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
0000	00	FF	FF	FF	FF	FF	FF	00	1E	6D	(a)			(b)		
0010		(c)	01	03	08	46	27	78	0A	D9	B0	A3	57	49	9C	25
0020	11	49	4B	A1	08	00	31	40	01	01	01	01	45	40	01	01
0030	61	40	01	01	01	01	1B	21	50	A0	51	00	1E	30	48	88
0040	35	00	BC	88	21	00	00	1C	4E	1F	00	80	51	00	1E	30
0050	40	80	37	0	BC	88	21	00	00	18	00	00	00	FD	00	3A
0060	3F	1F	32	09	00	0A	20	20	20	20	20	20		(d)		
0070															(e)	(c)

< EDID DATA HDMI Set : 256bytes>

Addr	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
0000	00	FF	FF	FF	FF	FF	FF	00	1E	6D	(a)			(b)		
0010		(c)	01	3	80	5C	34	96	0A	F3	30	A7	54	42	AA	26
0020	0F	48	4C	00	00	00	01	01	01	01	01	01	01	01	01	01
0030	01	01	01	01	01	01	8C	0A	D0	8A	20	E0	2D	10	10	3E
0040	96	00	C4	8E	21	00	00	18					(d)			
0050					(d)						00	00	00	FD	00	2D
0060	41	19	32	8	00	0A	20	20	20	20	20	20	00	00	00	00
0070	00	00	00	00	00	00	00	00	00	00	00	00	00	00	01	(e)
0080	02	03	1E	72	23	09	07	02	4B	10	1F	07	16	81	03	05
0090	14	13	12	04	83	01	00	00	65	03	0C	00	10	00	01	1D
00A0	80	18	71	1C	16	20	58	2C	25	00	C4	8E	21	00	00	9E
00B0	01	1D	80	D0	72	1C	16	20	10	2C	25	80	C4	8E	21	00
00C0	00	9E	01	1D	00	BC	52	D0	1E	20	B8	28	55	40	C4	8E
00D0	21	00	00	1E	8C	0A	D0	90	20	40	31	20	0C	40	55	00
00E0	C4	8E	21	00	00	18	01	1D	00	72	51	D0	1E	20	6E	28
00F0	55	00	C4	8E	21	00	00	1E	00	00	00	00	00	00	00	(c)

=> Detail EDID Options are below(a, b, c, d, e)

a. Product ID

Model Name	Product ID		
	DEC	HEX	EDID table
32LC4R	30113(A)	75A1	A175
	30114(D)	75A2	A275
32LC7R	30115 (A)	75A3	A375
	30116 (D)	75A4	A475
42LC4R	40075 (A)	9C8B	8B9C
	40076 (D)	9C8C	8C9C
42LC7R	40077(A)	9C8D	8D9C
	40078(D)	9C8E	8E9C

b. Serial No : Controlled on production line

c. Month, Year : Controlled on production line

ex) Montly: '03' => '03'

Year: '2005' => '0F'

d. Model Name(Hex):

Model Name	Model Name(HEX)															
32LC4R-ZA	00	00	00	FC	00	33	32	4C	43	34	52	2D	5A	41	0A	20
42LC4R-ZA	00	00	00	FC	00	34	32	4C	43	34	52	2D	5A	41	0A	20

e. Checksum (7EH) : Changeable by total EDID data

5.1. Sequence of Adjustment

(1) DDC data of Analog-RGB

1) Init the data

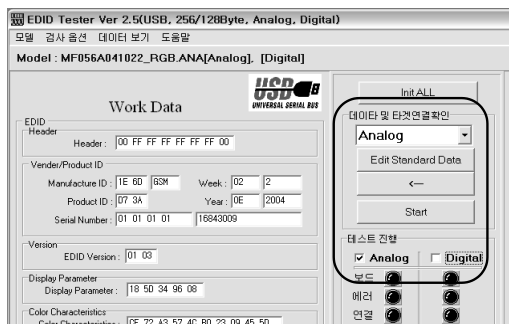


2) Load the EDID data. (Open file)

[Analog - RGB : LP78A_RGB.ANA]

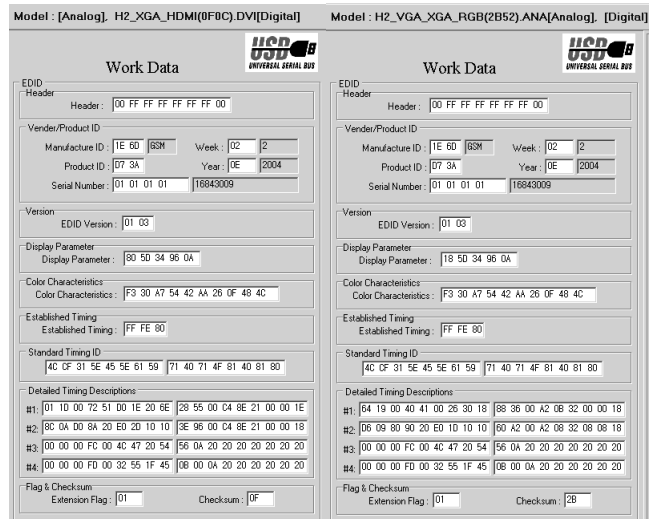
[Digital - HDMI : LP78A_HDMI.DVI]

3) Set the S/W as below



4) Push the "Write Data & Verify" button. And confirm "Yes".

5) If the writing is finished, you will see the "OK" message.



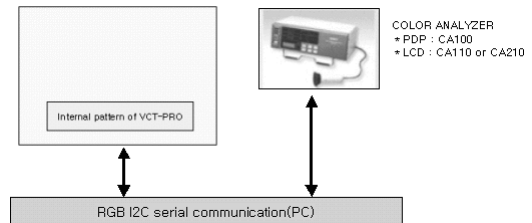
<EDID DATA>

6. Adjustment of White Balance

6.1 Required Equipment

- (1) Remote control for adjustment
- (2) Color Analyzer (CA-110 or CA-210 or same product)
- (3) Auto W/B adjustment instrument(only for Auto adjustment)

6.2 Connecting diagram of equipment for measuring (For Automatic Adjustment)



(1) Enter the DDC adjust mode

- Enter the DDC adjust mode at the same time heat-run mode when pushing the power on by power only key
- Enter the adjust mode and change the input mode to AV (ZA : AV3, TA,MA : AV2)when pushing the Front av key
- Maintain the DDC adjust mode with same condition of Heat-run -> Maintain after AC off/on in status of Heat-run pattern display

(2) Release the DDC adjust mode

- Release the adjust mode after AC off/on or std-by off/on in status of finishing the Hear-run mode
- Release the Adjust mode when receiving the aging off command(F3 00 00) from adjustment equipment
- Need to transmit the aging off command to TV set after finishing the adjustment.)

(3) DDC adjustment support command set

Adjustment	CMD(HEX)	ADR	
Aging On/Off	F3	00	FF : ON / 00 : OFF
Input select	F4	00	0x10 : TV
			0x20 : AV1(SCART1)
			0x21 : AV2(SCART2)
			0x23 : AV3(Side AV)
			0x40 : Component1
			0x50 : RGB DTV
			0x60 : RGB PC
			0x90 : HDMI1 DTV
R GAIN	16	00	GAIN adjustment
G GAIN	18	00	
B GAIN	1A	00	

6.3. Adjustment of White Balance

(For Manual adjustment)

- Operate the zero-calibration of the CA-110 or CA-210, then stick sensor to LCD module when you adjust.
- For manual adjustment, it is also possible by the following sequence

- 1) Select RF no signal by pressing **"POWER ON"** key on remote control for adjustment then operate heat run more than 15 minutes.

(If not executed this step, the condition for W/B will be differ. The W/B condition is Picture Mode : Standard (MA : Optimum), Color Temp : Normal.)

- 2) Changing to the av mode by pushing the input or front av key.

- 3) Display the internal pattern of the VCT-Pro IC by pushing the IN-START.

- 4) Stick sensor to center of the screen and select each items (Red/Green/Blue Gain and Offset) using ▲/▼ (CH+/-) key on R/C.

- 5) Adjust R Gain / B Gain using ◀/▶ (VOL+/-) key on R/C.

- 6) Adjust it until color coordination becomes as below.

(Initially, R/G/B gain and R/G/B offset values are fixed as below)

Red Gain : 80 , Green Gain : 80 , Blue Gain : 80

Red Offset : 80, Green Offset : 80 , Blue Offset : 80

- * Target Value [Picture Mode : Standard (ZA, TA), Optimum(MA), Color Temp: Normal]

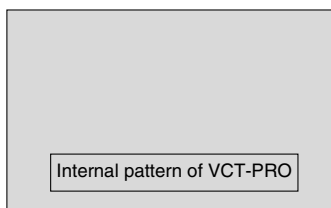
-Normal (9300K) x ; 0.283±0.003 y ; 0.298±0.003

-Luminance(Y) AV : upper 150 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



<Pattern for Adjustment of White Balance>

- 7) When adjustment is completed, Exit adjustment mode using EXIT key on R/C

6.4 Input the Shipping Option Data

- 1) Push the ADJ key in a Adjust Remote control.
- 2) Input the Option Number that was specified in the BOM, into the Shipping area.
- 3) The work is finished, Push ■ Key.

7. Default Value in Adjustment mode

(Default values maybe modified the module condition)

7.1. White Balance

White Bdance		
RED	Gain	80
Green	Gain	80
Blue	Gain	80
Red	Offset	80
Green	Offset	80
Blue	Offset	80

<Default Value on OSD>

8. Internal press test

Item	Value	Unit	Remark
Dielectric Voltage (AC <-> FG)	1.5	kV	At 100mA for 1sec (Line)
			At 100mA for 1min (OQC)
Dielectric Voltage (Without FG)	3	kV	At 100mA for 1sec (Line)
			At 100mA for 1min (OQC)

9. Sound spec.

Item	Min	Typ	Max	Unit	Remark
Audio Practical Max Output, L(Mono)/R	6	7	9	W	LCD

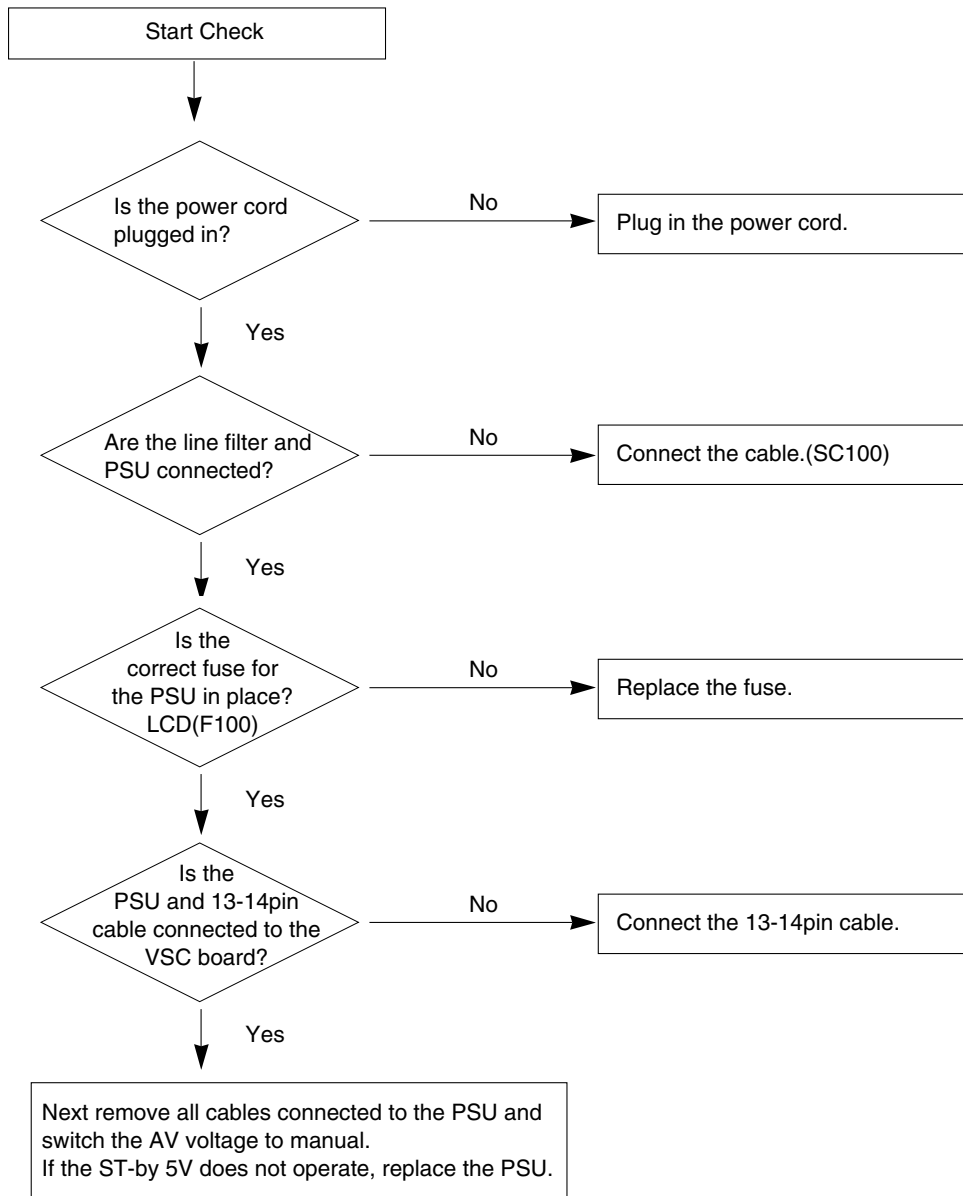
TROUBLESHOOTING

1. No power

(1) Symptom

- 1) Minute discharge does not occur at module.
- 2) Front LED does not activate.

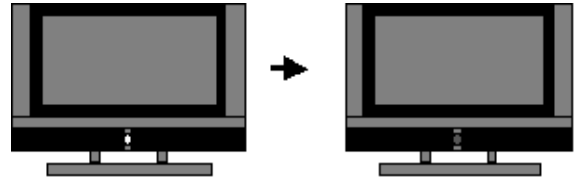
(2) Press check



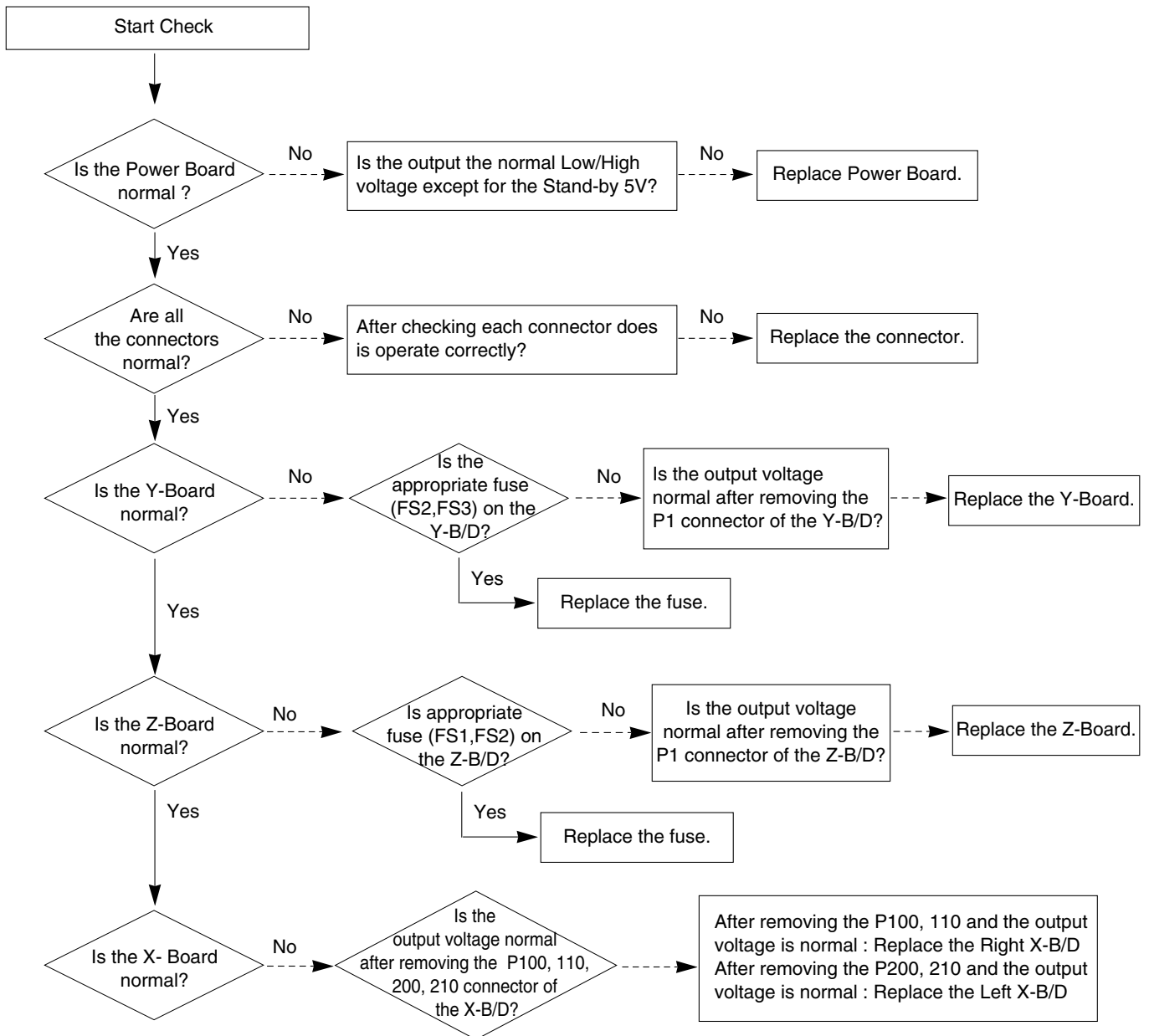
2. Protect mode

(1) Symptom

- 1) After lighting once it does not discharge minutely from the module.
- 2) The relay falls.(there is an audible "Click".)
- 3) The color of the front LED turns from green to red.



(2) Follow check



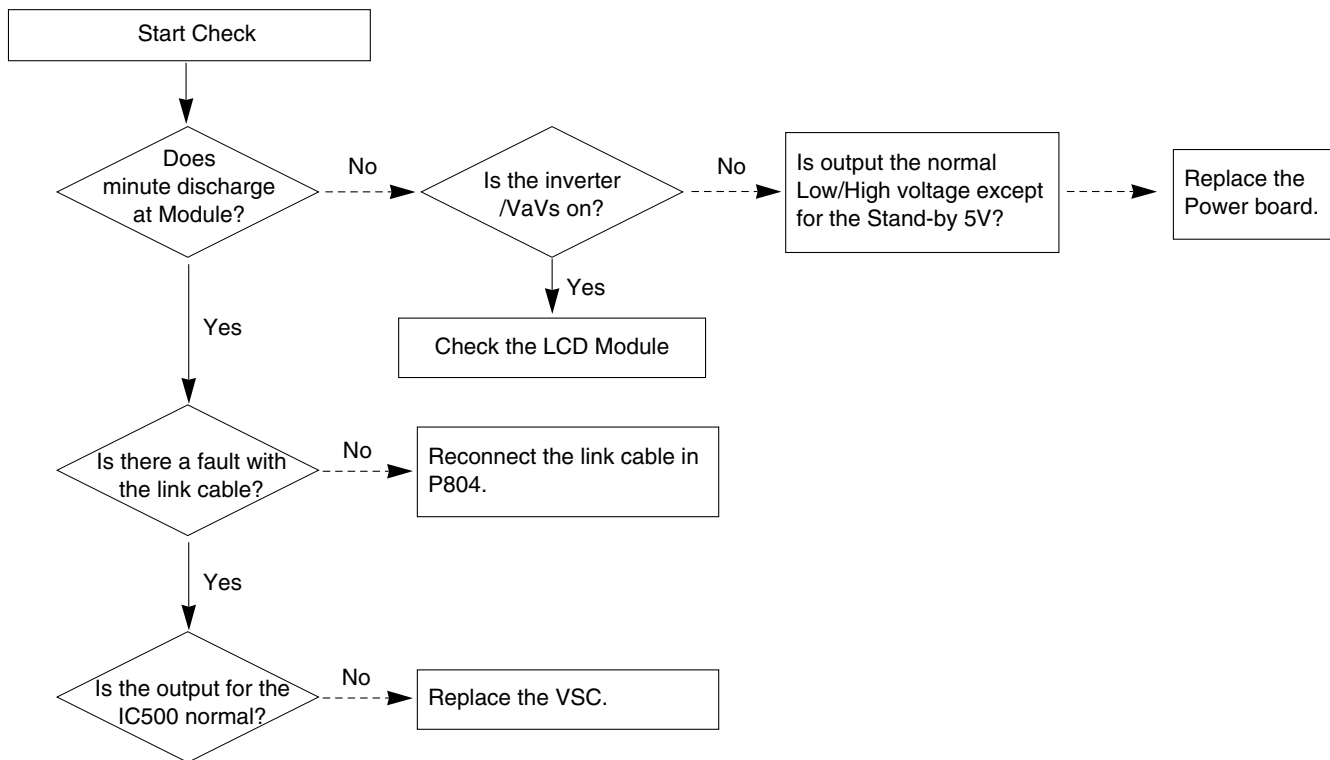
3. No Raster

(1) Symptom

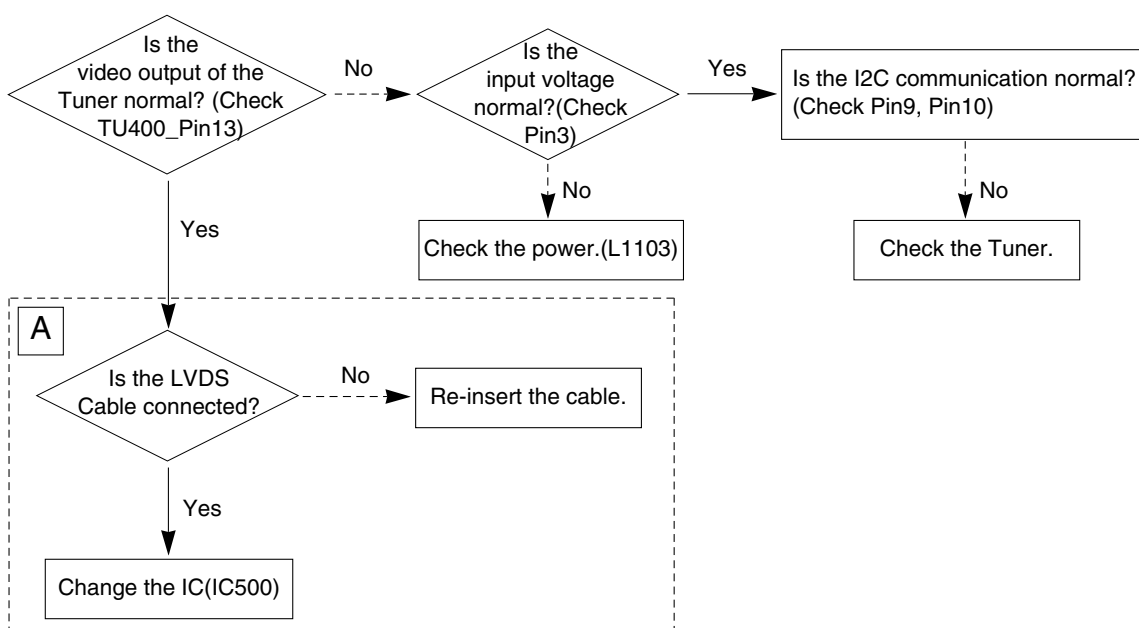
- 1) No OSD or image are displayed on the screen.
- 2) The front LED remains green.



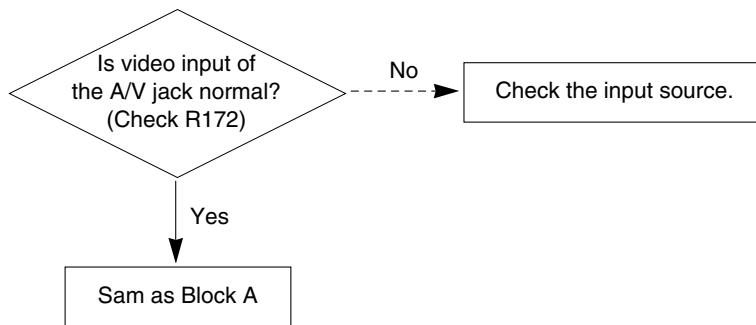
(2) Follow check



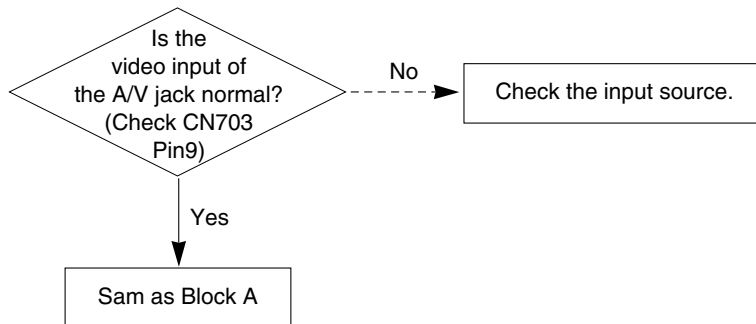
4. In the case an unusual display in RF mode.



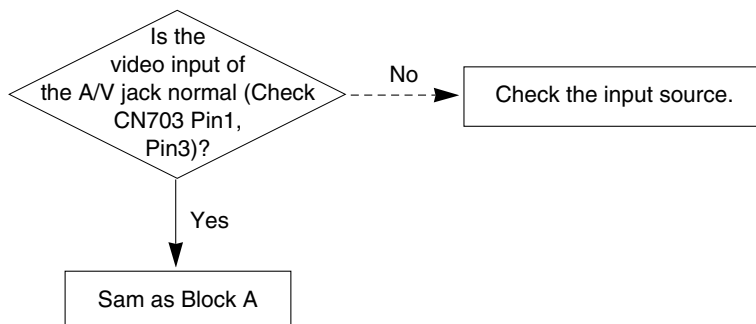
5. In the case of an unusual display in rear AV mode.



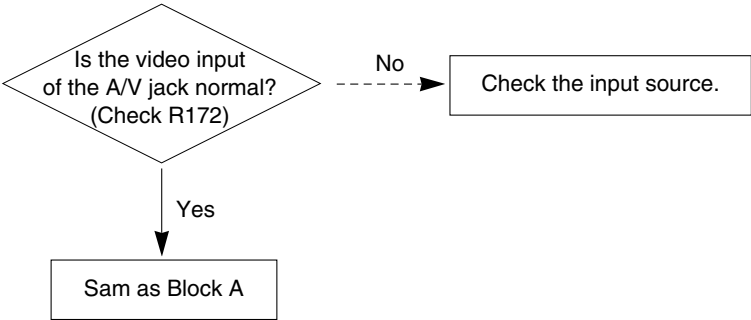
6. In the case of an unusual display in Side AV mode.



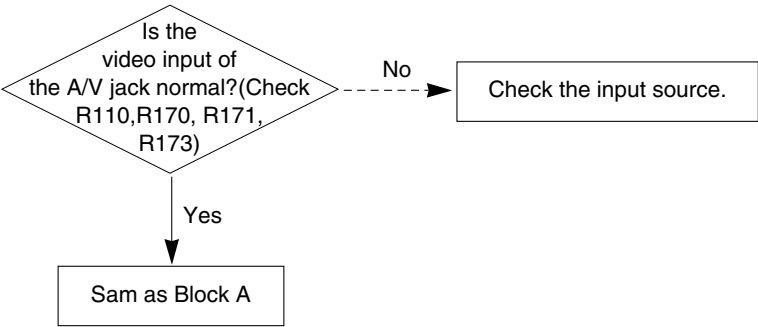
7. In the case of an unusual display in Side S-Video mode.



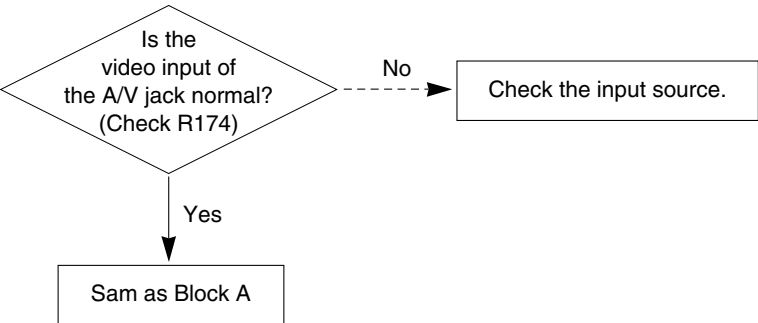
8. In the case of an unusual display in SCART 1 mode.



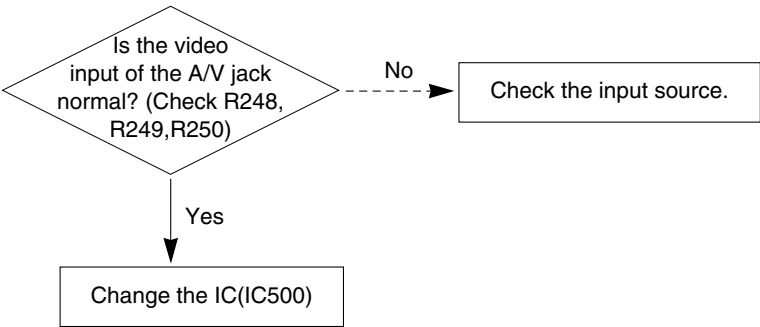
9. In the case of an unusual display in SCART 1_RGB mode.



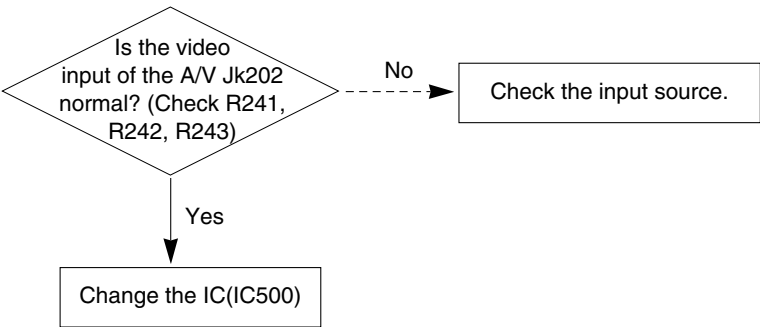
10. In the case of an unusual display in SCART 2 mode.



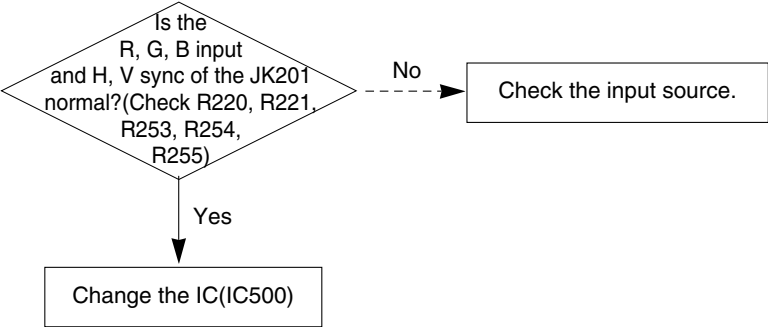
11. In the case of an unusual display in component 1 mode.



12. In the case of an unusual display in component 2 mode.



13. In the case of an unusual display in RGB mode.

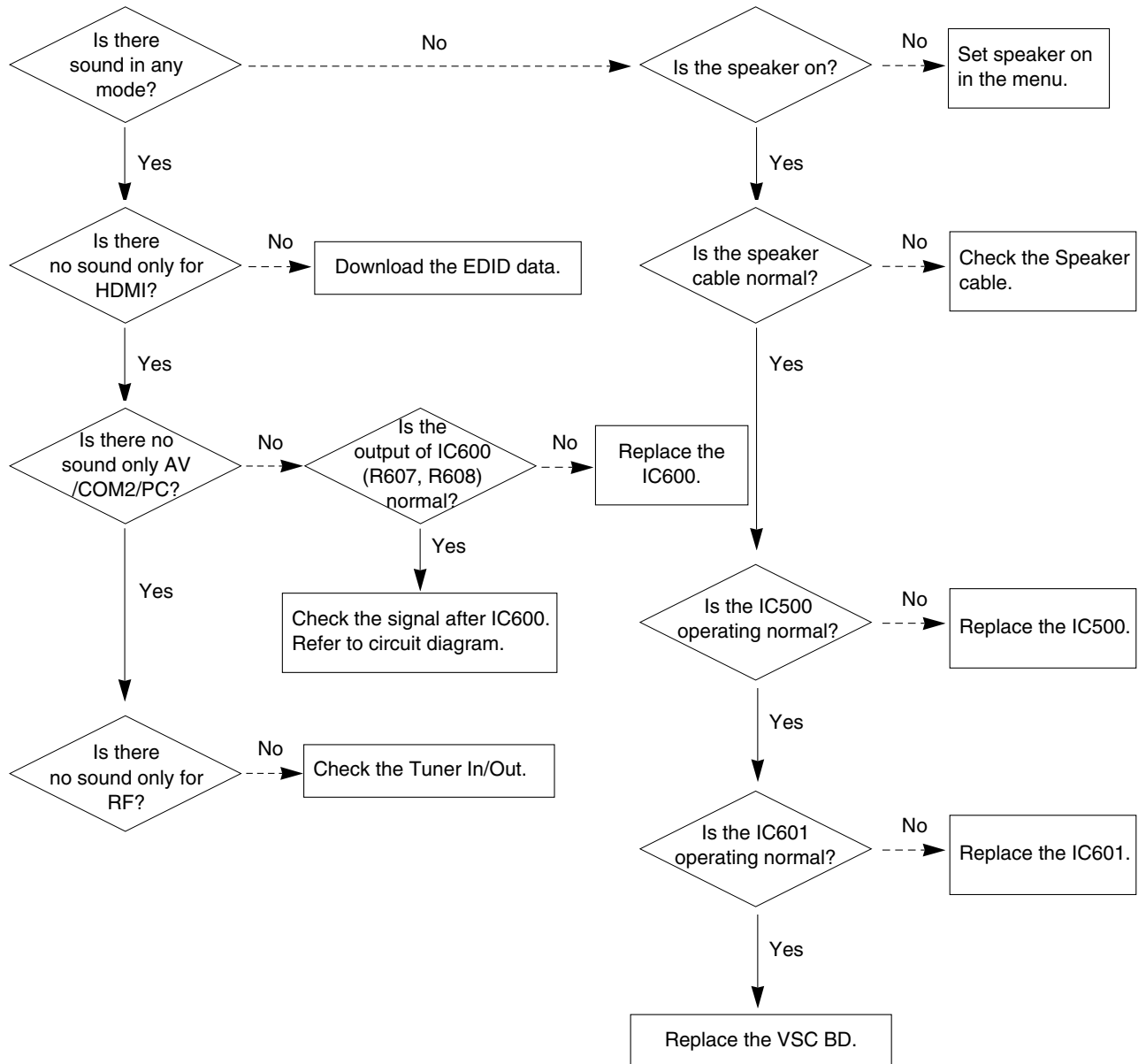


14. No Sound

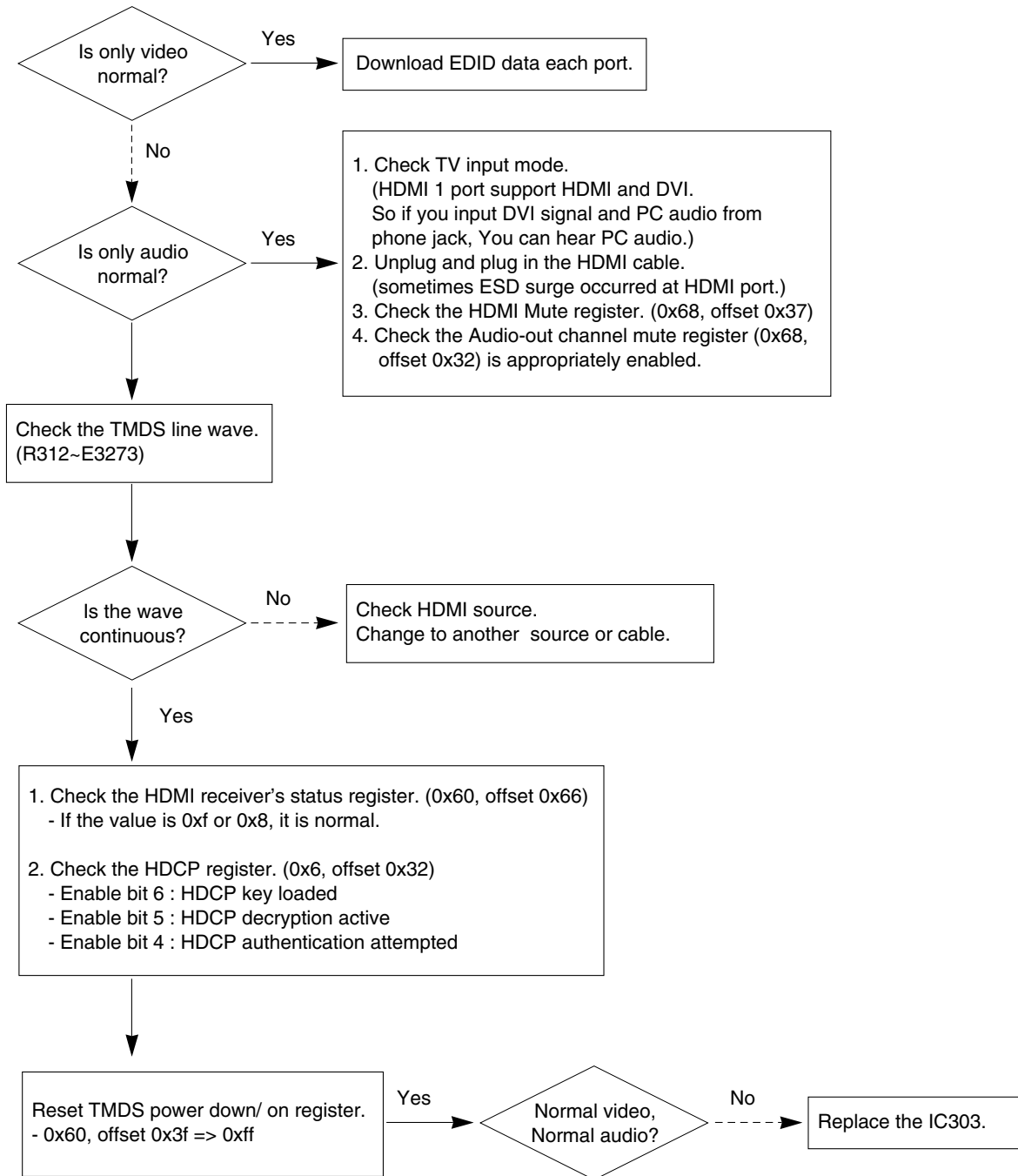
(1) Symptom

- 1) LED is green.
- 2) There is a picture but no sound.

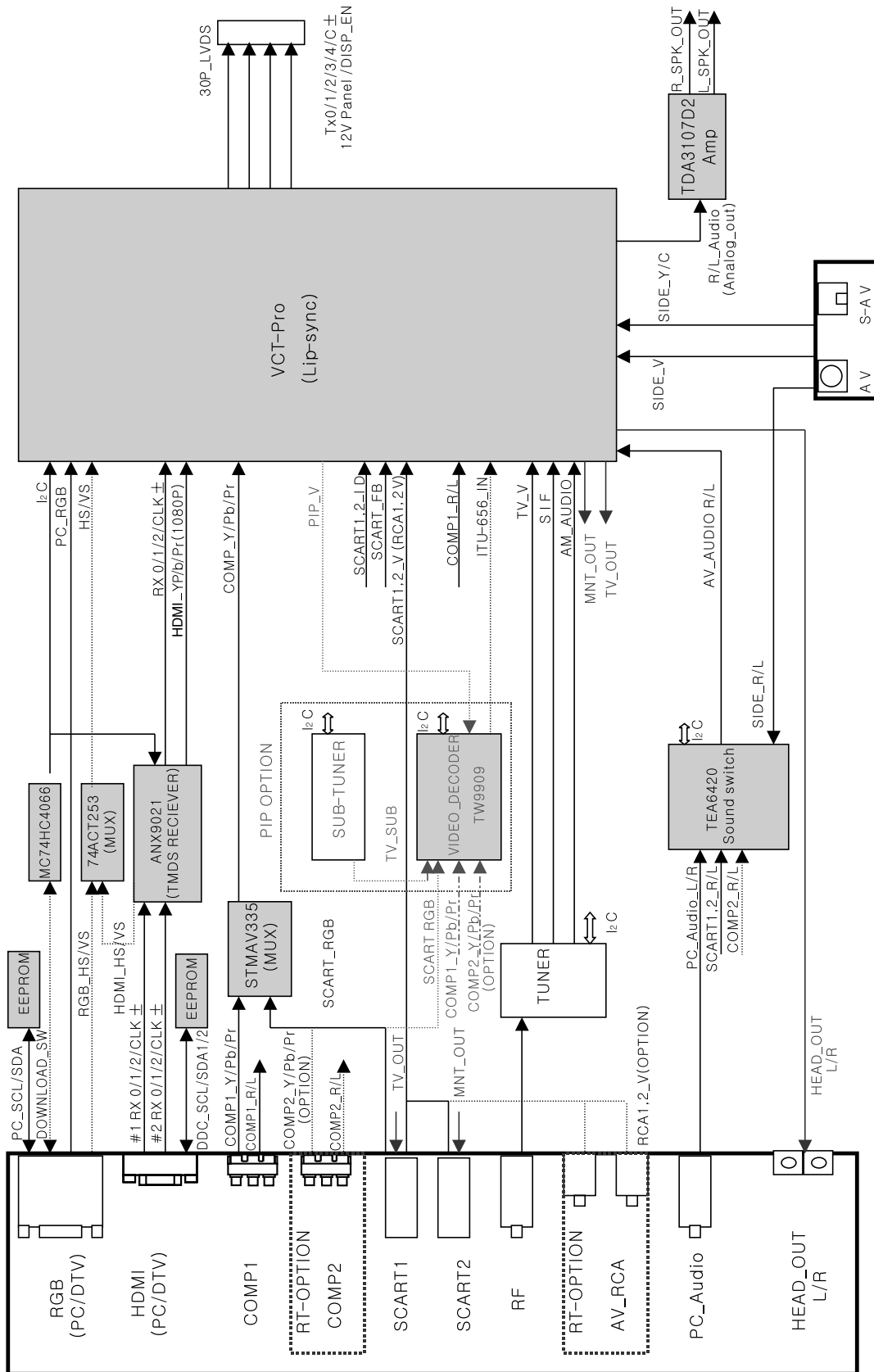
(2) Follow check



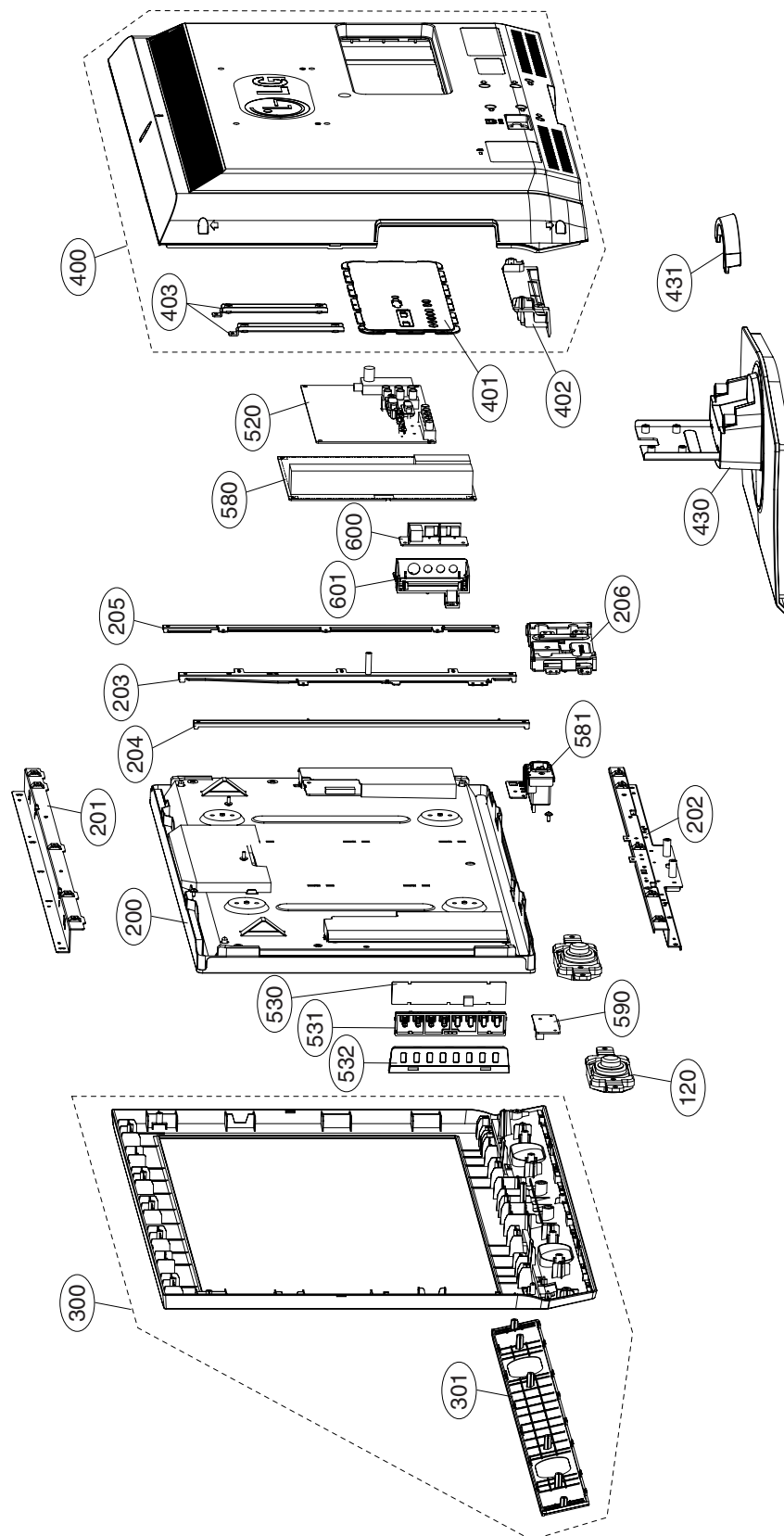
15. HDMI mode



BLOCK DIAGRAM



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

No.	PART NO.	DESCRIPTION
	120	EAB30826701 Speaker,Full Range EN1527C-6603-1. ND 7W 8OHM 80DB 170HZ 71.5 X 42 X 29.5
⚠	200	EAJ36325401 LCD,Module-TFT V260B1 L03 WXGA 16/9 800:1 - CHI MEI OPTOELECTRONICS CORP
	201	MGJ32424603 Plate PRESS EGI T1.0 METAL HGI
		MGJ32424607 Plate PRESS H-GI T1.0 METAL HGI 26LC7D top bar "A" CORE CKD P/NO.
	202	MGJ32424706 Plate PRESS EGI T1.2 METAL HGI 26LC7D/R METAL BOTTOM BAR FOR LPL/CMO
		MGJ32424709 Plate PRESS EGI T1.2 METAL SBHG-A METAL BOTTOM BAR FOR LPL/CMO '06'-CKD
	203	MGJ32424903 Plate PRESS EGI T1.0 METAL HGI H4 chassis
		MGJ32424906 Plate PRESS EGI T1.0 METAL HGI 26LC4 METAL BAR CENTER CKD P/NO
	204	MGJ32425001 Plate PRESS EGI T1.0 METAL HGI -
		MGJ32425003 Plate PRESS EGI T1.0 METAL HGI 26LC4 METAL BAR POWER CKD P/NO
	205	MGJ32425102 Plate PRESS EGI T1.0 METAL HGI 26LC7R H4 chssis
		MGJ32425104 Plate PRESS EGI T1.0 METAL HGI 26LC4 METAL BAR MAIN CKD P/NO
	206	MGJ33990401 Plate,Metal PRESS EGI 1.6 METAL EGI METAL BRACKET JIG BOTTOM
		MGJ33990402 Plate,Metal PRESS H-GI 1.6 METAL SECC METAL BRACKET JIG BOTTOM CKD
⚠	300	ABJ32378801 Cabinet Assembly 26LC7R-ZA H4-M 26"
		ABJ32378802 Cabinet Assembly 26LC7D-ZA LC73A 26" EUROPASS3 DTV
	301	ABA34558502 Bracket Assembly GRILLE 26LC5% LP78A FRONT DECO ASSEMBLY FOR LGEMA LOCAL
⚠	400	ACQ32380001 Cover Assembly,Rear 26LC7R-ZA H4-M 26"
		ACQ32380006 Cover Assembly,Rear 26LC7R-ZA H4-M 26" '01'-CKD
	401	MCK32421901 Cover MOLD ABS 26LC4D-AA ABS -
	402	MCK34645301 Cover,Rear MOLD HIPS 51SF 26LC3R/27LC7R ABS stand rear cover HIPS 51SF
	403	MGJ32425801 Plate PRESS EGI T1.6 METAL HGI -
⚠	430	AAN31665901 Base Assembly BASE 26LC4R-ZJ - 1
		AAN31665904 Base Assembly BASE 26LC4 - 26LC4D STAND ASSEMBLY, CKD P/NO.
	431	MCK32425401 Cover MOLD ABS 26LC4D-AA ABS -
		MCK32425402 Cover MOLD ABS 26LC4D-AA ABS '01'-CKD P/NO.
	520	EBR35512904 Hand Insert PCB Assembly MAIN M.I LP78A H4 EU MAIN . HAND INSERT For LGEWR
		EBR35843502 PCB Assembly MAIN T.T LP78A 32LC4R-ZA . Total FOR CKD
		EBR35843504 PCB Assembly MAIN T.T LP78A 32LC4R-ZA . Main Total For CKD . China
		EBR37816401 PCB Assembly,Main MAIN T.T LP78A 26LC7R-ZA . EU MAIN Total
	530	EBR36204701 PCB Assembly,Sub SUB T.T LP78A H4 26LCD Model . CONTROL
		EBR36204702 PCB Assembly,Sub SUB T.T LP78A H4 LCD Model CONTROL . FOR CKD
	531	MBG32421501 Button MOLD ABS CONTROL 26LC4D-AA ABS 8KEY -
	532	MCK32424401 Cover MOLD ABS 26LC4D-AA ABS -
⚠	580	EAY33025101 SMPS,AC/DC LGLP 2627HEP 90VTO264V 140W 47-63 UL/CSA/SEMKO HE/AT/YY 3
	581	EBT36230501 Chassis Assembly POWER(SMPS) LD73A 26" LCD AC-Inlet Assembly
		EBT36230502 Chassis Assembly POWER(SMPS) LD73A 26" LCD AC-Inlet Assembly For CKD. CHINA
	590	EBR35670601 PCB Assembly,Sub SUB T.T LP78A H4 26/42LC7R PRE-AMP TOTAL .
		EBR35670602 PCB Assembly,Sub SUB T.T LP78A H4 26/42LC7R PRE-AMP TOTAL FOR CKD
	591	MKC34384901 Window MOLD PMMA WINDOW 32/37/42/47LC7 PMMA LED & PRE AMP
	600	EBR33882601 PCB Assembly TOTAL T.T LP78A H4 26/32 LCD Model . SIDE AV
		EBR33882603 PCB Assembly TOTAL T.T LP78A H4 26/32 LC4R EU . SIDE AV FOR CKD . CHINA
	601	MCK32547701 Cover MOLD ABS 26LC2D-AA ABS -

REPLACEMENT PARTS LIST

For Capacitor & Resistors, the characters at 2nd and 3rd digit in the P/No. means as follows;

CC, CX, CK, CN, CH : Ceramic
CQ : Polyester
CE : Electrolytic
CF : Fixed Film

RD : Carbon Film
RS : Metal Oxide Film
RN : Metal Film
RH : CHIP, Metal Glazed(Chip)
RR : Drawing

DATE: 2006. 12. 06.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
MAIN BOARD				
CAPACITOR				
		C100	0CC102CK41A	C1608C0G1H102JT 1nF 5% 50V C
		C101	0CC102CK41A	C1608C0G1H102JT 1nF 5% 50V C
		C102	0CE227SF6DC	MVG6.3TP16VC220M 220uF 20% 1
		C103	0CE106SF6DC	VMV106M016S0ANB010 10uF 20%
		C104	0CE106SF6DC	VMV106M016S0ANB010 10uF 20%
		C105	0CC102CK41A	C1608C0G1H102JT 1nF 5% 50V C
		C106	0CC102CK41A	C1608C0G1H102JT 1nF 5% 50V C
		C110	0CK682CK51A	C1608Y5P1H682KT 6.8nF 10% 50
		C111	0CK682CK51A	C1608Y5P1H682KT 6.8nF 10% 50
		C112	0CK682CK51A	C1608Y5P1H682KT 6.8nF 10% 50
		C113	0CK682CK51A	C1608Y5P1H682KT 6.8nF 10% 50
		C114	0CC102CK41A	C1608C0G1H102JT 1nF 5% 50V C
		C115	0CC102CK41A	C1608C0G1H102JT 1nF 5% 50V C
		C116	0CE227SF6DC	MVG6.3TP16VC220M 220uF 20% 1
		C117	0CE106SF6DC	VMV106M016S0ANB010 10uF 20%
		C118	0CC102CK41A	C1608C0G1H102JT 1nF 5% 50V C
		C119	0CC102CK41A	C1608C0G1H102JT 1nF 5% 50V C
		C120	0CE106SF6DC	VMV106M016S0ANB010 10uF 20%
		C200	0CC102CK41A	C1608C0G1H102JT 1nF 5% 50V C
		C201	0CC102CK41A	C1608C0G1H102JT 1nF 5% 50V C
		C204	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C205	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C206	0CE106SF6DC	VMV106M016S0ANB010 10uF 20%
		C213	0CC102CK41A	C1608C0G1H102JT 1nF 5% 50V C
		C214	0CC102CK41A	C1608C0G1H102JT 1nF 5% 50V C
		C215	0CK105CF94A	0603F105Z160CT 1uF -20TO+80%
		C216	0CK105CF94A	0603F105Z160CT 1uF -20TO+80%
		C217	0CK105CF94A	0603F105Z160CT 1uF -20TO+80%
		C218	0CK105CF94A	0603F105Z160CT 1uF -20TO+80%
		C219	0CK105CF94A	0603F105Z160CT 1uF -20TO+80%
		C220	0CK105CF94A	0603F105Z160CT 1uF -20TO+80%
		C221	0CK104CF56A	0603B104K160CT 100nF 10% 16V
		C225	EAE32755801	CL31A106K5HNNNE 10uF 10% 16V
		C226	EAE32755801	CL31A106K5HNNNE 10uF 10% 16V
		C227	EAE32755801	CL31A106K5HNNNE 10uF 10% 16V
		C302	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C303	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C307	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C308	0CC180CK41A	C1608C0G1H180JT 18pF 5% 50V
		C309	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C310	0CC180CK41A	C1608C0G1H180JT 18pF 5% 50V
		C311	0CE106SH6DC	VMV106M025S0ANB010 10uF 20%
		C312	0CK103CK51A	0603B103K500CT 10nF 10% 50V
		C316	0CE106WFKDC	MVK4.0TP16VC10M 10uF 20% 16V
		C317	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C318	0CE106SH6DC	VMV106M025S0ANB010 10uF 20%
		C319	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C320	0CC220CK41A	C1608C0G1H220JT 22pF 5% 50V
		C321	0CC220CK41A	C1608C0G1H220JT 22pF 5% 50V
		C322	0CC220CK41A	C1608C0G1H220JT 22pF 5% 50V
		C400	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C401	0CC390CK41A	C1608C0G1H390JT 39pF 5% 50V

DATE: 2006. 12. 06.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C402	0CC390CK41A	C1608C0G1H390JT 39pF 5% 50V
		C403	0CE107SF6DC	VMV107M016S0ANE010 100uF 20%
		C405	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C406	0CK273CK56A	0603B273K500CT 27nF 10% 50V
		C408	0CE227SF6DC	MVG6.3TP16VC220M 220uF 20% 1
		C409	0CK273CK56A	0603B273K500CT 27nF 10% 50V
		C410	0CC220CK41A	C1608C0G1H220JT 22pF 5% 50V
		C411	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C412	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C500	0CK225DD66A	LMK212JB225MG-T 2.2uF 20% 10
		C501	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C502	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C503	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C504	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C505	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C506	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C507	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C508	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C509	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C510	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C511	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C512	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C513	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C514	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C515	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C516	0CE106SF6DC	VMV106M016S0ANB010 10uF 20%
		C517	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C518	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C519	0CK474CH94A	0603F474Z250CT 470nF -20TO+8
		C520	0CK474CH94A	0603F474Z250CT 470nF -20TO+8
		C521	0CK474CH94A	0603F474Z250CT 470nF -20TO+8
		C522	0CK474CH94A	0603F474Z250CT 470nF -20TO+8
		C525	0CK474CH94A	0603F474Z250CT 470nF -20TO+8
		C526	0CK474CH94A	0603F474Z250CT 470nF -20TO+8
		C527	0CE335WK6D8	MVK4.0TP50VC3.3M 3.3uF 20% 5
		C528	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C529	0CK332CK56A	C1608X7R1H332KT 3.3nF 10% 50
		C530	0CK332CK56A	C1608X7R1H332KT 3.3nF 10% 50
		C531	0CK332CK56A	C1608X7R1H332KT 3.3nF 10% 50
		C532	0CK332CK56A	C1608X7R1H332KT 3.3nF 10% 50
		C533	0CE106WH6DC	MVK5.0TP25VC10M 10uF 20% 25V
		C534	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C535	0CC560CK41A	C1608C0G1H560JT 56pF 5% 50V
		C536	0CC560CK41A	C1608C0G1H560JT 56pF 5% 50V
		C537	0CC220CK41A	C1608C0G1H220JT 22pF 5% 50V
		C538	0CC220CK41A	C1608C0G1H220JT 22pF 5% 50V
		C539	0CE226WF6DC	MVK5.0TP16VC22M 22uF 20% 16V
		C540	0CE226WF6DC	MVK5.0TP16VC22M 22uF 20% 16V
		C541	0CE226WF6DC	MVK5.0TP16VC22M 22uF 20% 16V
		C542	0CE226WF6DC	MVK5.0TP16VC22M 22uF 20% 16V
		C543	0CE226WF6DC	MVK5.0TP16VC22M 22uF 20% 16V
		C544	0CE226WF6DC	MVK5.0TP16VC22M 22uF 20% 16V
		C545	0CE226WF6DC	MVK5.0TP16VC22M 22uF 20% 16V
		C546	0CK104CK56A	0603B104K500CT 100nF 10% 50V

DATE: 2006. 12. 06.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C547	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C548	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C549	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C550	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C551	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C552	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C553	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C554	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C555	0CK106EF56A	C3216X7R1C106KT 10uF 10% 16V
		C556	0CK106EF56A	C3216X7R1C106KT 10uF 10% 16V
		C557	0CK106EF56A	C3216X7R1C106KT 10uF 10% 16V
		C558	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C559	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C563	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C564	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C568	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C569	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C570	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C571	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C572	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C573	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C574	0CE475WJ6DC	MVK4.0TP35VC4.7M 4.7uF 20% 3
		C575	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C576	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C600	0CK682CK51A	C1608Y5P1H682KT 6.8nF 10% 50
		C601	0CE107WF6DC	MVK6.3TP16VC100M 100uF 20% 1
		C602	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C603	0CK682CK51A	C1608Y5P1H682KT 6.8nF 10% 50
		C604	0CK475EF67A	C3216X5R1C475MT 4.7uF 20% 16
		C605	0CK475EF67A	C3216X5R1C475MT 4.7uF 20% 16
		C607	0CK475EF67A	C3216X5R1C475MT 4.7uF 20% 16
		C608	0CK475EF67A	C3216X5R1C475MT 4.7uF 20% 16
		C609	0CE226WF6DC	MVK5.0TP16VC22M 22uF 20% 16V
		C610	0CE475WJ6DC	MVK4.0TP35VC4.7M 4.7uF 20% 3
		C611	0CE475WJ6DC	MVK4.0TP35VC4.7M 4.7uF 20% 3
		C612	0CC471CK41A	C1608C0G1H471JT 470pF 5% 50V
		C613	0CC471CK41A	C1608C0G1H471JT 470pF 5% 50V
		C614	0CK475EF67A	C3216X5R1C475MT 4.7uF 20% 16
		C615	0CK475EF67A	C3216X5R1C475MT 4.7uF 20% 16
		C617	0CK475EF67A	C3216X5R1C475MT 4.7uF 20% 16
		C618	0CK475EF67A	C3216X5R1C475MT 4.7uF 20% 16
		C619	0CK102CK56A	0603B102K500CT 1nF 10% 50V X
		C620	0CK102CK56A	0603B102K500CT 1nF 10% 50V X
		C621	0CK682CK51A	C1608Y5P1H682KT 6.8nF 10% 50
		C622	0CK682CK51A	C1608Y5P1H682KT 6.8nF 10% 50
		C623	0CC270CK41A	C1608C0G1H270JT 27pF 5% 50V
		C624	0CK105DK94A	0805F105Z500CT 1uF -20TO+80%
		C625	0CK105DK94A	0805F105Z500CT 1uF -20TO+80%
		C626	0CK105DK94A	0805F105Z500CT 1uF -20TO+80%
		C627	0CK105DK94A	0805F105Z500CT 1uF -20TO+80%
		C628	0CE106WH6DC	MVK5.0TP25VC10M 10uF 20% 25V
		C629	0CK105DH56A	C2012X7R105KFT 1uF 10% 25V X
		C630	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C631	0CK105CF94A	0603F105Z160CT 1uF -20TO+80%
		C632	0CK224DK56A	CS2012X7R224K500NR 220nF 10%
		C633	0CK224DK56A	CS2012X7R224K500NR 220nF 10%
		C634	0CK224DK56A	CS2012X7R224K500NR 220nF 10%
		C635	0CK224DK56A	CS2012X7R224K500NR 220nF 10%
		C636	0CK105DK94A	0805F105Z500CT 1uF -20TO+80%
		C637	0CK105DK94A	0805F105Z500CT 1uF -20TO+80%
		C638	0CK105DK94A	0805F105Z500CT 1uF -20TO+80%
		C639	0CK105DK94A	0805F105Z500CT 1uF -20TO+80%

DATE: 2006. 12. 06.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C640	0CE477BJ618	ESM477M035T1G5H20G 470uF 20%
		C641	0CE477BJ618	ESM477M035T1G5H20G 470uF 20%
		C642	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C643	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C644	0CK225DK94A	CL21F225ZBFNNNE 2.2uF -20TO+
		C645	0CK225DK94A	CL21F225ZBFNNNE 2.2uF -20TO+
		C646	0CK474CH94A	0603F474Z250CT 470nF -20TO+8
		C647	0CE107WJ6DC	MVK10TP35VC100M 100uF 20% 35
		C648	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C649	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C650	0CK474CH94A	0603F474Z250CT 470nF -20TO+8
		C651	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C652	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C653	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C700	0CC102CK41A	C1608C0G1H102JT 1nF 5% 50V C
		C701	0CE107WH6DC	MVK8.0TP25VC100M 100uF 20% 2
		C702	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C703	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C704	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C708	0CE226SF6DC	VMV226M016S0ANB010 22uF 20%
		C709	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C710	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C711	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C712	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C713	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C714	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C801	0CE227WF6DC	MVK8.0TP16VC220M 220uF 20% 1
		C804	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C805	0CK474CH94A	0603F474Z250CT 470nF -20TO+8
		C807	0CE107WH6DC	MVK8.0TP25VC100M 100uF 20% 2
		C808	0CE107WF6DC	MVK6.3TP16VC100M 100uF 20% 1
		C809	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C810	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C811	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C812	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C813	0CE107WF6DC	MVK6.3TP16VC100M 100uF 20% 1
		C814	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C816	0CE107WF6DC	MVK6.3TP16VC100M 100uF 20% 1
		C818	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C819	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C820	0CE107WF6DC	MVK6.3TP16VC100M 100uF 20% 1
		C821	0CE477WF6DC	MVK10TP16VC470M 470uF 20% 16
		C822	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C823	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C824	0CE476SF6DC	VMV476M016S0ANC010 47uF 20%
		C825	0CE107WF6DC	MVK6.3TP16VC100M 100uF 20% 1
		C826	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C827	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C828	0CE227WF6DC	MVK8.0TP16VC220M 220uF 20% 1
		C829	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C830	0CE107WF6DC	MVK6.3TP16VC100M 100uF 20% 1
		C831	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C832	0CE107SF6DC	VMV107M016S0ANE010 100uF 20%
		C833	0CK104CK56A	0603B104K500CT 100nF 10% 50V
		C834	0CK475EF67A	C3216X5R1C475MT 4.7uF 20% 16
		C835	0CK475EF67A	C3216X5R1C475MT 4.7uF 20% 16
		C836	0CK226FF67A	EMK325BJ226MM-T 22uF 20% 16V
		C837	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C838	0CK106EF56A	C3216X7R1C106KT 10uF 10% 16V
		C839	0CK103CK56A	0603B103K500CT 10nF 10% 50V
		C840	0CK473CH56A	C1608X7R1E473KT 47nF 10% 25V

DATE: 2006. 12. 06.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
DIODEs				
		D101	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D102	EAH33946001	CDS3C05GTA 5.6V 6.4V 19V 1.9
		D103	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D104	EAH33946001	CDS3C05GTA 5.6V 6.4V 19V 1.9
		D105	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D106	EAH33946001	CDS3C05GTA 5.6V 6.4V 19V 1.9
		D107	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D108	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D109	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D110	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D111	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D112	EAH33946001	CDS3C05GTA 5.6V 6.4V 19V 1.9
		D200	EAH33946001	CDS3C05GTA 5.6V 6.4V 19V 1.9
		D201	EAH33946001	CDS3C05GTA 5.6V 6.4V 19V 1.9
		D202	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D203	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D204	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D205	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D206	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D207	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D208	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D209	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D210	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D211	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D219	EAH33946001	CDS3C05GTA 5.6V 6.4V 19V 1.9
		D220	EAH33946001	CDS3C05GTA 5.6V 6.4V 19V 1.9
		D221	ODR050008AA	SD05.TC - 6V 14.5V 24A 350W
		D224	ODSIH00028A	MC2838-T112-1 1.2V 75V 300MA
		D300	ODSIH00028A	MC2838-T112-1 1.2V 75V 300MA
		D301	ODSIH00028A	MC2838-T112-1 1.2V 75V 300MA
		D600	ODSIH00028A	MC2838-T112-1 1.2V 75V 300MA
		D700	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D701	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D801	0DZKE00048A	KDZ8.2V 8.2V 7.7TO8.7V 20OHM
		D803	ODR340009AA	MBRS340 525MV 40V 4A 0SEC 0F
IC				
		IC200	0IMMRAL014D	AT24C02BN-10SU-1.8 2KBIT 256
		IC202	0ISTL00031A	MC74HC4066ADR2G MC74HC4066AD
		IC203	0IFA742530B	74ACT253SC 4.5TO5.5V 0.004mA
		IC302	0IMMRAL014D	AT24C02BN-10SU-1.8 2KBIT 256
		IC303	0IPRP00735A	ANX9021 3.3V 60u 17MHZ TQFP
		IC304	0IMMRAL014D	AT24C02BN-10SU-1.8 2KBIT 256
		IC500	EAN35336801	VCT7993P- FA-A1-H-000 1.71VT
		IC501	0IMMRAL025A	AT24C32AN-10SU-2.7 32KBIT 40
		IC502	0IFA752700A	KA75270Z 2.55TO2.85V 0 200MW
		IC600	0IPRP00665A	TEA6420D 8TO10.2V 8mA 0 SO R
		IC601	EAN35502001	TPA3107D2 10TO26V 50mV 0.1%
		IC800	EAN32662801	KA7809ERTM 35V to 40V 9V 1W
		IC801	EAN35520901	MP2355DN-LF-Z 4.75V ~ 23V 2.
		IC802	0IPMG78341A	"AZ1085S-3.3TR/E1,LF 12V 3.3V"
		IC803	0IPMG78341A	"AZ1085S-3.3TR/E1,LF 12V 3.3V"
		IC805	EAN34140401	AZ1085S-1.8TRE1 1.238V to 1
		IC807	EAN32724702	STMAV340 4.0TO5.5V 5NSEC 5NS
		IC809	0IPMG00049A	AZ1117H-1.8TR/E1[H13A] 3.2TO
COIL & CORE & INDUCTOR				
		AL308	6210TCE002B	HB-4M3216-121JT 120OHM 3.2X1
		AL309	6210TCE002B	HB-4M3216-121JT 120OHM 3.2X1

DATE: 2006. 12. 06.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		AL310	6210TCE002B	HB-4M3216-121JT 120OHM 3.2X1
		AL311	6210TCE002B	HB-4M3216-121JT 120OHM 3.2X1
		AL312	6210TCE002B	HB-4M3216-121JT 120OHM 3.2X1
		AL313	6210TCE002B	HB-4M3216-121JT 120OHM 3.2X1
		L100	6210TCE001A	HB-1S2012-080JT 8OHM 2X1.25X
		L101	6210TCE001A	HB-1S2012-080JT 8OHM 2X1.25X
		L102	6210TCE001A	HB-1S2012-080JT 8OHM 2X1.25X
		L103	6210TCE001A	HB-1S2012-080JT 8OHM 2X1.25X
		L104	6210TCE001A	HB-1S2012-080JT 8OHM 2X1.25X
		L105	6210TCE001A	HB-1S2012-080JT 8OHM 2X1.25X
		L106	6210TCE001A	HB-1S2012-080JT 8OHM 2X1.25X
		L107	6210TCE001A	HB-1S2012-080JT 8OHM 2X1.25X
		L108	6210TCE001A	HB-1S2012-080JT 8OHM 2X1.25X
		L109	6210TCE001A	HB-1S2012-080JT 8OHM 2X1.25X
		L200	6210TCE001A	HB-1S2012-080JT 8OHM 2X1.25X
		L201	6210TCE001A	HB-1S2012-080JT 8OHM 2X1.25X
		L204	6210TCE001A	HB-1S2012-080JT 8OHM 2X1.25X
		L205	6210TCE001A	HB-1S2012-080JT 8OHM 2X1.25X
		L314	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L315	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L400	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L501	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L503	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L508	6210TCE001B	HH-1H3216-500JT 500OHM 3.2X1.
		L509	6210TCE001B	HH-1H3216-500JT 500OHM 3.2X1.
		L510	6210TCE001B	HH-1H3216-500JT 500OHM 3.2X1.
		L511	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L512	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L600	0LCML00020C	MLI-201212-100K 10UH 10% - 1
		L601	0LCML00020C	MLI-201212-100K 10UH 10% - 1
		L602	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L603	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L605	EAP32842807	NR8040T330M 33UH 20% 250V 1.
		L606	EAP32842807	NR8040T330M 33UH 20% 250V 1.
		L608	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L609	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L610	6210TCE001P	HB-1S2012-121JT(H:1mm) 120OH
		L612	6210TCE001P	HB-1S2012-121JT(H:1mm) 120OH
		L613	EAP32842807	NR8040T330M 33UH 20% 250V 1.
		L614	EAP32842807	NR8040T330M 33UH 20% 250V 1.
		L615	6210TCE001P	HB-1S2012-121JT(H:1mm) 120OH
		L617	6210TCE001P	HB-1S2012-121JT(H:1mm) 120OH
		L618	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L701	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L703	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L704	6200J00005N	HH-1M2012-121JT(H:1mm) 120OH
		L705	6200J00005N	HH-1M2012-121JT(H:1mm) 120OH
		L706	6200J00005N	HH-1M2012-121JT(H:1mm) 120OH
		L707	EAM33010401	MEM2012P25R0 EMI 25MHZ 100pF
		L708	EAM33010401	MEM2012P25R0 EMI 25MHZ 100pF
		L709	EAM33010401	MEM2012P25R0 EMI 25MHZ 100pF
		L711	EAM33010402	MEM2012P101R EMI 100MHZ 15pF
		L712	EAM33010402	MEM2012P101R EMI 100MHZ 15pF
		L713	EAM33010401	MEM2012P25R0 EMI 25MHZ 100pF
		L714	EAM33010402	MEM2012P101R EMI 100MHZ 15pF
		L800	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L801	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L802	6210TCE001B	HH-1H3216-500JT 500OHM 3.2X1.
		L803	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L806	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L807	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1
		L808	6210TCE001G	HH-1M3216-501JT 500OHM 3.2X1

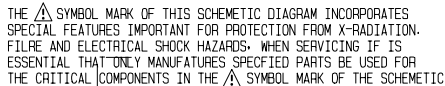
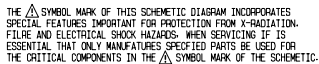
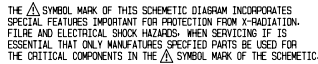
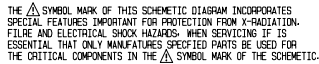
DATE: 2006. 12. 06.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R252	0RJ0332D677	MCR03EZPJ330 33OHM 5% 1/10W
		R253	0RJ0332D677	MCR03EZPJ330 33OHM 5% 1/10W
		R254	0RJ0332D677	MCR03EZPJ330 33OHM 5% 1/10W
		R255	0RJ0332D677	MCR03EZPJ330 33OHM 5% 1/10W
		R265	0RJ1502D677	MCR03EZPJ153 15KOHM 5% 1/10W
		R266	0RJ6801D677	MCR03EZPJ682 6.8KOHM 5% 1/10
		R267	0RJ2201D677	MCR03EZPJ222 2.2KOHM 5% 1/10
		R268	0RJ1502D677	MCR03EZPJ153 15KOHM 5% 1/10W
		R269	0RJ6801D677	MCR03EZPJ682 6.8KOHM 5% 1/10
		R270	0RJ2201D677	MCR03EZPJ222 2.2KOHM 5% 1/10
		R271	0RJ1502D677	MCR03EZPJ153 15KOHM 5% 1/10W
		R272	0RJ6801D677	MCR03EZPJ682 6.8KOHM 5% 1/10
		R273	0RJ2201D677	MCR03EZPJ222 2.2KOHM 5% 1/10
		R3	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20
		R300	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R301	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R302	0RJ4702D677	MCR03EZPJ473 47KOHM 5% 1/10W
		R303	0RJ4702D677	MCR03EZPJ473 47KOHM 5% 1/10W
		R304	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R305	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R306	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R307	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R308	0RJ1002D677	MCR03EZPJ103 10KOHM 5% 1/10W
		R310	0RJ4702D677	MCR03EZPJ473 47KOHM 5% 1/10W
		R311	0RJ4702D677	MCR03EZPJ473 47KOHM 5% 1/10W
		R312	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R313	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R314	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R315	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R316	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R317	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R318	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R319	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R320	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R321	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R322	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R323	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R324	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R325	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R326	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R327	0RJ0122D677	MCR03EZPJ120 12OHM 5% 1/10W
		R328	0RJ2001D677	MCR03EZPJ202 2KOHM 5% 1/10W
		R329	0RJ2001D677	MCR03EZPJ202 2KOHM 5% 1/10W
		R330	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R331	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R332	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R333	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R334	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R335	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R336	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R337	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R338	0RJ0222D677	MCR03EZPJ220 22OHM 5% 1/10W
		R339	0RJ0222D677	MCR03EZPJ220 22OHM 5% 1/10W
		R340	0RJ0222D677	MCR03EZPJ220 22OHM 5% 1/10W
		R341	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1
		R342	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1
		R344	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1
		R345	0RJ0332D677	MCR03EZPJ330 33OHM 5% 1/10W
		R346	0RJ1004D677	MCR03EZPJ105 1MOHM 5% 1/10W
		R347	0RJ3300D677	MCR03EZPJ331 330OHM 5% 1/10W
		R349	0RJ4701D677	MCR03EZPJ472 4.7KOHM 5% 1/10
		R350	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1

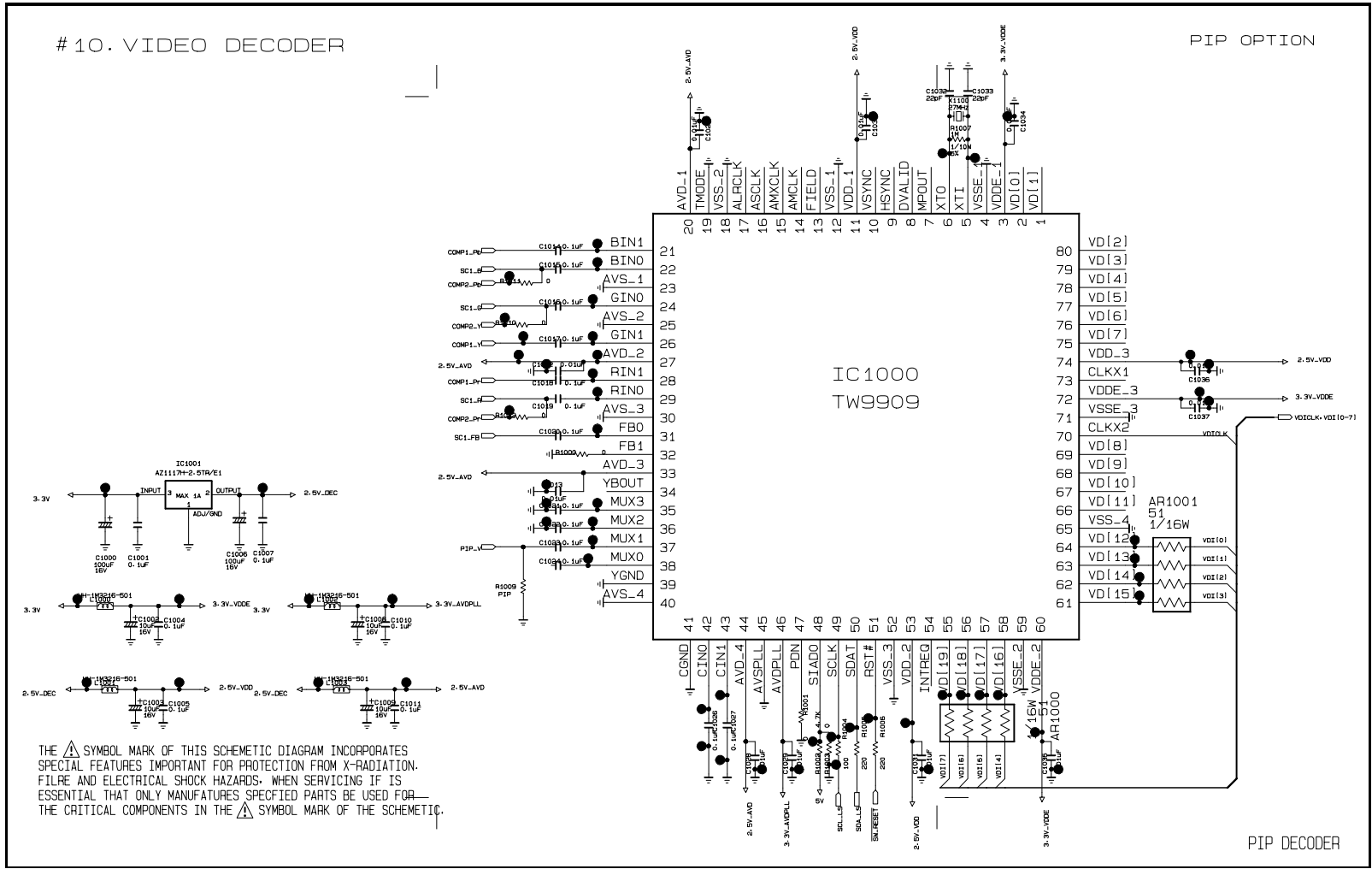
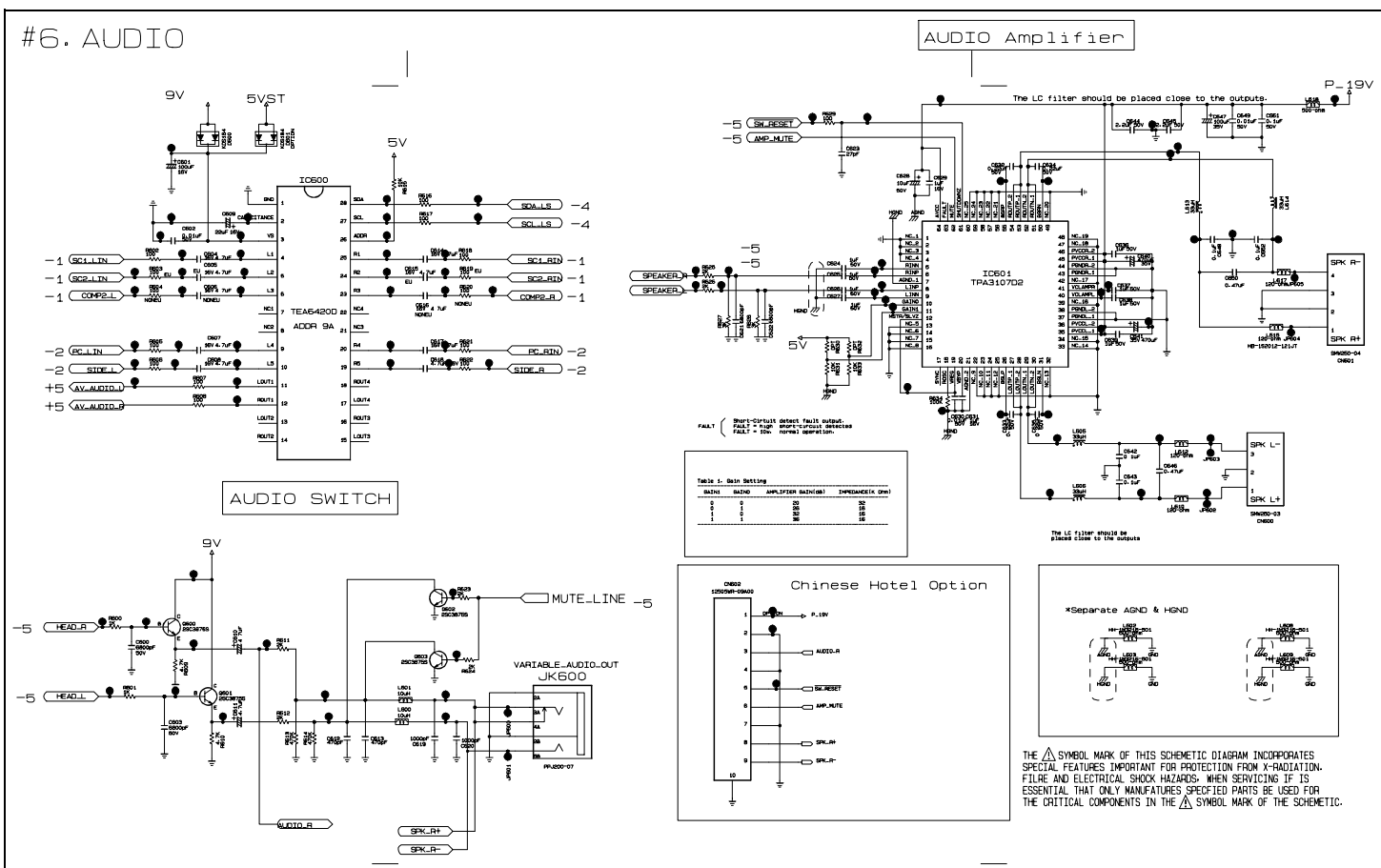
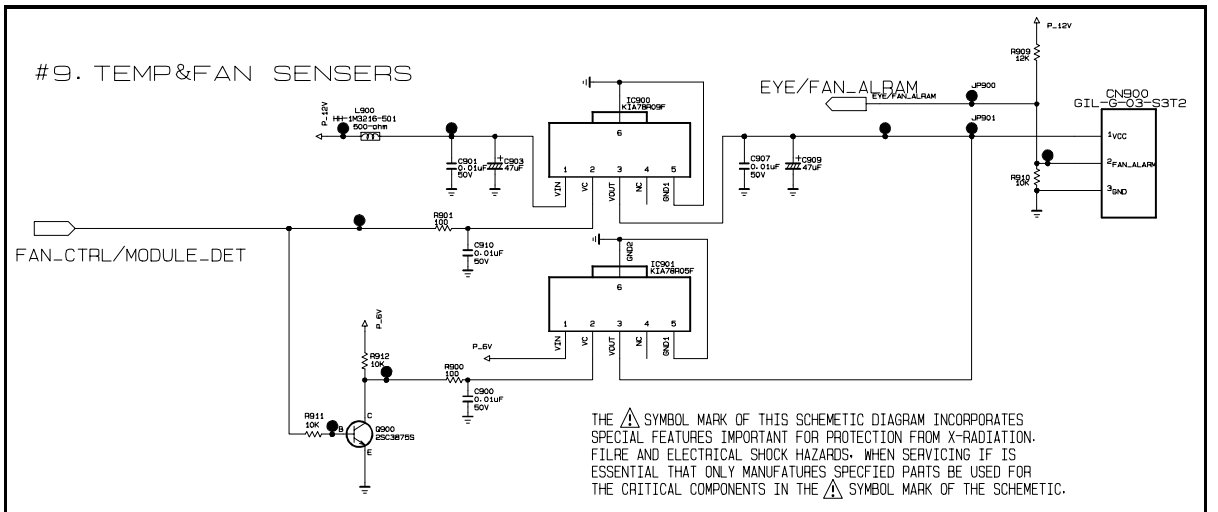
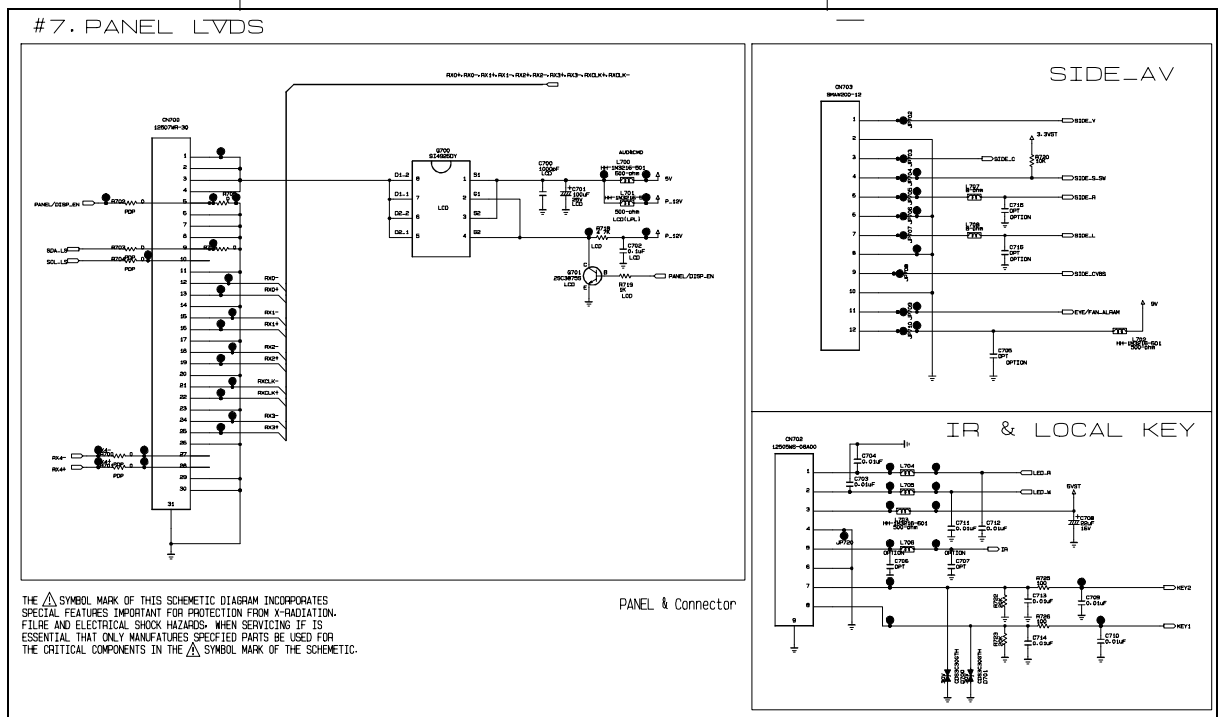
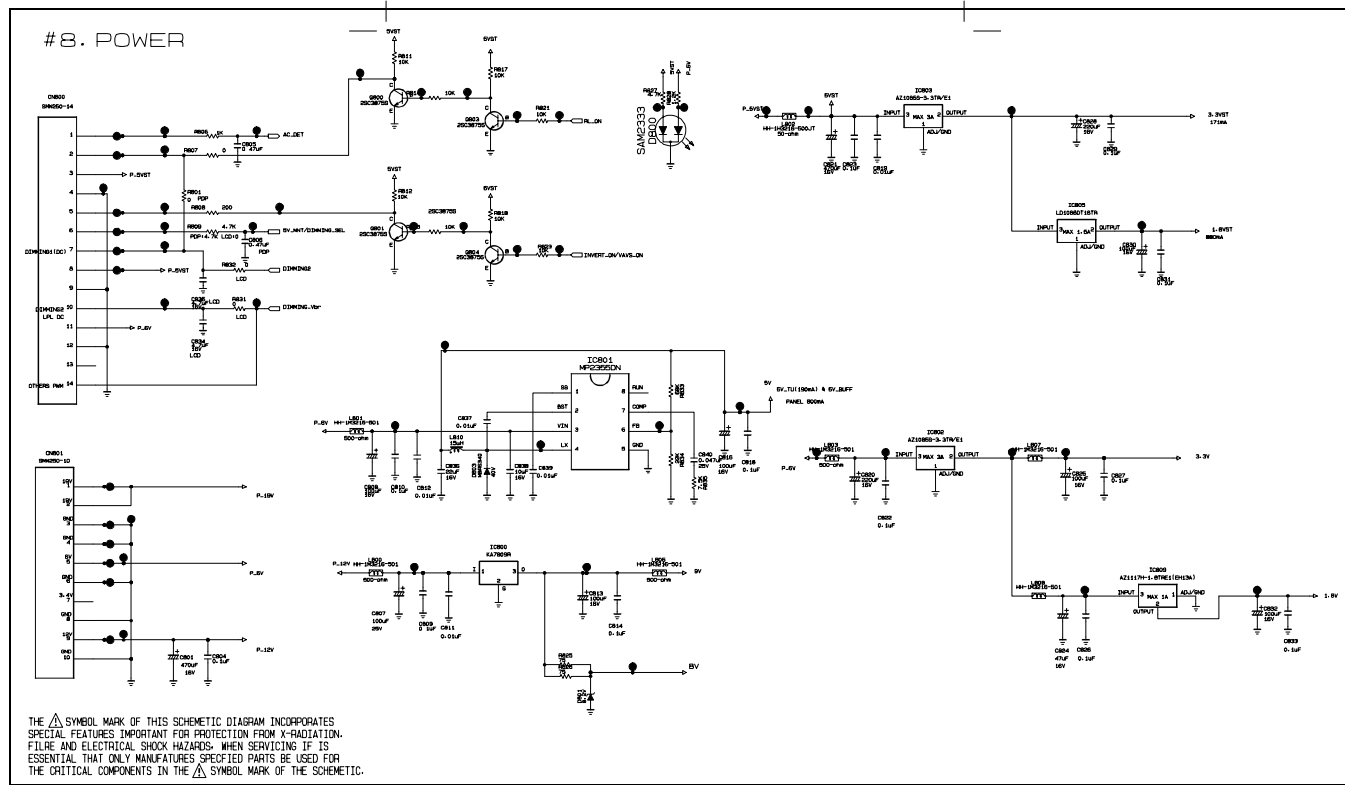
DATE: 2006. 12. 06.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R352	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1
		R353	0RJ0222D677	MCR03EZPJ220 22OHM 5% 1/10W
		R354	0RJ0222D677	MCR03EZPJ220 22OHM 5% 1/10W
		R355	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1
		R356	0RJ0222D677	MCR03EZPJ220 22OHM 5% 1/10W
		R358	0RJ4701D677	MCR03EZPJ472 4.7KOHM 5% 1/10
		R359	0RJ0222D677	MCR03EZPJ220 22OHM 5% 1/10W
		R367	0RJ0392D677	MCR03EZPJ390 39OHM 5% 1/10W
		R368	0RJ0392D677	MCR03EZPJ390 39OHM 5% 1/10W
		R369	0RJ0392D677	MCR03EZPJ390 39OHM 5% 1/10W
		R370	0RJ4701D677	MCR03EZPJ472 4.7KOHM 5% 1/10
		R371	0RJ4701D677	MCR03EZPJ472 4.7KOHM 5% 1/10
		R4	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20
		R401	0RJ3300D677	MCR03EZPJ331 330OHM 5% 1/10W
		R402	0RJ3300D677	MCR03EZPJ331 330OHM 5% 1/10W
		R404	0RJ7501D677	MCR03EZPJ752 7.5KOHM 5% 1/10
		R405	0RJ4701D677	MCR03EZPJ472 4.7KOHM 5% 1/10
		R407	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R408	0RJ4700D677	MCR03EZPJ471 470OHM 5% 1/10W
		R410	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R411	0RJ1002D677	MCR03EZPJ103 10KOHM 5% 1/10W
		R412	0RJ0822D677	MCR03EZPJ820 82OHM 5% 1/10W
		R413	0RJ2200D677	MCR03EZPJ221 220OHM 5% 1/10W
		R421	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1
		R422	0RJ2200D677	MCR03EZPJ221 220OHM 5% 1/10W
		R423	0RJ4700D677	MCR03EZPJ471 470OHM 5% 1/10W
		R424	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1
		R5	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20
		R503	0RJ2000D477	MCR03EZPF201 200OHM 1% 1/10W
		R504	0RJ1500D677	MCR03EZPJ151 150OHM 5% 1/10W
		R505	0RJ4700D677	MCR03EZPJ471 470OHM 5% 1/10W
		R506	0RJ1500D677	MCR03EZPJ151 150OHM 5% 1/10W
		R508	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R509	0RJ2000D477	MCR03EZPF201 200OHM 1% 1/10W
		R510	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R511	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R512	0RJ1802D677	MCR03EZPJ183 18KOHM 5% 1/10W
		R513	0RJ4701D677	MCR03EZPJ472 4.7KOHM 5% 1/10
		R514	0RJ4701D677	MCR03EZPJ472 4.7KOHM 5% 1/10
		R515	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R516	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R517	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R518	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R519	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R520	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R521	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R522	0RJ6201D677	MCR03EZPJ622 6.2KOHM 5% 1/10
		R527	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R528	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R529	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R530	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R531	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R532	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R533	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R534	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R535	0RJ0222D677	MCR03EZPJ220 22OHM 5% 1/10W
		R536	0RJ0222D677	MCR03EZPJ220 22OHM 5% 1/10W
		R537	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R538	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R540	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R541	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R542	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W

DATE: 2006. 12. 06.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R543	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R544	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R545	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R546	0RJ4701D677	MCR03EZPJ472 4.7KOHM 5% 1/10
		R547	0RJ4701D677	MCR03EZPJ472 4.7KOHM 5% 1/10
		R548	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R549	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R550	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R551	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R552	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1
		R554	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R555	0RJ4702D677	MCR03EZPJ473 47KOHM 5% 1/10W
		R556	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R557	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R558	0RJ8201D677	MCR03EZPJ822 8.2KOHM 5% 1/10
		R559	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R560	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R561	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R563	0RJ3001D677	MCR03EZPJ302 3KOHM 5% 1/10W
		R564	0RJ3001D677	MCR03EZPJ302 3KOHM 5% 1/10W
		R570	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1
		R573	0RJ2702D677	MCR03EZPJ273 27KOHM 5% 1/10W
		R574	0RJ1002D677	MCR03EZPJ103 10KOHM 5% 1/10W
		R6	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20
		R600	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R601	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R602	0RJ1000D477	MCR03EZPF101 100OHM 1% 1/10W
		R603	0RJ1000D477	MCR03EZPF101 100OHM 1% 1/10W
		R605	0RJ1000D477	MCR03EZPF101 100OHM 1% 1/10W
		R606	0RJ1000D477	MCR03EZPF101 100OHM 1% 1/10W
		R607	0RJ1000D477	MCR03EZPF101 100OHM 1% 1/10W
		R608	0RJ1000D477	MCR03EZPF101 100OHM 1% 1/10W
		R609	0RJ4701D677	MCR03EZPJ472 4.7KOHM 5% 1/10
		R610	0RJ4701D677	MCR03EZPJ472 4.7KOHM 5% 1/10
		R611	0RJ2001D677	MCR03EZPJ202 2KOHM 5% 1/10W
		R612	0RJ2001D677	MCR03EZPJ202 2KOHM 5% 1/10W
		R613	0RJ4703D677	MCR03EZPJ474 470KOHM 5% 1/10
		R614	0RJ4703D677	MCR03EZPJ474 470KOHM 5% 1/10
		R615	0RJ1002D677	MCR03EZPJ103 10KOHM 5% 1/10W
		R616	0RJ1000D477	MCR03EZPF101 100OHM 1% 1/10W
		R617	0RJ1000D477	MCR03EZPF101 100OHM 1% 1/10W
		R618	0RJ1000D477	MCR03EZPF101 100OHM 1% 1/10W
		R619	0RJ1000D477	MCR03EZPF101 100OHM 1% 1/10W
		R621	0RJ1000D477	MCR03EZPF101 100OHM 1% 1/10W
		R622	0RJ1000D477	MCR03EZPF101 100OHM 1% 1/10W
		R623	0RJ2001D677	MCR03EZPJ202 2KOHM 5% 1/10W
		R624	0RJ2001D677	MCR03EZPJ202 2KOHM 5% 1/10W
		R625	0RJ2001D677	MCR03EZPJ202 2KOHM 5% 1/10W
		R626	0RJ2001D677	MCR03EZPJ202 2KOHM 5% 1/10W
		R627	0RJ3001D677	MCR03EZPJ302 3KOHM 5% 1/10W
		R628	0RJ3001D677	MCR03EZPJ302 3KOHM 5% 1/10W
		R629	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R631	0RJ1002D677	MCR03EZPJ103 10KOHM 5% 1/10W
		R633	0RJ1002D677	MCR03EZPJ103 10KOHM 5% 1/10W
		R634	0RJ1003D677	MCR03EZPJ104 100KOHM 5% 1/10
		R635	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20
		R636	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20
		R7	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20
		R705	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1
		R706	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1
		R718	0RJ4701D677	MCR03EZPJ472 4.7KOHM 5% 1/10
		R719	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W

DATE: 2006. 12. 06.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R720	0RJ1002D677	MCR03EZPJ103 10KOHM 5% 1/10W
		R722	0RJ2002D677	MCR03EZPJ203. 20KOHM 5% 1/10
		R723	0RJ2002D677	MCR03EZPJ203. 20KOHM 5% 1/10
		R725	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R726	0RJ1000D677	MCR03EZPJ101 100OHM 5% 1/10W
		R8	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20
		R806	0RJ1001D677	MCR03EZPJ102 1KOHM 5% 1/10W
		R807	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1
		R808	0RJ2000D677	MCR03EZPJ201 200OHM 5% 1/10W
		R809	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1
		R811	0RJ2001D677	MCR03EZPJ202 2KOHM 5% 1/10W
		R812	0RJ1002D677	MCR03EZPJ103 10KOHM 5% 1/10W
		R814	0RJ1002D677	MCR03EZPJ103 10KOHM 5% 1/10W
		R815	0RJ1002D677	MCR03EZPJ103 10KOHM 5% 1/10W
		R817	0RJ1002D677	MCR03EZPJ103 10KOHM 5% 1/10W
		R818	0RJ1002D677	MCR03EZPJ103 10KOHM 5% 1/10W
		R821	0RJ1002D677	MCR03EZPJ103 10KOHM 5% 1/10W
		R823	0RJ1002D677	MCR03EZPJ103 10KOHM 5% 1/10W
		R825	0RJ0752D677	MCR03EZPJ750 75OHM 5% 1/10W
		R826	0RJ0752D677	MCR03EZPJ750 75OHM 5% 1/10W
		R827	0RJ1002D677	MCR03EZPJ103 10KOHM 5% 1/10W
		R828	0RJ1201D677	MCR03EZPJ122 1.2KOHM 5% 1/10
		R831	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1
		R832	0RJ0000D677	MCR03EZPJ000 0OHM 5% 1/10W 1
		R833	0RJ6802D677	MCR03EZPJ683 68KOHM 5% 1/10W
		R834	0RJ2202D677	MCR03EZPJ223 22KOHM 5% 1/10W
		R835	0RJ7501D677	MCR03EZPJ752 7.5KOHM 5% 1/10
OTHERS				
		D800	0DL233309AC	SAM2333 RED/Y-GREEN 2.7V 2.8
		SW500	6600VR1004A	SKHMPWE010 1C1P 12VDC 0.05A
		TU400	EBL35311201	TAFT-W003D PAL-B/G+I+D/K SEC
PREAMP&LED BOARD				
		R101	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20
		R102	0RH1101D622	MCR10EZHJ112 1.1KOHM 5% 1/8W
		R103	0RH3301D622	MCR10EZHJ332 3.3KOHM 5% 1/8W
		R104	0RH9101D622	MCR10EZHJ912 9.1KOHM 5% 1/8W
		R105	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20
		R106	0RH1101D622	MCR10EZHJ112 1.1KOHM 5% 1/8W
		R107	0RH3301D622	MCR10EZHJ332 3.3KOHM 5% 1/8W
		R108	0RH9101D622	MCR10EZHJ912 9.1KOHM 5% 1/8W
		SW101	140-313B	KPT-1115AM 1C1P 12VDC 0.05A
		SW102	140-313B	KPT-1115AM 1C1P 12VDC 0.05A
		SW103	140-313B	KPT-1115AM 1C1P 12VDC 0.05A
		SW104	140-313B	KPT-1115AM 1C1P 12VDC 0.05A
		SW105	140-313B	KPT-1115AM 1C1P 12VDC 0.05A
		SW106	140-313B	KPT-1115AM 1C1P 12VDC 0.05A
		SW107	140-313B	KPT-1115AM 1C1P 12VDC 0.05A
		SW108	140-313B	KPT-1115AM 1C1P 12VDC 0.05A
CONTROL BOARD				
		C100	0CH5101K416	C2012C0G1H101JT 100pF 5% 50V
		C101	0CH5101K416	C2012C0G1H101JT 100pF 5% 50V
		D100	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D101	EAH33946001	CDS3C05GTA 5.6V 6.4V 19V 1.9
		D102	EAH33946001	CDS3C05GTA 5.6V 6.4V 19V 1.9
		D103	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A
		D104	EAH33945901	CDS3C30GTH 30V 50V 120V 1.9A

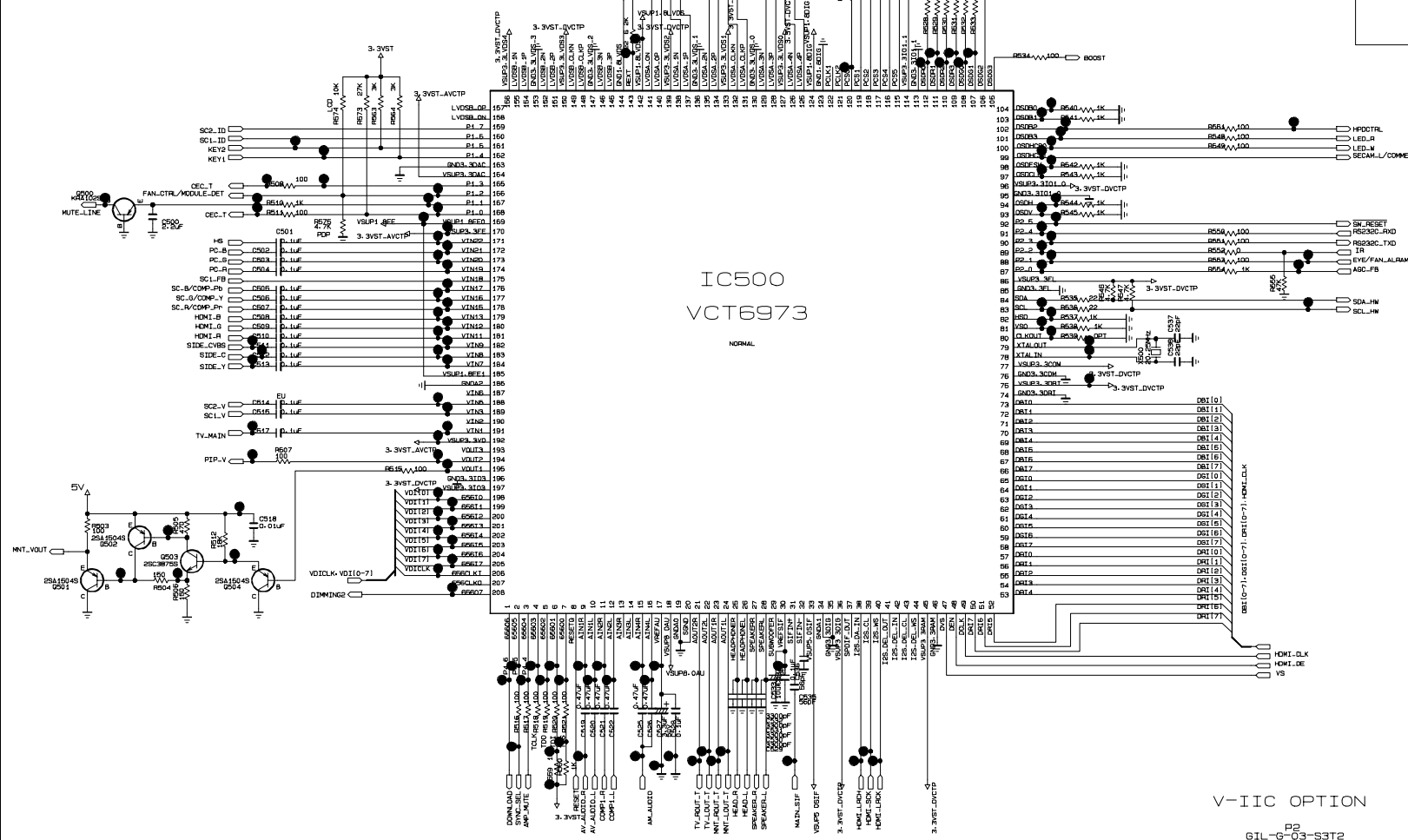
DATE: 2006. 12. 06.				
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R100	0RH0332D622	MCR10EZHJ330 33OHM 5% 1/8W 2
		R101	0RH0752D622	MCR10EZHJ750 75OHM 5% 1/8W 2
		R102	0RH4700D622	MCR10EZHJ471 470OHM 5% 1/8W
		R103	0RH2203D622	MCR10EZHJ224 220KOHM 5% 1/8W
		R104	0RH4700D622	MCR10EZHJ471 470OHM 5% 1/8W
		R105	0RH2203D622	MCR10EZHJ224 220KOHM 5% 1/8W
		R106	0RH0332D622	MCR10EZHJ330 33OHM 5% 1/8W 2
		R107	0RH0752D622	MCR10EZHJ750 75OHM 5% 1/8W 2
		R108	0RH0332D622	MCR10EZHJ330 33OHM 5% 1/8W 2
		R109	0RH0752D622	MCR10EZHJ750 75OHM 5% 1/8W 2
		R110	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20
SIDE A/V BOARD				
		C100	0CH5101K416	C2012C0G1H101JT 100pF 5% 50V
		C101	0CE476VF6DC	VGv476M016S0ANE010 47uF 20%
		C102	0CE476VF6DC	VGv476M016S0ANE010 47uF 20%
		C103	0CE476VF6DC	VGv476M016S0ANE010 47uF 20%
		C104	0CH6330K416	C2012C0G1H330JT 33p 5% 50V C
		D100	0DLBE0138AA	BL-BUBGE301 ROUND 3MM SUPER
		IC100	6712000013A	TSOP4438SO1 4.5TO5.5V 1.5MA
		L100	0LC1032101A	FI-C3216-103KJT 10UH 10% - 5
		Q100	0TRIY80001A	2SC3052 NPN 6V 50V 50V 200MA
		Q101	0TRIY80001A	2SC3052 NPN 6V 50V 50V 200MA
		R100	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20
		R101	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20
		R102	0RH1002D622	MCR10EZHJ103 10KOHM 5% 1/8W
		R103	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20
		R104	0RH1002D622	MCR10EZHJ103 10KOHM 5% 1/8W
		R105	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20
		R106	0RH0000D622	MCR10EZHJ000 0OHM 5% 1/8W 20



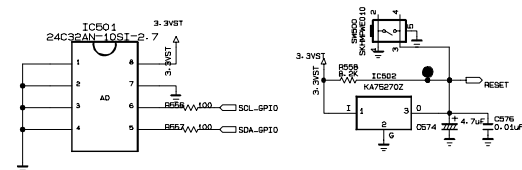
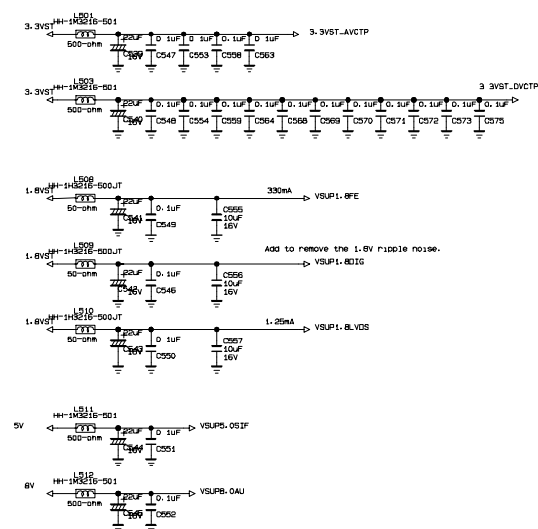
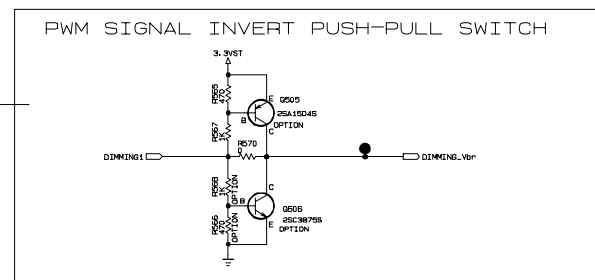


#5. VCTP

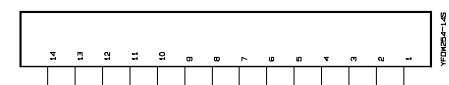
SCALEF



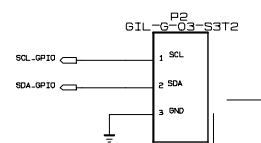
THE  SYMBOL MARK OF THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION. FILRE AND ELECTRICAL SHOCK HAZARDS. WHEN SERVICING IF IS ESSENTIAL THAT ONLY MANUFACTURES SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE  SYMBOL MARK OF THE SCHEMATIC.



JTAG OPTION



V-IIC OPTION





P/NO : MFL36696901

Mar., 2007
Printed in Korea