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COLOR TV

SERVICE MANUAL

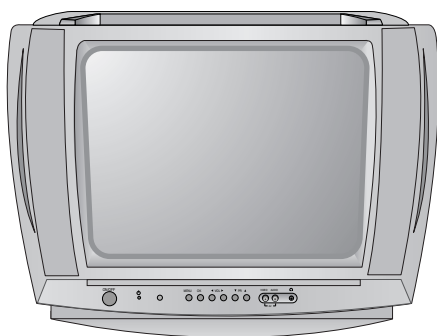
CHASSIS : MC-059B

MODEL: 14CA8RB/RG

14CA8RB/RG-TH

CAUTION

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



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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 X-RADIATION, 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.

Due to high vacuum and large surface area of picture tube, extreme care should be used in **handling the Picture Tube**. Do not lift the Picture tube by its Neck.

X-RAY Radiation

Warning:

The source of X-RAY RADIATION in this TV receiver is the High Voltage Section and the Picture Tube. For continued X-RAY RADIATION protection, the replacement tube must be the same type tube as specified in the Replacement Parts List.

To determine the presence of high voltage, use an accurate high impedance HV meter.

Adjust brightness, color, contrast controls to minimum.

Measure the high voltage.

The meter reading should indicate

23.5 $\pm$ 1.5KV: 14-19 inch, 26 $\pm$ 1.5KV: 19-21 inch,

29.0 $\pm$ 1.5KV: 25-29 inch, 30.0 $\pm$ 1.5KV: 32 inch

If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.

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 Ω and 5.2M Ω .

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.

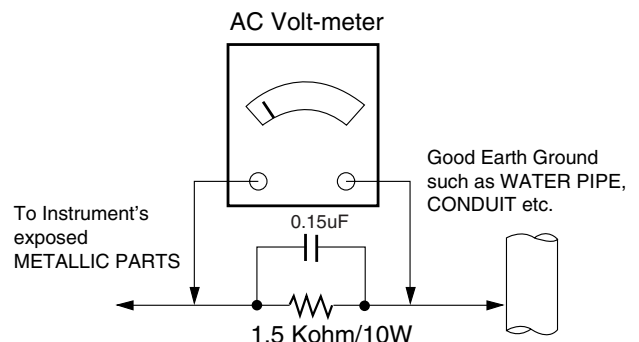
Connect 1.5K/10watt resistor in parallel with a 0.15uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

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 is 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

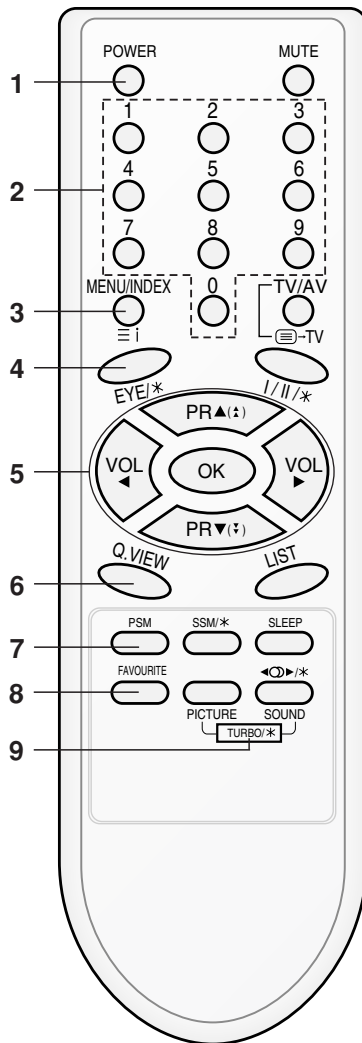


DESCRIPTION OF CONTROLS

All the functions can be controlled with the remote control handset. Some functions can also be adjusted with the buttons on the front panel of the set.

Remote control handset

Before you use the remote control handset, please install the batteries. See the next page.



- 1. POWER**
switches the set on from standby or off to standby.
- 2. NUMBER BUTTONS**
switches the set on from standby or directly select a number.
- 3. MENU (or INDEX)**
selects a menu.
selects an index page in the teletext mode (only TELETEXT models). (option)
- 4. EYE/* (option)**
switches the eye function on or off.
- 5. ▲ / ▼ (Programme Up/Down)**
selects a programme or a menu item.
switches the set on from standby.
scans programmes automatically.
◀ / ▶ (Volume Up/Down)
adjusts the volume.
adjusts menu settings.
OK
accepts your selection or displays the current mode.
- 6. Q.VIEW**
returns to the previously viewed programme.
- 7. PSM (Picture Status Memory)**
recalls your preferred picture setting.
- 8. FAVOURITE**
selects a favorite programme.
- 9. TURBO PICTURE / SOUND BUTTON (option)**
selects Turbo picture and sound.

10. MUTE

switches the sound on or off.

11. TV/AV

selects TV or AV mode.

switches the set on from standby.

12. I/II/* (option)

selects the language during dual language broadcast. (option)

selects the sound output.

13. LIST

displays the programme table.

14. SLEEP

sets the sleep timer.

15. SSM/* (Sound Status Memory) (option)

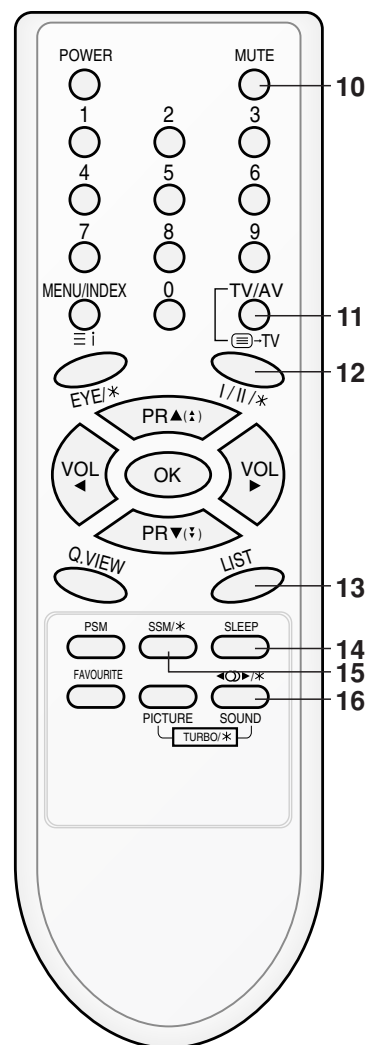
recalls your preferred sound setting.

16. SURROUND (◀▶/*) (option)

selects surround sound.

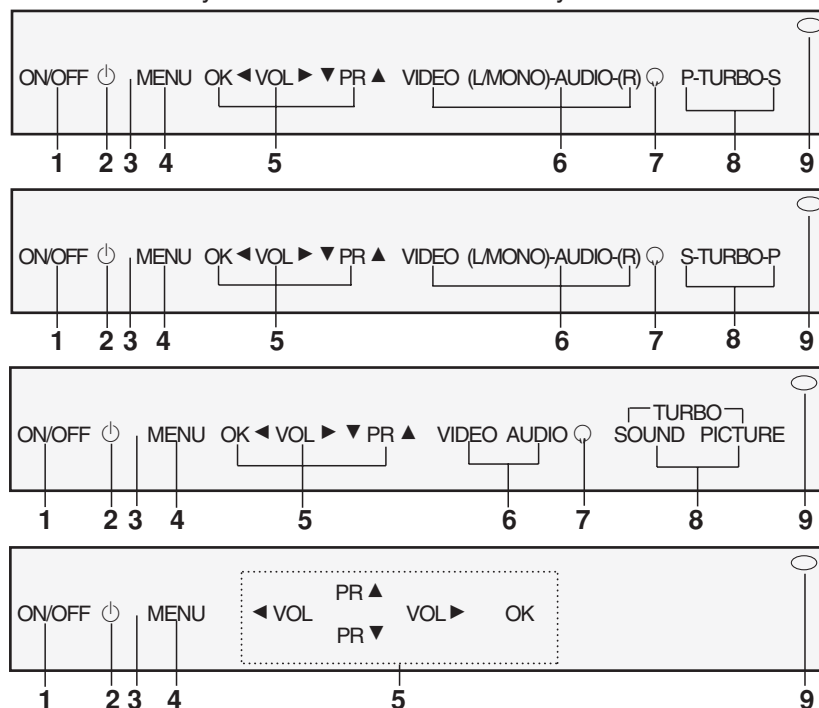
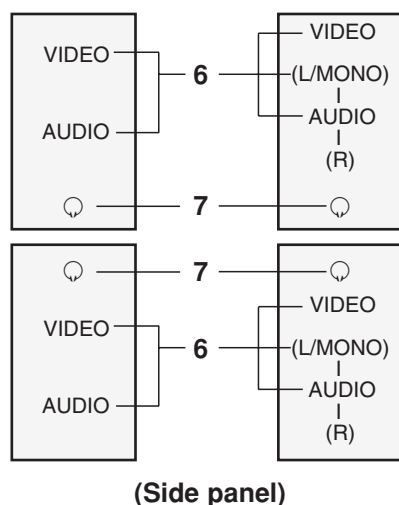
*** : No function**

COLOURED BUTTONS : These buttons are used for teletext (only TELETEXT models) or programme edit.



Front panel

Shown is a simplified representation of front or side panel.
Here shown may be somewhat different from your set.



1. **MAIN POWER (ON/OFF)**
switches the set on or off.
2. **POWER/STANDBY INDICATOR**
illuminates brightly when the set is in standby mode.
dims when the set is switched on.
3. **REMOTE CONTROL SENSOR**
Note : Only use the supplied remote control handset. (When you use others, they'll be not able to function.)
4. **MENU**
selects a menu.
5. **OK**
accepts your selection or displays the current mode.
◀ / ▶ (Volume Up/Down)
adjusts the volume.
adjusts menu settings.
▲ / ▼ (Programme Up/Down)
selects a programme or a menu item.
switches the set on from standby.
6. **AUDIO(or AUDIO-L/R)/VIDEO IN SOCKETS (AV2) (option)**
Connect the audio/video out sockets of external equipment to these sockets.
7. **HEADPHONE SOCKET (option)**
Connect the headphone plug to this socket.
8. **TURBO SOUND/PICTURE (option)**
switches Turbo sound or Turbo picture on or off.
9. **EYE (option)**
adjusts picture according to the surrounding conditions.

*Note : Shown is a simplified representation of front or side panel.
Here shown may be somewhat different from your set.*

SPECIFICATIONS

Note : Specification and others are subject to change without notice for improvement.

■ Scope

This specification can be applied to all the television related to MC-059B Chassis.

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.

■ Requirement for Test

Each part is tested as below without special appointment.

- 1) Temperature : $25 \pm 5^{\circ}\text{C}$ ($77 \pm 9^{\circ}\text{F}$), CST : 40 ± 5
(CST must be tested $40 \pm 5^{\circ}\text{C}$. Humidity : 50%)
- 2) Relative Humidity : $65 \pm 10\%$
- 3) Power Voltage : Standard input Voltage (110-240V~, 50/60Hz)
* Standard Voltage of each products is marked by models.

■ Test Method

- 1) Performance : LGE TV test method followed.
- 2) Demanded other specification
 - CCC
 - Safety : IEC60065

■ General specification

No.	Item	Specification
1	Receiving System	PAL BG, DK, I / NTSC M (AV 3.58/ 4.43)
2	Available Channel	VHF : E2 ~ E12 UHF : E21 ~ E69 CATV : S1 ~ S20 HYPER : S21 ~ S41
3	Input Voltage	100 - 240V~, 50/60Hz
4	Market	China, Indonesia, Thai, Vietnam, CIS
5	Screen Size	14 ~ 21inch (FLAT / Conventional)
6	Aspect Ratio	4:3
7	Display Method	CRT
8	Tuning System	FVS
9	Operating Environment	Temp : 0 ~ 40 deg Humidity : ~ 85 %
10	Storage Environment	Temp : -20 ~ 60 deg Humidity : ~ 90 %

■ Features and Function

No.	Item		Specification		Remark
1	Feature	AV Input	2	AV 1, 2	Rear1, Front1(CVBS,L,R)
		AV Output	1	Monitor out	Rear
		Earphone	1	Front	
2	Key	Local Key	Power, Vol(◀, ▶), PR(▼, ▲), MENU, OK		7EA/ Front
			Turbo-Picture, Sound		Option
		Remocon	LG Code (NEC)		
3	Channel	Auto prog.	System/ Storage/ Normal/ Turbo		
		Manual	Storage/ System/ Channel/ Fine/ Search/ Name		
		Prog. edit	Copy/ Move/ Delete/ Skip		
		Favorite	8 Channel		
4	Picture	PSM	Dynamic/ Standard/ Mild/ Game/ User		
		User Control	Contrast/ Brightness/ Color/ Sharpness Tint (NTSC-M Only)		
5	Sound	SSM	Flat/ Music/ Movie/ Speech/ User		
		Treble/ Bass	0 ~ 100		
		Equalizer	100/ 400/ 1K/ 4K/ 10K		
6	Timer	Clock	-- : --		
		Off time	-- : -- Off(On)		
		On time	-- : -- Pr 1 VOL 30 Off(On)		
		Auto off	On/ Off		
7	Special	Language	English/ Russia		CIS
			English/ Indonesia/ Thai/ Vietnam		East-Asia
		Input	TV/ AV1/ AV2		
8	Etc.	Child lock	On/ Off		
		Sleep			

ADJUSTMENT

1. Scope of Application

These instructions are applied to MC-059B Chassis.

2. Notes

- 1) Because this is a cold chassis, it is not necessary to use an isolation transformer. However, operating it using a transformer between the power supply line and chassis input to prevent electric shock and to protect the 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 (100-240 ~ $\pm 10\%$, 50/60Hz) in adjusting
- 5) The receiver must be operated for about 15 minutes prior to the adjustment. But adjusting on the board can be done in jig state right away.
- 6) Signal: The standard color signal is approved in $65 \pm 1\text{dBuV}$.

3. AGC Voltage Adjustment

3-1. Necessary Instrument

Digital Multi meter : 1 set

- Max Input Current : Over 1A / Max Input Voltage : 500Vdc
- Measurement Range : 10mV-100mVdc / Accuracy : 0.03%

3-2. Adjustment Preparation

- 1) Input LG standard signal into 75Ω antenna terminal (or PAL-B/G 05CH)
- 2) Connect the digital multi-meter to terminal(with Hole/J105) with AGC Check.

3-3. Adjustment

- 1) Select the VP 0(RF AGC) adjustment mode by pressing IN-START key on the SVC remote control.
- 2) After select the RF AGC using CH +/- key, adjust the multi-meter voltage to be as shown below.
 - 6700MF0014A(LG INNOTEK): $2.3 \pm 0.05\text{V}$, 65dBu, TAEW-G013D
 - 6700PF0006B(SANYO): $2.3 \pm 0.05\text{V}$, 65dBu, 115-B-A86EL
- 3) CAUTION
 - : Since the signal strength can be easily changed by the condition of signal cable, you need to check the signal strength frequently in order to prevent error.

4. Screen Voltage Adjustment

4-1. Adjustment of Screen Manually

(Using SVC Remote Control)

- 1) Receive the PAL(SECAM) signal into RF mode regardless of channel.
- 2) If you press the "ADJ" key on LINE SVC remote control, changes to screen adjustment mode.
- 3) Adjust the Screen Vol. of FBT to appear Horizontal Line and adjust the Screen Vol. of FBT at disappear point Horizontal Line.(Press the Enter(■) key to exit SVC mode)

5. Purity and Convergence Adjustment

5-1. Purity Adjustment

(1) Adjustment Preparation

- 1) Receive Red Raster Pattern for purity adjustment.
- 2) Demagnetize the CPT and Cabinet with a degaussing coil.

(2) Horizontal Line Adjustment

- 1) Pre-adjust the static convergence (STC) with the 4 and 6pole magnet.
- 2) Check if the beam land at mask hole by setting two 2-pole magnets in opposite direction respectively.
- 3) If not, adjust 2-pole magnet so the beam as to land at mask hole accurately.

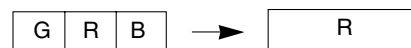
(3) Purity Adjustment

- 1) Adhere DY closely to CPT.
- 2) Receive Red Pattern and adjust the 2-Pole magnet so Red color Bar as to locate center and make the portion of Green color and Blue color same.<Fig. 1>



<Fig. 1>

- 3) Make the full screen Red by pulling DY back slowly. (When adhering DY, use the electric driver of which turning force is lower than 10Kg/Cm) <Fig. 2>



<Fig. 2>

5-2. Convergency Adjustment

(1) Necessary Instrument

- 1) Degaussing Coil
- 2) Convergency fixing instrument

(2) Preliminary steps

- 1) Heat run over 30 minutes before adjustment.
- 2) Demagnetize the CPT and Cabinet by using degaussing coil.
- 3) Receive Cross Hatch Pattern.(EU09CH)
- 4) Adjust Contrast and Brightness for easy observation.

(3) Static Convergence (STC) Adjustment

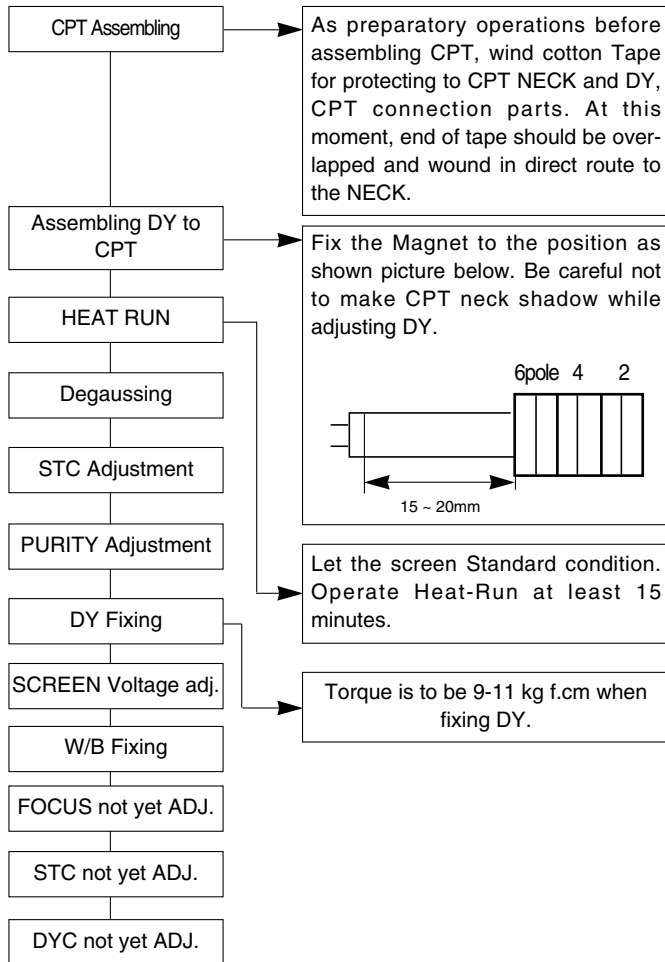
- 1) Receive Cross Hatch Pattern(EU09CH)
- 2) Adjust the focus first seeing to it that the WHITE color picture quality is sharp enough.
- 3) Open two 4-Pole magnets until vertical Red and Blue lines are unified.
- 4) Rotate the 4-Pole magnets keeping the angle between two 4-Pole magnets until horizontal Red and Blue lines are unified.
- 5) Open two 6-Pole magnets until vertical Red and Green lines are unified.
- 6) Rotate the 6-Pole magnets keeping the angle between two 4-Pole magnets until horizontal Red and Blue lines are unified.

(4) Dynamic Convergence (DYC) Adjustment

- 1) Vertical Line Adjustment : Adjust by moving DY right and left
- 2) Horizontal Line Adjustment : Adjust by moving DY up and down.

5-3. block diagram

Adjustment should be operated when using the CPT(without ITC from CPT manufacturing place)



6. White Balance Adjustment

6-1. Necessary Instrument

- 1) Automatic White Balance Meter(Can generate Low/High light Pattern)
- 2) White Balance meter(CRT Color Analyzer, CA-100) :1set
- 3) Factory Remote Control

6-2. Adjustment Preparation

: Prior to this adjustment, the Screen Voltage adjustment should be finished.

6-3. Automatic adjustment

- 1) Adjust the using Automatic White Balance Meter.
- 2) Adjust in CPU OFF Mode by pressing IN-START, MUTE key on the SVC Remote control. After finishing adjustment, press the TV/AV key to exit.

(*In case there is excess RED color, adjust it using the VOLUME - key of the remote control until the RED color disappear.)

Color temperature : 12000°K

X Coordinate : 270±8

Y Coordinate : 283±8

6-4. Adjustment(Manual)

- 1) Adjust using white Balance meter and Factory Remote controller.
- 2) Enter into adjustment mode by pressing the INSTART key
- 3) Use the CH▲, CH▼ Key to choose adjustment item.
- 4) Use the VOL◀, VOL▶ Key to change item data.
- 5) Adjustment Procedure
 - a. Make the picture luminance 45Ft-L by changing the "CONTRAST" and "BRIGHTNESS".
 - b. Adjust X data of High light with R-DRIVE(VP7) and Y data with B-DRIVE(VP9) to have the color temperature as shown below.
 - c. Make the picture luminance 4.5Ft-L by changing the "CONTRAST" and "BRIGHTNESS".
 - d. Adjust X data of low light with R-BIAS(VP4) and Y data with B-BIAS(VP6) to have the color temperature as shown below.
 - e. Repeat steps a~d until both low and high light have same readings as shown below.
 - f. Check the adjusted color coordinates with white balance meter.

Market	Color Temperature	X-AXIS	Y-AXIS
PAL model	14,000°K	266±8	270±8

7. Focus Voltage Adjustment

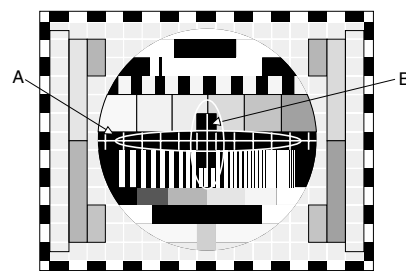
This adjustment must be done after operating the TV set receiver sufficiently.

7-1. Adjustment Preparation

- 1) Receive Digital pattern and Set the PSM condition to "DYNAMIC".

7-2. Adjustment

Adjust the upper Focus volume of FBT for the best focus of horizontal line A, vertical B.



<Fig. 3>

8. SUB-BRIGHTNESS Adjustment

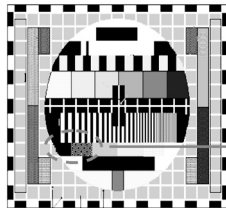
Prior to this adjustment, the White balance adjustment should be finished.

8-1. Adjustment Preparation

- 1) Receive the PAL B/G 5CH signal into RF mode regardless of channel.
- 2) Set the PSM condition to "DYNAMIC".

8-2. Adjustment

- 1) Select SUB-BRIGHT Adjustment Mode by pressing ADJ. key on the SVC Remote control
- 2) At the point of becoming g equal in left 2 boundarys are located in lower Gray Scale of PAL B/G 05CH signal, adjustment is completed by pressing the VOL◀, VOL▶ key on the remote control.



<Fig. 4>

9. Deflection setting data adjustment

This adjustment must be done by automatic adjustment Equipment.

In case of manual adjustment, Adjustment will be done as follows.

9-1. Adjustment Preparation

- 1) Set the Deflection data with the SVC Remote control.
- 2) Select the Deflection adjustment mode by pressing IN-START key.
- 3) Use the CH▲, CH▼ key to select adjustment item.
- 4) Use the VOL◀, VOL▶ key for data changing

9-2. Adjustment

- 1) Horizontal Position Adjustment
Select VP1(H-POS) and adjust until left and right screen are symmetrically equal.
- 2) Vertical Position Adjustment
Select VP2(V-POS) and adjust until the mechanical center point and the center of screen unite
- 3) Vertical Size Adjustment
Select VP3(V-SIZE) and adjust until the smaller inscribed circle of Digital Pattern coincides with the outer frame of screen as figure below.

10. IIC BUS Adjustment Data Table

: Refer to <TABLE 1>

11. Instrument setting data

(automatic adjustment)

<TABLE 2>

	VIDEO IC	EEPROM	Speed	Delay
SLave ADD	BA	A2	1	30

VCD	TV				PC			
	B(R)AMP	B(R)CUT	G(B)AMP	G(B)CUT	B AMP	B CUT	G AMP	G CUT
Sub Add	C	9	E	B				
Start Bit	6	7	6	7				
Stop Bit	0	0	0	0				
Masking	0	0	0	0				
Direction	1	1	1	1				
EEPROM Sub Add	74	71	76	73				
SpeedPlus Step/Data	3	3	3	3				

12. EEPROM OPTION TABLE

<TABLE 3>

OPTION 1	INITIAL	REMARK
DVD	0	DVD function (1:Yes, 0:No)
TURBO ME	0	T-P,T-S function in MENU (Display or not)
V-CURVE	0	VOLUME CURVE (1:HIGH, 0:LOW)
V-MUTE	0	VIDEO MUTE
EYE	0	EYE function (1:Yes, 0:No)
FLAT	1	CPT SECTION
SND MUTE	1	SOUND MUTE at no signal (yes or not)
GAME	0	GAME function (1:Yes, 0:No)
OPTION2		REMARK
TURBO	0	TURBO P/S function (1:Yes, 0:No)
ARC	0	ARC function (1:Yes, 0:No)
200PR	0	Number of CH. MEMORY : 200
BLUEBACK	1	BLUEBACK display (1:Yes, 0:No)
TURBO AT	1	TURBO SEARCH function (1:Yes, 0:No)
HOTEL	0	HOTEL function (1:Yes, 0:No)
SHARP	0	SHARPNESS DATA (1:+10, 0:NORMAL)
DVDN	1	DVD SOUND -> AV (1:possibility, 0:impossibility)
OPTION3		REMARK
FM TRANS	0	FM TRANS function (1:Yes, 0:No)
FM HIGH	0	FM TRANS FREQUENCY (1:HIGH, 0:LOW)
NTSC	1	NTSC function (1:Yes, 0:No)
AV PSEU	1	AV ST MODE (1:PSEUDO, 0:MATRIX)
SYNC KI	1	SYNC KILL function (1:Yes, 0:No)
A2 SW	0	MONO DUAL function (1:5.74MHz possible, 0:NORMAL)
LNA	0	LNA TUNER (1:LNA, 0:NORMAL)
SWOOFER	0	WOOFER function (1:Yes, 0:No)
OPTION 4		REMARK
SYSTEM	4	0:CHINA / 1:INDONESIA / 2:THAI / 3:VIETNAM / 4:MULTI
SND MODE	1	0:MONO / 1:AV ST / 2:REAL ST
AV	2	0:NO AV / 1:AV1 / 2:AV1,2 / 3:AV1,2,3
LOC KEY	1	0:4KEY / 1:6KEY / 2:8KEY
COLOR T	1	COLOR TABLE
PLL DIV	31	PLL DATA (NTSC Tunning Level)
MTS LEV	22	STEREO LEVEL
OPTION 5		REMARK
FM PRE	6	FM PRESCALER
NICAM PRE	13	NICAM PRESCALER
SCART PRE	0	SCART PRESCALER
A2 FM TH	5	A2 PRESCALER
FIRST TH	15	MONO THRESHOLD
ZWT TH	2	A2 THRESHOLD

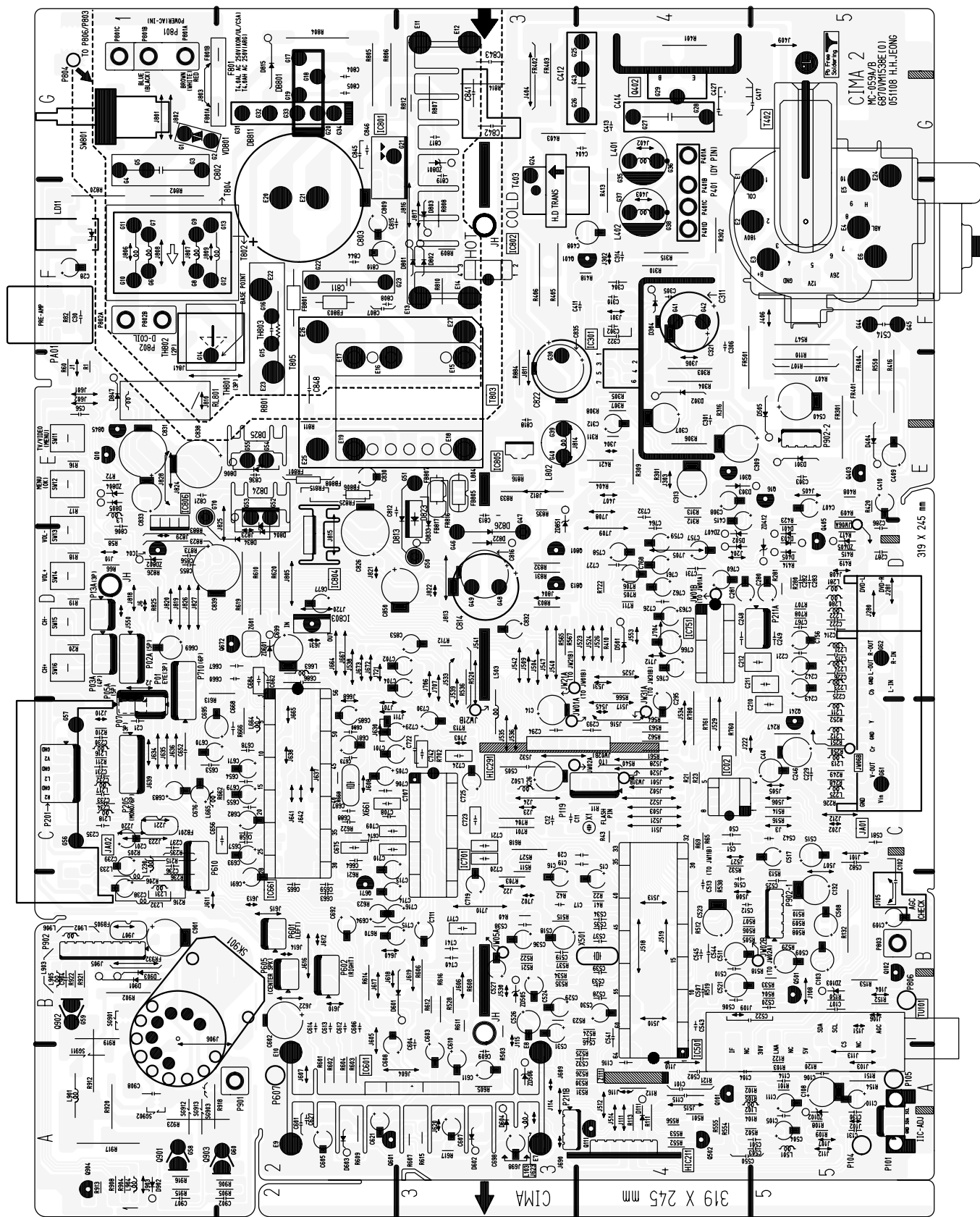
<TABLE 1>

Menu	OSD	Adjustment	Range	Initial setting	Remark
VP 0	RF AGC	RF AGC Delay	0 ~ 63	40	Necessary
VP 1	H POS	H PHASE	0 ~ 31	12	Necessary
VP 2	V POS	V Shift (V POSI)	0 ~ 15	5	Necessary
VP 3	V SIZE	Vertical Size	0 ~ 127	105	Necessary
VP 4	R BIAS	Red Bias	0 ~ 255	127	Necessary
VP 5	G BIAS	Green Bias	0 ~ 255	127	Unnecessary
VP 6	B BIAS	Blue Bias	0 ~ 255	127	Necessary
VP 7	R DRIVE	Red Drive	0 ~ 127	64	Necessary
VP 8	G DRIVE	Green Drive	0 ~ 15	8	Unnecessary
VP 9	B DRIVE	Blue Drive	0 ~ 127	64	Necessary
VP 10	V LIN	V LIN (Vertical Linearity)	0 ~ 31	23	Unnecessary
VP 11	V SCORR	Vertical S-Correction	0 ~ 31	10	Unnecessary
VP 12	V COMP	V.COMP	0 ~ 7	7	Unnecessary
VP 13	H BLK L	H BLK L	0 ~ 7	0	Unnecessary
VP 14	H BLK R	H BLK R	0 ~ 7	3	Unnecessary
VP 15	AFC GAIN	AFC Gain & gate	0 / 1	0	Unnecessary
VP 16	H FREQ	H Freq.	0 ~ 63	15	Unnecessary
VP 17	CD MODE	Count Down Mode	0 ~ 7	0	Unnecessary
VP 18	VBLK SW	VBLK SW	0 / 1	0	Unnecessary
VP 19	FBP SW	FBP Blanking OR SW	0 / 1	1	Unnecessary
VP 20	YC FILTER	Filter System	0 ~ 15	2	Unnecessary
VP 21	Y APF	Y APF Select	0 / 1	0	Unnecessary
VP 22	C SYSTEM	Color System	0 ~ 7	0	Unnecessary
VP 23	C VCO	C/VCO Adjustment	0 ~ 7	4	Unnecessary
VP 24	PAL APC	PAL APC SW	0 / 1	0	Unnecessary
VP 25	S TRAP SW	S.TRAP SW	0 / 1	1	Unnecessary
VP 26	VIF SYS	VIF System SW	0 ~ 3	1	Unnecessary
VP 27	VCO FREQ	VCO Freq	0 ~255	112	Unnecessary
VP 28	SIF SYS	SIF System SW	0 ~ 3	1	Unnecessary
VP 29	SUB BIAS	Sub Bias (sub-bright)	0 ~ 127	45	Unnecessary
VP 30	BRIGHT	Brightness Control	0 ~ 127	64	Unnecessary
VP 31	ABL	Bright ABL Defeat	0 / 1	1	Unnecessary
VP 32	BRI STOP	Bright Mid Stop Defeat	0 / 1	0	Unnecessary
VP 33	ABL TH	Bright ABL Threshold	0 ~ 7	4	Unnecessary
VP 34	RGB TEMP	RGB Temp SW	0 / 1	0	Unnecessary
VP 35	COR GAIN	Coring Gain Select	0 ~ 3	3	Unnecessary
VP 36	PRE SHOOT	Pre-shoot Adjustment	0 ~ 3	0	Unnecessary
VP 37	OVER SHOOT	Over-shoot Adjustment	0 ~ 3	3	Unnecessary
VP 38	Y GAMMA	Y Gamma start point Select	0 ~ 3	0	Unnecessary
VP 39	DC REST	DC Restoration Select	0 ~ 3	1	Unnecessary
VP 40	B-ST START	Black Stretch Start Point Select	0 ~ 3	1	Unnecessary
VP 41	B-ST GAIN	Black Stretch Gain Select	0 ~ 3	2	Unnecessary
VP 42	C BYPASS	C Bypass	0 / 1	1	Unnecessary
VP 43	C KILL ON	C Kill On	0 / 1	0	Unnecessary
VP 44	C KILL OFF	C Kill Off	0 / 1	0	Unnecessary
VP 45	C KILL OPER	Color Killer Operational Point	0 ~ 7	7	Unnecessary
VP 46	RB BAL	R/B Gain Balance	0 ~ 15	5	Unnecessary
VP 47	RB ANG	R/B Angle	0 ~ 15	5	Unnecessary
VP 48	B-Y LEVEL	B-Y DC Level	0 ~ 31	28	Unnecessary
VP 49	R-Y LEVEL	R-Y DC Level	0 ~ 31	27	Unnecessary
VP 50	V LEVEL	Video Level	0 ~ 7	7	Unnecessary
VP 51	OVER MO SW	OVER.MOD.SW	0 / 1	0	Unnecessary
VP52	OVER MO LE	OVER.MOD.LEVEL	0 ~ 15	8	Unnecessary
VP53	TINT TH	Tint Through	0 / 1	0	Unnecessary

Menu	OSD	Adjustment	Range	Initial setting	Remark
VP 54	Y TH	Y TH	0 ~ 3	1	Unnecessary
VP 55	Y GAIN	Y Gain	0 ~ 3	0	Unnecessary
VP 56	R WIDTH	R width	0 ~ 3	0	Unnecessary
VP 57	R OFFSET	R offset	0 ~ 3	0	Unnecessary
VP 58	B WIDTH	B width	0 ~ 3	0	Unnecessary
VP 59	B OFFSET	B offset	0 ~ 3	0	Unnecessary
VP 60	T DISABLE	T Disable	0 / 1	1	Unnecessary
VP 61	V TRANCE	V TRANCE	0 / 1	0	Unnecessary
VP 62	A MUTE	Audio Mute	0 / 1	0	Unnecessary
VP 63	V MUTE	Video Mute	0 / 1	0	Unnecessary
VP 64	SYNC KILL	Sync Kill	0 / 1	0	Unnecessary
VP 65	V KILL	Vertical Kil	0 / 1	0	Unnecessary
VP 66	FSC SW	SVO or fsc Output	0 / 1	0	Unnecessary
VP 67	GRAY	Gray Mode	0 / 1	0	Unnecessary
VP 68	CROSS BW	Cross B/W	0 ~ 3	0	Unnecessary
VP 69	VM Dela	VM Delay Adjust	0 ~ 3	0	Unnecessary
VP 70	RGB BLK	Blank Defeat	0 / 1	0	Unnecessary
VP 71	C EXT	C Ext	0 / 1	0	Unnecessary
VP 72	CRCB IN	CbCr IN	0 / 1	0	Unnecessary
VP 73	AUDIO SW	Audio SW	0 / 1	0	Unnecessary
VP 74	VOL FIL	VOL. FIL	0 / 1	0	Unnecessary
VP 75	FM MUTE	FM Mute	0 / 1	0	Unnecessary
VP 76	IF AGC	IF AGC Defeat	0 / 1	0	Unnecessary
VP 77	A-OUT SW	A.MONI.SW	0 / 1	1	Unnecessary
VP 78	DE-EMPH	De-emphasis TC	0 / 1	0	Unnecessary
VP 79	FM GAIN	FM Gain	0 / 1	1	Unnecessary
VP 80	VOLUME	VOLUME	0 ~ 127	126	Unnecessary
VP 81	VDC	Vertical OUT DC Level	0 ~ 63	32	Unnecessary
VP 82	VSEPUP	V-sync Separation Up	0 / 1	0	Unnecessary
VP 83	VRES TM	Vertical Reset Timing	0 / 1	0	Unnecessary
VP 84	HL Ldet	Vertical sync system (H lock)	0 / 1	1	Unnecessary
VP 85	ERGB Cont	External RGB Contrast	0 ~ 15	8	Unnecessary
VP 86	S TRAP	S Trap Test	0 ~ 7	4	Unnecessary
VP 87	C TRAP	C. Trap Test	0 / 1	4	Unnecessary
VP 88	Dig OSD	Digital OSD sw	0 / 1	0	Unnecessary
89	VM AUD SW	VM output or Ext Audio input	0 / 1	0	Unnecessary
90	VIN RGB SW	Video input or Ext RB input	0 / 1	1	Unnecessary
91	FLESH	Auto-Flesh	0 / 1	0	Unnecessary
92	WPL Ope	WPL operating Point	0 ~ 3	0	Unnecessary
93	VM Gain	VM Gain	0 ~ 7	0	Unnecessary
94	Sync SS	Sensitivity of sync sepalation	0 ~ 7	3	Unnecessary
95	GY Amp	G-Y Amplitude	0 ~ 15	4	Unnecessary
96	HTno C	Color on/off on Half tone Mode	0 / 1	0	Unnecessary
97	Over MT	Overmodulation circuit Type	0 / 1	0	Unnecessary
98	Apc Of	APC Offset current	0 ~ 7	4	Unnecessary
99	VL Offs	IF video level offset	0 ~ 3	3	Unnecessary
100	A2 SW	5.74MHz FM Det	0 / 1	0	Unnecessary
101	VCO Ad	IF VCO freerun frequency	0 ~ 15	8	Unnecessary
102	EQU Ad	Equalizer	0 ~ 15	8	Unnecessary
103	Bel Ad	Bell filter	0 ~ 15	3	Unnecessary
104	EQU on	Equalizer circuit	0 / 1	0	Unnecessary
105	Ba SW	Bell filter adjust	0 / 1	1	Unnecessary
106	SECKOff	SECAM Killer circuit disable	0 / 1	0	Unnecessary
107	SECKON	SECAM Killer circuit enable	0 / 1	0	Unnecessary
108	OSD CONT	OSD Contrast	0 ~ 7	4	Unnecessary
109	OSD POS	OSD Position	-	38	Unnecessary

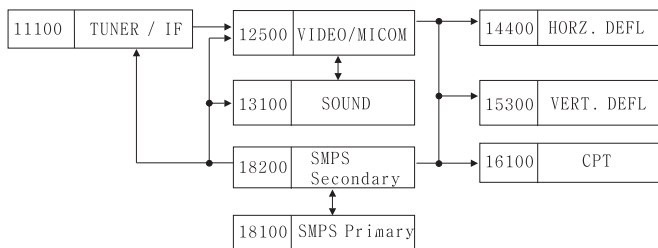
PRINTED CIRCUIT BOARD

MAIN

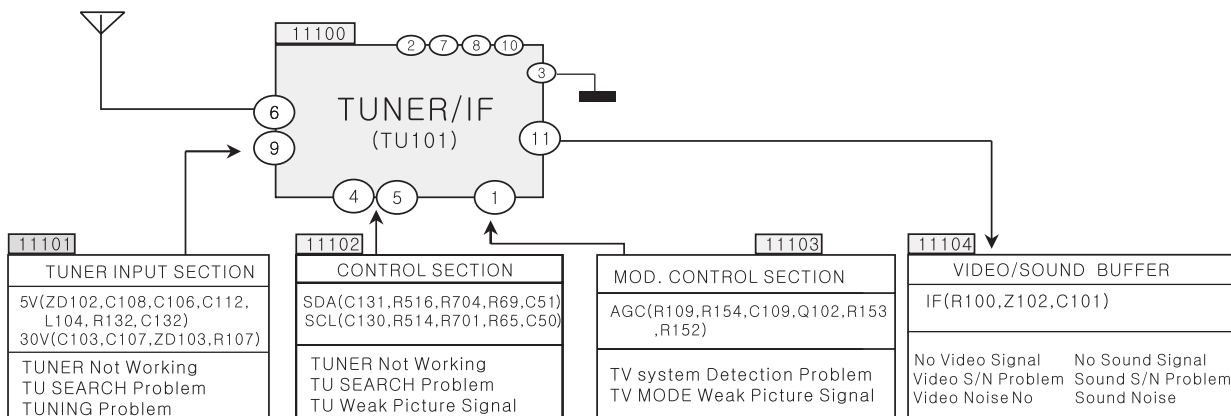


TROUBLE SHOOTING

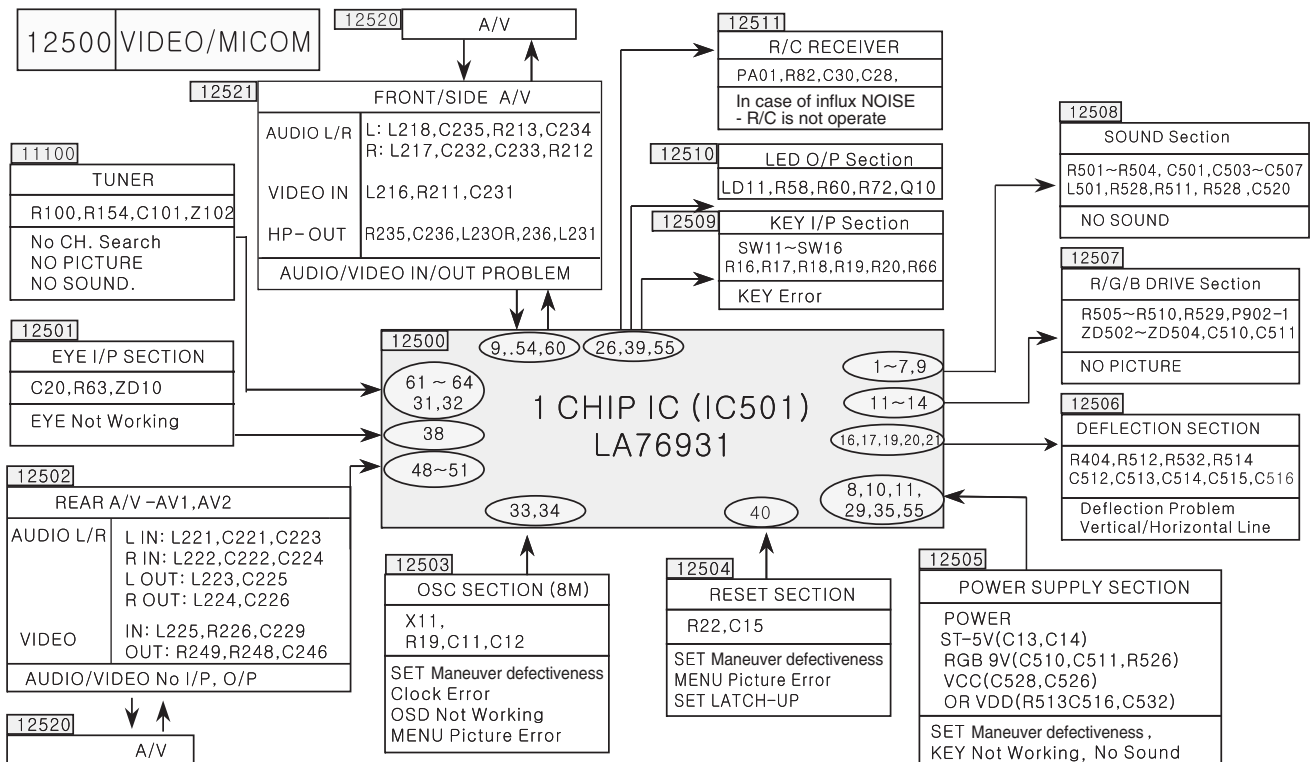
1. TV FUNCTIONAL



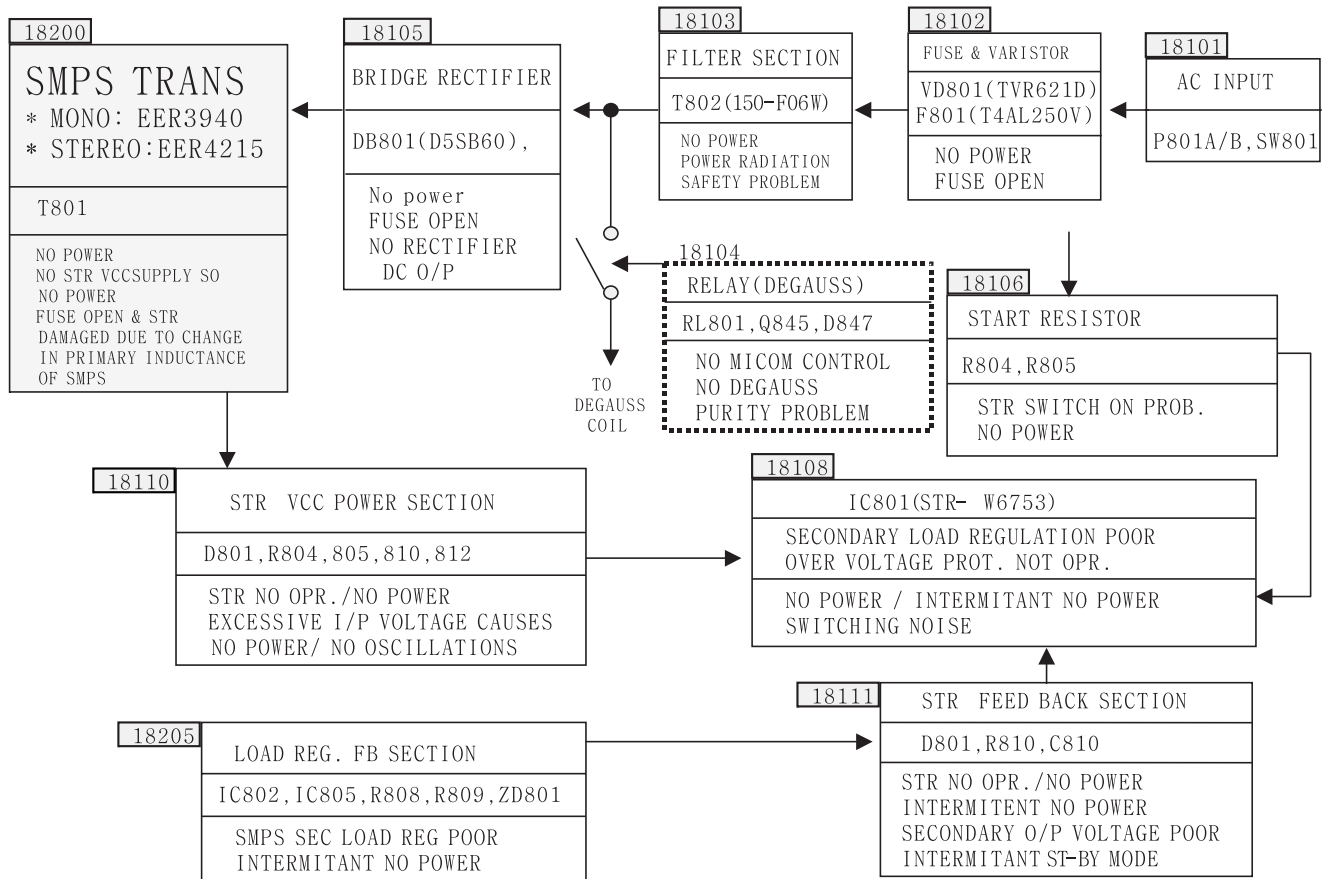
2. TU / IF SECTION



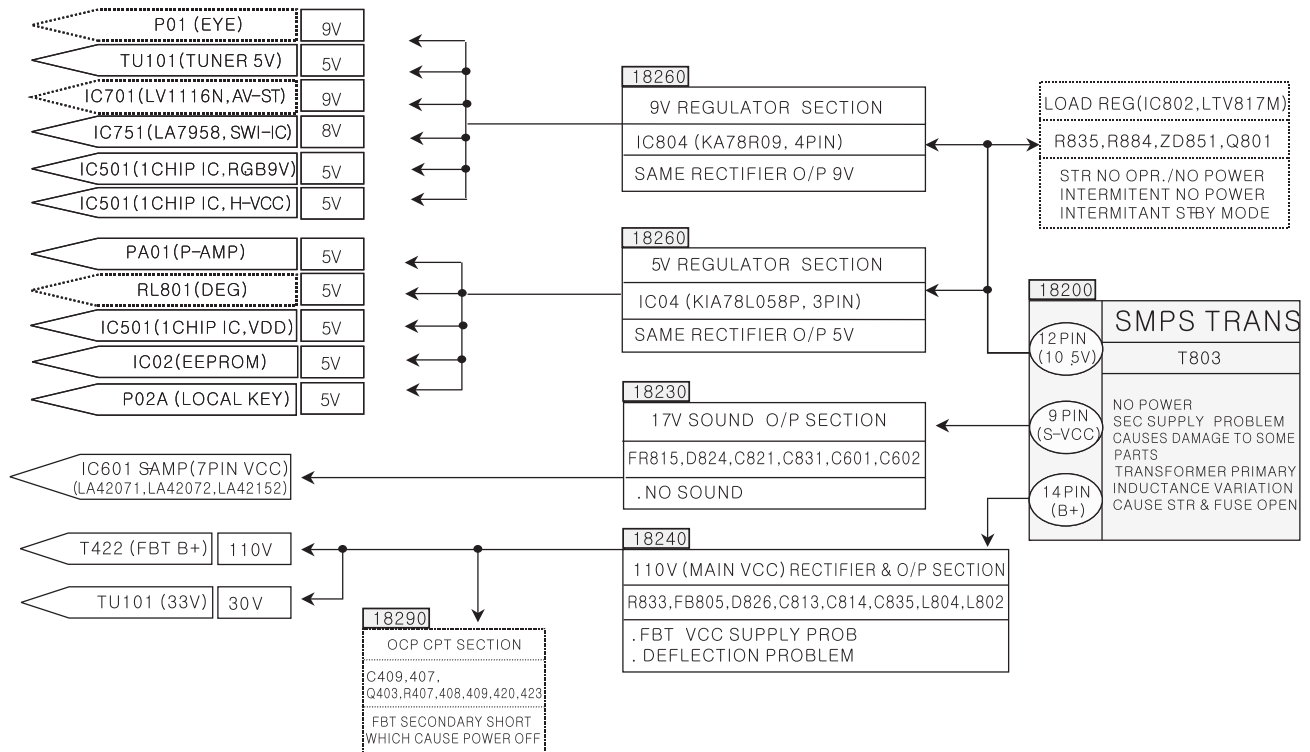
3. VIDEO PROCESSING



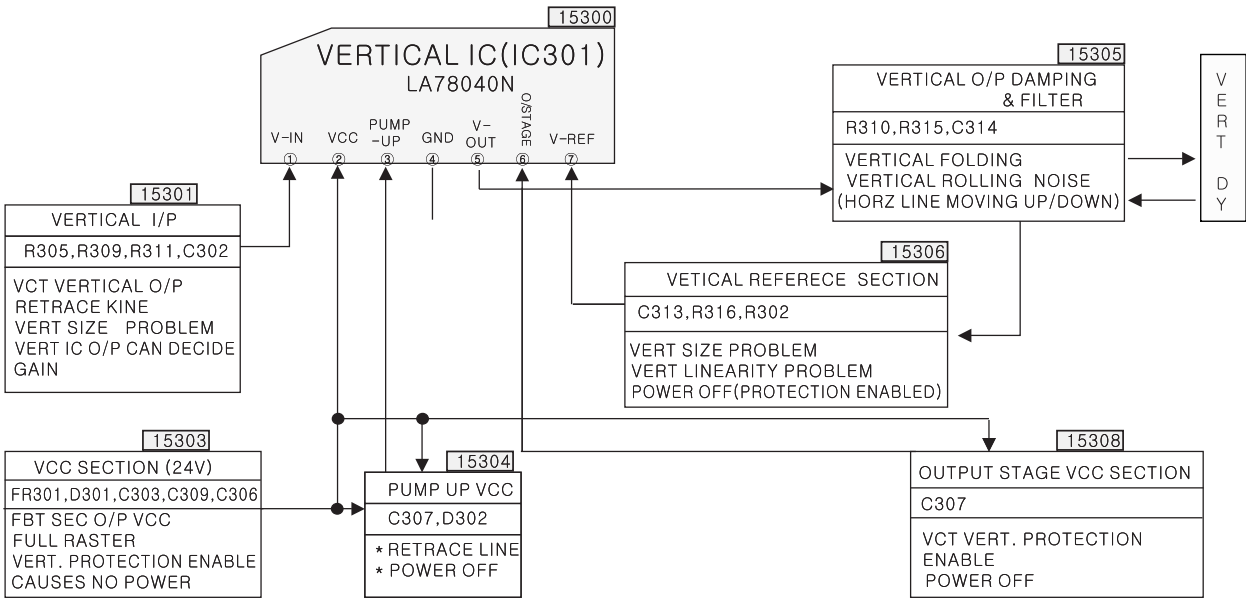
4. SMPS PRIMARY SECTION



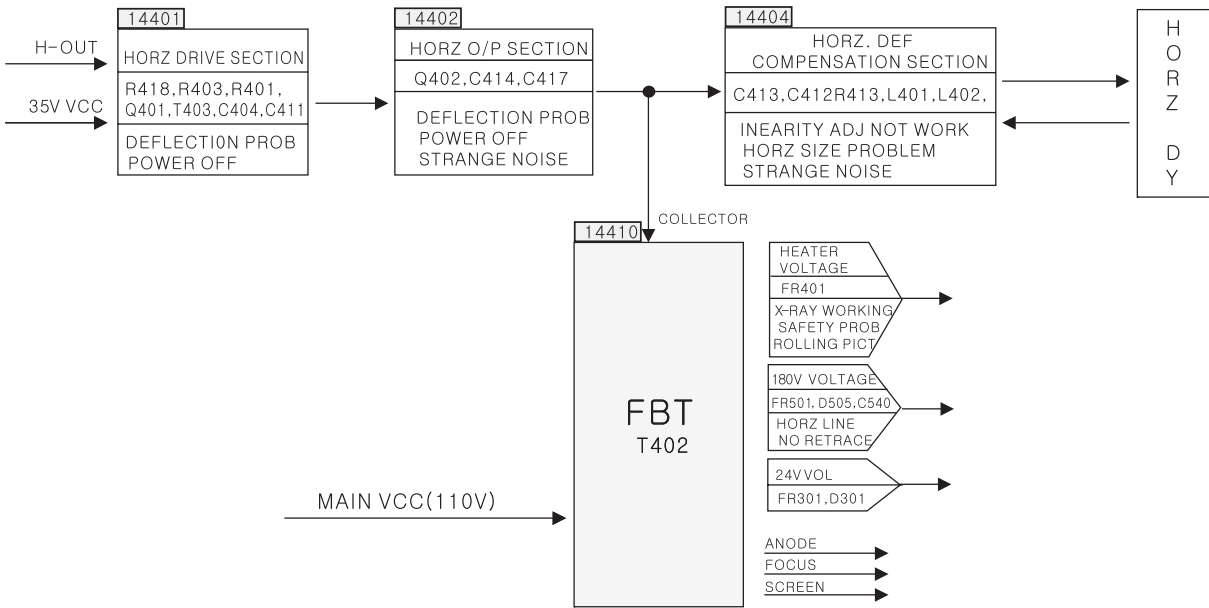
5. SMPS SECONDARY SECTION



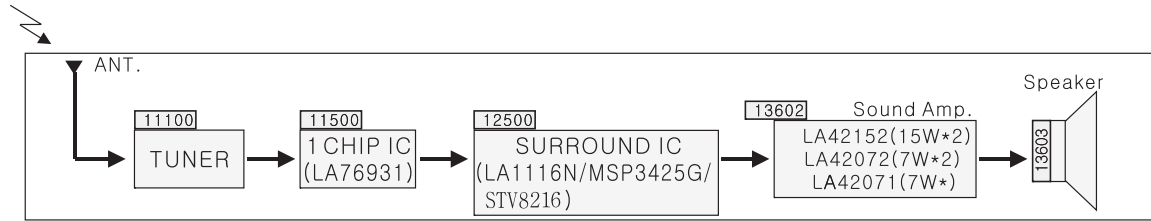
6. VERTICAL SECTION



7. HORIZONTAL SECTION



8. SOUND PROCESSING SECTION

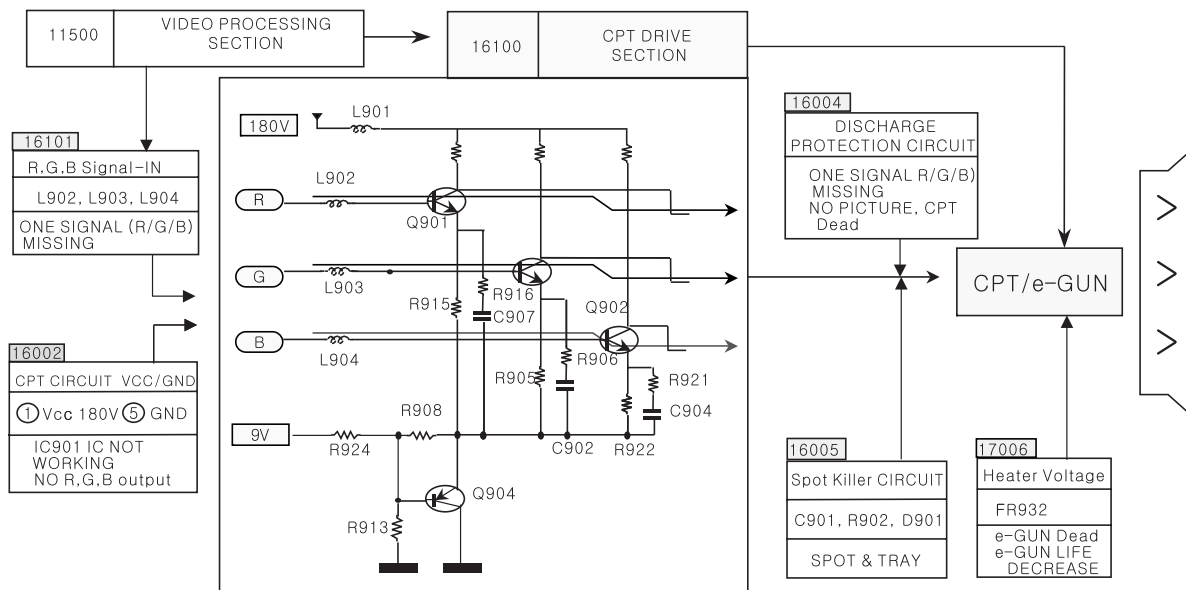
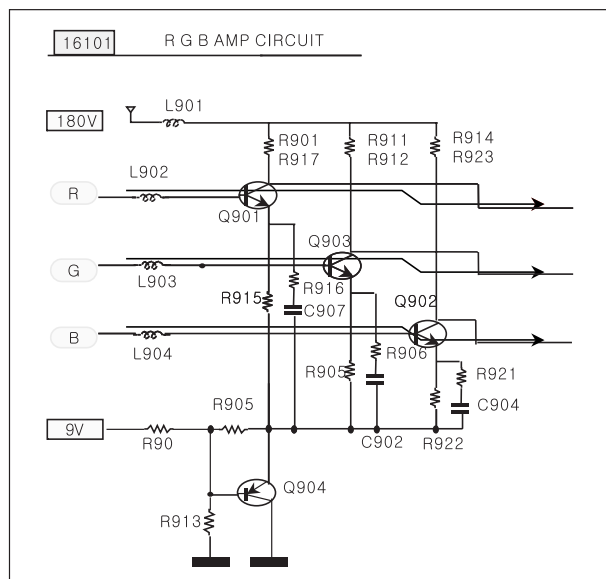


- TUNER : RF signal is feed to TUNER through Antenna. IF output from Tuner is then given to 1 CHIP IC.
- 1 CHIP IC : 1 CHIP IC processes the input IF. Demodulates Picture and sound information and gives analog R G B output for Display and SPKL/R as audio output, this sound output is further Amplified and feed to speakers.
- Sound Amp : Sound amps(LA42152,LA42072,LA42071) is and Audio Amplifier it amplified the output sound signal from Surround ic(LA1116/MSP3425G/ STV8216) and feeds to speaker which generates Sound.

9. CPT DRIVE SECTION

CPT Board Circuit 16100

The CPT-BOARD assembly is composed of discrete type RGB Amplifier.
Amp-Gain is defined by Resistance of R901, R911, R914 and R917, R912, R923
High Frequency compensation is made by inductance of L901, capacitance of C907, C904 and C902.
DC level of collector of Q901, Q902 and Q903 is defined by R904 & R905

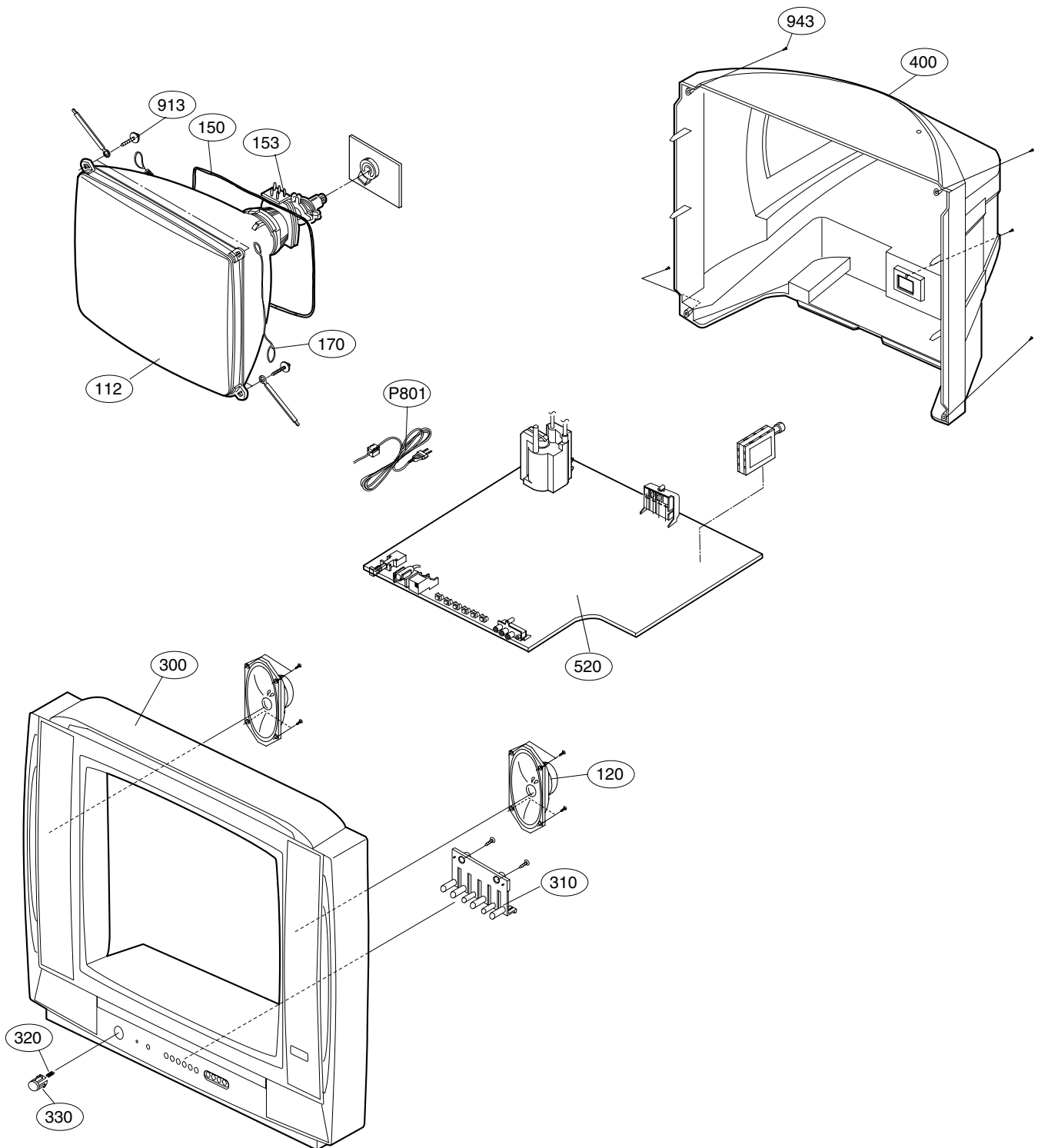


The diagram illustrates the internal architecture of an AV system centered around the LA42152 IC. It details the power supply section, including AC input, transformers, and regulators. The audio path shows the flow from input through various amplifiers and processors to the speakers. The video path includes a video processor (LA76931) and a vertical amplifier (LA78040). Control and interface components like the IC804, IC803, and IC802 are shown managing the system's operation. External components like a DVD player, game pack, and various output devices are also depicted.

Legend:

- Option Part (represented by a rectangle with a dashed border)
- IIC Bus Line (represented by a double-headed arrow)

EXPLODED VIEW



EXPLODED VIEW PARTS LIST

The components identified by mark Δ is critical for safety.
Replace only with part number specified.

LOCA. NO	PARTS No.	DESCRIPTIONS
Δ 112	2055-00744N	CPT ASSEMBLY, A34KPU02XX 00T7ND
	2055-00744P	CPT ASSEMBLY, A34KPU02XX 31M7ND M(+0.30G) 0G LPDI
Δ 120	6400VA0001A	SPEAKER,FULLRANGE KK BUKDOO 8 OHM 5/12W 82 DB 110*50
	6400VA0001B	SPEAKER,FULLRANGE 480B BUKDOO 16 OHM 2.5/5W 84DB 110X50MM
Δ 150	150-D02C	COIL,DEGAUSSING,CU 14" 230T 80 OHM
	150-D02W	COIL,DEGAUSSING CU 14" 42TURN 5.7 OHM D02B (NYLON)
Δ 153	153-113V	DY(DEFLECTION YOKE), DCAD2-14SNAB
Δ 170	170-A01E	EARTH, CPT EARTH 14"(LGEMX LOCAL ONLY
300	3091V00599C	CABINET ASSEMBLY, RT-14CA80V(N.ALLIED LOCAL) STEREO SY-PAKISTAN
	3091V00A83P	CABINET ASSEMBLY, 14CA8RB-TH MONO MC059B IN SET
310	5020V00650C	BUTTON, RT-14CA85V ABS, HF-380 4KEY #117
	5020V00806A	BUTTON, CONTROL RT-14CA80 ABS, HF-380 6KEY N.ALLIED MOLD EXPORT
320	320-062H	SPRING, COIL
330	5020V00649C	BUTTON, POWER RT-14CA85V ABS, HF-380 1KEY #117A
	5020V00807A	BUTTON, POWER RT-14CA80 ABS, HF-380 1KEY N.ALLIED MOLD EXPORT
400	3809V00415C	BACK COVER ASSEMBLY, RT-14CA80V 1PHONE SY-N.ALLIED
	3809V00A42K	BACK COVER ASSEMBLY, RT-14CA85MX 1PHONE IN->SET
520	68719MM156K	\PWB(PCB) ASSEMBLY,MAIN MC059B 14CA8RB-TH KFPDLEI FRONT/SECAM
	68719MMT81S	PWB(PCB) ASSEMBLY,MAIN 14CA8RG-TH. NTNLLBK SY-PAKISTAN 7W+7W
913	332-057A	SCREW,DRAWING HEXAGON NON NON FZMY-1
943	1PTF0403116	SCREW TAP TITE(P),TRUSS HEAD + D4.0 L16.0 MSWR3/FZB
Δ P801	6411VCH001H	POWER CORD ASSEMBLY, VDE/SEMKO 200MM HOUSING BLACK LGEIN
	174-009E	POWER CORD, POWER(W/HOLD,HOUSING, L=200,4.0

SVC. SHEET : 3854VA0196B-S

REPLACEMENT PARTS LIST

For Capacitor & Resistors, the characters at 2nd and 3rd digit in the P/No. means as follows;	CC, CX, CK, CN : Ceramic CQ : Polyester CE : Electrolytic	RD : Carbon Film RS : Metal Oxide Film RN : Metal Film RF : Fusible
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LOCA. NO	PART NO	DESCRIPTION
IC		
IC02	0IAL241610B	AT24C16A-10PI-2.7 8PIN DIP ST EEPROM
IC301	0IPRPSA006B	LA78040N SANYO 7Z BK 1.5A VERT. OUT
IC501	0ICTMSA006A	LG046N9R57N4-E SANYO 64P,DIP STICK
IC601	0IPMGSA024A	LA42071NLG-E SANYO SIP 13P ST 7W 1CH
IC801	0IPMGSK016A	STR-W6753 6PIN T0220F-6L ST PWR IC
IC802	0IPRPKD003A	PC17L1 4P/DIP ST PHOTO COUPLER
IC803	0IKE780500Q	KIA7805API 3P TO-220 ST REGULATOR 5V
IC804	0IMCRKE002B	KIA78R09API KEC 4P TO-220IS ST 9V/1A LOW
IC805	0ISK110000A	SE110N(LF12) 3P 110V ERROR AMP
TRANSISTOR		
Q10	0TR319809AA	KTC3198(KTC1815) KEC TP TO92 50V 150MA
Q101	0TR319709AB	KTC3197 TP KEC TO92 NPN
Q102	0TR319809AA	KTC3198(KTC1815) KEC TP TO92 50V 150MA
Q111	0TR102009AB	KRC102M(KRC1202) KEC TP NA NA NA
Q16	0TR102009AB	KRC102M(KRC1202) KEC TP NA NA NA
Q241	0TR126609AA	KTA1266-Y(KTA1015) TP KEC TO92 PNP
Q401	0TR322809AA	KTC3228-0 TP(KTC2383),KEC
Q402	0TRSA10004A	TT2170LS-YB11 ST TO-220FM 1500V 5A
Q403	0TR421009CC	BF421(PNP) TP TO92 VCBO -300V ICM -100MA
Q501	0TR319809AA	KTC3198(KTC1815) KEC TP TO92 50V 150MA
Q801	0TR319809AA	KTC3198(KTC1815) KEC TP TO92 50V 150MA
Q813	0TR102009AB	KRC102M(KRC1202) KEC TP NA NA NA
Q901	0TR233009CA	KSC2330-Y TP SAMSUNG TO-92L -
Q902	0TR233009CA	KSC2330-Y TP SAMSUNG TO-92L -
Q903	0TR233009CA	KSC2330-Y TP SAMSUNG TO-92L -
DIODE		
D111	0DSVH00019A	BA282 VISHAY TP DO35 35V 100MMA
D301	0DD060009AC	TVR06J TP - 600V 250NSEC
D302	0DD400509AA	1N4005 TP KEC DO204AL 600V 1A 30A - 5UA
D403	0DSGF00019A	1N4148 TP DO35 100V 0.15A 2A 4NSSEC 25UA
D405	0DSGF00019A	1N4148 TP DO35 100V 0.15A 2A 4NSSEC 25UA
D501	0DSGF00019A	1N4148 TP DO35 100V 0.15A 2A 4NSSEC 25UA
D502	0DSGF00019A	1N4148 TP DO35 100V 0.15A 2A 4NSSEC 25UA
D505	0DD060009AC	TVR06J TP - 600V 250NSEC
D601	0DSGF00019A	1N4148 TP DO35 100V 0.15A 2A 4NSSEC
D801	0DD100009AM	EU1ZV(1) TP E/EO-TMD 200V 0.25A 15A 0.4US
D802	0DD100009AM	EU1ZV(1) TP E/EO-TMD 200V 0.25A 15A 0.4US
D803	0DD100009AM	EU1ZV(1) TP E/EO-TMD 200V 0.25A 15A 0.4US
D813	0DD300009AC	RU3AMV(1) TP R-TMD 600V 1.5A 50A 0.4US 10UA
D815	0DD060009AC	TVR06J TP - 600V 250NSEC -
D826	0DD300009AC	RU3AMV(1) TP R-TMD 600V 1.5A 50A 0.4US 10UA
D834	0DD300009AC	RU3AMV(1) TP R-TMD 600V 1.5A 50A 0.4US 10UA
D901	0DR140039AC	1N4003E TP A405 200V 1A
D902	0DSGF00019A	1N4148 TP DO35 100V 0.15A 2A 4NSSEC
DB801	0DRTW00131A	D2SB60 ST GBL 600V 1.5A .A .SEC

LOCA. NO	PART NO	DESCRIPTION
ZD102	0DZ510009DB	MTZJ5.1B TP DO34 - 5.1V 5UA -
ZD103	0DZ300009AG	GDZJ30B TP GRANDE DO34 0.5W 30.0V
ZD412	0DZ910009AJ	MTZJ9.1B TP DO34 0.5W 9.1V 5UA -
ZD801	0DZ620009AH	MTZJ6.2A TP DO34 0.5W 6.2V 150UA -
ZD802	0DZ510009DB	MTZJ5.1B TP DO34 - 5.1V 5UA -
ZD804	0DZ510009DB	MTZJ5.1B TP DO34 - 5.1V 5UA -
ZD851	0DZ620009AH	MTZJ6.2A TP DO34 0.5W 6.2V 150UA -
CAPACITOR		
C103	0CE106DK618	10UF STD 50V 20% FL TP 5
C104	0CN1030F679	10000PF D 16V 20% X5R TA52
C105	0CN1030F679	10000PF D 16V 20% X5R TA52
C107	0CN1020K519	1000PF D 50V 10% B(Y5P) TA52
C108	0CE337DD618	330UF STD 10V 20% FL TP 5
C109	0CE225DK618	2.2UF STD 50V 20% FL TP 5
C11	0CC1800K415	18PF D 50V 5% NP0 TR
C110	0CE225DK618	2.2UF STD 50V 20% FL TP 5
C111	0CE476DF618	47UF STD 16V 20% FL TP 5
C116	0CN1030F679	10000PF D 16V 20% X5R TA52
C12	0CC1800K415	18PF D 50V 5% NP0 TR
C132	0CE107DF618	100UF STD 16V 20% FL TP 5
C14	0CE227DD618	220UF STD 10V 20% FL TP 5
C15	0CE334DK618	0.33UF STD 50V 20% FL TP 5
C16	0CE225DK618	2.2UF STD 50V 20% FL TP 5
C17	0CQ3331N509	0.033UF D 100V 10% PE TP5
C19	0CN1010K519	100PF D 50V 10% B(Y5P) TA52
C201	0CE106DF618	10UF STD 16V 20% FL TP 5
C233	0CN8220F579	8200PF D 16V 10% X5R TA52
C246	0CE227DD618	220UF STD 10V 20% FL TP 5
C28	0CE107DD618	100UF STD 10V 20% FL TP 5
C303	0CK4710W515	470PF D 500V 10% B(Y5P) TR
C305	0CQ6831N509	0.068UF D 100V 10% PE TP5
C306	0CQ4731N509	0.047UF D 100V 10% PE TP5
C307	0CE107DJ618	100UF STD 35V 20% FL TP 5
C309	0CE227DJ618	220UF STD 35V 20% FL TP 5
C310	0CQ1041N409	0.1UF D 100V 5% PE TP5
C312	0CE474DK618	0.47UF STD 50V 20% FL TP 5
C313	0CE106DK618	10UF STD 50V 20% FL TP 5
C314	0CQ1041N409	0.1UF D 100V 5% PE TP5
C321	0CE108DH618	1000UF STD 25V 20% FL TP 5
C322	0CN1020K519	1000PF D 50V 10% B(Y5P) TA52
C40	0CE107DD618	100UF STD 10V 20% FL TP 5
C404	0CK4710W515	470PF D 500V 10% B(Y5P) TR
C407	0CE106DH618	10UF STD 25V 20% FL TP 5
C408	0CE225DP618	2.2UF STD 160V 20% FL TP 5
C409	0CE227DD618	220UF STD 10V 20% FL TP 5
C412	181-013E	MPP 200V 0.47UF J
C413	0CK2220W515	2200PF D 500V 10% B(Y5P) TR
C414	181-015E	MPP 1600V 0.0068UF H

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LOCA. NO	PART NO	DESCRIPTION
C415	0CE475DK618	4.7UF STD 50V 20% FL TP 5
C417	181-091U	R 220PF 2KV 10%,-10% R/TP TP7.5
C50	0CN2210K519	220PF D 50V 10% B(Y5P) TA52
C501	0CX3300K409	33P 50V J SL TA52
C502	0CN2230H949	22000PF D 25V 80%,-20% F(Y5V) TA52
C503	0CX3300K409	33P 50V J SL TA52
C504	0CE105DK618	1UF STD 50V 20% FL TP 5
C506	0CN2230H949	22000PF D 25V 80%,-20% F(Y5V) TA52
C507	0CN1520F569	1500PF D 16V 10% X7R TA52
C508	0CE475DK618	4.7UF STD 50V 20% FL TP 5
C509	0CE106DK618	10UF STD 50V 20% FL TP 5
C51	0CN2210K519	220PF D 50V 10% B(Y5P) TA52
C510	0CN1030F679	10000PF D 16V 20% X5R TA52
C511	0CE107DD618	100UF STD 10V 20% FL TP 5
C512	181-007H	MPE ECQ-V1H474JL3(TR), 50V 0.47UF
C513	181-007F	MPE ECQ-V1H224JL3(TR), 50V 0.22UF
C514	181-009R	PP 200V 0.022UF K
C515	0CE227DD618	220UF STD 10V 20% FL TP 5
C516	0CQ1531N509	0.015UF D 100V 10% PE TP5
C517	0CE335DK618	3.3UF STD 50V 20% FL TP 5
C518	0CE107DD618	100UF STD 10V 20% FL TP 5
C519	0CN1030F679	10000PF D 16V 20% X5R TA52
C521	0CE107DD618	100UF STD 10V 20% FL TP 5
C523	0CE477DD618	470UF STD 10V 20% FL TP 5
C524	0CE474DK618	0.47UF STD 50V 20% FL TP 5
C526	0CE107DD618	100UF STD 10V 20% FL TP 5
C527	0CE105DK618	1UF STD 50V 20% FL TP 5
C528	0CN1030F679	10000PF D 16V 20% X5R TA52
C529	0CE105DK618	1UF STD 50V 20% FL TP 5
C530	0CE225DK618	2.2UF STD 50V 20% FL TP 5
C531	0CE474DK618	0.47UF STD 50V 20% FL TP 5
C532	0CN1040K949	0.1UF D 50V 80%,-20% F(Y5V) TA52
C533	0CQ4731N509	0.047UF D 100V 10% PE TP5
C534	0CN1030F679	10000PF D 16V 20% X5R TA52
C535	0CN1030F679	10000PF D 16V 20% X5R TA52
C540	0CE475DR618	4.7UF STD 250V 20% FL TP 5
C542	0CQ1831N509	0.018UF D 100V 10% PE TP5
C543	0CQ3331N509	0.033UF D 100V 10% PE TP5
C545	0CK2230K945	0.022UF D 50V 80%,-20% F(Y5V) TR
C546	0CN1510K519	150PF D 50V 10% B(Y5P) TA52
C56	0CN4710K519	470PF D 50V 10% B(Y5P) TA52
C602	0CE226DF618	22UF STD 16V 20% FL TP 5
C603	0CE475DK618	4.7UF STD 50V 20% FL TP 5
C604	0CQ2221N509	0.0022UF D 100V 10% PE TP5
C606	181-007C	MPE ECQ-V1H104JL3(TR), 50V 0.1UF
C608	0CE106DF618	10UF STD 16V 20% FL TP 5
C611	0CE476DH618	47UF STD 25V 20% FL TP 5
C612	181-007C	MPE ECQ-V1H104JL3(TR), 50V 0.1UF
C677	0CE475DK618	4.7UF STD 50V 20% FL TP 5
C802	0CQZVBK002A	A.C 275V 0.1UF M (S=15)
C803	181-001F	CE 400V 220UF M LUG (85)
C804	0CK10202515	1000PF D 2KV 10% TR B(Y5P)

LOCA. NO	PART NO	DESCRIPTION
C805	0CK10202515	1000PF D 2KV 10% TR B(Y5P)
C809	0CE105DK618	1UF STD 50V 20% FL TP 5
C810	0CE336DK618	33UF STD 50V 20% FL TP 5
C811	181-011B	0.001UF D 1.6KV J M/PP NI FM20
C813	181-091R	R 1000PF 1KV 10%,-10% R/TP TP5
C814	0CE227DP61A	220UF STD 160V 20% FL TP 7.5
C815	0CK8210K515	820PF D 50V 10% B(Y5P) TR
C817	181-007C	MPE ECQ-V1H104JL3(TR), 50V 0.1UF
C818	0CQ4731N509	0.047UF D 100V 10% PE TP5
C819	0CK1520K515	1500PF D 50V 10% B(Y5P) TR
C821	0CK4710W515	470PF D 500V 10% B(Y5P) TR
C826	0CE228DF618	2200UF STD 16V 20% FL TP 5
C831	0CE227DF618	220UF STD 16V 20% FL TP 5
C833	0CE107DD618	100UF STD 10V 20% FL TP 5
C835	0CE476CP618	47UF SHL,SD 160V 20% FL TP 5
C839	0CE228DF618	2200UF STD 16V 20% FL TP 5
C843	181-120K	2200PF 4KV M E FMTW LEAD 4.5
C850	0CE477DF618	470UF STD 16V 20% FL TP 5
C853	0CE107DD618	100UF STD 10V 20% FL TP 5
C901	0CE475DR618	4.7UF STD 250V 20% FL TP 5
C902	0CN2210K519	220PF D 50V 10% B(Y5P) TA52
C904	0CN1810K519	180PF D 50V 10% B(Y5P) TA52
C907	0CN2210K519	220PF D 50V 10% B(Y5P) TA52
C908	0CK12202510	1200PF D 2KV 10% B(Y5P) R
R511	0CN8220F579	8200PF D 16V 10% X5R TA52
COIL & INDUCTOR		
C115	0LA0680K119	INDUCTOR,AXIAL LEAD 0.68UH 10% A 2.3 X 3.4
J709	0LA0102K119	INDUCTOR,AXIAL LEAD 10UH 10% A 2.3 X 3.4
L102	0LA0820K119	INDUCTOR,AXIAL LEAD 0.82UH 10% A 2.3 X 3.4
L401	150-L01R	COIL,LINEARITY 38UH PHY TURN
L501	0LA0102K119	INDUCTOR,AXIAL LEAD 10UH 10% A 2.3 X 3.4
L802	150-C02F	COIL,CHOKE 82UH PHY TURN
T403	151-C02B	TRANSFORMER, EI-2519 01UH EI-19
T803	6170VMCA43L	TRANSFORMER,SMPS[COIL] EER3940 380UH
CONNECTOR		
C1	366-036B	STAPLE
C2	387-603E	9P 2.5MM 430MM B-B UL1007AWG26
C3	387-917J	1P 500MM R-R UL1617AWG22
C4	6631V25023N	3P 2.5MM 350/700MM R-H UL1007 AWG26
P101	366-921B	GIL-G-03P LGC 3PIN 2.54MM STICK
P401	366-043K	35929-0410 MOLEX 4PIN 8.0-6.0MM
P601	366-921B	GIL-G-03P LGC 3PIN 2.54MM STICK
P801	366-043B	35929-0210 MOLEX 2PIN 10.0MM
P802	366-043B	35929-0210 MOLEX 2PIN 10.0MM
P901	366-043A	35929-0110 MOLEX 1 .
RESISTOR		
FR301	0RF0101J607	1 OHM 1 W 5.00% TA62
FR401	0RF0221K607	2.2 OHM 2 W 5.00% TA62
FR403	0RF0121K607	1.2 OHM 2 W 5.00% TA62

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	CQ : Polyester	RS : Metal Oxide Film
	CE : Electrolytic	RN : Metal Film
		RF : Fusible

LOCA. NO	PART NO	DESCRIPTION
FR501	0RF0101J607	1 OHM 1 W 5.00% TA62
FR825	0RP0050H709	0.05 OHM 1/2 W 10% TA52
J539	0RD5100F609	510 OHM 1/6 W 5.00% TA52
R1	0RD6800F609	680 OHM 1/6 W 5% TA52
R101	0RD1000F609	100 OHM 1/6 W 5% TA52
R102	0RD3601F609	3.6K OHM 1/6 W 5.00% TA52
R103	0RD1201F609	1.2K OHM 1/6 W 5% TA52
R104	0RD0222F609	22 OHM 1/6 W 5.00% TA52
R105	0RD3900F609	390 OHM 1/6 W 5% TA52
R108	0RD1802F609	18K OHM 1/6 W 5.00% TA52
R109	0RD1003F609	100K OHM 1/6 W 5% TA52
R110	0RS2702H609	27K OHM 1/2 W 5.00% TA52
R111	0RD4701F609	4.7K OHM 1/6 W 5% TA52
R112	0RD2201F609	2.2K OHM 1/6 W 5.00% TA52
R113	0RD2201F609	2.2K OHM 1/6 W 5.00% TA52
R121	0RD0752F609	75 OHM 1/6 W 5.00% TA52
R132	0RS0392J607	39 OHM 1 W 5.00% TA62
R150	0RD1003F609	100K OHM 1/6 W 5% TA52
R152	0RD1002F609	10K OHM 1/6 W 5% TA52
R153	0RD1001F609	1K OHM 1/6 W 5% TA52
R154	0RD1001F609	1K OHM 1/6 W 5% TA52
R16	0RD1201F609	1.2K OHM 1/6 W 5% TA52
R17	0RD2401F609	2.4K OHM 1/6 W 5.00% TA52
R18	0RD2701F609	2.7K OHM 1/6 W 5% TA52
R19	0RD1801F609	1.8K OHM 1/6 W 5.00% TA52
R20	0RD3600F609	360 OHM 1/6 W 5.00% TA52
R205	0RD1000A609	100 OHM 1/2 W(7.0) 5.00% TA52
R206	0RD1000A609	100 OHM 1/2 W(7.0) 5.00% TA52
R21	0RD4701F609	4.7K OHM 1/6 W 5% TA52
R22	0RD1003F609	100K OHM 1/6 W 5% TA52
R23	0RD4701F609	4.7K OHM 1/6 W 5% TA52
R247	0RD5100F609	510 OHM 1/6 W 5.00% TA52
R249	0RD0752F609	75 OHM 1/6 W 5.00% TA52
R301	0RN1502F409	15K OHM 1/6 W 1.00% TA52
R302	0RD4700A609	470 OHM 1/2 W(7.0) 5.00% TA52
R303	0RD0331A609	3.3 OHM 1/2 W(7.0) 5.00% TA52
R304	0RD0331A609	3.3 OHM 1/2 W(7.0) 5.00% TA52
R305	0RN1002F409	10K OHM 1/6 W 1.00% TA52
R307	0RD6801F609	6.8K OHM 1/6 W 5.00% TA52
R308	0RD2202F609	22K OHM 1/6 W 5% TA52
R309	0RD6801F609	6.8K OHM 1/6 W 5.00% TA52
R310	0RD0101A609	1 OHM 1/2 W(7.0) 5.00% TA52
R311	0RD4702F609	47K OHM 1/6 W 5% TA52
R313	0RN4702F409	47K OHM 1/6 W 1.00% TA52
R315	0RS2200H609	220 OHM 1/2 W 5.00% TA52
R401	0RD0472A609	47 OHM 1/2 W(7.0) 5.00% TA52
R403	0RD2001A609	2K OHM 1/2 W(7.0) 5.00% TA52
R404	0RD1500F609	150 OHM 1/6 W 5.00% TA52
R406	0RS8201K607	8.2K OHM 2 W 5.00% TA62
R407	0RS1002H609	10K OHM 1/2 W 5.00% TA52
R408	0RD7502F609	75K OHM 1/6 W 5.00% TA52
R409	0RD1002F609	10K OHM 1/6 W 5% TA52

LOCA. NO	PART NO	DESCRIPTION
R41	0RD1000F609	100 OHM 1/6 W 5% TA52
R410	0RD5101F609	5.1K OHM 1/6 W 5.00% TA52
R413	0RD3300A609	330 OHM 1/2 W(7.0) 5.00% TA52
R414	0RD1002F609	10K OHM 1/6 W 5% TA52
R416	0RS1001J607	1K OHM 1 W 5.00% TA62
R42	0RD1004F609	1M OHM 1/6 W 5% TA52
R420	0RD2403F609	240K OHM 1/6 W 5.00% TA52
R421	0RD4700F609	470 OHM 1/6 W 0.05 TA52
R423	0RD3001F609	3K OHM 1/6 W 5.00% TA52
R43	0RD2703F609	270K OHM 1/6 W 0.05 TA52
R501	0RD3301F609	3.3K OHM 1/6 W 5.00% TA52
R502	0RD3902F609	39K OHM 1/6 W 5.00% TA52
R504	0RD3901F609	3.9K OHM 1/6 W 5% TA52
R505	0RD1000F609	100 OHM 1/6 W 5% TA52
R506	0RD1000F609	100 OHM 1/6 W 5% TA52
R507	0RD1000F609	100 OHM 1/6 W 5% TA52
R508	0RD3901F609	3.9K OHM 1/6 W 5% TA52
R509	0RD3901F609	3.9K OHM 1/6 W 5% TA52
R510	0RD3901F609	3.9K OHM 1/6 W 5% TA52
R512	0RN4701F409	4.7K OHM 1/6 W 1.00% TA52
R513	0RD1200F609	120 OHM 1/6 W 5.00% TA52
R514	0RD2200F609	220 OHM 1/6 W 5.00% TA52
R515	0RD0102F609	10 OHM 1/6 W 5% TA52
R516	0RD2200F609	220 OHM 1/6 W 5.00% TA52
R519	0RD1202F609	12K OHM 1/6 W 5% TA52
R521	0RD7501F609	7.5K OHM 1/6 W 5.00% TA52
R522	0RD2402F609	24K OHM 1/6 W 5.00% TA52
R523	0RD1803F609	180K OHM 1/6 W 5.00% TA52
R524	0RD2700F609	270 OHM 1/6 W 5% TA52
R525	0RD6202F609	62K OHM 1/6 W 5.00% TA52
R526	0RD4702F609	47K OHM 1/6 W 5% TA52
R527	0RD0752F609	75 OHM 1/6 W 5.00% TA52
R528	0RD4301F609	4.3K OHM 1/6 W 5.00% TA52
R529	0RD0332F609	33 OHM 1/6 W 5.00% TA52
R530	0RD3300F609	330 OHM 1/6 W 5.00% TA52
R531	0RD3300F609	330 OHM 1/6 W 5.00% TA52
R532	0RD3901F609	3.9K OHM 1/6 W 5% TA52
R533	0RD1001F609	1K OHM 1/6 W 5% TA52
R537	0RD3300F609	330 OHM 1/6 W 5.00% TA52
R547	0RD1303A609	130K OHM 1/2 W(7.0) 5.00% TA52
R550	0RS1002H609	10K OHM 1/2 W 5.00% TA52
R561	0RD1000F609	100 OHM 1/6 W 5% TA52
R565	0RD1000F609	100 OHM 1/6 W 5% TA52
R566	0RD4701F609	4.7K OHM 1/6 W 5% TA52
R58	0RD4701F609	4.7K OHM 1/6 W 5% TA52
R603	0RD0221A609	2.2 OHM 1/2 W(7.0) 5.00% TA52
R604	0RD0221A609	2.2 OHM 1/2 W(7.0) 5.00% TA52
R611	0RD1801F609	1.8K OHM 1/6 W 5.00% TA52
R618	0RD1002F609	10K OHM 1/6 W 5% TA52
R620	0RS0821K607	8.2 OHM 2 W 5.00% TA62
R65	0RD2200F609	220 OHM 1/6 W 5.00% TA52
R66	0RD3301F609	3.3K OHM 1/6 W 5.00% TA52

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LOCA. NO	PART NO	DESCRIPTION
R69	0RD2200F609	220 OHM 1/6 W 5.00% TA52
R72	0RD6800F609	680 OHM 1/6 W 5% TA52
R803	0RD4701F609	4.7K OHM 1/6 W 5% TA52
R804	0RS4702K607	47K OHM 2 W 5.00% TA62
R805	0RS4702K607	47K OHM 2 W 5.00% TA62
R806	180-A01M	0.22 OHM 2 W 5% TA62 RW ROUND
R807	0RD2200A609	220 OHM 1/2 W(7.0) 5.00% TA52
R808	0RD1501F609	1.5K OHM 1/6 W 5% TA52
R809	0RD1001F609	1K OHM 1/6 W 5% TA52
R810	0RD0472F609	47 OHM 1/6 W 5% TA52
R812	0RD1003F609	100K OHM 1/6 W 5% TA52
R814	0RKZVTA001C	8.2M OHM 1/2 W 5% TA52
R82	0RD4701F609	4.7K OHM 1/6 W 5% TA52
R831	0RD4701F609	4.7K OHM 1/6 W 5% TA52
R832	0RD4701F609	4.7K OHM 1/6 W 5% TA52
R835	0RD1001F609	1K OHM 1/6 W 5% TA52
R883	0RD0822A609	82 OHM 1/2 W(7.0) 5.00% TA52
R884	0RD1201F609	1.2K OHM 1/6 W 5% TA52
R902	0RD2204A609	2.2M OHM 1/2 W(7.0) 5.00% TA52
R905	0RD3900F609	390 OHM 1/6 W 5% TA52
R906	0RD1000F609	100 OHM 1/6 W 5% TA52
R908	0RD1801F609	1.8K OHM 1/6 W 5.00% TA52
R912	0RS1802K607	18K OHM 2 W 5.00% TA62
R915	0RD3900F609	390 OHM 1/6 W 5% TA52
R916	0RD1000F609	100 OHM 1/6 W 5% TA52
R917	0RS1802K607	18K OHM 2 W 5.00% TA62
R918	0RD1501A609	1.5K OHM 1/2 W(7.0) 5.00% TA52
R919	0RD1501A609	1.5K OHM 1/2 W(7.0) 5.00% TA52
R920	0RD1501A609	1.5K OHM 1/2 W(7.0) 5.00% TA52
R921	0RD1000F609	100 OHM 1/6 W 5% TA52
R922	0RD4300F609	430 OHM 1/6 W 5.00% TA52
R923	0RS1802K607	18K OHM 2 W 5.00% TA62
ZD505	0RD1004F609	1M OHM 1/6 W 5% TA52
SWITCH		
SW11	140-315A	SKHV17910B 12V 0.05A HORIZONTAL 160G
SW12	140-315A	SKHV17910B 12V 0.05A HORIZONTAL 160G
SW13	140-315A	SKHV17910B 12V 0.05A HORIZONTAL 160G
SW14	140-315A	SKHV17910B 12V 0.05A HORIZONTAL 160G
SW15	140-315A	SKHV17910B 12V 0.05A HORIZONTAL 160G
SW16	140-315A	SKHV17910B 12V 0.05A HORIZONTAL 160G
SW801	6600VM1001A	SDKLA1 ALPS UL/CSA 250V 5A VERTICAL 460G
FILTER & CRYSTAL		
FB801	125-022R	BI3857 FEELUX 5.7X3.6MM AXIAL 26MM
L804	125-022R	BI3857 FEELUX 5.7X3.6MM AXIAL 26MM
T802	6200JB8008G	SQ2222 FEEL LUX BK 7MH,0.5PHY,64TURN
X1	6212AA2998A	RESONATOR,CRYSTAL HLX-308 32.768KHZ
X501	156-A01V	RESONATOR,CRYSTAL HC49U 4.433619MHZ
Z111	6200QL3002X	K7260M EPCOS BULK PAL

LOCA. NO	PART NO	DESCRIPTION
ACCESSORIES		
A1	38289U0486F	MANUAL, USER NEU AR/EN 112D/E/124E TX
A2	6710V00124D	REMOTE CONTROLLER, MC049B W/O TXT
A3	5010V00004B	ANTENNA, 3SECTION 750MM NTSC W/ADP
MISCELLANEOUS		
F801	0FS4001B518	FUSE,SLOW BLOW 4000MA 250 V 5.2X20
JA01	6612VJH004F	JACK,RCA PJ6056F AV 4P MONO 21PIN
JA02	6613V00006C	JACK ASSEMBLY, PJ6062C 2P<YL(SW)WH(SW)>
LD11	0DLLT0020AA	LED, LITEON LTL-4223 BK RED 19MCD
PA01	6712SCA226B	REMOTE CONTROLLER RECEIVER, KSM-913LG1T
SK901	6620VBA003A	SOCKET (CIRC),CPT PCS031A 7PIN 14/360
T402	6174V-6002U	FBT , BSC26-N2121 20/21
TH801	163-051F	THERMISTOR,PTC J503P84D140M290Q +/- 20%
TH803	163-048A	THERMISTOR,NTC KL15L010 +/- 15% 125V
TU101	6700MF0014A	TUNER, TAEW-G013D LGIT MULTI FS
VD801	164-003K	VARISTOR, SVC621D-14A ILJIN 620V



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