

Driver Install Guide Specification

담당

관리자

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06.12.22

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1. Model Description

MODEL	21FJ4AB-TH	BRAND	LG	Part No.	MFL31479115
SUFFIX	KDRLCEY	Product Name	SVC Manual		

2. Printing Specification

1. Trim Size (Format) : 215mm x 280 mm
2. Printing Colors
 - Cover : 2 Colors (Black and Pantone 207C)
 - Inside : 1 Color (Black)
3. Stock (Paper)
 - Cover : Uncoated paper 100 g/m²
 - Inside : Uncoated paper 100 g/m²
4. Printing Method :
5. Bindery : Saddle stitch
6. Language : English
7. Number of pages : 28 pages

NOTE

- This part contain Eco-hazardous substances (Pb, Cd, Hg, Cr6+, PBB, PBDE, etc.) within LG standard level, Details should be followed Eco-SCM management standard[LG(56)-A-2524].
- Especially, Part should be followed and controlled the following specification.
 - (1) Eco-hazardous substances test report should be submitted when Part certification test and First Mass Production.
 - (2) Especially, Don't use or contain lead(Pb) and cadmium(Cd) in ink.

3. Changes

10				
9				
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7				
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REV. NO.	MM/DD/YY	SIGNATURE	CHANGE NO.	CHANGE CONTENTS

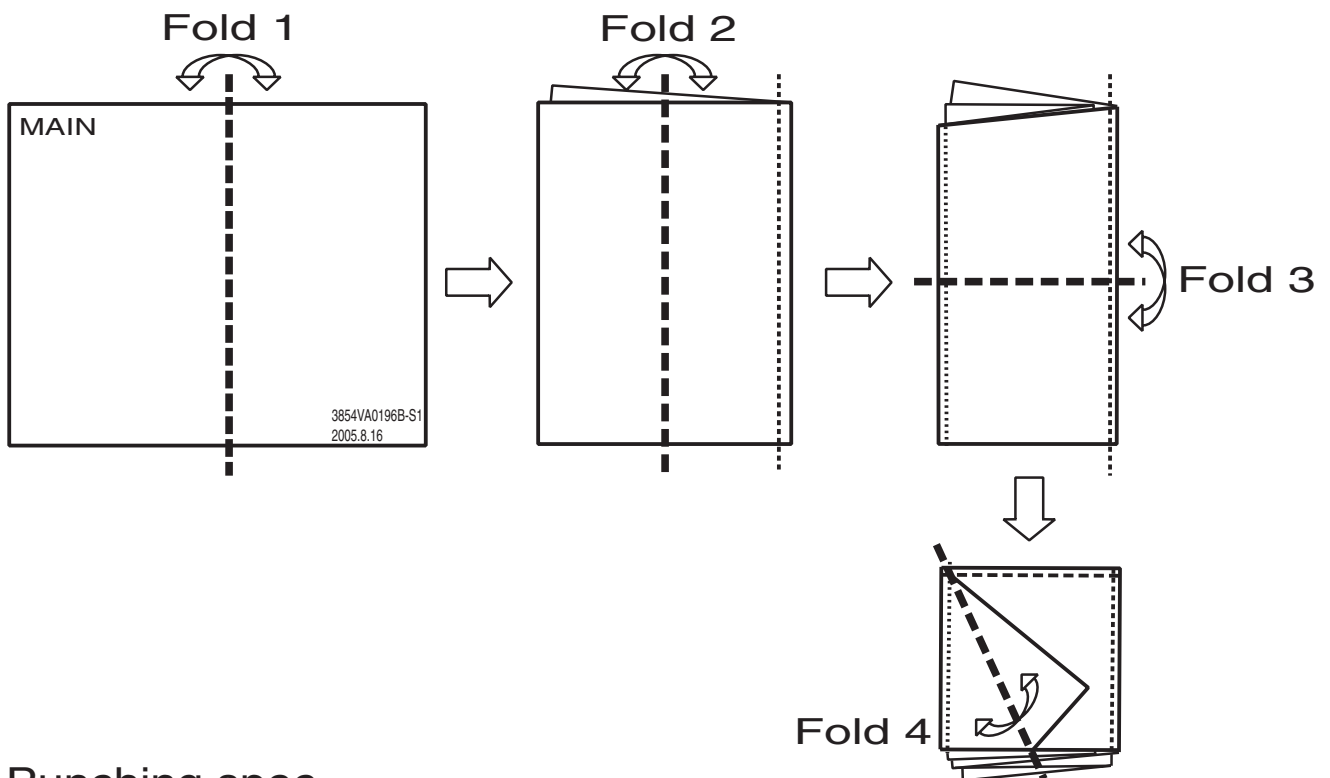
Pagination sheet

P/NO . MFL31479115
Total pages : 28 pages

Front Cover (EN)	Front Cover Inside EN 2	EN 3	EN 4 ...	EN 26	Back Cover Inside 3854VA0196B-S1 27	Back Cover (EN)
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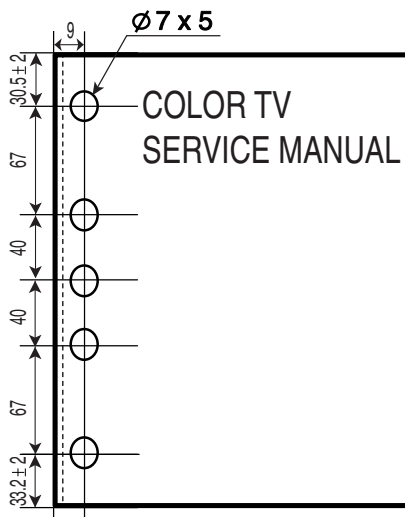
Schematic diagram

P/N : 3854VA0196B-S1



Punching spec

unit : mm





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

COLOR TV

SERVICE MANUAL

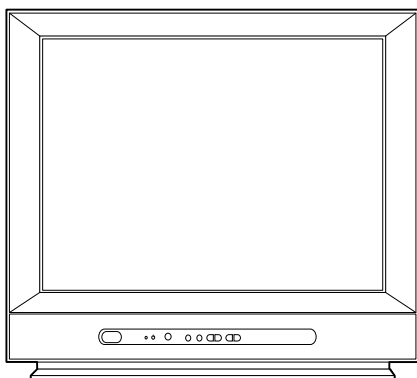
CHASSIS : MC-059B

MODEL: 21FJ4AB/RB

21FJ4AB/RB-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.

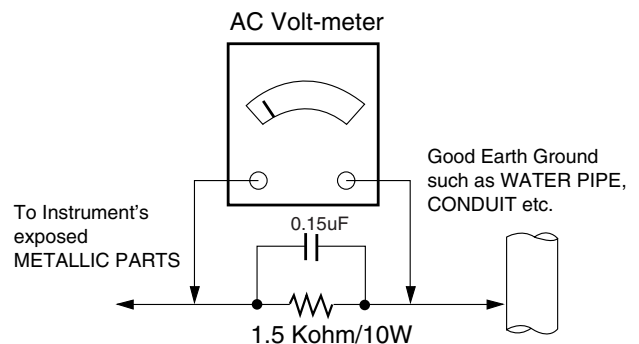
Connect 1.5K/10watt resistor in parallel with a 0.15uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

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 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

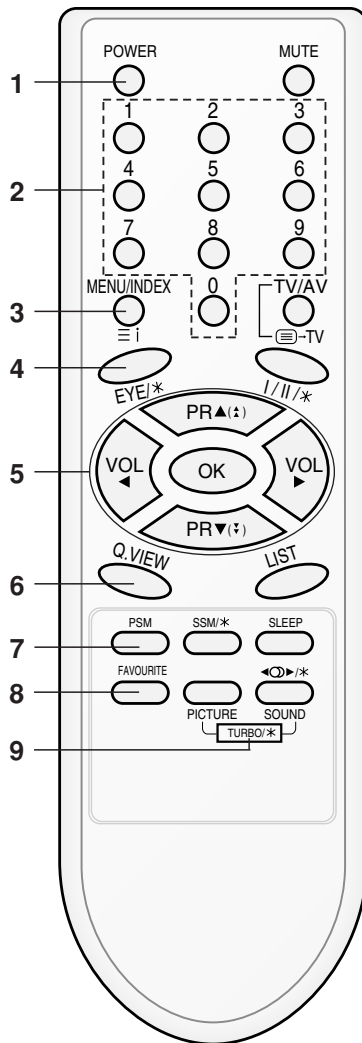


DESCRIPTION OF CONTROLS

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)

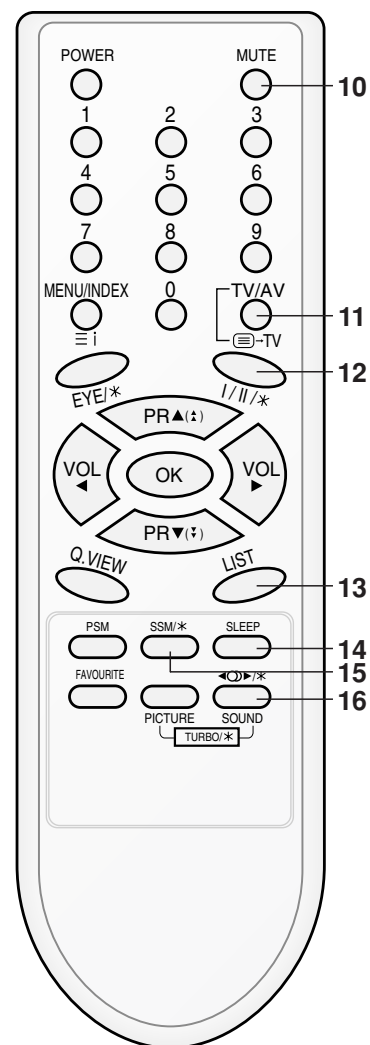
recalls your preferred sound setting.

16. SURROUND (◀▶/*) (option)

selects surround sound.

*** : No function**

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



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

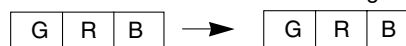
- 1) Receive Red Raster Pattern for purity adjustment.
- 2) Demagnetize the CPT and Cabinet with a degaussing coil.

(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.

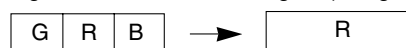
(3) Purity Adjustment

- 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

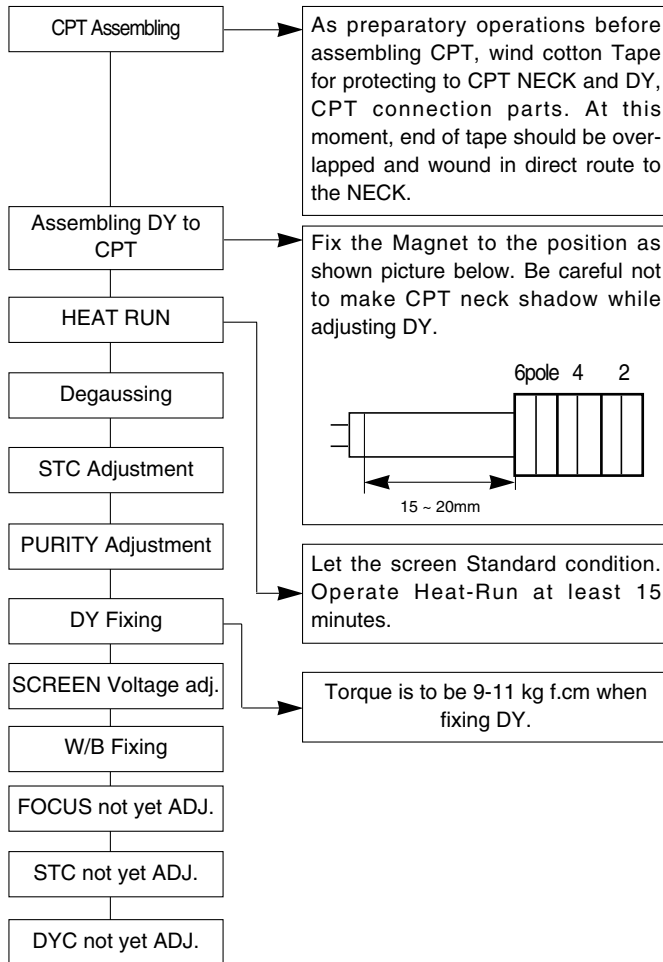
- 1) Receive Cross Hatch Pattern(EU09CH)
- 2) Adjust the focus first seeing to it that the WHITE color picture quality is sharp enough.
- 3) Open two 4-Pole magnets until vertical Red and Blue lines are unified.
- 4) Rotate the 4-Pole magnets keeping the angle between two 4-Pole magnets until horizontal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

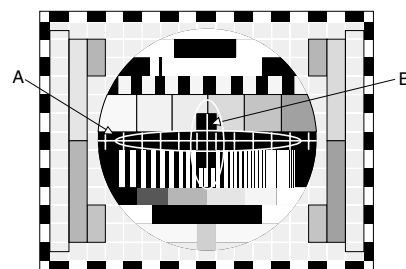
This adjustment must be done after operating the TV set receiver sufficiently.

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

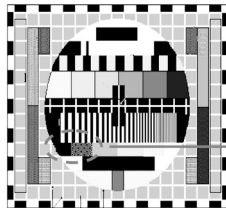
Prior to this adjustment, the White balance adjustment should be finished.

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 equal in left 2 boundaries 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 Tuning 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

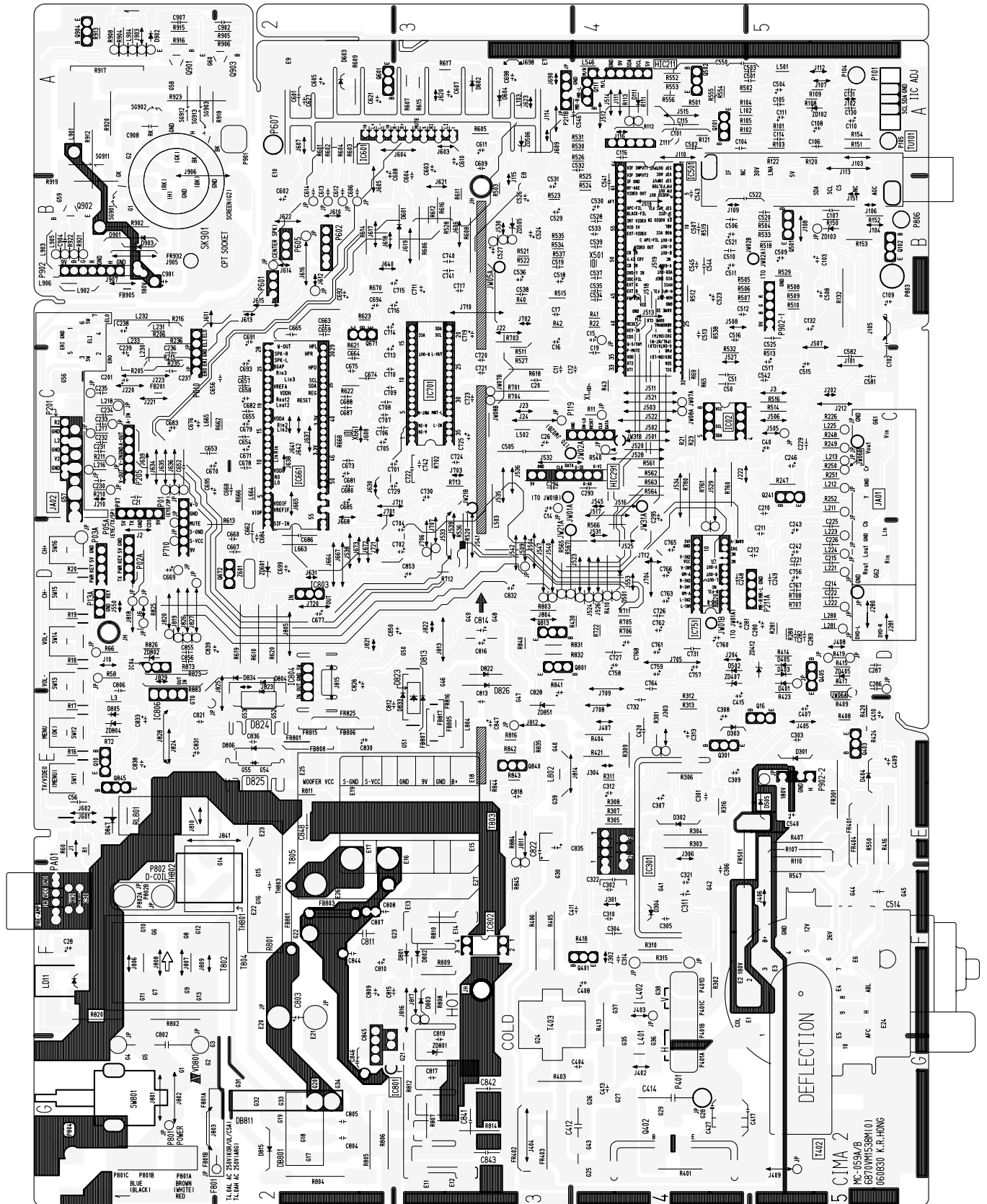
<TABLE 1>

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 separation	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

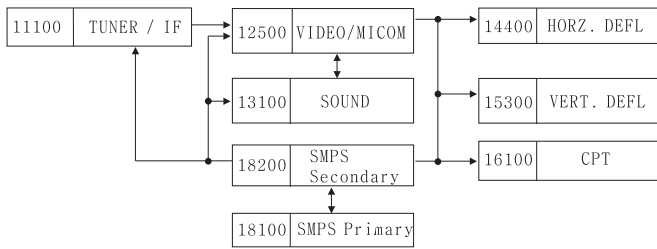
PRINTED CIRCUIT BOARD

MAIN

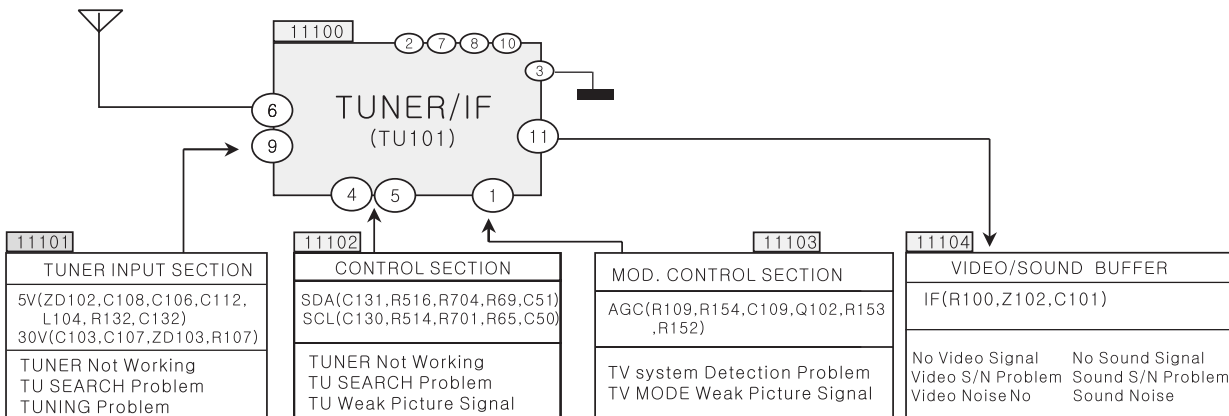


TROUBLE SHOOTING

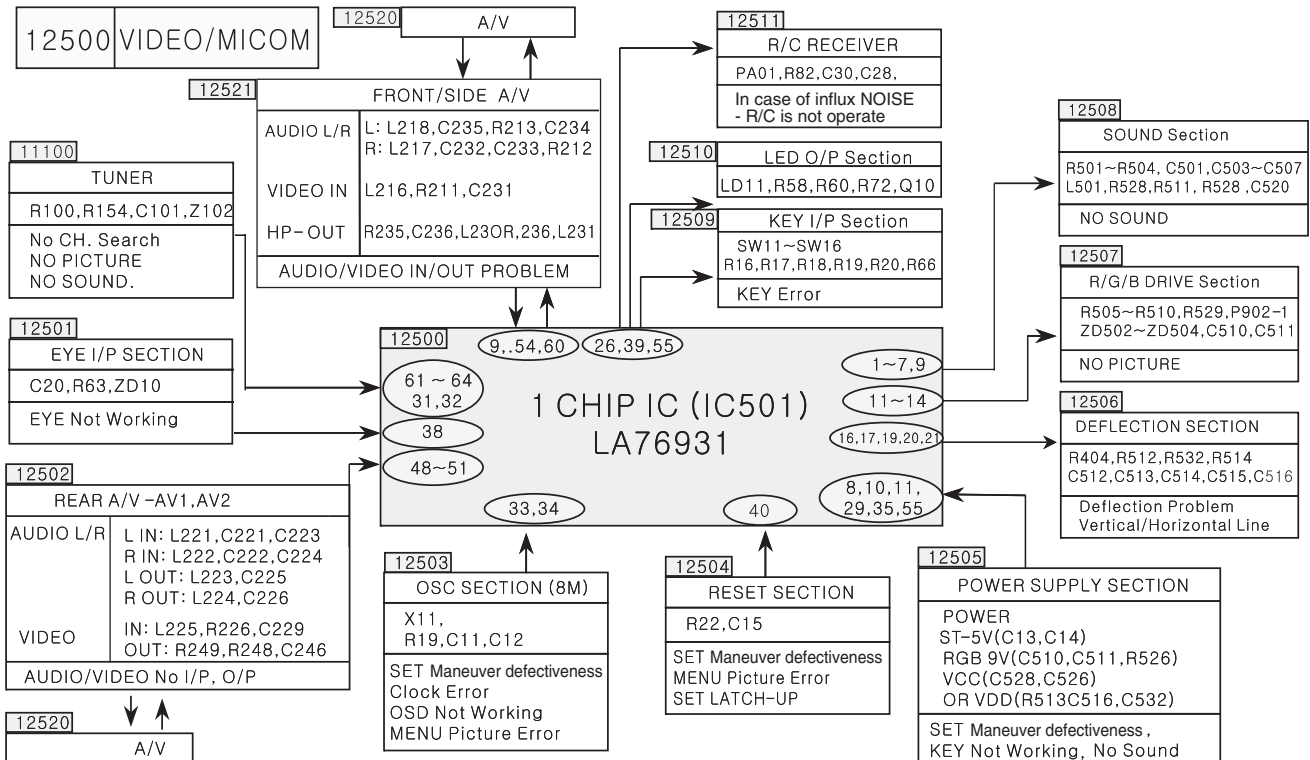
1. TV FUNCTIONAL



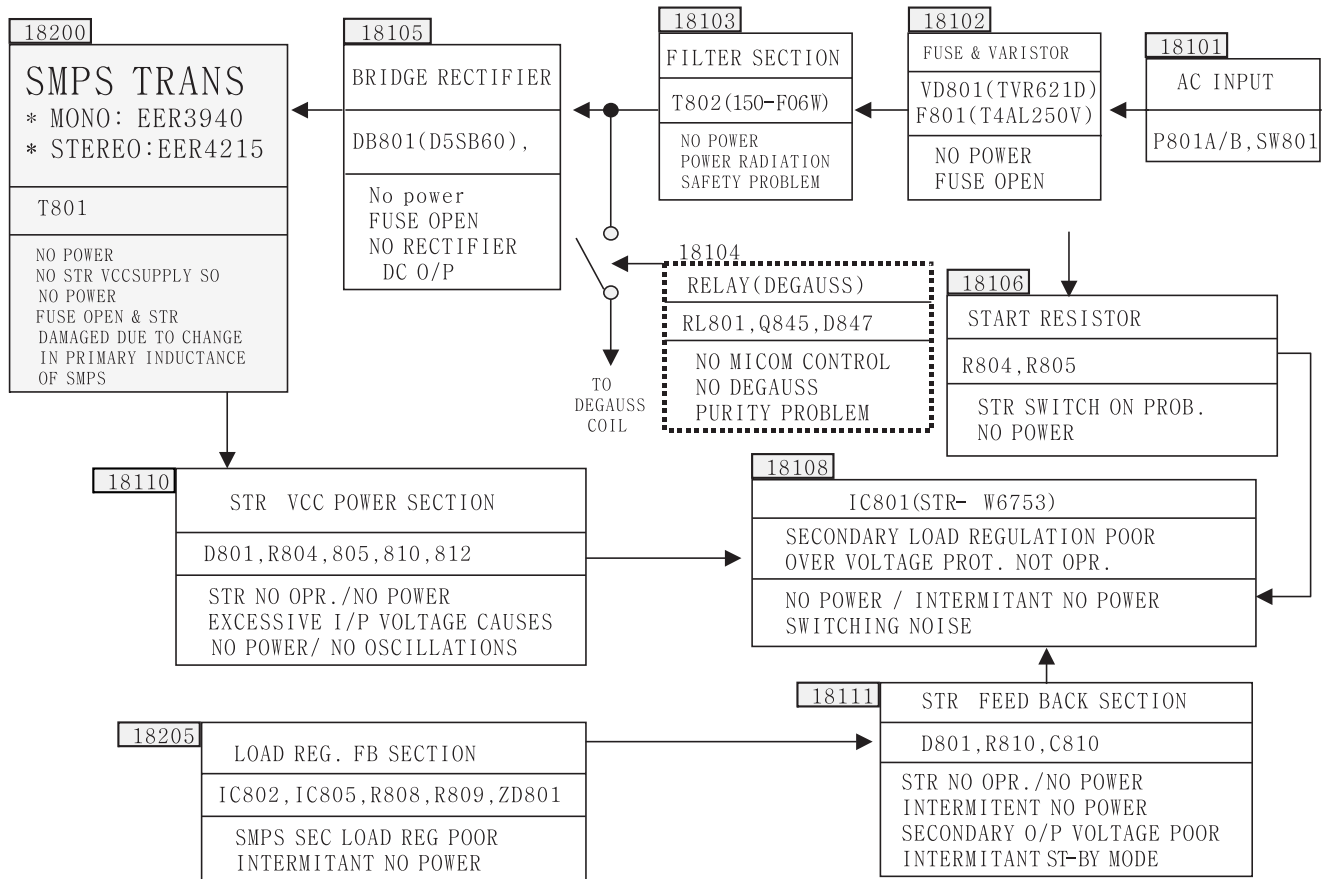
2. TU / IF SECTION



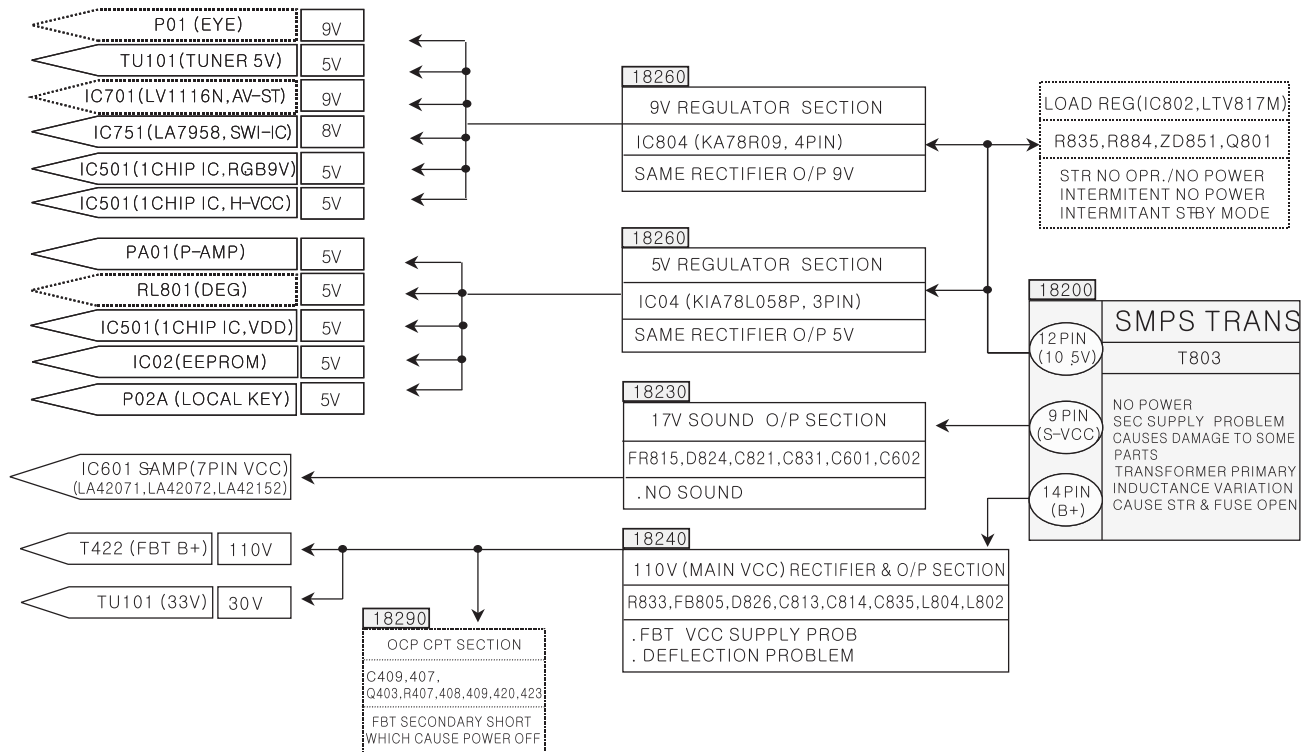
3. VIDEO PROCESSING



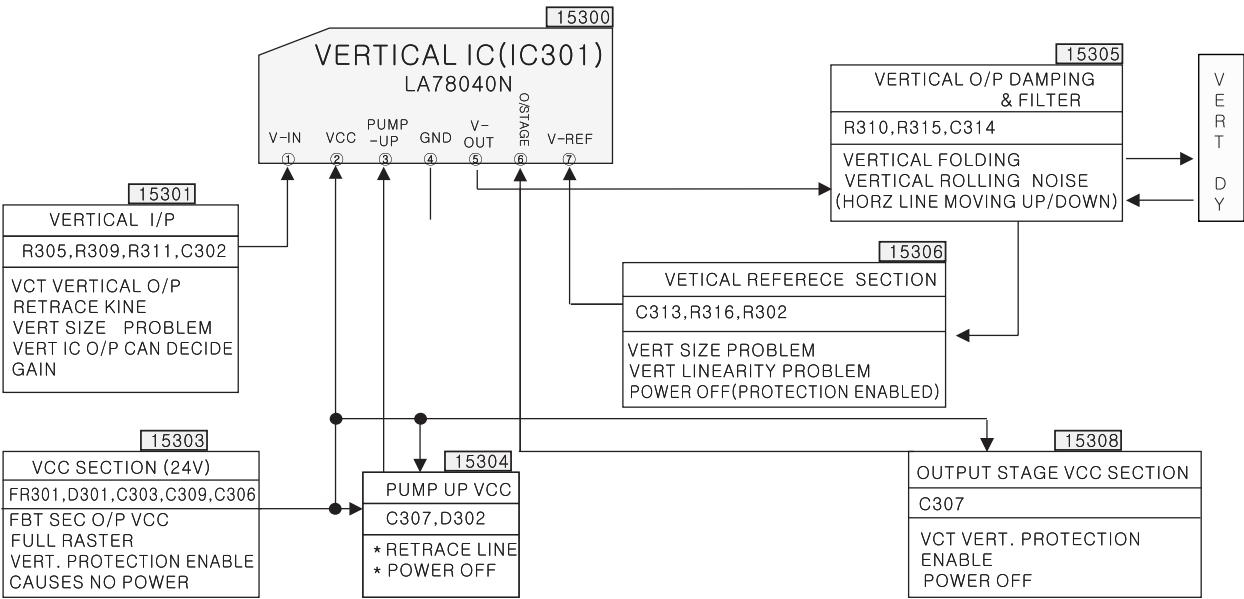
4. SMPS PRIMARY SECTION



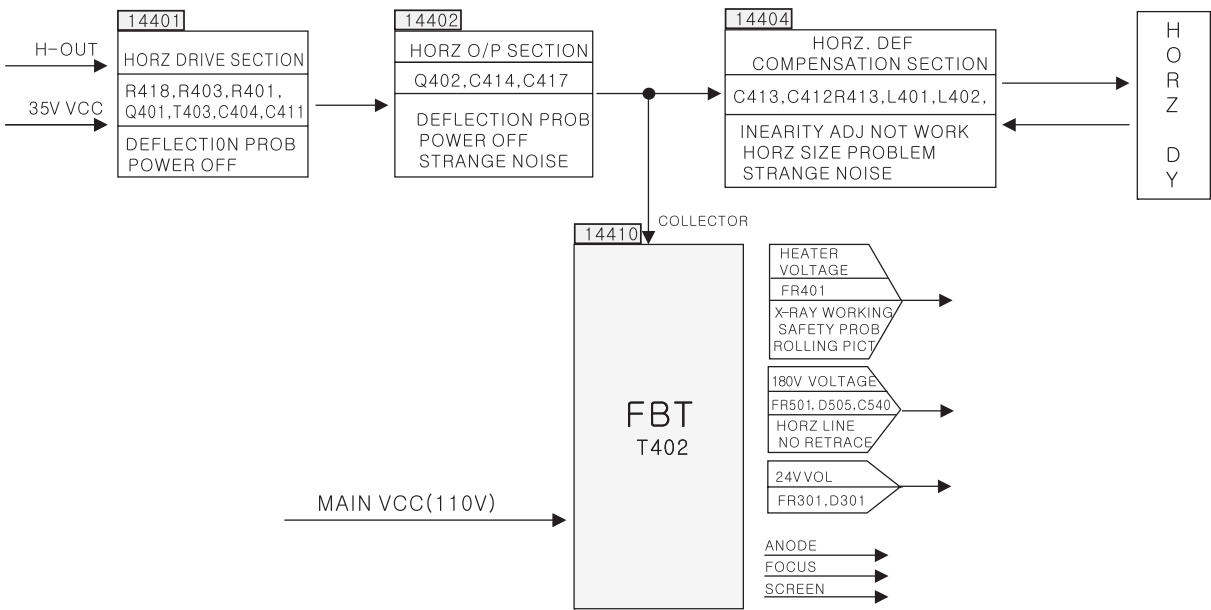
5. SMPS SECONDARY SECTION



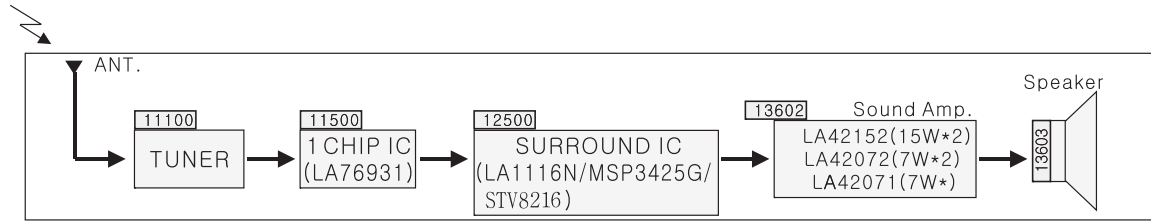
6. VERTICAL SECTION



7. HORIZONTAL SECTION



8. SOUND PROCESSING SECTION

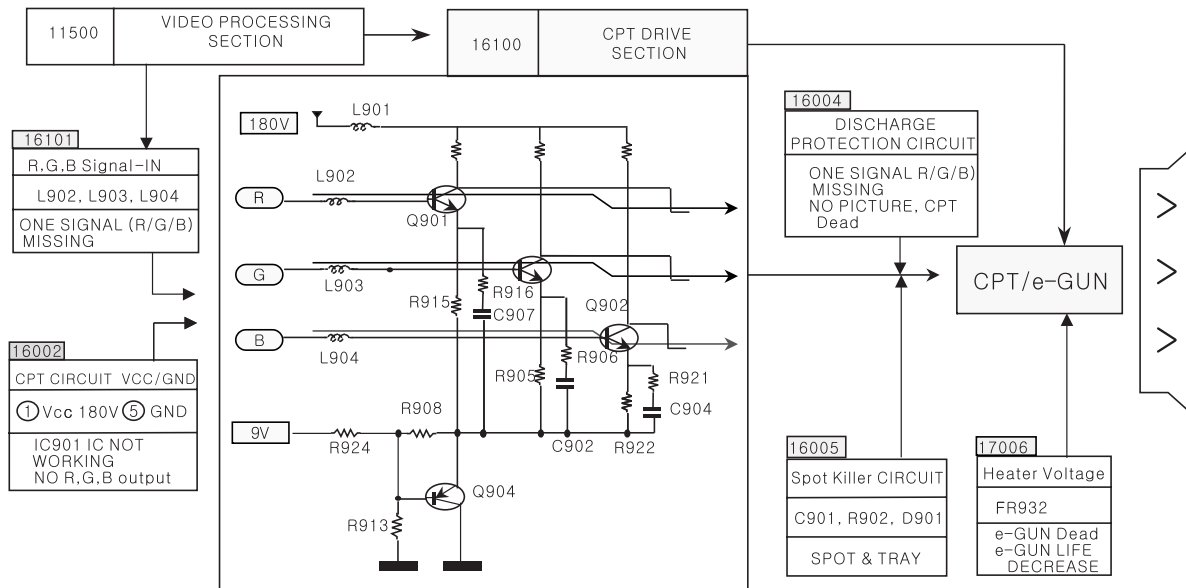
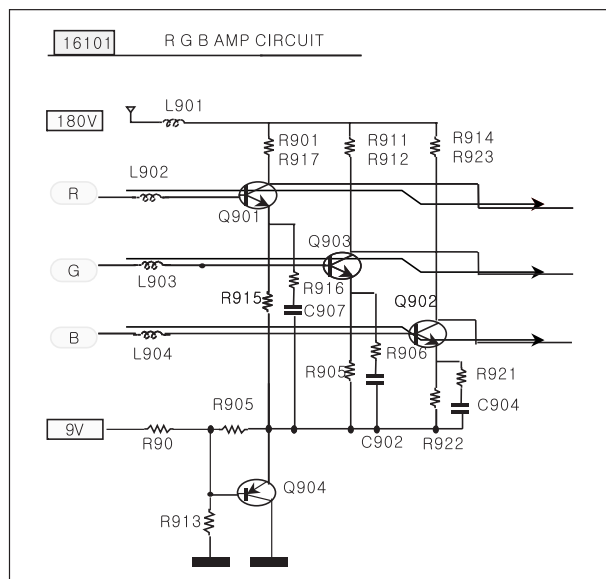


- TUNER : RF signal is feed to TUNER through Antenna. IF output from Tuner is then given to 1 CHIP IC.
- 1 CHIP IC : 1 CHIP IC processes the input IF. Demodulates Picture and sound information and gives analog R G B output for Display and SPKL/R as audio output, this sound output is further Amplified 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

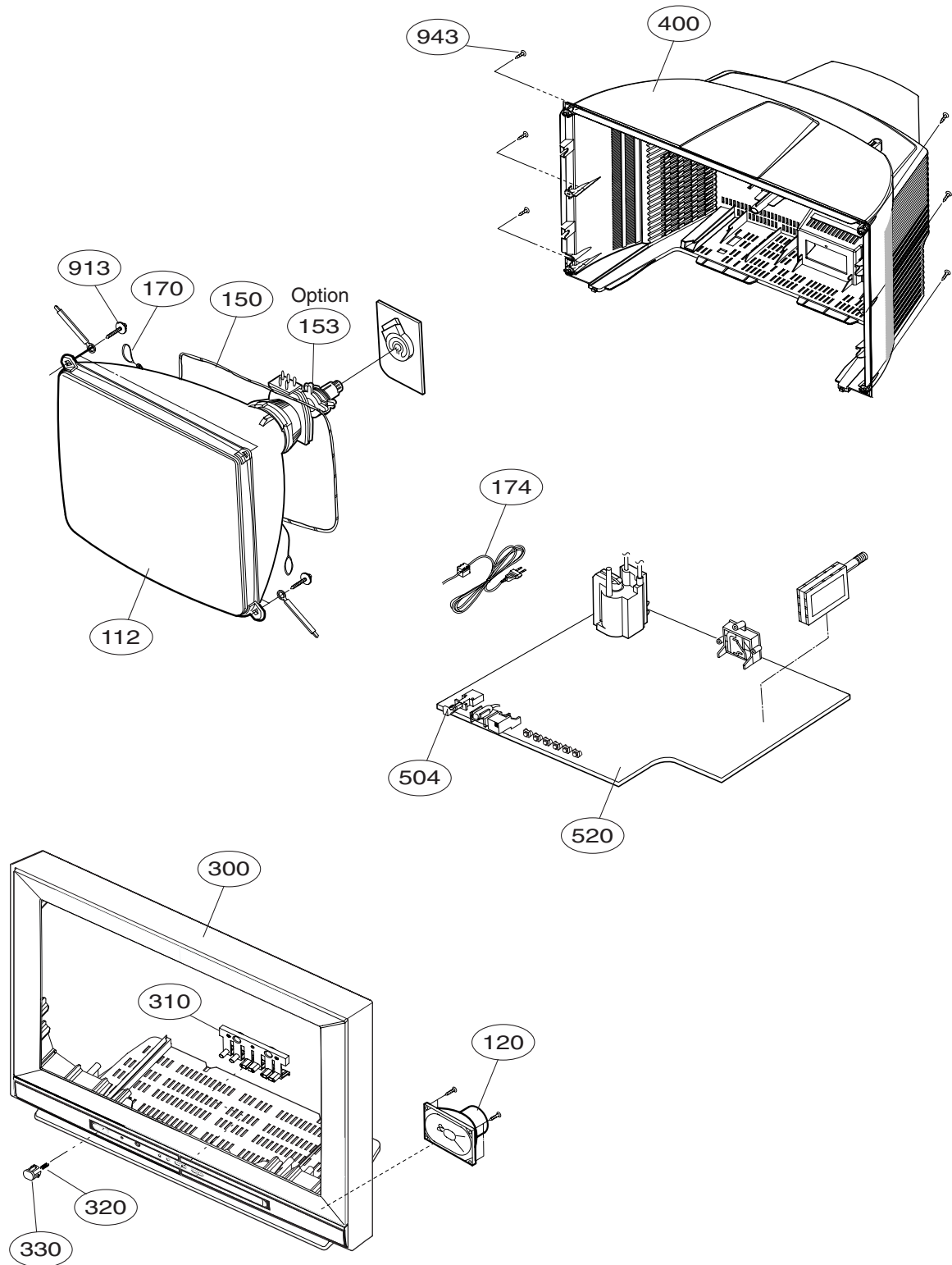
CPT Board Circuit 16100

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



MEMO

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	6334921001A	CPT,Bare A51QDJ420X A0MLYG 21INCH FLAT 4/3 16KHZ
	6334V21009B	CPT,Bare A51QDJ420X(G) 21INCH FLAT 4/3 16KHZ
	6335921011A	CPT,ITC A51QDJ420X 21(0.2G) 21INCH FLAT +0.5G 4/3 16KHZ 6150Z-1228Y
120	6400VA0018G	Speaker,Full Range JF SPK 5W/10W BARIUM 5W 8OHM 80DB 400HZ 71X41mM
Δ 150	6140VC2007E	Coil,Degaussing RT-21FB57V 11OHM AL 44T 0.6mM SQUARE 21INCH
Δ 153	61509-1004B	Coil,Deflection Yoke 1.72mH 21.2mH - - WIRE 129X98MM
	61509-1008A	Coil,Deflection Yoke 6150Z-1228R 1.74mH_21.2mH 1KV 16.5A_15.5A 21RF
Δ 170	170-A01N	Drawing,Assembly CPT EARTH UL1015 AWG22 21INCH NORMAL
Δ 174	174-225C	Power Cord Assembly TJC1 TJC1-2Y 2.0M 220MM 250V 5A H03VVH2-F
	6410VEH001B	Power Cord Assembly CE-503/H03VVH2-F 2X0.75MM2/2.4M/BLK CE-503
300	ACQ32204101	Cover Assembly 21FJ4AB-TH MC059B 21" C/A SY TOOL 2 TONE
	ACQ32204103	Cover Assembly 21FJ4RB-TH MC059B 21" C/A SY TOOL 1 TONE 117A C/SKD
	ACQ32204105	Cover Assembly 21FJ4RB-TH MC059B 21" C/A 1 TONE SET SY- FOUANI
310	5020900052B	Button MOLD ABS 380 CONTROL HF-380 6KEY LGERS LOCAL 117A DDM
	MBG36436501	Button,Control MOLD ABS 380 6 KEY HP-380 21FJ4AB-TH CONTROL LGESY
320	320-062H	Spring CUTTING STSC304 COIL STSC304
330	5020900051B	Button MOLD ABS 380 POWER 21FJ4RB-LD ABS, HF-380 1KEY LGERS 117A
	MBG36436401	Button,Power MOLD ABS 380 21FJ4AB-TH HF-380 POWER 1 KEY LGESY
400	ACQ32204701	Cover Assembly 21FJ4AB-TH MC059B 21" B/C SY TOOL BK PHONE
	ACQ32204702	Cover Assembly 21FJ4AB-TH MC059B 21" B/C SY TOOL BK PHONE
504	4520V00023A	Link MOLD HIPS POWER 14.7*13*9.1 HIPS 60HR SY, FOR 21FB3"
520	EBR30621906	PCB Assembly MAIN1 M.I MC059B 21FJ4RB-TH QLVLCBK SY TO LV
	EBR30621909	PCB Assembly MAIN1 M.I MC059B 21FJ4RB-TH QRULLCU SY TO LGERA
	EBR31421721	PCB Assembly MAIN1 M.I MC059B 21FJ4RB-TH.KFLLCEY
	EBR32888106	Hand Insert PCB Assembly MAIN 21FJ4AB-TH. KDRLCEY SY-SET KIEV
913	FAB30021402	Screw Assembly FAB30021402 TAPTITE P TYPE D5.0 L35.0 SAW TOOTHED
943	FAB30006309	Screw,Taptite 1SZZ9PB012A TH + P 4MM 16MM MSWR10 FZB

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-10PU-2.7 16KBIT 2KX8BIT 2.7
IC301	0IPRPSA006B	LA78040N 24VTO24V - 9W - ZIP ST 7P
IC501	0ICTMSA007B	LG046N9R58D0-E 7V 35mA 3.58MHZ 512BY
IC601	0IPMGSA024A	LA42071NLG-E 5.5TO20V 0.5V - 7W 15W
IC801	0IPMGSK016A	STR-W6753 16.3TO19.9V 8.8TO10.6V SWI
IC802	0IPRPKD003A	PC17L1(5V/35V 4P) 5V 35V 35V 50MA 10
IC803	0IKE780500Q	KIA7805API 7TO20V 5V 2W TO220IS ST 3
IC804	0IMCRKE002B	KIA78R09API 10TO25V 9V 1.5W TO220IS
Q840	0IMCRFA007A	KA431AZ 2.47TO2.52V 36V 770MW TO92 T
TRANSISTOR		
Q10	0TR319809AA	KTC3198(KTC1815) NPN 5V 60V 50V 150M
Q101	0TR319709AB	KTC3197 NPN 4V 30V 25V 50MA 100NA 20
Q102	0TR319809AA	KTC3198(KTC1815) NPN 5V 60V 50V 150M
Q111	0TR102009AB	KRC102M(KRC1202) NPN 30V - 50V 100MA
Q16	0TR102009AB	KRC102M(KRC1202) NPN 30V - 50V 100MA
Q241	0TR126609AA	KTA1266-Y(KTA1015) PNP -5V -50V -50V
Q301	0TR103009AD	KRC103M NPN 40V 0V 50V 100MA 500NA 7
Q401	0TR322809AA	KTC3228-O(KTC2383) NPN 6V 160V 160V
Q402	0TRSA10004A	TT2170LS-YB11 NPN 5V 1.5KV 800V 5A 1
Q403	0TRA21009CC	BF421(KEC) PNP -5V -0.3KV -0.3KV -0.
Q501	0TR319809AA	KTC3198(KTC1815) NPN 5V 60V 50V 150M
Q801	0TR319809AA	KTC3198(KTC1815) NPN 5V 60V 50V 150M
Q813	0TR102009AB	KRC102M(KRC1202) NPN 30V - 50V 100MA
Q901	0TR233009CA	KSC2330Y NPN 7V 300V 300V 100MA 100N
Q902	0TR233009CA	KSC2330Y NPN 7V 300V 300V 100MA 100N
Q903	0TR233009CA	KSC2330Y NPN 7V 300V 300V 100MA 100N
DIODE		
D111	0DSVH00019A	BA282 1V 35V 100MA 350A 1SEC 350W DO
D301	0DRDC00014A	TVR06J 600V 1.3V 10UA 25A 150NSEC DO
D302	0DRDC00014C	1N4005GP 600V 1.1V 5UA 30A 0SEC DO41
D303	0DS141489AB	1N4148 1V 100V 150MA 500MA 4NSEC 500
D403	0DS141489AB	1N4148 1V 100V 150MA 500MA 4NSEC 500
D405	0DS141489AB	1N4148 1V 100V 150MA 500MA 4NSEC 500
D501	0DS141489AB	1N4148 1V 100V 150MA 500MA 4NSEC 500
D502	0DS141489AB	1N4148 1V 100V 150MA 500MA 4NSEC 500
D505	0DRDC00014A	TVR06J 600V 1.3V 10UA 25A 150NSEC DO
D601	0DS141489AB	1N4148 1V 100V 150MA 500MA 4NSEC 500
D801	0DRDC00014Q	EU12S 200V 2.5V 10UA 15A 120NSEC DO4
D802	0DRDC00014J	EU12Z 200V 2.5V 10UA 15A 50NSEC DO41
D803	0DRDC00014J	EU12Z 200V 2.5V 10UA 15A 50NSEC DO41
D813	0DRDC00014F	RU3AM 600V 1.1V 10UA 50A 90NSEC DO15
D815	0DRDC00014A	TVR06J 600V 1.3V 10UA 25A 150NSEC DO
D826	0DRDC00014F	RU3AM 600V 1.1V 10UA 50A 90NSEC DO15
D834	0DRDC00014F	RU3AM 600V 1.1V 10UA 50A 90NSEC DO15
D902	0DS141489AB	1N4148 1V 100V 150MA 500MA 4NSEC 500

LOCA. NO	PART NO	DESCRIPTION
D903	0DRDC00014R	1n4003 300V 1.1V 10UA 30A 1.5USEC DO
DB801	0DRTW00131A	D2SB60 600V 1.05V 10UA 80A GBL ST 4P
ZD102	0DZ510009BF	GDZ5.1B 5.1V 4.94TO5.2V 200HM 500MW
ZD103	0DZ300009AG	GDZJ30B 30V 27.7TO29.13V 55OHM 500MW
ZD412	0DZ910009BD	GDZJ9.1B . 9.1V 8.57TO9.01V 25OHM 50
ZD505	0DZ910009BD	GDZJ9.1B . 9.1V 8.57TO9.01V 25OHM 50
ZD506	0DZ910009BD	GDZJ9.1B . 9.1V 8.57TO9.01V 25OHM 50
ZD801	0DZ620009AH	MTZJ6.2A 6.2V 5.78TO6.09V 30OHM 500M
ZD802	0DZ510009BF	GDZ5.1B 5.1V 4.94TO5.2V 200HM 500MW
ZD804	0DZ510009BE	GDZ5.1B 5.1V 4.94TO5.2V 200HM 500MW
ZD851	0DZ620009AH	MTZJ6.2A 6.2V 5.78TO6.09V 30OHM 500M
ZD851	0DZ910009BD	GDZJ9.1B . 9.1V 8.57TO9.01V 25OHM 50
CAPACITOR		
C103	0CE106DK618	SMS5.0TP50VB10M 10uF 20% 50V 72MA -4
C104	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R
C105	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R
C107	0CN1020K519	RH UP050 B102K-B-B 1nF 10% 50V Y5P -
C108	0CE337DD618	SMS5.0TP10VB330M 330uF 20% 10V 386MA
C109	0CE225DK618	EGR225M050T1G1C11G 2.2uF 20% 50V 20M
C11	0CC1800K415	DD1HCH180J749 18pF 5% 50V C0H -25TO+
C110	0CE225DK618	EGR225M050T1G1C11G 2.2uF 20% 50V 20M
C111	0CE476DF618	SMS5.0TP16VB47M 47uF 20% 16V 0A -40T
C116	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R
C12	0CC1800K415	DD1HCH180J749 18pF 5% 50V C0H -25TO+
C132	0CE107DF618	EGR107M016T1G1C11G 100uF 20% 16V 160
C14	0CE227DD618	EGR227M010T1G1E11G 220uF 20% 10V 255
C15	0CE334DK618	EGR334M050T1G1C11G 330nF 20% 50V 3MA
C16	0CE225DK618	EGR225M050T1G1C11G 2.2uF 20% 50V 20M
C17	0CQ3331N509	PEI333K2AT 33nF 10% 100V PE -40TO+85
C19	0CN1020K519	RH UP050 B102K-B-B 1nF 10% 50V Y5P -
C215	0CN4710K519	RH UP050 B471K-B-B 470pF 10% 50V Y5P
C246	0CE227DD618	EGR227M010T1G1E11G 220uF 20% 10V 255
C28	0CE107DD618	SMS5.0TP10VB100M 100uF 20% 10V 157MA
C30	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R
C301	0CQ3921N409	310M 2A 392 J 3.9nF 5% 100V PE -40TO
C303	0CK4710W515	DCM471K20Y5PL6FJ5A 470pF 10% 500V Y5
C305	0CQ6831N509	PEI683K2AT 68nF 10% 100V PE -40TO+85
C306	0CQ4731N509	PEI473K2AT 47nF 10% 100V PE -40TO+85
C307	0CE107DJ618	SMS5.0TP35VB100M 100uF 20% 35V 291MA
C308	0CE476DF618	SMS5.0TP16VB47M 47uF 20% 16V 0A -40T
C309	0CE227DJ618	EGR227M035T1G1H15G 220uF 20% 35V 390
C310	0CQ1041N409	310M 2A 104 J 100nF 5% 100V PE -40TO
C312	0CE105DK618	EGR105M050T1G1C11G 1uF 20% 50V 10MA
C313	0CE106DK618	SMS5.0TP50VB10M 10uF 20% 50V 72MA -4
C314	0CQ1041N409	310M 2A 104 J 100nF 5% 100V PE -40TO
C321	0CE108DH618	SMS5.0TP25VB1000M 1000uF 20% 25V 1.3
C322	0CN1020K519	RH UP050 B102K-B-B 1nF 10% 50V Y5P -
C40	0CE107DD618	SMS5.0TP10VB100M 100uF 20% 10V 157MA

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LOCA. NO	PART NO	DESCRIPTION
C404	0CK4710W515	DCM471K20Y5PL6FJ5A 470pF 10% 500V Y5
C407	0CE106DH618	SMS5.0TP25VB10M 10uF 20% 25V 72MA -4
C408	0CE225DP618	EGR225M160T1G1E11G 2.2uF 20% 160V 30
C409	0CE227DD618	EGR227M010T1G1E11G 220uF 20% 10V 255
C412	181-013P	MPP334J2GD 330nF 5% 400V MPP -40TO+8
C413	0CK2220W515	DCM222K34Y5PL6FJ5A 2.2nF 10% 500V Y5
C414	181-015F	MPPS732H3VD 7.3nF 3% 1.6KV MPP -40TO
C415	0CE475DK618	EGR475M050T1G1C11G 4.7uF 20% 50V 50M
C417	181-091U	DG3DHR221K825 220pF 10% 2000V Y5R -2
C50	0CN2210K519	RH UP050 B221K-B-B 220pF 10% 50V Y5P
C501	0CX3300K409	RH UP050SL330J-B-B 33pF 5% 50V S2L -
C502	0CN2230H949	RH TP050 F223Z-B-B 22nF -20TO+80% 25
C503	0CX3300K409	RH UP050SL330J-B-B 33pF 5% 50V S2L -
C504	0CE105DK618	EGR105M050T1G1C11G 1uF 20% 50V 10MA
C505	0CN1010K519	RH UP050 B101K-B-B 100pF 10% 50V Y5P
C506	0CN2230H949	RH TP050 F223Z-B-B 22nF -20TO+80% 25
C507	0CN1520F569	RH EP050 X152K-B-B 1.5nF 10% 16V X7R
C508	0CE475DK618	EGR475M050T1G1C11G 4.7uF 20% 50V 50M
C509	0CE226DK618	SMS5.0TP50VB22M 22uF 20% 50V 108MA -
C51	0CN2210K519	RH UP050 B221K-B-B 220pF 10% 50V Y5P
C510	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R
C511	0CE107DD618	SMS5.0TP10VB100M 100uF 20% 10V 157MA
C512	0CF4741L438	PCMT 365 76474 470nF 5% 63V MPE -40T
C513	181-007F	ECQ-V1H224JL3(TR) 220nF 5% 50V MPE -
C514	181-009R	PPN223K2DH 22nF 10% 200V PP -40TO+85
C515	0CE227DD618	EGR227M010T1G1E11G 220uF 20% 10V 255
C516	0CQ1531N509	PEI153K2AT 15nF 10% 100V PE -40TO+85
C517	0CE335DK618	SMS5.0TP50VB3.3M 3.3uF 20% 50V 42MA
C518	0CE107DD618	SMS5.0TP10VB100M 100uF 20% 10V 157MA
C519	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R
C520	0CN8220F579	RH EP050 Y822K-B-B 8.2nF 10% 16V X5R
C521	0CE107DD618	SMS5.0TP10VB100M 100uF 20% 10V 157MA
C523	0CE477DD618	EGR477M010T6G1G11G 470uF 20% 10V 425
C524	0CE474DK618	EGR474M050T1G1C11G 470nF 20% 50V 5MA
C526	0CE107DD618	SMS5.0TP10VB100M 100uF 20% 10V 157MA
C527	0CE105DK618	EGR105M050T1G1C11G 1uF 20% 50V 10MA
C528	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R
C529	0CE105DK618	EGR105M050T1G1C11G 1uF 20% 50V 10MA
C530	0CE225DK618	EGR225M050T1G1C11G 2.2uF 20% 50V 20M
C531	0CE474DK618	EGR474M050T1G1C11G 470nF 20% 50V 5MA
C532	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C533	0CQ4731N509	PEI473K2AT 47nF 10% 100V PE -40TO+85
C534	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R
C535	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R
C537	0CN1010K519	RH UP050 B101K-B-B 100pF 10% 50V Y5P
C539	0CN1010K519	RH UP050 B101K-B-B 100pF 10% 50V Y5P
C540	0CE475DR618	EGR475M250T1G1G11G 4.7uF 20% 250V 70
C542	0CQ1831N509	PEI183K2AT 18nF 10% 100V PE -40TO+85
C543	0CQ2231N509	PEI223K2AT 22nF 10% 100V PE -40TO+85
C545	0CQ2231N509	PEI223K2AT 22nF 10% 100V PE -40TO+85
C546	0CN8200K519	RH UP050 B820K-B-B 82pF 10% 50V Y5P
C56	0CN4710K519	RH UP050 B471K-B-B 470pF 10% 50V Y5P

LOCA. NO	PART NO	DESCRIPTION
C582	0CN3320F569	RH EP050 X332K-B-B 3.3nF 10% 16V X7R
C602	0CE336DF618	EGR336M016T1G1C11G 33uF 20% 16V 95MA
C603	0CE475DK618	EGR475M050T1G1C11G 4.7uF 20% 50V 50M
C604	0CQ5621N519	PEN562K2AT 5.6nF 10% 100V PE -40TO+8
C606	181-007C	ECQV1H104JL3 100nF 5% 50V MPE -40TO+
C608	0CE106DF618	SMS5.0TP16VB10M 10uF 20% 16V 72MA -
C611	0CE476DH618	SMS5.0TP25VB47M 47uF 20% 25V 131MA -
C612	181-007C	ECQV1H104JL3 100nF 5% 50V MPE -40TO+
C802	0CQZVBK002C	PCX2 335 91592 0.22uF 10% 275V MPP -
C803	0CE337KV6A0	LTW337M450S1A5S45G 330uF 20% 450V 1.
C804	0CK10202515	DCH102K39Y5PP7FJ5A 1nF 10% 2000V Y5P
C805	0CK10202515	DCH102K39Y5PP7FJ5A 1nF 10% 2000V Y5P
C809	0CE105DK618	EGR105M050T1G1C11G 1uF 20% 50V 10MA
C810	0CE336DK618	SMS5.0TP50VB33M 33uF 20% 50V 151MA -
C811	181-011B	MPPS102J3VD 1nF 5% 1.6KV MPP -40TO+8
C813	181-091R	LRYM7102KHA 1nF 10% 1000V Y5R -25TO+
C814	0CE227DP61A	EGR227M160T1G1M32G 220uF 20% 160V 81
C815	0CK8210K515	DCT821K20Y5PF6FJ5A 820pF 10% 50V Y5P
C817	181-007C	ECQV1H104JL3 100nF 5% 50V MPE -40TO+
C818	0CQ2231N509	PEI223K2AT 22nF 10% 100V PE -40TO+85
C818	0CQ4731N509	PEI473K2AT 47nF 10% 100V PE -40TO+85
C819	0CK1520K515	DCT152K22Y5PF6FJ5A 1.5nF 10% 50V Y5P
C821	0CK4710W515	DCM471K20Y5PL6FJ5A 470pF 10% 500V Y5
C826	0CE228DF618	SMS5.0TP16VB2200M 2200uF 20% 16V 2.0
C828	0CE476DD618	EGR476M010T1G1C11G 47uF 20% 10V 105M
C831	0CE227DF618	EGR227M016T6G1G11G 220uF 20% 16V 265
C833	0CE107DD618	SMS5.0TP10VB100M 100uF 20% 10V 157MA
C835	0CE476CP618	SHL5.0TP160VB47M 47uF 20% 160V 341MA
C839	0CE228DF618	SMS5.0TP16VB2200M 2200uF 20% 16V 2.0
C843	181-120K	SDE222M16FS1 2.2nF 20% 4000V Y5U -25
C847	0CE105CP638	SHL5.0TP160VB1M 1uF 20% 160V 27MA -2
C850	0CE477DF618	EGR477M016T1G1G11G 470uF 20% 16V 450
C853	0CE107DD618	SMS5.0TP10VB100M 100uF 20% 10V 157MA
C901	0CE475DR618	EGR475M250T1G1G11G 4.7uF 20% 250V 70
C902	0CN2210K519	RH UP050 B221K-B-B 220pF 10% 50V Y5P
C904	0CN1810K519	RH UP050 B181K-B-B 180pF 10% 50V Y5P
C907	0CN2210K519	RH UP050 B221K-B-B 220pF 10% 50V Y5P
C908	0CK12202510	DCH122K43Y5PP73K0A 1.2nF 10% 2000V Y
R226	0CN1010K519	RH UP050 B101K-B-B 100pF 10% 50V Y5P
R511	0CN8220F579	RH EP050 Y822K-B-B 8.2nF 10% 16V X5R
R552	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R
R904	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R

COIL & INDUCTOR

C115	0LA0680K119	Inductor,Wire Wound,Axial LAL02TBR68K 680NH
J101	0LA0102K119	Inductor,Wire Wound,Axial LAL02TB100K 10UH
L102	0LA0820K119	Inductor,Wire Wound,Axial LAL02TBR82K 820NH
L221	0LA1000K119	Inductor,Wire Wound,Axial LAL02TB101K 100UH
L225	0LA0101K119	Inductor,Wire Wound,Axial LAL02TB1R0K 1UH
L401	150-L01R	Coil,Linearity CN-20F7X/20J3B 38uH
L402	6140VB0001F	Coil,Choke CT-21Q42EF 130uH DC 500V
L501	0LA0102K119	Inductor,Wire Wound,Axial LAL02TB100K 10UH

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

LOCA. NO	PART NO	DESCRIPTION
L546	0LA0821K119	Inductor,Wire Wound,Axial LAL02TB8R2K 8.2UH
L802	150-C02F	Coil,Choke LEAD 82uH 50V 12X17MM
T402	6174V-6006V	Transformer,FBT BSC25-N1651 0 112V
T403	151-C02B	Transformer,Switching 151-C02B EI2519
T803	6170VMCA43L	Transformer,Switching 6170VMCA43L EER3940
CONNECTOR		
P101	366-921B	GIL-G-03P-S3T2-E 3P 2.54MM 1R STRAIG
P401	366-043K	35929-0410 4P 10.00MM 1R STRAIGHT DI
P605	366-921B	GIL-G-03P-S3T2-E 3P 2.54MM 1R STRAIG
P801	366-043B	35929-0210 2P 10.00MM 1R STRAIGHT DI
P802	366-043B	35929-0210 2P 10.00MM 1R STRAIGHT DI
	387-603E	LPI-025-027 9P 4P-5P UL1007 N . YUE
	387-917J	387-917J 35740-8610 35740-8610 500mM
	6631V25023C	6631V25023C LGC-3Y 35097-9702_35098-
RESISTOR		
FR301	0RF0101J607	FN-01T3J1R00 1OHM 5% 1W 12.0X4.0MM 0
FR401	0RF0141K607	FNS02T3J1R40 1.4OHM 5% 2W 12.0X4.0MM
FR403	0RF0121K607	FNS02T3J1R20 1.2OHM 5% 2W 12.0X4.0MM
FR501	0RF0101J607	FN-01T3J1R00 1OHM 5% 1W 12.0X4.0MM 0
FR825	0RP0050H709	SPF92T1KR050 0.05OHM 10% 1/2W 3.2X2.
FR932	0RF0101K607	FNS02T3J1R00 1OHM 5% 2W 12.0X4.0MM 0
J109	0RD2700F609	RD-96T1J270R 270OHM 5% 1/6W 3.2X1.8M
R1	0RD6800F609	RD-96T1J680R 680OHM 5% 1/6W 3.2X1.8M
R101	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8M
R102	0RD3601F609	RD-96T1J3K60 3.6KOHM 5% 1/6W 3.2X1.8
R103	0RD1201F609	RD-96T1J1K20 1.2KOHM 5% 1/6W 3.2X1.8
R104	0RD0222F609	RD-96T1J22R0 22OHM 5% 1/6W 3.2X1.8MM
R105	0RD3900F609	RD-96T1J390R 390OHM 5% 1/6W 3.2X1.8M
R108	0RD1802F609	RD-96T1J18K0 18KOHM 5% 1/6W 3.2X1.8M
R109	0RD1003F609	RD-96T1J100K 100KOHM 5% 1/6W 3.2X1.8
R11	0RD1003F609	RD-96T1J100K 100KOHM 5% 1/6W 3.2X1.8
R110	0RS2402K607	RSD02T3J24K0 24KOHM 5% 2W 12.0X4.0MM
R111	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8
R112	0RD2201F609	RD-96T1J2K20 2.2KOHM 5% 1/6W 3.2X1.8
R113	0RD2201F609	RD-96T1J2K20 2.2KOHM 5% 1/6W 3.2X1.8
R121	0RD0222F609	RD-96T1J22R0 22OHM 5% 1/6W 3.2X1.8MM
R132	0RS0392J607	RS-01T3J39R0 39OHM 5% 1W 12.0X4.0MM
R150	0RD1003F609	RD-96T1J100K 100KOHM 5% 1/6W 3.2X1.8
R152	0RD1002F609	RD-96T1J10K0 10KOHM 5% 1/6W 3.2X1.8M
R153	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R154	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R16	0RD1201F609	RD-96T1J1K20 1.2KOHM 5% 1/6W 3.2X1.8
R17	0RD1801F609	RD-96T1J1K80 1.8KOHM 5% 1/6W 3.2X1.8
R17	0RD2401F609	RD-96T1J2K40 2.4KOHM 5% 1/6W 3.2X1.8
R18	0RD2701F609	RD-96T1J2K70 2.7KOHM 5% 1/6W 3.2X1.8
R19	0RD1801F609	RD-96T1J1K80 1.8KOHM 5% 1/6W 3.2X1.8
R20	0RD3600F609	RD-96T1J360R 360OHM 5% 1/6W 3.2X1.8M
R21	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8
R22	0RD1003F609	RD-96T1J100K 100KOHM 5% 1/6W 3.2X1.8
R23	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8

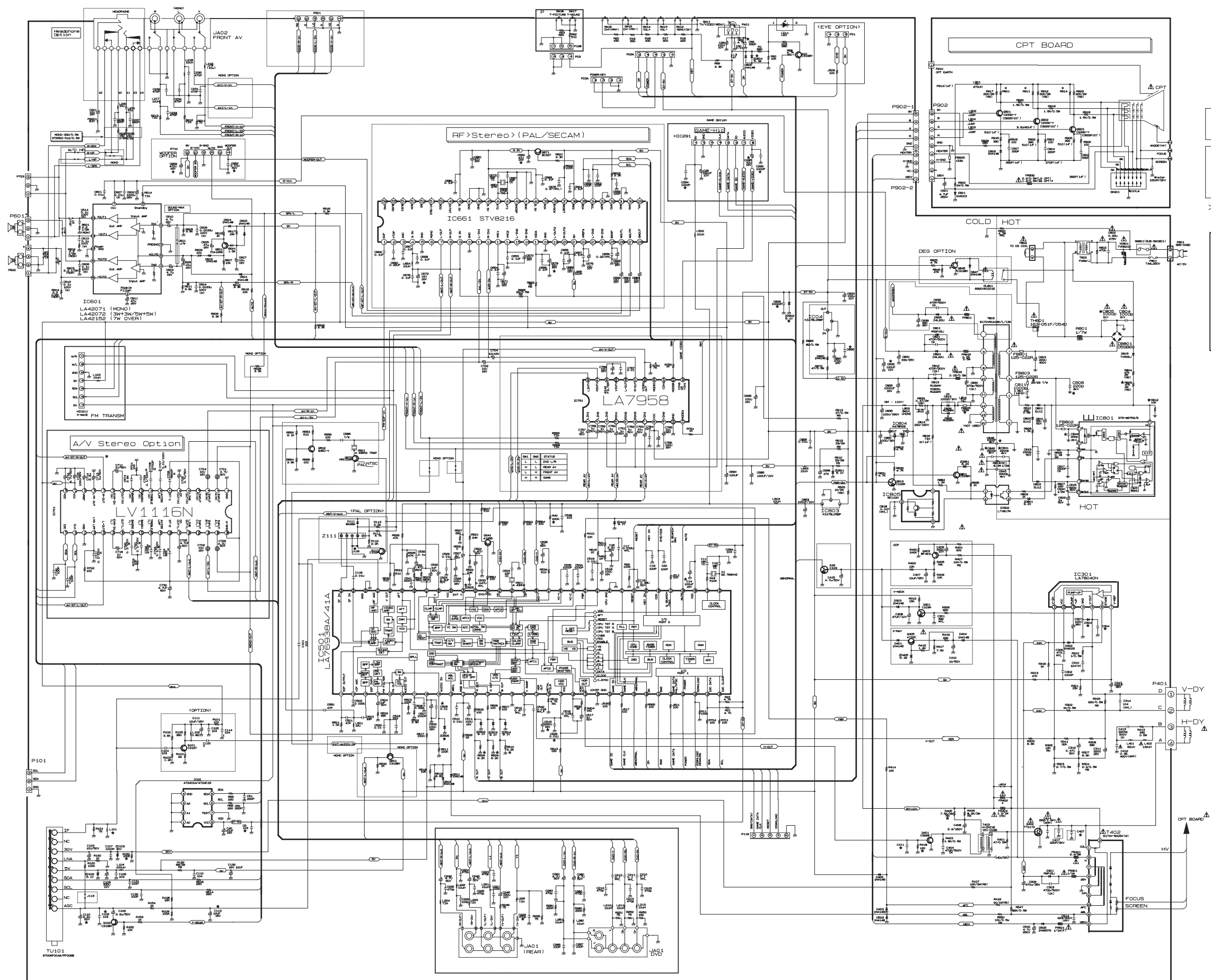
LOCA. NO	PART NO	DESCRIPTION
R247	0RD5100F609	RD-96T1J510R 510OHM 5% 1/6W 3.2X1.8M
R249	0RD0752F609	RD-96T1J75R0 75OHM 5% 1/6W 3.2X1.8MM
R301	0RN1502F409	RN-96T1F15K0 15KOHM 1% 1/6W 3.2X1.8M
R302	0RD6200A609	RDM92T1J620R 620OHM 5% 1/2W 6.5X2.3M
R303	0RD0201A609	RDM92T1J2R00 2OHM 5% 1/2W 6.5X2.3MM
R304	0RD0201A609	RDM92T1J2R00 2OHM 5% 1/2W 6.5X2.3MM
R305	0RN1202F609	RN-96T1J12K0 12KOHM 5% 1/6W 3.2X1.8M
R306	0RD8202F609	RD-96T1J82K0 82KOHM 5% 1/6W 3.2X1.8M
R307	0RD6801F609	RD-96T1J6K80 6.8KOHM 5% 1/6W 3.2X1.8
R308	0RD4302F609	RD-96T1J43K0 43KOHM 5% 1/6W 3.2X1.8M
R309	0RD6801F609	RD-96T1J6K80 6.8KOHM 5% 1/6W 3.2X1.8
R309	0RN6801F409	RN-96T1F6K80 6.8KOHM 1% 1/6W 3.2X1.8
R310	0RD0101A609	RDM92T1J1R00 1OHM 5% 1/2W 6.5X2.3MM
R311	0RD3002F609	RD-96T1J30K0 30KOHM 5% 1/6W 3.2X1.8M
R312	0RD1502F609	RD-96T1J15K0 15KOHM 5% 1/6W 3.2X1.8M
R313	0RN4702F409	RN-96T1F47K0 47KOHM 1% 1/6W 3.2X1.8M
R315	0RS2700H609	RSD92T1J270R 270OHM 5% 1/2W 6.5X2.3M
R401	0RD0472A609	RDM92T1J47R0 47OHM 5% 1/2W 6.5X2.3MM
R403	0RD2001A609	RDM92T1J2K00 2KOHM 5% 1/2W 6.5X2.3MM
R404	0RD1500F609	RD-96T1J150R 150OHM 5% 1/6W 3.2X1.8M
R406	0RS6801K607	RSD02T3J6K80 6.8KOHM 5% 2W 12.0X4.0M
R407	0RS1002H609	RS-92T1J10K0 10KOHM 5% 1/2W 9.0X3.0M
R408	0RD7502F609	RD-96T1J75K0 75KOHM 5% 1/6W 3.2X1.8M
R409	0RD1002F609	RD-96T1J10K0 10KOHM 5% 1/6W 3.2X1.8M
R41	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8M
R410	0RD5101F609	RD-96T1J5K10 5.1KOHM 5% 1/6W 3.2X1.8
R413	0RD3300A609	RDM92T1J330R 330OHM 5% 1/2W 6.5X2.3M
R414	0RD1002F609	RD-96T1J10K0 10KOHM 5% 1/6W 3.2X1.8M
R416	0RS1001J607	RS-01T3J1K00 1KOHM 5% 1W 12.0X4.0MM
R42	0RD1004F609	RD-96T1J1M00 1MOHM 5% 1/6W 3.2X1.8MM
R421	0RD3300F609	RD-96T1J330R 330OHM 5% 1/6W 3.2X1.8M
R423	0RD3001F609	RD-96T1J3K00 3KOHM 5% 1/6W 3.2X1.8MM
R424	0RD2403A609	RDM92T1J240K 240KOHM 5% 1/2W 6.5X2.3
R43	0RD2703F609	RD-96T1J270K 270KOHM 5% 1/6W 3.2X1.8
R430	0RD5602F609	RD-96T1J56K0 56KOHM 5% 1/6W 3.2X1.8M
R502	0RD3902F609	RD-96T1J39K0 39KOHM 5% 1/6W 3.2X1.8M
R504	0RD1002F609	RD-96T1J10K0 10KOHM 5% 1/6W 3.2X1.8M
R505	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8M
R506	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8M
R507	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8M
R508	0RD3901F609	RD-96T1J3K90 3.9KOHM 5% 1/6W 3.2X1.8
R509	0RD3901F609	RD-96T1J3K90 3.9KOHM 5% 1/6W 3.2X1.8
R510	0RD3901F609	RD-96T1J3K90 3.9KOHM 5% 1/6W 3.2X1.8
R512	0RN4701F409	RN-96T1F4K70 4.7KOHM 1% 1/6W 3.2X1.8
R513	0RD1300F609	RD-96T1J130R 130OHM 5% 1/6W 3.2X1.8M
R514	0RD2200F609	RD-96T1J220R 220OHM 5% 1/6W 3.2X1.8M
R515	0RD0102F609	RD-96T1J10R0 10OHM 5% 1/6W 3.2X1.8MM
R516	0RD2200F609	RD-96T1J220R 220OHM 5% 1/6W 3.2X1.8M
R519	0RD1202F609	RD-96T1J12K0 12KOHM 5% 1/6W 3.2X1.8M
R521	0RD7501F609	RD-96T1J7K50 7.5KOHM 5% 1/6W 3.2X1.8
R522	0RD2402F609	RD-96T1J24K0 24KOHM 5% 1/6W 3.2X1.8M
R523	0RD1803F609	RD-96T1J180K 180KOHM 5% 1/6W 3.2X1.8

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LOCA. NO	PART NO	DESCRIPTION
R524	0RD2700F609	RD-96T1J270R 270OHM 5% 1/6W 3.2X1.8M
R525	0RD6202F609	RD-96T1J62K0 62KOHM 5% 1/6W 3.2X1.8M
R526	0RD4702F609	RD-96T1J47K0 47KOHM 5% 1/6W 3.2X1.8M
R527	0RD0752F609	RD-96T1J75R0 75OHM 5% 1/6W 3.2X1.8MM
R528	0RD8201F609	RD-96T1J8K20 8.2KOHM 5% 1/6W 3.2X1.8
R529	0RD0392F609	RD-96T1J39R0 39OHM 5% 1/6W 3.2X1.8MM
R530	0RD2700F609	RD-96T1J270R 270OHM 5% 1/6W 3.2X1.8M
R530	0RD3300F609	RD-96T1J330R 330OHM 5% 1/6W 3.2X1.8M
R531	0RD3300F609	RD-96T1J330R 330OHM 5% 1/6W 3.2X1.8M
R532	0RD3901F609	RD-96T1J3K90 3.9KOHM 5% 1/6W 3.2X1.8
R533	0RD2700F609	RD-96T1J270R 270OHM 5% 1/6W 3.2X1.8M
R537	0RD3300F609	RD-96T1J330R 330OHM 5% 1/6W 3.2X1.8M
R547	0RD1003A609	RDM92T1J100K 100KOHM 5% 1/2W 6.5X2.3
R550	0RS1002H609	RS-92T1J10K0 10KOHM 5% 1/2W 9.0X3.0M
R561	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8M
R565	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8M
R566	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8
R58	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8
R603	0RD0221A609	RDM92T1J2R20 2.2OHM 5% 1/2W 6.5X2.3M
R604	0RD0221A609	RDM92T1J2R20 2.2OHM 5% 1/2W 6.5X2.3M
R611	0RD3901F609	RD-96T1J3K90 3.9KOHM 5% 1/6W 3.2X1.8
R618	0RD1002F609	RD-96T1J10K0 10KOHM 5% 1/6W 3.2X1.8M
R620	0RS0821K607	RSD02T3J8R20 8.2OHM 5% 2W 12.0X4.0MM
R65	0RD2200F609	RD-96T1J220R 220OHM 5% 1/6W 3.2X1.8M
R66	0RD3301F609	RD-96T1J3K30 3.3KOHM 5% 1/6W 3.2X1.8
R69	0RD2200F609	RD-96T1J220R 220OHM 5% 1/6W 3.2X1.8M
R72	0RD6800F609	RD-96T1J680R 680OHM 5% 1/6W 3.2X1.8M
R801	180-A03Q	RWR07SPJ1R00 1OHM 5% 7W 36X9.5X9.5MM
R802	0RKZVTA001K	RN-92T1J470K 470KOHM 5% 1/2W 9.0X3.0
R803	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8
R804	0RS4702K607	RSD02T3J47K0 47KOHM 5% 2W 12.0X4.0MM
R805	0RS4702K607	RSD02T3J47K0 47KOHM 5% 2W 12.0X4.0MM
R806	180-A01M	PRW02T3JR220 0.22OHM 5% 2W 12.0X4.0M
R807	0RD2200A609	RDM92T1J220R 220OHM 5% 1/2W 6.5X2.3M
R808	0RD1501F609	RD-96T1J1K50 1.5KOHM 5% 1/6W 3.2X1.8
R809	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R810	0RD0332F609	RD-96T1J33R0 33OHM 5% 1/6W 3.2X1.8MM
R810	0RD0472F609	RD-96T1J47R0 47OHM 5% 1/6W 3.2X1.8MM
R812	0RD1003F609	RD-96T1J100K 100KOHM 5% 1/6W 3.2X1.8
R814	0RKZVTA001C	RN-92T1J8M20 8.2MOHM 5% 1/2W 9.0X3.0
R816	0RN1803F409	RN-96T1F180K 180KOHM 1% 1/6W 3.2X1.8
R82	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8
R831	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8
R832	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8
R835	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R835	0RD2701F609	RD-96T1J2K70 2.7KOHM 5% 1/6W 3.2X1.8
R840	0RD0472F609	RD-96T1J47R0 47OHM 5% 1/6W 3.2X1.8MM
R841	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R842	0RN2202F409	RN-96T1F22K0 22KOHM 1% 1/6W 3.2X1.8M
R843	0RD3902F609	RD-96T1J39K0 39KOHM 5% 1/6W 3.2X1.8M
R844	0RN4701F409	RN-96T1F4K70 4.7KOHM 1% 1/6W 3.2X1.8
R845	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM

LOCA. NO	PART NO	DESCRIPTION
R883	0RS1000K607	RSD02T3J100R 100OHM 5% 2W 12.0X4.0MM
R884	0RD1201F609	RD-96T1J1K20 1.2KOHM 5% 1/6W 3.2X1.8
R902	0RD2204A609	RDM92T1J2M20 2.2MOHM 5% 1/2W 6.5X2.3
R905	0RD3900F609	RD-96T1J390R 390OHM 5% 1/6W 3.2X1.8M
R905	0RD3900F609	RD-96T1J390R 390OHM 5% 1/6W 3.2X1.8M
R906	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8M
R908	0RD1801F609	RD-96T1J1K80 1.8KOHM 5% 1/6W 3.2X1.8
R912	0RS1802K607	RSD02T3J18K0 18KOHM 5% 2W 12.0X4.0MM
R915	0RD3900F609	RD-96T1J390R 390OHM 5% 1/6W 3.2X1.8M
R915	0RD3900F609	RD-96T1J390R 390OHM 5% 1/6W 3.2X1.8M
R916	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8M
R917	0RS1802K607	RSD02T3J18K0 18KOHM 5% 2W 12.0X4.0MM
R918	0RD1501A609	RDM92T1J1K50 1.5KOHM 5% 1/2W 6.5X2.3
R919	0RD1501A609	RDM92T1J1K50 1.5KOHM 5% 1/2W 6.5X2.3
R920	0RD1501A609	RDM92T1J1K50 1.5KOHM 5% 1/2W 6.5X2.3
R921	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8M
R922	0RD4300F609	RD-96T1J430R 430OHM 5% 1/6W 3.2X1.8M
R923	0RS1802K607	RSD02T3J18K0 18KOHM 5% 2W 12.0X4.0MM
SWITCH		
SW11	140-315H	THVH472GBC(HORIZONTAL) 1C1P 12VDC 0.
SW12	140-315H	THVH472GBC(HORIZONTAL) 1C1P 12VDC 0.
SW13	140-315H	THVH472GBC(HORIZONTAL) 1C1P 12VDC 0.
SW14	140-315H	THVH472GBC(HORIZONTAL) 1C1P 12VDC 0.
SW15	140-315H	THVH472GBC(HORIZONTAL) 1C1P 12VDC 0.
SW16	140-315H	THVH472GBC(HORIZONTAL) 1C1P 12VDC 0.
SW801	6600M000057	KDC-A02-F AC 250VAC 5A 1PCS 1C1P HOR
FILTER & CRYSTAL		
FB801	125-022R	Filter,Bead Bl3857 30OHM 3.6X5.7MM
L804	125-022R	Filter,Bead Bl3857 30OHM 3.6X5.7MM
T802	150-F06W	Filter,Line Noise 150-F06W 27MH
X1	6212AA2998A	Crystal HLX-308 32.768MHZ
X501	156-A01V	Crystal EUA4.43361F00EYYL
Z111	6200QL3002X	Filter,Saw K7260M 38.9MHZ
	6210VH0004B	Filter,Ferrite Core ZCAT1518-0730-M- K
MISCELLANEOUS		
F801	0FS4001B53C	Fuse,Time Delay 0215 004. 250V 4A
JA01	6612VJH004F	Jack,RCA PJ6056F(YELLOW/WHITE)
LD11	0DLLT0020AA	LED,DIP LTL-4223 ROUND 5MM
PA01	6712SCA226B	Receiver Module KSM-913LG1T 4.5TO5.5V
SK901	6620VBC003A	Socket,CRT PCS030A 8P 15.24MM
TH801	163-051F	Thermistor,PTC J503P84D140M290Q 14OHM
TU101	6700MF0018A	Tuner,Analog TAEA-G011D 48.25MHZT
VD801	164-003G	Varistor TVR14621 620V 14MM
ACCESSORIES		
A1	38289U0485H	Manual USER RUS/BZ03 RU/
A2	6710V00124D	Remote Controller COMPLEX W/O TXT
A3	5010V00004B	Antenna,Rod 5010V00004B 2.5DB 300OHM PAL
A3	5010V00004D	Antenna,Rod 3SECTION 750MM NTSC

< MC-059B SCHEMATIC DIAGRAM >

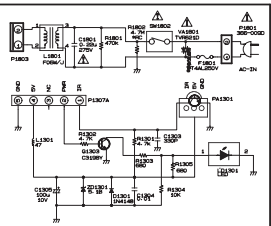


WARNING: BEFORE SERVICING THIS CHASSIS, READ "X-RAY RADIATION PRECAUTION," "SAFETY PRECAUTION," AND PRODUCT SAFETY NOTICE IN THIS MANUAL.

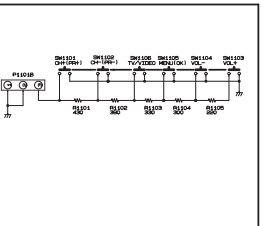
CAUTION: THE MARKS IN THE SCHEMATIC DIAGRAM AND THE PARTS LIST DESIGNATE COMPONENTS WHICH HAVE SPECIAL CHARACTERISTICS FOR SAFETY, AND SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT OR SPECIFIED IN THE PARTS LIST. BEFORE REPLACING ANY OF THESE COMPONENTS, READ CAREFULLY THE PRODUCT SAFETY NOTICE IN THIS MANUAL. DO NOT DEGRADE THE SAFETY OF THE RECEIVER THROUGH IMPROPER SERVICING.

* : OPTION

FB25 POWER CONTROL



FB25 KEY CONTROL



SVC. SHEET : 3854VA0196B-S



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