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# COLOR TV

# SERVICE MANUAL

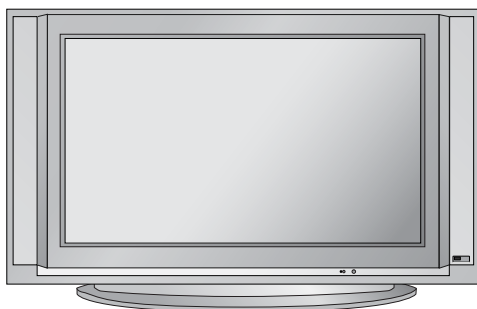
CHASSIS : CW62A

**MODEL: 29FS4ALX/RL/RLX**

**29FS4ALX/RL/RLX-ZG**

## 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  $\Delta$  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 $\Omega$  and 5.2M $\Omega$ .

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

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

#### Leakage Current Hot Check (See below Figure)

Plug the AC cord directly into the AC outlet.

#### Do not use a line Isolation Transformer during this check.

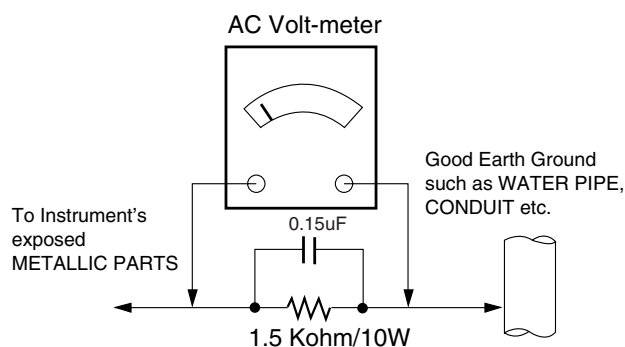
Connect 1.5K/10watt resistor in parallel with a 0.15uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

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

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

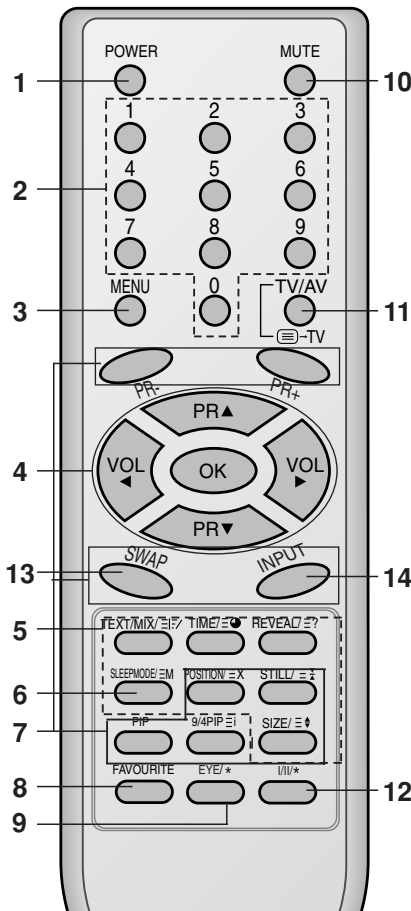
In case any measurement is out of the limits specified, there is possibility of shock hazard and the set must be checked and repaired before it is returned to the customer.

#### Leakage Current Hot Check circuit

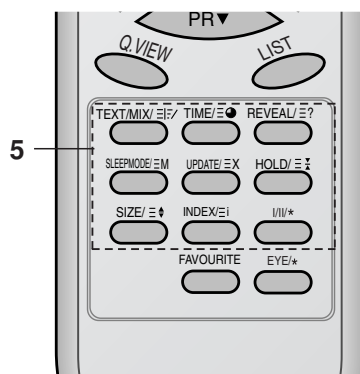


# DESCRIPTION OF CONTROLS

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.



(With TELETEXT / PIP)



(With TELETEXT / Without PIP)

## 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**  
selects a menu.
- 4. ▲ / ▼ (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.
- 5. TELETEXT BUTTONS (option)**  
These buttons are used for teletext.  
For further details, see the 'Teletext' section.
- 6. SLEEP**  
sets the sleep timer.
- 7. PIP BUTTONS (option)**  
**PIP**  
switches the sub picture on or off.  
**PR +/-**  
selects a programme for the sub picture.  
**SWAP**  
alternates between main and sub picture.  
**INPUT**  
selects the input mode for the sub picture.  
**SIZE**  
adjusts the sub picture size.  
**STILL**  
freezes motion of the sub picture.  
**POSITION**  
relocates the sub picture in clockwise direction.  
**9/4 PIP**  
switches on or off the 9 or 4 sub pictures.

**8. FAVOURITE**

selects a favorite programme.

**9. EYE/★ (option)**

switches the eye function on or off.

**10. MUTE**

switches the sound on or off.

**11. TV/AV**

selects TV or AV mode.  
switches the set on from standby.  
exits the Teletext mode

**12. I/II/★**

selects the language during dual language broadcast.  
selects the sound output (option).

**13. Q.VIEW (or YELLOW)**

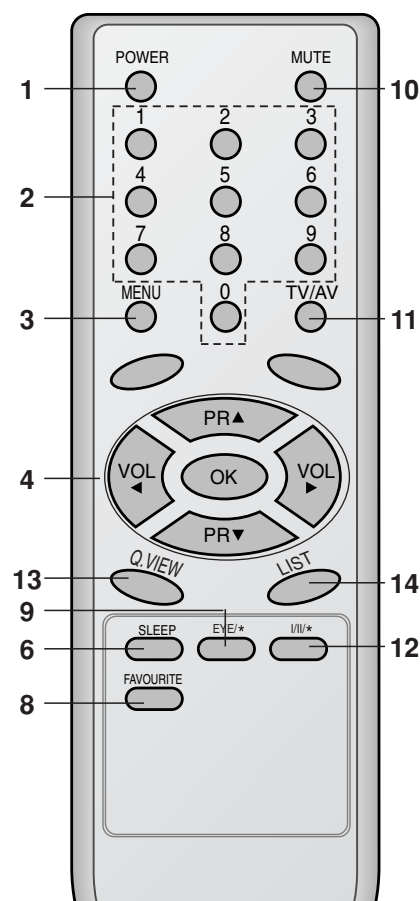
returns to the previously viewed programme.

**14. LIST (or BLUE)**

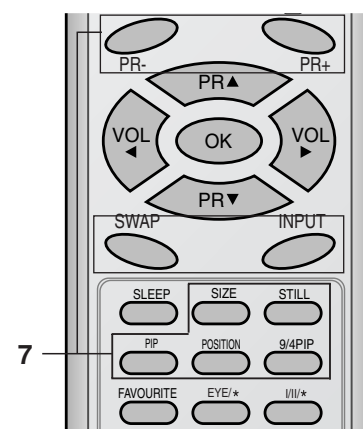
displays the programme table.

**★ : No function**

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

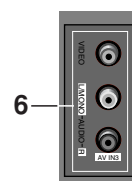
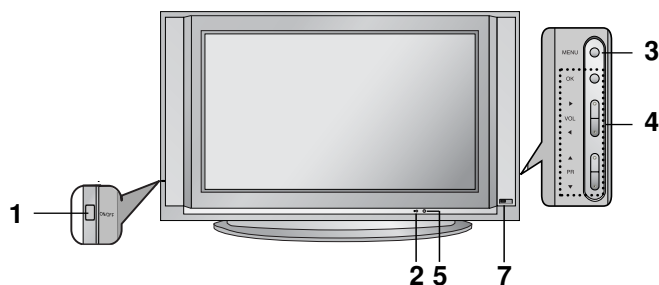


(Without TELETEXT / PIP)



(With PIP / Without TELETEXT)

## Front panel



## Side panel

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. **MENU**  
selects a menu.
4. **OK**  
accepts your selection or displays the current mode.  
**◀ / ▶ (Volume Down/Up)**  
adjusts the volume.  
adjusts menu settings.  
**▲ / ▼ (Programme Up/Down)**  
selects a programme or a menu item.  
switches the set on from standby.
5. **REMOTE CONTROL SENSOR**  
***Note :** Only use the supplied remote control handset. (When you use others, they'll be not able to function.)*
6. **AUDIO/VIDEO IN SOCKETS (AV IN3)**  
Connect the audio/video out sockets of external equipment to these sockets.
7. **EYE (option)**  
adjusts picture according to the surrounding conditions.

# 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 CW62A Chassis.

## ■ Test and Inspection Method

- 1) performance : Follow the Standard of LG TV test
- 2) Standards of Etc. requirement
  - Safety: IEC60065
  - EMC: EN55020,EN55013

## ■ Test Condition

- 1) Temperature :  $20 \pm 5^{\circ}\text{C}$ (CST :  $40 \pm 5^{\circ}\text{C}$ )
- 2) Relative Humidity :  $65 \pm 10\%$
- 3) Power voltage : AC110-240V~, 50/60Hz
- 4) Follow each drawing or spec for spec and performance of parts,based upon P/N of B.O.M
- 5) Warm up TV set for more than 20min. before the measurement.

## ■ General Specification

No	Item	Specification	Remark
1	Receiving System	PAL,SECAM BG PAL/SECAM DK PAL-I/I NTSC M NTSC 4.43(AV) SECAM-L/L' NTSC M/ PAL M/N	EU/ Non EU      OPTION
2	Available Channel	VHF : E2 ~ E12 UHF : E21 ~ E69 CATV : S1 ~ S20 HYPER : S21 ~ S41	Non EU/ EU
		VHF : 02 ~ 13 UHF : 14 ~ 69 CATV : 02 ~ 13	NTSC-M
3	Input Voltage	AC 110-240V, 50/60Hz AC 230V, 50/60Hz	Non EU EU
4	Market	EU,CIS, China, Asia, Africa	
5	Screen Size	Flat 29"	
6	Tuning System	FVS 100Program	200 PR(W/O TXT)
7	Operating Environment	1) Temp : 0 ~ 45 deg 2) Humidity : below 85%	
8	Storage Environment	1) Temp : -20 ~ 60 deg 2) Humidity : below 85%	

# ADJUSTMENT INSTRUCTIONS

## 1. Application Object

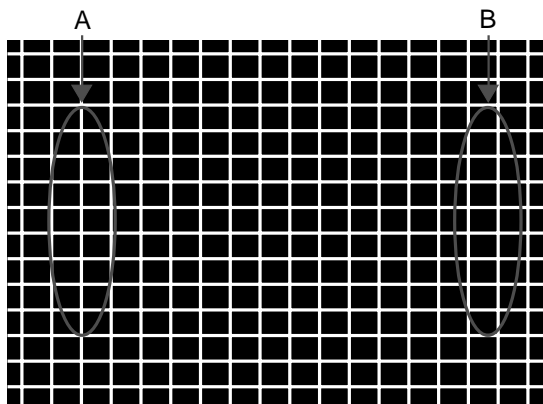
These instructions are applied to all of the color TV, CW62A.

## 2. Notes

- (1) Because this is not a hot chassis, it is not necessary to use an isolation transformer. However, the use of isolation transformer will help protect test instrument.
- (2) Adjustment must be done in the correct order. But the adjustment can be changed by consideration of mass production.
- (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 AC voltage of the receiver must keep rating voltage in adjusting.
- (5) The receiver must be operated for about 15 minutes prior to the adjustment.
- (6) Signal: Received, the standard color signal. ( $65\text{dB} \pm 1\text{dB uV}$ )  
LG standard signal means the digital pattern (PAL\_EU 05CH).

## 3. Focus adjustment

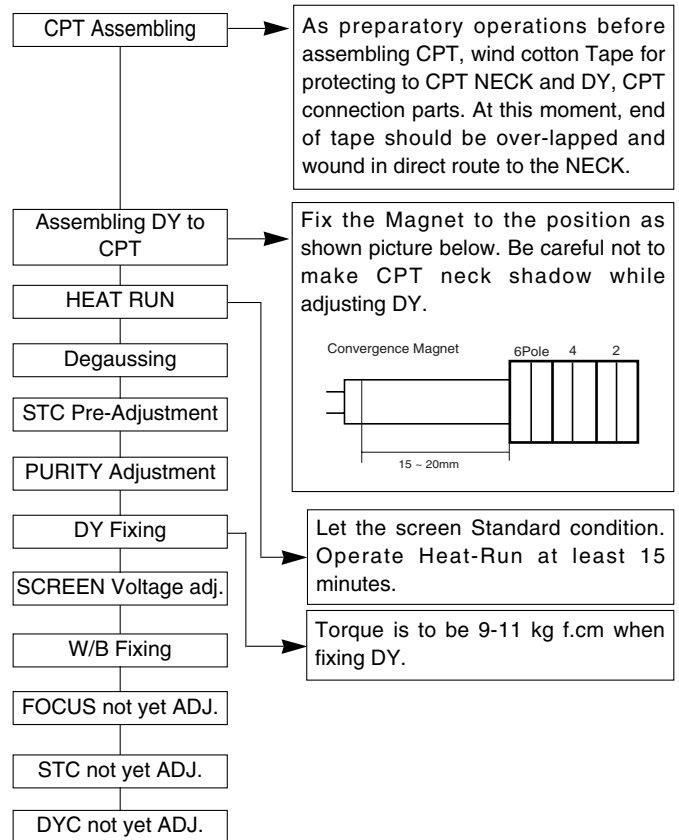
- (1) Receive the Cross-Hatch Pattern (Fig 1).
- (2) Set the picture condition on "DYNAMIC(CLEAR)" mode.
- (3) Adjust the Focus volume of FBT for the best focus of (A) & (B).



<Fig 1. Cross-Hatch Pattern(E-7CH)>

## 4. Purity & Convergence adjustment

Adjustment should be operated when using the CPT (without ITC from CPT manufacturing place)  
This adjustment must be done in the order of the following flowchart.



### 4.1. Color purity adjustment

- (1) It makes CPT or CABINET enough to demagnetization.
- (2) Receive the signal of red raster.
- (3) Loosen fixed screw of DY and closely to CPT funnel part.
- (4) Check the center of screen that PURITY MAGNET of CPT by crossing adjustment. At this time, 4 & 6 pole magnet is located to magnet of nothing.
- (5) Move the DY to make equal red on whole screen and it does not to make the DY by fixed screw after check a simple color of Red/Green/Blue and white raster whether or not it is a pollution of color.  
(At this time, take care raster of screen and DY must fixing in the condition which maintains a horizontality.)
- (6) Check the TV set by move direction.

### 4.2. Convergence adjustment

These adjustments can the best condition of focus after finished purity adjustment.

- (1) Receive the signal of cross hatch that BACK RASTER is black.
- (2) Adjust brightness and luminosity till dot appear 9 ~ 12.
- (3) Open angle of the two tab of 4 pole MAGNET by isogonic angle and accord with vertical line of red and blue color in the middle of screen.
- (4) Maintain as angle of (3) and rotate the tab to accord with vertical line of Red and Blue color in the middle of screen.



- (5) Open angle of the two tab of 6 pole magnet by isogonic angle and accord with vertical line of Red/Blue and Green.
- (6) Maintain as angle of (5) and rotate the tab to accord with horizontal line. In case of twisted horizontal line, repeat adjustment of (3) ~ (5) remembering the movement of Red/Green/Blue color.
- (7) Move the DY to best condition of convergence and attach the CPT to a rubber-chock for fixing DY.

## 5. Screen voltage adjustment

- (1) Receive the PAL or SECAM(NTSC) signal into RF mode (regardless of channel).
- (2) If you press the "ADJ" button in LINE SVC mode(IN-START button), the LINE SVC mode changes to screen adjustment mode.
- (3) Turn the Screen Volume of FBT to change luminance of White signal center as shown below.
- (4) Press the ADJ button to exit SVC mode.

## 6. White balance adjustment

**NOTE :** When adjusting white balance automatically, connect the adjustment JIG in SVC mode. (When pressing IN-START, MUTE button on remote control for adjustment orderly, it is changed to CPU OFF mode and screen is displayed to "CPU OFF".)

- (1) Receive 100% white pattern.
- (2) Adjust LOW Light status(4.5FL) of CR(R CUT), CB(B CUT) at CG(G CUT:75) : 60.
- (3) Adjust HIGH Light status(35FL) of WR(R DRIVE), WB(B DRIVE) at WG(G DRIVE:380) : 450.
- (4) Repeat above step (2) and (3) for the best condition each status of High Light and Low Light.

<Table 1> White Balance Color analyzer

Menu	EU	N-EU
X	288	268
Y	295	273
Color Temperature	9000°K	13000°K

<Table 2> White Balance Initial Data

	Menu	Range	DATA
LOW LIGHT	BLO-R(R CUT)	0 ~ 63	32
	BLO-G(G CUT)	0 ~ 63	32
	BLO-B(B CUT)	0 ~ 63	FIX
HIGH LIGHT	RG(R DRIVE)	0 ~ 63	32
	GG(G DRIVE)	0 ~ 63	32
	BG (B DRIVE)	0 ~ 63	32

<Table 3> White Balance Initial Data

### 1. IC

	Name	Maker	Algorithm			
VCD IC			0	0	0	0
EP_ROM						

## 2. White balance IIC Parameter(Address)

Program	Win31_wb	TWB		Win31_wb	TWB	Speed	Delay
Vcd Slave		8A	Eeprom_Slave		A0	1	30

	B(R)_Amp		B(R)_Cut		G_Amp		G_Cut	
Program	Win31_wb	TWB	Win31_wb	TWB	Win31_wb	TWB	Win31_wb	TWB
Sub Add		20		17		21		18
Start Bit		5		5		5		5
Stop Bit		0		0		0		0
Offset		0		0		2		2
Polarity		1		1		0		0
EP_Rom_S		36		33		37		34

Speed/ Plus	2	2	2	2
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## 7. Deflection setting Data Adjustment

### 7.1 Adjustment preparation

- (1) Tune the TV set to receive an Digital pattern(EU05CH).
- (2) Deflection setting data adjustment is operate by SVC communicator.
- (3) Enter the deflection mode by selection SERVICE2 key on SERVICE MENU after enter the adjustment mode by pressing LINE SVC MODE(IN-START KEY).
- (4) Use the CH ▲, ▼ key to select adjustment item.
- (5) Use the VOL ◀, ▶ key to increase/decrease data.

### 7.2 Adjustment

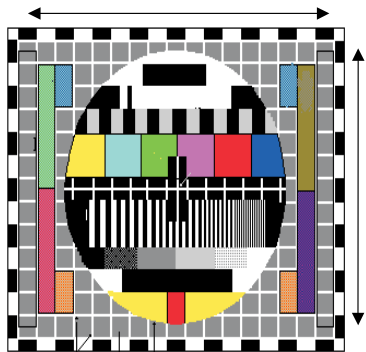
<Note>

- When adjusting a deflection, adjust N50Hz of PAL signal first and adjust a deflection data at N60Hz(NTSC), Z60Hz, N50Hz, W50Hz, Z50Hz.
- After finishing deflection adjustment, press the ENTER button to enter or exit SVC mode.

- (1) H SHIFT  
Adjust so that the geometric horizontal center line is in accord with horizontal center line of CPT.
- (2) H PARALLEL  
Adjust vertical inclination of screen.
- (3) H BOW  
After finishing Cushion adjustment, adjust curved rate of top & bottom corner to be equal.
- (4) V LINEAR  
Adjust the top & bottom size of inner circle to be equal.
- (5) V SCROLL  
Adjust so that the geometric vertical center line is in accord with vertical center line of CPT.

(6) EW WIDTH

Adjust until the outmost left and right lattice of received pattern is accord with 25% of other lattice width.



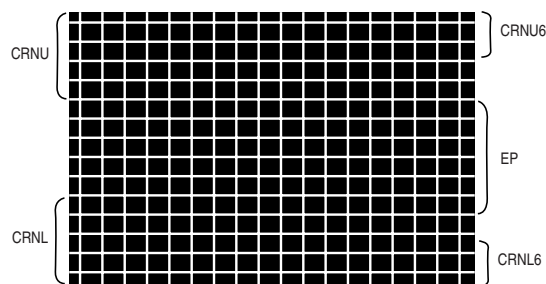
<Fig. 2>PAL Digital pattern (EU05CH)

(7) EW PARABOLA

Adjust so that middle portion of the outermost left and right vertical line look like parallel with vertical lines of the CPT.

(8) EW UPCORNER & (9) EW LOCORNER

After finished cushion adjustment, adjust vertical line of left-top, right-top, left-bottom, right-bottom of screen to the best straight line.



<Fig. 3> Cross-Hatch Pattern (E-7CH)

(10) EW TRAPEZOID

Adjust to make the length of top horizontal line same with it of the bottom horizontal line.

(11) V SLOPE

(12) V AMPLITUDE

Adjust so that the circle of a digital circle pattern should be located interval of 6~7mm from the effective screen of the CPT.

(13) S CORRECTION

Adjust so that all distance between each lattice width of top/center/bottom are to be the same.

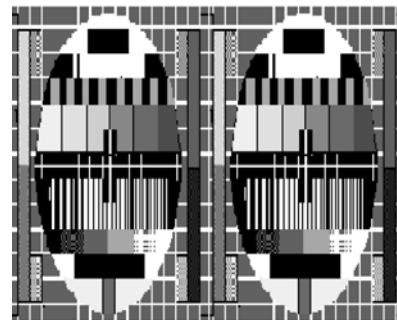
(14) V SHIFT

Adjust so that the geometric vertical center line is in accord with vertical center line of CPT.

(15) V ZOOM (VERTICAL ZOOM)

(16) PIP\_H (PIP H Position) adjustment - option

Adjust the H-Position by using VOL +/- key until PIP picture is in contact with main picture.



<Fig. 4> PIP H Position

## 8. Deflection setting initial data

<Table 4> Deflection setting initial data (SERVICE 2)

\* Fix : Don't change data

Item	Description	29"		Adjust
		50Hz	60Hz	
H-SHIFT	Horizontal shift	24	34	Adjust
H PARALL	Horizontal parallelogram	32	32	Recommend
H BOW	Bow	32	32	Recommend
V LINEAR	Vertical linearity	41	44	Recommend
V SCROLL	Vertical scroll	30	30	Adjust
EW WIDTH	EW width	57	57	Adjust
EW PARAB	Parabola adj	18	15	Adjust
EW UPCOR	Upper corner adj	49	45	Adjust
EW LOCOR	Lower corner adj	53	50	Adjust
EW TRAPE	Trapezoid adj	25	25	Adjust
V SLOPE	Vertical slope	17	25	Recommend
V AMPLIT	Vertical amplitude	34	29	Recommend
SCORRECT	S correction	35	30	Recommend
V SHIFT	Vertical shift	46	54	Recommend
V ZOOM	Vertical zoom	25	25	Fix
V SYNLI	Vertical slicing level	0	0	Fix
OVRVOLIN	Over voltage input mode	0	0	Fix
VGUARD	Vertical guard mode	0	0	Fix

- After finishing deflection adjustment at PAL 50Hz, NTSC 60Hz is applied deflection compensation value. But recheck condition of adjustment at NTSC system and adjust deflection data if necessary.

- Adjust PIP Position adjustment at only PAL 50Hz.

## 9. Service adjustment data table

<Table 5> Picture setting service data1 (SERVICE 1)

ITEM	DESCRIPTION	29" S-SLIM
AGC	ACG take over	25
RG	Red Gain	32
GG	Green Gain	32
BG	Blue Gain	32
BLO-R	Black level offset Red	32
BLO-G	Black level offset Green	32
CDL	Cathode Drive Level	5
L-DLY	Luminance delay time	13
PEAK	Peak white limiting	1
SHOOT	Pre overshoot ratio	1

<Table 6> Picture setting service data2 (SERVICE 3)

ITEM	DESCRIPTION	29" S-SLIM
AM DEM G	AM DEMODULATOR GAIN-AMLOW	0
FM DEM G	FM DEMODULATOR GAIN-AGN	0
ADC LEV	ADC LEVEL(-16~5) - ADCLEV	0
DEC LEV	DEC LEVEL(-16~5) - DECLEV	0
MONO LEV	MONO LEVEL(-16~5) - MONOLEV	0
NICAMLEV	NICAM LEVEL(-16~5) - NICLEV	0
AUX1 VOL	AUX1 VOL - AUX1VOLL(R)	0
AUX2 VOL	AUX2 VOL - AUX2VOLL(R)	0
AUX3 VOL	AUX3 VOL(SCART1 RF SOUND OUT)	0
FMWINDOW	FM WINDOW FILTER (FMWS)	0
BOOSTVAL	BOOSTER	0
MAXVOL	MAX VOLUME	100
DCXO VAL	DCXO	63

<Table 7> OPTION 1, 2, 3, 4

	ITEM	Description
OPTION1	INCH	29 S-Slim/ 29 N-Flat
	SYSTEM	BG/DK/I/M, BG/DK/I/L
	200PR	W/O TXT=>200PR, W/TXT=>100PR
	TOP	TOP=>Germany, Swiss, Austria, Italy
	ACMS	Auto channel memory system
	CH-AU	China & Australia Frequency table
	BOOSTER	
OPTION2	SOUND	RF stereo / AV stereo / Mono option
	PIP	PIP option
	VOL CURVE	High / Low volume curve
	A2 STEREO	Nicam check & FM stereo / Dual
	I/I SAVE	Dual sound setting save
	HIDEVIAT (High deviation)	Sound high deviation
OPTION3	SCART	SCART option
	DVD	DVD option
	XWAVE	FM TX option
	EYE	EYE option
	4KEY	4 Key option
	TILT	TILT option
	DEGAUSS (Degaussing)	Degaussing option
OPTION4	OSD LANG	Refer to the next page(table.8)
	TXT LANG	Refer to the next page(table.8)
	REMOCON	
	HOTEL	HOTEL option
	TURBOSCH (Turbo search)	Turbo search
	TURBOP/S (picture/sound)	Turbo picture/ sound
	DCXO/A (DCXO auto adjust)	DCXO auto adjust

&lt;Table 8&gt; OSD &amp; TEXT LANGUAGES

0	SOUTHEAST ASIA	0	ENGLISH		
		1		0	ENGLISH
				1	INDONESIAN
				2	MALAY
				3	VIETNAMESE
				4	THAI
		2	RESERVED		
		3	RESERVED		
		4	RESERVED		
		5	RESERVED		
		6	RESERVED		
		7	RESERVED		
1	EAST EU CYRILLIC TEXT	0	ENGLISH		
		1	EAST EU ALL	0	ENGLISH
				1	GERMAN
				2	RUMANIAN
				3	POLISH
				4	HUNGARIAN
				5	CZECH
				6	RUSSIAN
				7	BULGARIAN
		2	ENGLISH RUSSIAN	0	ENGLISH
				1	RUSSIAN
		3	RESERVED		
		4	RESERVED		
		5	RESERVED		
		6	RESERVED		
		7	RESERVED		
3	WEST EU GREEK TEXT	0	ENGLISH		
		1	EU 7EA	0	ENGLISH
				1	GERMAN
				2	FRENCH
				3	ITALIAN
				4	SPANISH
				5	DUTCH
				6	PORTUGUESE
		2	WEST EU ALL	0	ENGLISH
				1	GERMAN
				2	FRENCH
				3	ITALIAN
				4	SPANISH
				5	DUTCH
				6	SWEDISH
				7	NORWEGIAN
				8	DANISH
				9	FINNISH
				10	PORTUGUESE
				11	GREEK
		3	ENGLISH GREEK	0	ENGLISH
				1	GREEK
		4	RESERVED		
		5	RESERVED		
		6	RESERVED		
		7	RESERVED		

3	ARAB TEXT	0	ENGLISH		
		1	ARABIC	0	ENGLISH
				1	FRENCH
				2	ARAB
				3	URDU
		2	PARSI	0	ENGLISH
				1	FRENCH
				2	ARAB
		3	ARAB ALL	3	PARSI
				0	ENGLISH
				1	FRENCH
				2	ARAB
				3	URDU
				4	PARSI
		4	RESERVED		
		5	RESERVED		
		6	RESERVED		
		7	RESERVED		
4	PARSI TEXT		The same ARAB TEXT		
5	SOUTHEAST W/O TEXT		The same SOUTHEAST ASIA TEXT		
6	WEST EU W/O TEXT		The same WEST EU GREEK TEXT		
7	EAST EU W/O TEXT		The same EAST EU CYRILLIC TEXT		
8	ARAB W/O TEXT		The same ARAB TEXT		
9	CHINA, INDIA W/O TEXT	0	ENGLISH		
		1	CHINA	0	ENGLISH
				1	CHINESE
		2	HINDI	0	ENGLISH
				1	HINDI
		3	RESERVED		
		4	RESERVED		
		5	RESERVED		
		6	RESERVED		
		7	RESERVED		

## 10. How to inspect condition of a transmission and reception in FM TRANSMISSION MODEL

- FM TRANSMITTER's efficiency inspections is executed to a finished in a final inspection phase.
- FM TRANSMITTER is a function which receives voice-signal by an exclusive remote control and Earphone, transmits a FM through transmitter of inner part in MICOM BOARD to TV sound(MONITOR OUTPUT)

- 1) Execute in channel generating voice-signal
- 2) Select a transmitted frequency in MENU OSD.  
MENU => SOUND => TRANSMITTER => frequency selection (87.7MHz)
- 3) A received frequency in an exclusive remote control or received FM Radio is tuned by 87.7MHz(107.7MHz) which is same as frequency in OSD.
- 4) Check out whether a signal generating to MAIN SPEAKER generates in earphone or receiver or not.
- 5) There is no alternation and setting of adjusted DATA in the process of inspecting FM TX.

## 11.OPTION Adjustment

- 1) This option adjustment decides function in accordance with model. Press IN-START button at SVC mode, then adjust the option at OPTION1,2,3,4,5 mode.
- 2) Mark the option adjustment data like [112,68,164,32,8] in BOM.

\* Mark of BOM

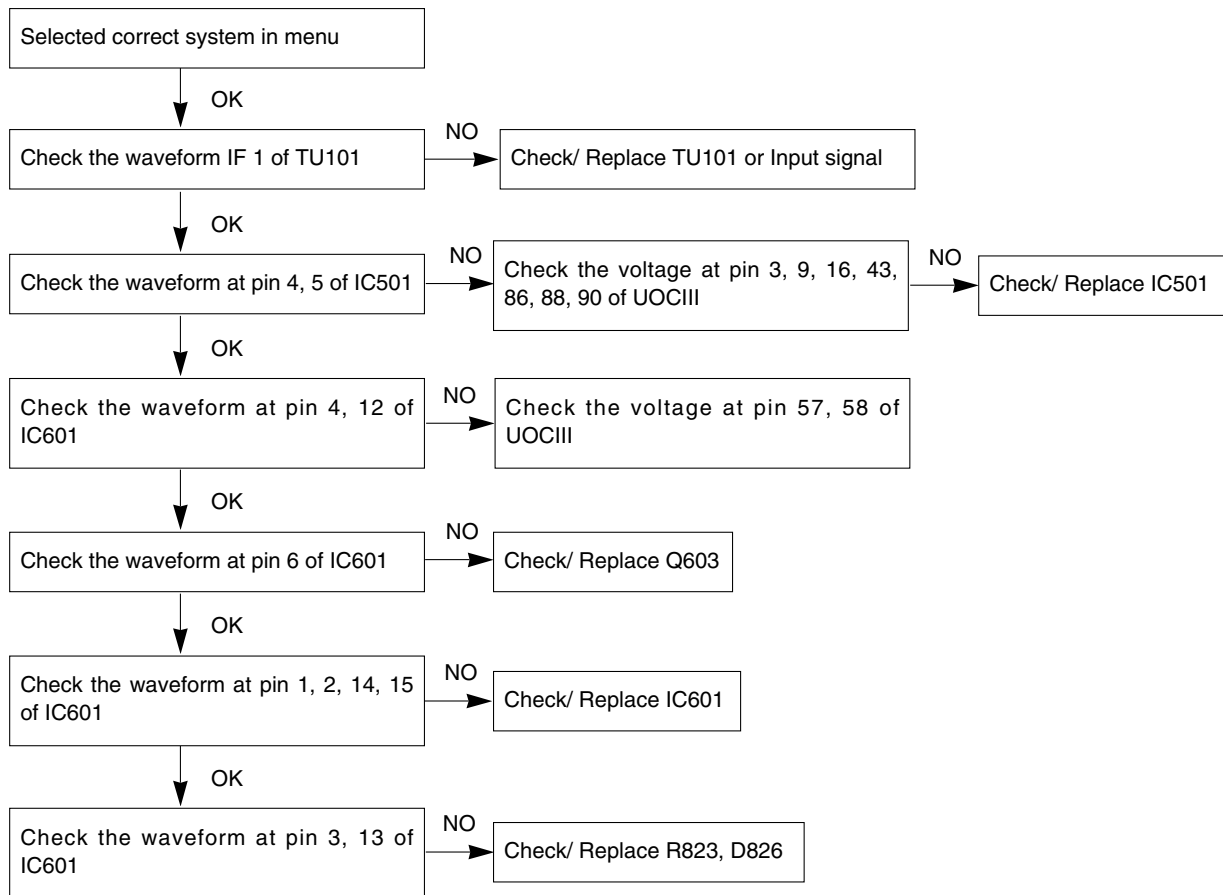
LEVEL	PART NO.	SPECIFICATION	DESCRIPTION
1.	3141VMN382A	MAIN CHASSIS ASSY	[112,68,164,32,8]

In this model, the OPTION1 data is 112, OPTION2 data is 68, the OPTION3 data is 164,the OPTION 4 data is 32, OPTION 5 data is 8.

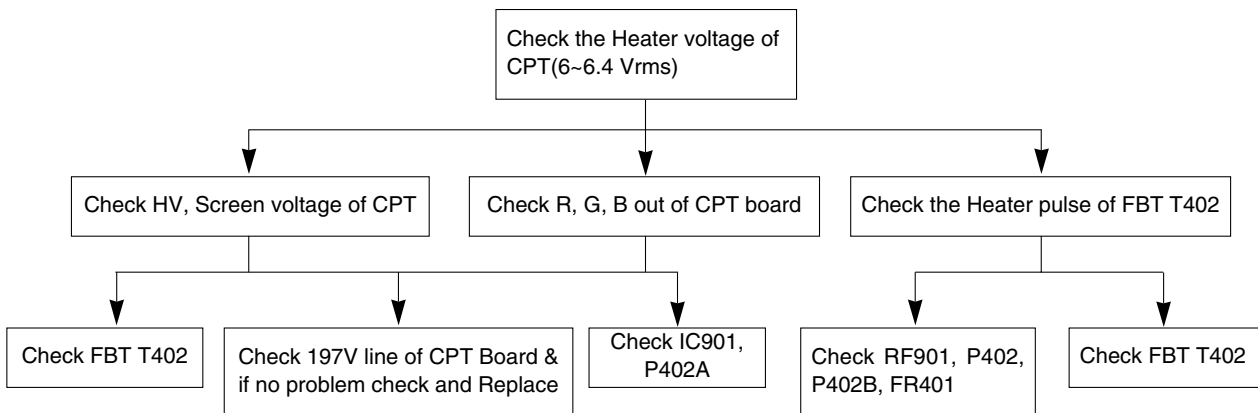
# TROUBLE SHOOTING

## 1. RF-STEREO MODEL

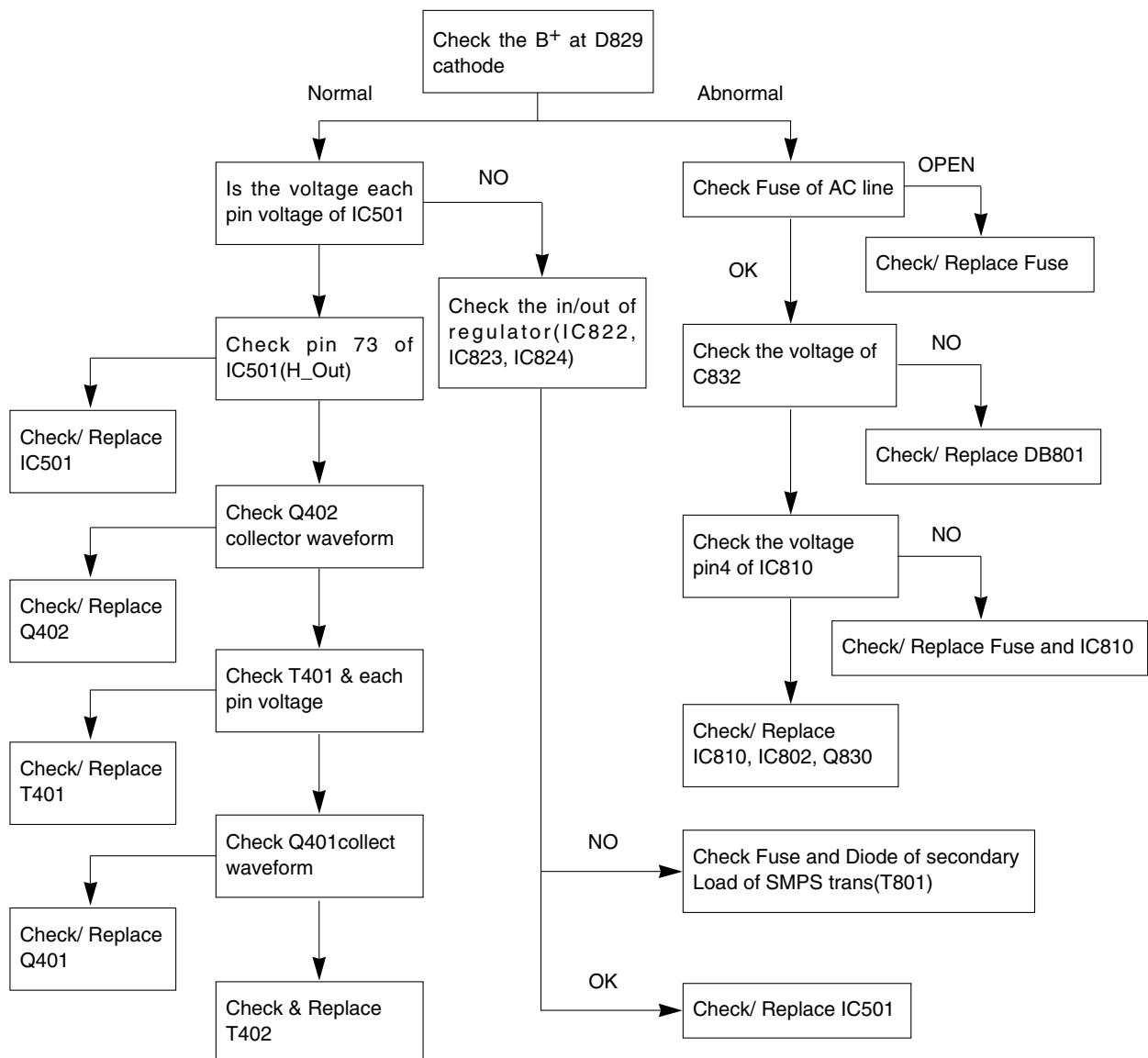
### 1) PICTURE OK / NO SOUND



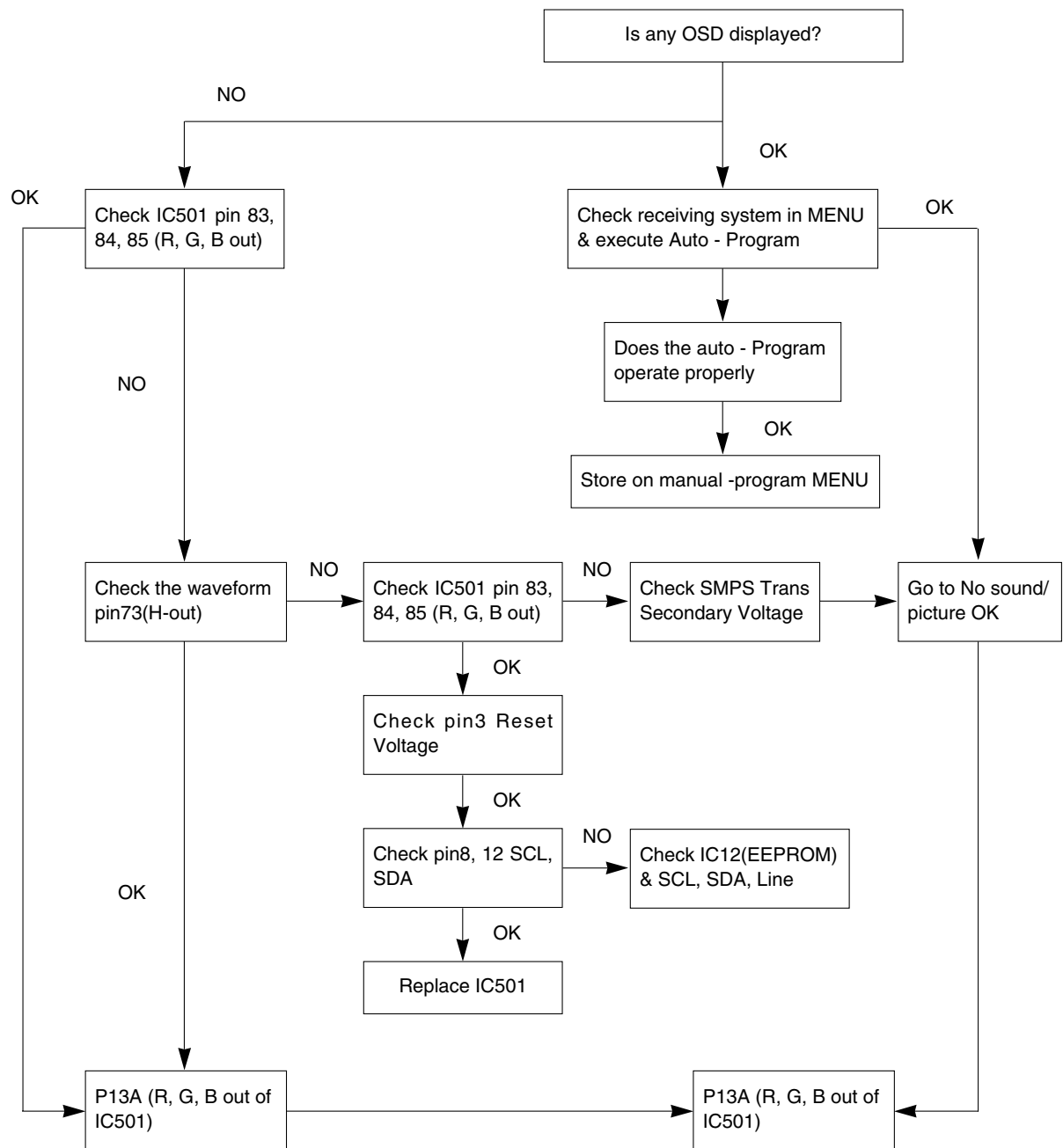
### 2) No Raster / Sound OK(1/2)



### 3) No Raster (2/2)

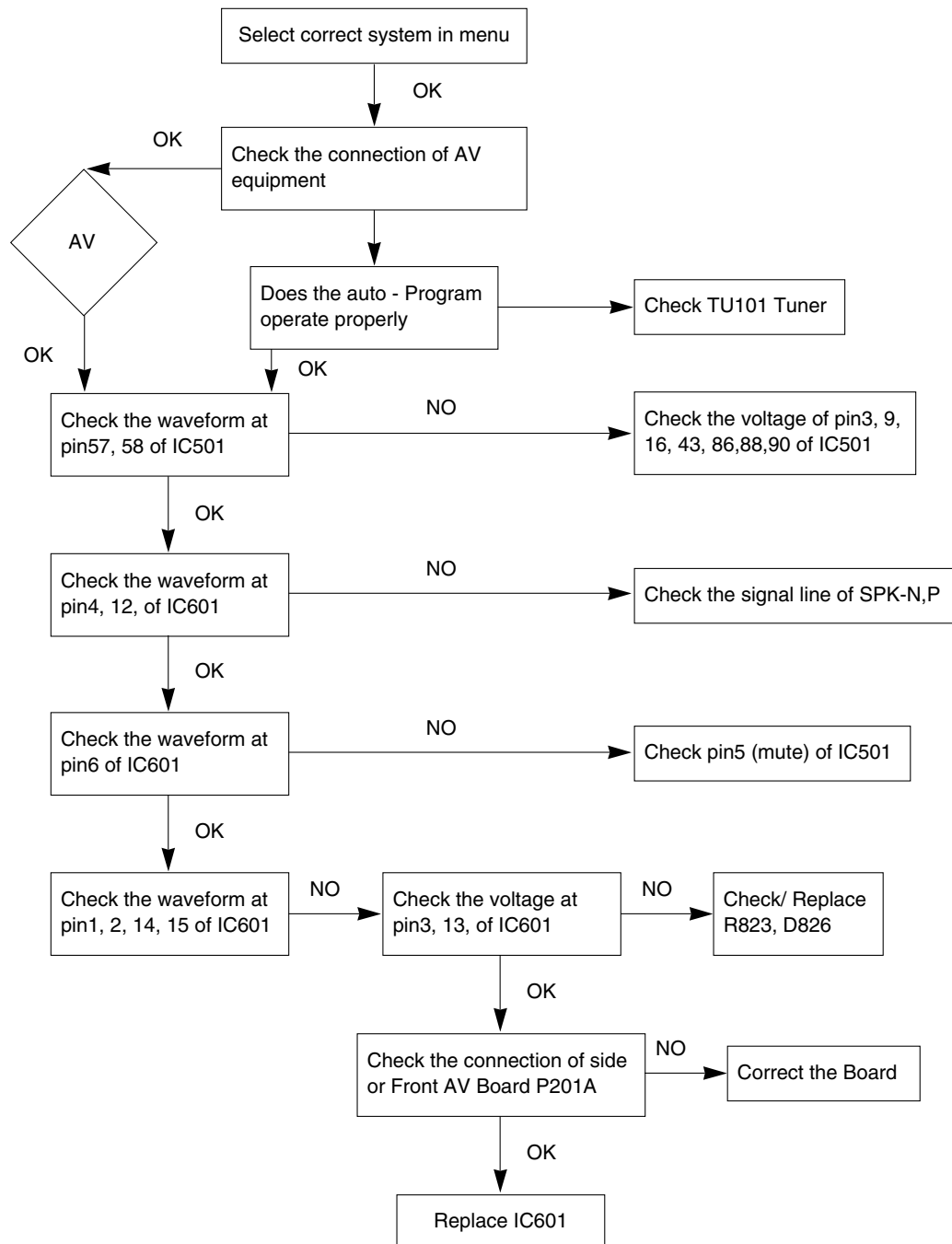


#### 4) No Picture/ No Sound





## 2. AV STEREO/ MONO MODEL





The image shows a complex printed circuit board (PCB) layout for a portable electronic device. The board is populated with numerous components, each labeled with its part number or value.

- Top Section:** Features a large multi-pin connector labeled "AIR WOLF". Below it is a component labeled "P128".
- Middle Section:** Contains several integrated circuits (ICs) labeled "R1145", "R1147", "R1148", "R1149", "R1146", and "R1150". There are also labels for "AS-LS-KC", "DNG", and "MENU SH1105".
- Bottom Section:** Includes a section labeled "LOCAL KEY" with components "M2-0430", "680795016CA101", and "050823 S.T.H.". A label "CH+ SH1181" is also present.
- Other Labels:** Various other labels include "VOL+", "VOL-", "CH+", "SH1182", "TWVIDEO SH1106", "CH-", "SH1103", "CH-", "SH1104", "R1145", "R1147", "R1148", "R1149", "R1146", "R1150", "M2-0430", "680795016CA101", "050823 S.T.H.", "CH+", "SH1181", "CH+", "SH1182", "TWVIDEO SH1106", "MENU SH1105", "DNG", "AS-LS-KC", "P128", "AIR WOLF", "LOCAL KEY", "M2-0430", "680795016CA101", "050823 S.T.H.", "CH+", "SH1181", "CH+", "SH1182".

MC049D/CW62A LED  
68709S0114B(CNC)  
060221 S.T.H  
29FS4R LED/1R

Pb Free Soldering

MC-022A 6870VS182A(1) 020524 S.J.H.

CURRENT HARMONICS (150W)

JP001B

JP001B

E905 G901 G902 G903 E906

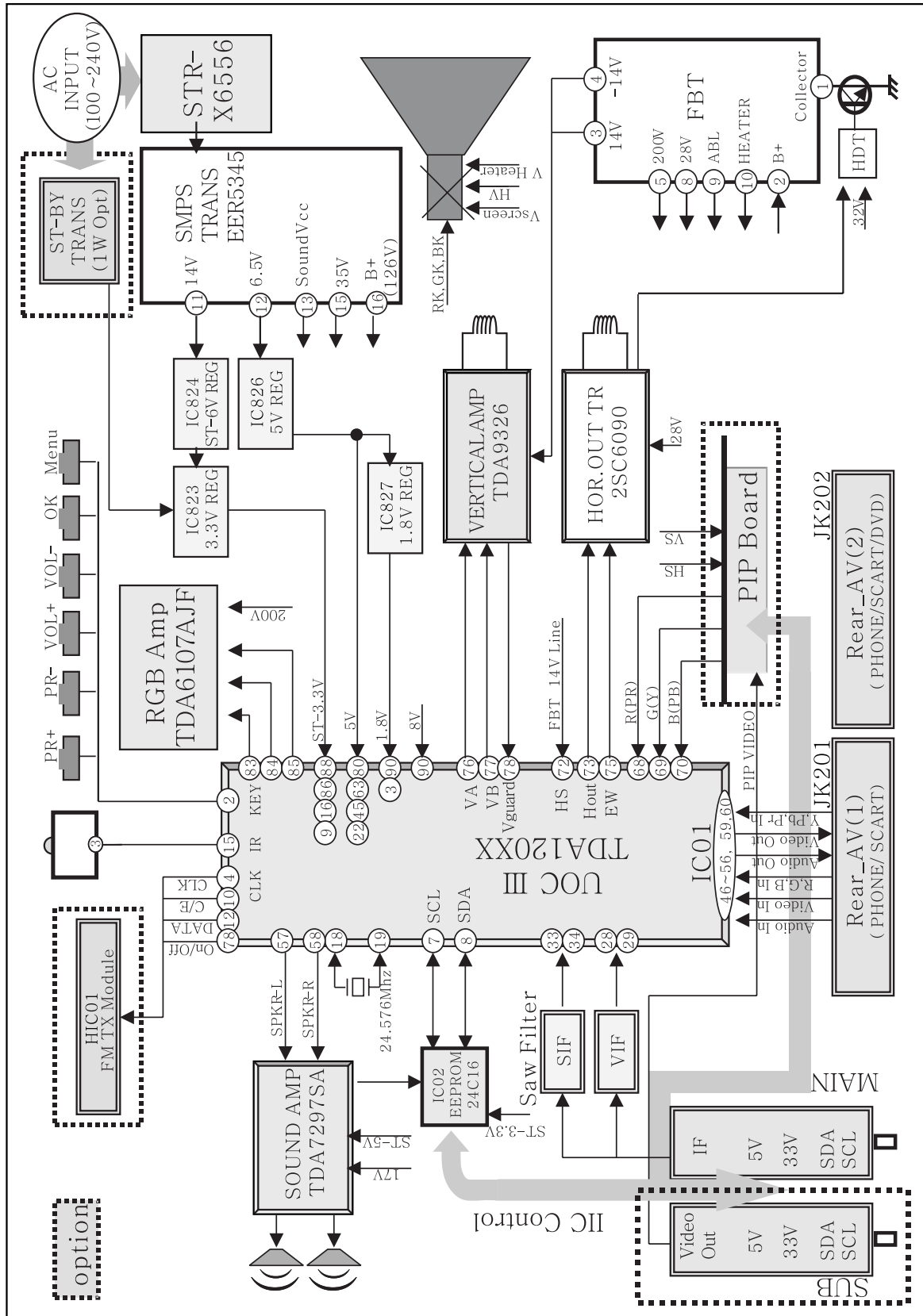
JP002B

JP002B

E904 E903 E902 E901

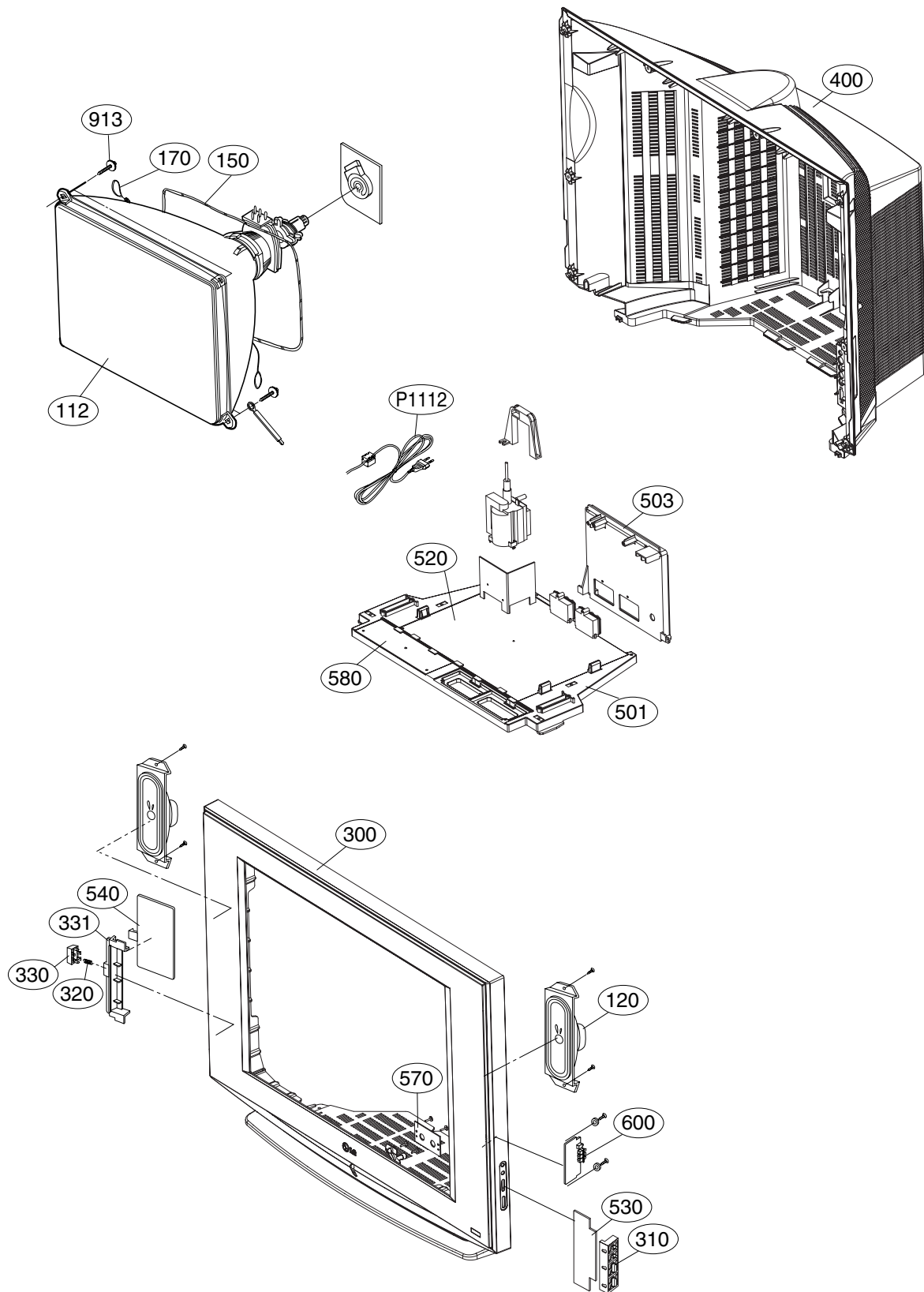
T801

# BLOCK DIAGRAM



## MEMO

## EXPLODED VIEW



## EXPLODED VIEW PARTS LIST

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

LOCA. No.	PART No.	DESCRIPTIONS
$\Delta$ 112	6335929005L	CPT,ITC A68ERS870X 02 L(+0.50G) 0G LG-PHILIPS DISPLAYS 29INCH
120	6400VA0025E	Speaker,Fullrange C163A01K1451 FERRITE 15W 8OHM 86DB 110HZ
	EAB30828501	Speaker,Fullrange C163A01K1451. ND 15W 8OHM 86DB 110HZ 193 X 57 X 44.4 LUG
$\Delta$ 150	6140VC2007T	Coil,Degaussing 23OHM AL 80T 0.65mM SQUARE 29INCH 3250mM
$\Delta$ 170	170-844K	Drawing,Assembly CPT EARTH UL1015 AWG22-TBC 0.12X4X16MM 29INCH
$\Delta$ 300	30919K0016B	Cover Assembly, 29FS4RL CW62A 29" SY-AK SY TOOL
	30919K0016D	Cover Assembly, 29FS4RLX-ZG CW62A 29" SY-KIEV (SY TOOL) SET
	30919K0016G	Cover Assembly, 29FS4ALX-ZG CW62A 29" SY-RA RA SKD 1TONE
310	5020900039B	Button, CONTROL 29FS2 ABS, HF-380 6KEY LGESY LOCAL 117A
320	320-062E	Spring, CUTTING STSC304 KNOB
330	5020900038B	Button, POWER 29FS2 ABS, HF-380 1KEY LGESY LOCAL 117A
331	4810900051B	Bracket, 29FS2 MC036A ABS, HF-380 LGESY LOCAL 117A
$\Delta$ 400	3809900191B	Cover Assembly, 29FS4RL CW62A 29" SY-AK SY TOOL DVD
	3809900191D	Cover Assembly, 29FS4RLX-ZG CW62A 29" SY-KIEV SY TOOL CW62A
501	4810900052D	Bracket, MAIN 29FS2 MC049D HIPS 407AF LGESY LOCAL 50HZ CUT RIB
503	4810900104B	Bracket, REAR AV 29FS2RLX-TG CW62A HIPS 51SF LGESY LOCAL
520	EBR30649901	PCB Assembly, MAIN1 M.I CW62A 29FS4RL-ZG QDKLLBA SY TO LGEAK
	EBR30770305	PCB Assembly, MAIN1 M.I CW62A 29FS4RLX-ZG QDRLLBK SY TO KIEV
	EBR30770311	PCB Assembly, MAIN1 M.I CW62A 29FS4RLX-ZG KDRLLLEY SY TO KIEV
	EBR30770342	PCB Assembly, MAIN1 M.I CW62A 29FS4ALX-ZG QRULLCU SY TO LGERA
530	EBR30680701	PCB Assembly, SUB M.I CW62A 29FS4 SY TO CIS SKD CONT M.I. ASSY
	EBR30756002	PCB Assembly, SUB M.I CW62A 29FS2 CONT BOARD SY TO CIS
540	EBR30681801	PCB Assembly, MAIN1 M.I CW62A 29FS4 SY TO CIS SKD POWER BOARD
	EBR30756004	PCB Assembly,Sub SUB M.I CW62A 29FS2 POWER SY-CIS
550	EBR30691901	PCB Assembly, MAIN1 29FB3 SY TO CIS SKD MODEL HANMONIC BOARD
	EBR30839303	PCB Assembly, SUB M.I CW62A SY TO CIS HANMONIC
570	EBR30682401	PCB Assembly, SUB M.I CW62A SY TO CIS SKD LED+PRE AMP BOARD
	EBR30682402	PCB Assembly, SUB M.I CW62A 29FS4 LED+PRE AMP BOARD SY-CIS SET
580	68719SM179E	PCB Assembly, Deflection M.I CW62A 29FS2 SUPER SLIM SKD
	EBR30683001	PCB Assembly, MAIN1 M.I CW62A SY TO CIS SKD DEFLECTION BOARD
600	EBR30681501	PCB Assembly, SUB M.I CW62A 29FS4 SY TO CIS SKD SIDE AV M.I. ASSY
	EBR30756003	PCB Assembly,Sub M.I CW62A 29FS2 SIDE AV SY-CIS
913	FAB30021506	Screw Assembly, FAB30021506 TAPTITE P TYPE D7.0 L45.0 RUBBER
$\Delta$ P1112	174-009E	Power Cord Assembly, M4206+YFH800-02+H03VVH2-F 2X0.75MM2
	174-009P	Power Cord Assembly, KKP-419CG/YH YFH-800-02/KLCE-2F

# 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
<b>IC</b>		
IC12	0IAL241610B	AT24C16A-10PI-2.7 16KBIT 2KX8BIT 2.7V
IC301	0IPMGPH002A	TDA4863A 9.0VTO30.0V - 3.2W - DBS ST
IC302	0IKE455800E	KIA4558 36V _+-18V 6mV - - 500MW 30uV/
IC601	0ILNR00189A	TDA7297SA 6TO18V 0 0.10% 15W 30W 56DB
IC802	0ILI817000G	LTV-817M-VB 6V 35V 35V 50MA 100NA 600
IC810	0IPMG78443A	STR-X6556 16.2TO19.4V - - ZIP ST 7P
IC823	0IMCRAU004A	S1117-33PIC 4.8TO12V 3.3V 2W TO220 ST
IC824	0IMCRKE020A	KIA78S06P 8.1TO21V 6V 600MW TO92 ST 3
IC826	0IMCRKE018A	KIA78R05API 6TO12V 5V 1.5W TO220IS ST
IC901	0IPRP00747A	TDA6107AJF 180TO210V 6mA - SIP ST 9P
Q602	0IFA754207A	KA75420ZTA(KA7542ZTA) 0.3TO15V 4.2V 2
Q830	0IMCRFA007A	KA431AZ 2.47TO2.52V 36V 770MW TO92 TP
<b>TRANSISTOR</b>		
Q105	0TR102009AB	KRC102M(KRC1202) NPN 30V - 50V 100MA
Q1106	0TR733009AA	KSA733C-Y PNP -5V -60V -50V -0.15A -0
Q201	0TR198009BA	2SA1980Y PNP -5V -50V -50V -0.15A -0.
Q202	0TR534309AA	2SC5343Y NPN 5V 60V 50V 150MA 100NA 1
Q204	0TR198009BA	2SA1980Y PNP -5V -50V -50V -0.15A -0.
Q301	0TR198009BA	2SA1980Y PNP -5V -50V -50V -0.15A -0.
Q302	0TRKE10013A	KTD1047 NPN 6V 160V 140V 12A 100UA 60
Q303	0TR127409AB	KTA1274-Y PNP -5V -80V -80V -0.4A -0.
Q401	0TRSA10005A	2SC6090LS NPN 5V 1.5KV 700V 10A 10UA
Q402	0TR437000BA	KTC4370A-Y NPN 5V 180V 180V 1.5A 1UA
Q502	0TR198009BA	2SA1980Y PNP -5V -50V -50V -0.15A -0.
Q503	0TR319809AA	KTC3198(KTC1815) NPN 5V 60V 50V 150MA
Q504	0TR319809AA	KTC3198(KTC1815) NPN 5V 60V 50V 150MA
Q505	0TR127009AA	KTA1270-Y(KTA562TM) PNP -5V -35V -30V
Q506	0TR127009AA	KTA1270-Y(KTA562TM) PNP -5V -35V -30V
Q603	0TR534309AA	2SC5343Y NPN 5V 60V 50V 150MA 100NA 1
Q803	0TR102009AB	KRC102M(KRC1202) NPN 30V - 50V 100MA
Q804	0TR534309AA	2SC5343Y NPN 5V 60V 50V 150MA 100NA 1
Q805	0TR102009AB	KRC102M(KRC1202) NPN 30V - 50V 100MA
Q806	0TR127409AB	KTA1274-Y PNP -5V -80V -80V -0.4A -0.
Q809	0TR319809AA	KTC3198(KTC1815) NPN 5V 60V 50V 150MA
Q810	0TR319809AA	KTC3198(KTC1815) NPN 5V 60V 50V 150MA
Q811	0TR534309AA	2SC5343Y NPN 5V 60V 50V 150MA 100NA 1
Q840	0TR421009CA	BF421 PNP -5V -0.3KV -0.3KV -0.05A -0
<b>DIODE</b>		
D101	0DD414809ED	1N4148 1V 100V 150MA 500MA 4NSEC 500M
D102	0DSVH00019A	BA282 1V 35V 100MA - - - DO35 TP 2P 1
D11	0DD414809ED	1N4148 1V 100V 150MA 500MA 4NSEC 500M
D301	0DD400509AA	1N4005 600V 1.1V 5UA 30A - DO41 TP 2P
D302	0DD414809ED	1N4148 1V 100V 150MA 500MA 4NSEC 500M
D401	0DRSA00211A	FMV-205GUR 1.7KV 1.7V 50UA 50A 600NSE
D403	0DD414809ED	1N4148 1V 100V 150MA 500MA 4NSEC 500M

LOCA. NO	PART NO	DESCRIPTION
D405	0DRTW00164B	RGP15J 600V 1.3V 5UA 50A 250NSEC DO15
D406	0DRTW00164B	RGP15J 600V 1.3V 5UA 50A 250NSEC DO15
D407	0DD060009AC	TVR06J 600V 1.4V 10UA 25A 300NSEC DO4
D414	0DRTW00164B	RGP15J 600V 1.3V 5UA 50A 250NSEC DO15
D444	0DD060009AC	TVR06J 600V 1.4V 10UA 25A 300NSEC DO4
D606	0DD414809ED	1N4148 1V 100V 150MA 500MA 4NSEC 500M
D815	0DD414809ED	1N4148 1V 100V 150MA 500MA 4NSEC 500M
D818	0DD060009AC	TVR06J 600V 1.4V 10UA 25A 300NSEC DO4
D820	0DD060009AC	TVR06J 600V 1.4V 10UA 25A 300NSEC DO4
D823	0DRTW00141A	SFAF504G 200V 975MV 10UA 125A 35NSEC
D826	0DRTW00141A	SFAF504G 200V 975MV 10UA 125A 35NSEC
D828	0DD060009AC	TVR06J 600V 1.4V 10UA 25A 300NSEC DO4
D829	0DD410000AD	RU4AM 600V 1.3V 10UA 70A 400NSEC R4 T
D845	0DZ150009AD	MTZJ15B 15V 13.89TO14.62V 25OHM 500MW
D846	0DD400509BB	UF4005(52MM) 600V 1.7V 10UA 30A 75NSE
D847	0DD060009AC	TVR06J 600V 1.4V 10UA 25A 300NSEC DO4
D901	0DD060009AC	TVR06J 600V 1.4V 10UA 25A 300NSEC DO4
D902	0DD060009AC	TVR06J 600V 1.4V 10UA 25A 300NSEC DO4
D903	0DD060009AC	TVR06J 600V 1.4V 10UA 25A 300NSEC DO4
D904	0DR140049AC	1N4004A 500V 1.1V 10UA 30A - DO41 TP
DB801	0DRTW00131C	TS6P05G 600V 1V 5UA 150A TS6P ST 4P 4
ZD101	0DZ330009DG	GDZJ33B 33V 30.32TO31.88V 65OHM 500MW
ZD401	0DZ510009BE	GDZ5.1B 5.1V 4.94TO5.2V 20OHM 500MW D
ZD402	0DZ120009AF	MTZJ12B 12V 11.44TO12.03V 25OHM 500MW
ZD501	0DZ510009DB	MTZJ5.1B 5.1V 4.94TO5.2V 70OHM 500MW
ZD502	0DZ820009AH	MTZJ8.2B 8.2V 7.78TO8.19V 20OHM 500MW
ZD601	0DZ820009AH	MTZJ8.2B 8.2V 7.78TO8.19V 20OHM 500MW
ZD827	0DZ750009AG	MTZJ7.5B 7.5V 7.07TO7.45V 20OHM 500MW
ZD910	0DZ510009BE	GDZ5.1B 5.1V 4.94TO5.2V 20OHM 500MW D
ZD911	0DZ510009BE	GDZ5.1B 5.1V 4.94TO5.2V 20OHM 500MW D
ZD912	0DZ510009BE	GDZ5.1B 5.1V 4.94TO5.2V 20OHM 500MW D
<b>CAPACITOR</b>		
C103	0CE475DK618	EGR475M050T1G1C11G 4.7uF 20% 50V 50MA
C107	0CE227DD618	EGR227M010T1G1E11G 220uF 20% 10V 255M
C108	0CE475DK618	EGR475M050T1G1C11G 4.7uF 20% 50V 50MA
C109	0CE226DK618	SMS5.0TP50VB22M 22uF 20% 50V 108MA -4
C1103	0CE4763F618	ESF476M016T1A5E05G 47uF 20% 16V 60MA
C1111	0CQZVBK002C	PCX2 335 91592 0.22uF 10% 275V MPP -4
C112	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R -
C113	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R -
C114	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C115	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C1201	0CN4710K519	RH UP050 B471K-B-B 470pF 10% 50V Y5P
C1202	0CN4710K519	RH UP050 B471K-B-B 470pF 10% 50V Y5P
C1409	0CF4342U460	PCMP 389 52434 0.43UF 5% 400V MPP -40
C1410	181-013M	MPP224J2GD 220nF 5% 400V MPP -40TO+85
C1421	181-010H	PPN393K2GH 39nF 10% 400V PP -40TO+85C
C1479	0CF4342U460	PCMP 389 52434 0.43UF 5% 400V MPP -40



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
C1490	0CF7041R460	PCMP389 42704 0.7uF 5% 250V MPP -40TO
C17	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R -
C201	0CE226DF618	EGR226M016T1G1C11G 22uF 20% 16V 75MA
C202	0CN4710K519	RH UP050 B471K-B-B 470pF 10% 50V Y5P
C203	0CN1010K519	RH UP050 B101K-B-B 100pF 10% 50V Y5P
C204	0CN4710K519	RH UP050 B471K-B-B 470pF 10% 50V Y5P
C205	0CN1010K519	RH UP050 B101K-B-B 100pF 10% 50V Y5P
C206	0CN1010K519	RH UP050 B101K-B-B 100pF 10% 50V Y5P
C207	0CN4710K519	RH UP050 B471K-B-B 470pF 10% 50V Y5P
C208	0CE226DF618	EGR226M016T1G1C11G 22uF 20% 16V 75MA
C209	0CN4710K519	RH UP050 B471K-B-B 470pF 10% 50V Y5P
C210	0CN1010K519	RH UP050 B101K-B-B 100pF 10% 50V Y5P
C210	0CN4710K519	RH UP050 B471K-B-B 470pF 10% 50V Y5P
C212	0CN1010K519	RH UP050 B101K-B-B 100pF 10% 50V Y5P
C213	0CN4710K519	RH UP050 B471K-B-B 470pF 10% 50V Y5P
C214	0CN1010K519	RH UP050 B101K-B-B 100pF 10% 50V Y5P
C215	0CN4710K519	RH UP050 B471K-B-B 470pF 10% 50V Y5P
C217	0CN4710K519	RH UP050 B471K-B-B 470pF 10% 50V Y5P
C219	0CN4710K519	RH UP050 B471K-B-B 470pF 10% 50V Y5P
C224	0CE226DF618	EGR226M016T1G1C11G 22uF 20% 16V 75MA
C225	0CE226DF618	EGR226M016T1G1C11G 22uF 20% 16V 75MA
C270	0CE227DD618	EGR227M010T1G1E11G 220uF 20% 10V 255M
C271	0CE227DD618	EGR227M010T1G1E11G 220uF 20% 10V 255M
C301	0CQ3931N509	PEI393K2AT 39nF 10% 100V PE -40TO+85C
C302	0CQ3931N509	PEI393K2AT 39nF 10% 100V PE -40TO+85C
C303	181-091D	DEHR33A102KN2A 1nF 10% 1000V Y5R -25T
C304	0CE107DK618	EGR107M050T6G1G11G 100uF 20% 50V 270M
C306	0CF1541L438	PCMT 365 76154 150nF 5% 63V MPE -40TO
C307	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R -
C308	0CE476DK618	SMS5.0TP50VB47M 47uF 20% 50V 181MA -4
C309	0CN4710K519	RH UP050 B471K-B-B 470pF 10% 50V Y5P
C310	0CQ1031N509	PEI103K2AT 10nF 10% 100V PE -40TO+85C
C402	0CE475DK618	EGR475M050T1G1C11G 4.7uF 20% 50V 50MA
C403	0CK1520W515	DCM152K30Y5PL6FJ5A 1.5nF 10% 500V Y5P
C404	0CE106DF618	SMS5.0TP16VB10M 10uF 20% 16V 72MA -4
C405	181-091Y	LYRM28681KXA 680pF 10% 2000V Y5R -25T
C408	0CE685BK652	KM5.0MC50VBBP-S6.8M 6.8uF 20% 50V 44M
C411	0CE105BR618	ESM105M250T1G5E11G 1uF 20% 250V 15MA
C413	0CK2220W515	DCM222K34Y5PL6FJ5A 2.2nF 10% 500V Y5P
C414	0CK2710W515	DCM271K20Y5PL6FJ5A 270pF 10% 500V Y5P
C415	0CE108DH618	SMS5.0TP25VB1000M 1000uF 20% 25V 1.34
C416	181-009R	PPN223K2DH 22nF 10% 200V PP -40TO+85C
C417	0CK2710W515	DCM271K20Y5PL6FJ5A 270pF 10% 500V Y5P
C419	0CE108DH618	SMS5.0TP25VB1000M 1000uF 20% 25V 1.34
C420	181-009W	PPN563K2DH 56nF 10% 200V PP -40TO+85C
C421	0CK2710W515	DCM271K20Y5PL6FJ5A 270pF 10% 500V Y5P
C422	0CE475DR618	EGR475M250T1G1G11G 4.7uF 20% 250V 70M
C423	0CE107DJ618	SMS5.0TP35VB100M 100uF 20% 35V 291MA
C461	0CF4732Y460	PCMP 389 62473 0.047UF 5% 630V MPP -4
C463	0CF15312460	PCMP384 92153 0.015uF 5% 2000V MPP -4
C501	0CF2241L438	PCMT 365 76224 220nF 5% 63V MPE -40TO
C502	0CE225DK618	EGR225M050T1G1C11G 2.2uF 20% 50V 20MA

LOCA. NO	PART NO	DESCRIPTION
C503	0CQ6821N509	PEI682K2AT 6.8nF 10% 100V PE -40TO+85
C504	0CE107DD618	SMS5.0TP10VB100M 100uF 20% 10V 157MA
C505	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C506	0CQ1031N509	PEI103K2AT 10nF 10% 100V PE -40TO+85C
C509	0CE106DF618	SMS5.0TP16VB10M 10uF 20% 16V 72MA -4
C510	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C512	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C513	0CE337DD618	SMS5.0TP10VB330M 330uF 20% 10V 386MA
C516	0CE226DD618	EGR226M010T1G1C11G 22uF 20% 10V 75MA
C519	181-007F	ECQ-V1H224JL3(TR) 220nF 5% 50V MPE -4
C520	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C530	0CN2220F569	RH EP050 X222K-B-B 2.2nF 10% 16V X7R
C531	0CN2230H949	RH TP050 F223Z-B-B 22nF -20TO+80% 25V
C532	0CF4741L438	PCMT 365 76474 470nF 5% 63V MPE -40TO
C533	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C535	0CF4741L438	PCMT 365 76474 470nF 5% 63V MPE -40TO
C536	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C538	0CF4741L438	PCMT 365 76474 470nF 5% 63V MPE -40TO
C540	0CF4741L438	PCMT 365 76474 470nF 5% 63V MPE -40TO
C542	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C544	0CF4741L438	PCMT 365 76474 470nF 5% 63V MPE -40TO
C546	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C547	0CF4741L438	PCMT 365 76474 470nF 5% 63V MPE -40TO
C548	0CN2220F569	RH EP050 X222K-B-B 2.2nF 10% 16V X7R
C551	0CE226DD618	EGR226M010T1G1C11G 22uF 20% 10V 75MA
C553	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C554	0CE107DD618	SMS5.0TP10VB100M 100uF 20% 10V 157MA
C556	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C557	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C558	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C559	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C561	0CQ3931N509	PEI393K2AT 39nF 10% 100V PE -40TO+85C
C562	0CQ3931N509	PEI393K2AT 39nF 10% 100V PE -40TO+85C
C563	0CN1010K519	RH UP050 B101K-B-B 100pF 10% 50V Y5P
C564	0CE106DK618	SMS5.0TP50VB10M 10uF 20% 50V 72MA -40
C569	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C570	0CE107DF618	EGR107M016T1G1C11G 100uF 20% 16V 160M
C571	0CE336DD618	EGR336M010T1G1C11G 33uF 20% 10V 85MA
C572	0CN4710K519	RH UP050 B471K-B-B 470pF 10% 50V Y5P
C573	0CX1000K409	RH UP050SL100J-B-B 10pF 5% 50V S2L -2
C574	0CX1000K409	RH UP050SL100J-B-B 10pF 5% 50V S2L -2
C575	0CX1000K409	RH UP050SL100J-B-B 10pF 5% 50V S2L -2
C576	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C577	0CE106DF618	SMS5.0TP16VB10M 10uF 20% 16V 72MA -4
C578	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C579	0CE106DF618	SMS5.0TP16VB10M 10uF 20% 16V 72MA -4
C580	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C581	0CE107DD618	SMS5.0TP10VB100M 100uF 20% 10V 157MA
C584	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C585	0CE225DK618	EGR225M050T1G1C11G 2.2uF 20% 50V 20MA
C586	0CE225DK618	EGR225M050T1G1C11G 2.2uF 20% 50V 20MA
C587	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R -

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

LOCA. NO	PART NO	DESCRIPTION
C590	0CE225DK618	EGR225M050T1G1C11G 2.2uF 20% 50V 20MA
C591	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C592	0CE107DD618	SMS5.0TP10VB100M 100uF 20% 10V 157MA
C594	0CQ1031N509	PEI103K2AT 10nF 10% 100V PE -40TO+85C
C595	181-301C	NPP100V154J10F 150nF 5% 100V PP -40TO
C596	0CN1040K949	CH UP050 F104Z-B-B Z 100nF -20TO+80%
C596	0CN2230H949	RH TP050 F223Z-B-B 22nF -20TO+80% 25V
C597	0CE106DF618	SMS5.0TP16VB10M 10uF 20% 16V 72MA -4
C599	0CN2230H949	RH TP050 F223Z-B-B 22nF -20TO+80% 25V
C602	0CE108DH618	SMS5.0TP25VB1000M 1000uF 20% 25V 1.34
C603	0CF2241L438	PCMT 365 76224 220nF 5% 63V MPE -40TO
C604	0CN6810K519	RH UP050 B681K-B-B 680pF 10% 50V Y5P
C605	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R -
C607	0CE476DH618	SMS5.0TP25VB47M 47uF 20% 25V 131MA -4
C609	0CN6810K519	RH UP050 B681K-B-B 680pF 10% 50V Y5P
C611	0CF2241L438	PCMT 365 76224 220nF 5% 63V MPE -40TO
C807	181-091Q	LYRM5471KHA 470pF 10% 1000V Y5R -25TO
C808	0CE477BH618	ESM477M025T1G5H15G 470uF 20% 25V 510M
C809	0CE228BF618	ESM228M016T1G5K25G 2200uF 20% 16V 970
C811	0CE335CK636	ERN335M050T1G5C11G 3.3uF 20% 50V 30MA
C812	0CK47101515	DCH471K26Y5PN6FJ5A 470pF 10% 1000V Y5
C813	0CE476DD618	EGR476M010T1G1C11G 47uF 20% 10V 105MA
C814	181-091W	LYRM27471KX1A 470pF 10% 2000V Y5R -25
C816	0CE227DP61A	EGR227M160T1G1M32G 220uF 20% 160V 810
C818	0CQ2231N509	PEI223K2AT 22nF 10% 100V PE -40TO+85C
C820	181-120N	SDE102M09FS1 1nF 20% 4000V Y5U -25TO+
C821	181-091Q	LYRM5471KHA 470pF 10% 1000V Y5R -25TO
C822	0CE108DD618	SMS5.0TP10VB1000M 1000uF 20% 10V 854M
C823	181-120N	SDE102M09FS1 1nF 20% 4000V Y5U -25TO+
C826	0CE108DD618	SMS5.0TP10VB1000M 1000uF 20% 10V 854M
C829	0CE476DD618	EGR476M010T1G1C11G 47uF 20% 10V 105MA
C830	0CE3386H610	EGR338M025K6G1M26G 3300uF 20% 25V 1.8
C831	0CK4710W515	DCM471K20Y5PL6FJ5A 470pF 10% 500V Y5P
C832	181-001U	LTW477M450S1A5T50G 470uF 20% 450V 2.3
C833	0CK10201515	DCH102K34Y5PN6FJ5A 1nF 10% 1000V Y5P
C834	0CK10201515	DCH102K34Y5PN6FJ5A 1nF 10% 1000V Y5P
C835	0CQZVBK002A	PCX2 335 M9729 0.1uF 20% 275V MPP -40
C836	0CK4710W515	DCM471K20Y5PL6FJ5A 470pF 10% 500V Y5P
C837	181-001Y	SMH450VN330M 330uF 20% 450V 1.55A -25
C838	0CE227BK618	ESM227M050T1G5H17G 220uF 20% 50V 400M
C839	0CE106DH618	SMS5.0TP25VB10M 10uF 20% 25V 72MA -40
C840	0CE226DK618	SMS5.0TP50VB22M 22uF 20% 50V 108MA -4
C841	181-011B	MPPS102J3VD 1nF 5% 1.6KV MPP -40TO+85
C842	0CQ3321N509	PEI332KA2T 3.3nF 10% 100V PE -40TO+85
C843	181-007C	ECQV1H104JZ3 100nF 5% 50V MPE -40TO+8
C844	0CQ1031N509	PEI103K2AT 10nF 10% 100V PE -40TO+85C
C846	0CE107DD618	SMS5.0TP10VB100M 100uF 20% 10V 157MA
C848	0CE107CQ650	SHL5.0MC200VB100M 100uF 20% 200V 601M
C849	0CE477DD618	EGR477M010T6G1G11G 470uF 20% 10V 425M
C851	0CN1020K519	RH UP050 B102K-B-B 1nF 10% 50V Y5P -2
C858	181-091X	LYRM27561KXA 560pF 10% 2000V Y5R -25T
C861	181-120N	SDE102M09FS1 1nF 20% 4000V Y5U -25TO+

LOCA. NO	PART NO	DESCRIPTION
C901	0CE475DR618	EGR475M250T1G1G11G 4.7uF 20% 250V 70M
C903	181-033S	DCH122K39Y5PP7VK7A 1.2nF 10% 2000V Y5
C904	0CE475DR618	EGR475M250T1G1G11G 4.7uF 20% 250V 70M
C906	0CN1030F679	RH EP050 Y103M-B-B 10nF 20% 16V X5R -
C910	0CN5610K519	RH UP050 B561K-B-B 560pF 10% 50V Y5P
R1201	0CN1010K519	RH UP050 B101K-B-B 100pF 10% 50V Y5P
R1202	0CN1010K519	RH UP050 B101K-B-B 100pF 10% 50V Y5P
<b>COIL &amp; INDUCTOR</b>		
J549	0LA0121K119	Inductor,Wire Wound,Axial LAL02TB1R2K 1.2UH
L102	0LA0102K139	Inductor,Wire Wound,Axial LAL04TB100K 10UH
L1102	0LA0102K119	Inductor,Wire Wound,Axial LAL02TB100K 10UH
L1407	6140VB0034E	Coil,Choke JS-D018 400uH
L1408	61409B0003C	Coil,Choke JS-D019 130uH
L204	0LA0102K119	Inductor,Wire Wound,Axial LAL02TB100K 10UH
L206	0LA0102K119	Inductor,Wire Wound,Axial LAL02TB100K 10UH
L207	0LA0102K119	Inductor,Wire Wound,Axial LAL02TB100K 10UH
L401	150-717K	Coil,Choke RN-29FA11 1.1uH 50V
L402	6140VY0024F	Coil,Linearity JS-E021 20uH
L501	0LA0121K119	Inductor,Wire Wound,Axial LAL02TB1R2K 1.2UH
L503	0LA0121K119	Inductor,Wire Wound,Axial LAL02TB1R2K 1.2UH
L504	0LA0121K119	Inductor,Wire Wound,Axial LAL02TB1R2K 1.2UH
L505	0LA0121K119	Inductor,Wire Wound,Axial LAL02TB1R2K 1.2UH
L506	0LA0121K119	Inductor,Wire Wound,Axial LAL02TB1R2K 1.2UH
L507	0LA0121K119	Inductor,Wire Wound,Axial LAL02TB1R2K 1.2UH
L509	0LA0102K119	Inductor,Wire Wound,Axial LAL02TB100K 10UH
L511	0LA0121K119	Inductor,Wire Wound,Axial LAL02TB1R2K 1.2UH
L514	0LA0121K119	Inductor,Wire Wound,Axial LAL02TB1R2K 1.2UH
L548	0LA0121K119	Inductor,Wire Wound,Axial LAL02TB1R2K 1.2UH
L801	150-C02E	Coil,Choke 50uH 50V 0A 12X17MM
T401	151-C02M	Transformer,Linear EI19 10V 100V 200MH 1A 1A
T402	6174V-5003W	Transformer,FBT BSC29-N2464 - 125V
T801	61709MC003B	Transformer,Switching EER5345 350uH 100uH
T801	6170VZ0007A	Transformer,Switching 6170VZ0007A TS4134
<b>CONNECTOR</b>		
C1	366-036A	STAPLE
C2	387-916M	387-916M BH10009 BH10009 800mM NONE 1
C3	450-018C	BS901 - STRAIGHT RF ADAPTER WIRE BK N
C4	6631V25014D	GIL-G-03 35097-9702_35098-9702 900mM
C5	6631V25034E	TJC25-4Y 35097-9702_35098-9702 500mM
C6	6631V39015B	GP390-04S-CS 1-1123722-04 150mM 3.96M
JW401	387-907B	MXH8610 BH10009 150mM 1.00MM 1P UL161
JW8A	387-907C	387-907C MXH8610 BH10009 200mM 3.00MM
JW8B	387-907C	387-907C MXH8610 BH10009 200mM 3.00MM
P101	366-932B	GIL-G-03P-S3T2-E 3P 2.50MM 1R STRAIGH
P1113	387-552S	YFH800-02 YFH800-02 400mM 8.00MM 2P U
P11A	366-932C	GIL-G-04P-S3T2-E 4P 2.50MM 1R STRAIGH
P12A	366-932B	GIL-G-03P-S3T2-E 3P 2.50MM 1R STRAIGH
P12B	387-A03H	GIL-G GIL-J 450mM 2.50MM 3 UL1007 AWG
P13A	366-921G	GIL-G-08P-S3T2-E 8P 2.50MM 1R STRAIGH
P1407A	6602V39001B	GP390-04P-TS 4P 3.96MM 1R STRAIGHT DI

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LOCA. NO	PART NO	DESCRIPTION
P201A	366-932E	GIL-G-06P-S3T2-E 6P 2.50MM 1R STRAIGH
P201B	387-A06J	GIL-G-06 GIL-J-06 500mM 2.50MM 6P UL1
P22B	387-A04F	387-A04F GIL-G-04 GIL-J-04 350mM 2.50
P401	366-043K	35929-0410 4P 10.00MM 1R STRAIGHT DIP
P403A	6631V25A16G	GIL-J-04 GIL-J-04 400mM 2.50MM 4P UL1
P407	6602V39002B	YW396-04V 4P 3.96MM 1R STRAIGHT DIP-T
P601	366-932B	GIL-G-03P-S3T2-E 3P 2.50MM 1R STRAIGH
P602	366-932C	GIL-G-04P-S3T2-E 4P 2.50MM 1R STRAIGH
P902B	387-B08G	GIL-G GIL-J 400mM 2.50MM 8P UL1185 AW
<b>RESISTOR</b>		
FR403	0RP0050H709	SPF92T1KR050 0.05OHM 10% 1/2W 3.2X2.0
FR404	0RP0050H709	SPF92T1KR050 0.05OHM 10% 1/2W 3.2X2.0
FR405	0RP0050H709	SPF92T1KR050 0.05OHM 10% 1/2W 3.2X2.0
FR901	0RF0391K607	FNS02T3J3R90 3.9OHM 5% 2W 12.0X4.0MM
J230	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
J231	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
J564	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
J565	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
L1201	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
L1202	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
L203	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
L208	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
L214	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
L215	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
L216	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
L217	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
L510	0RD0222A609	RDM92T1J22R0 22OHM 5% 1/2W 6.5X2.3MM
R101	0RD3902F609	RD-96T1J39K0 39KOHM 5% 1/6W 3.2X1.8MM
R103	0RD2202F609	RD-96T1J22K0 22KOHM 5% 1/6W 3.2X1.8MM
R110	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R111	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R1110	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R1111	0RKZVTA001K	RN-92T1J470K 470KOHM 5% 1/2W 9.0X3.0M
R112	0RD6802F609	RD-96T1J68K0 68KOHM 5% 1/6W 3.2X1.8MM
R1136	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8M
R1143	0RD6200F609	RD-96T1J620R 620OHM 5% 1/6W 3.2X1.8MM
R1146	0RD3601F609	RD-96T1J3K60 3.6KOHM 5% 1/6W 3.2X1.8M
R1147	0RD1501F609	RD-96T1J1K50 1.5KOHM 5% 1/6W 3.2X1.8M
R1148	0RD1801F609	RD-96T1J1K80 1.8KOHM 5% 1/6W 3.2X1.8M
R1149	0RD2401F609	RD-96T1J2K40 2.4KOHM 5% 1/6W 3.2X1.8M
R1150	0RD5601F609	RD-96T1J5K60 5.6KOHM 5% 1/6W 3.2X1.8M
R117	0RD1002F609	RD-96T1J10K0 10KOHM 5% 1/6W 3.2X1.8MM
R119	0RD3301F609	RD-96T1J3K30 3.3KOHM 5% 1/6W 3.2X1.8M
R120	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8M
R121	0RD2201F609	RD-96T1J2K20 2.2KOHM 5% 1/6W 3.2X1.8M
R15	0RD1002F609	RD-96T1J10K0 10KOHM 5% 1/6W 3.2X1.8MM
R201	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R201	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R202	0RD0752F609	RD-96T1J75R0 75OHM 5% 1/6W 3.2X1.8MM
R203	0RD0682F609	RD-96T1J68R0 68OHM 5% 1/6W 3.2X1.8MM
R204	0RD0752F609	RD-96T1J75R0 75OHM 5% 1/6W 3.2X1.8MM

LOCA. NO	PART NO	DESCRIPTION
R205	0RD0752F609	RD-96T1J75R0 75OHM 5% 1/6W 3.2X1.8MM
R206	0RD0752F609	RD-96T1J75R0 75OHM 5% 1/6W 3.2X1.8MM
R207	0RD5602F609	RD-96T1J56K0 56KOHM 5% 1/6W 3.2X1.8MM
R209	0RD0682F609	RD-96T1J68R0 68OHM 5% 1/6W 3.2X1.8MM
R212	0RD1201A609	RDM92T1J1K20 1.2KOHM 5% 1/2W 6.5X2.3M
R213	0RD1201F609	RD-96T1J1K20 1.2KOHM 5% 1/6W 3.2X1.8M
R213	0RD1201F609	RD-96T1J1K20 1.2KOHM 5% 1/6W 3.2X1.8M
R214	0RD5602F609	RD-96T1J56K0 56KOHM 5% 1/6W 3.2X1.8MM
R215	0RD2402F609	RD-96T1J24K0 24KOHM 5% 1/6W 3.2X1.8MM
R216	0RD4702F609	RD-96T1J47K0 47KOHM 5% 1/6W 3.2X1.8MM
R217	0RD4702F609	RD-96T1J47K0 47KOHM 5% 1/6W 3.2X1.8MM
R220	0RD0752F609	RD-96T1J75R0 75OHM 5% 1/6W 3.2X1.8MM
R221	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R221	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R222	0RD1201F609	RD-96T1J1K20 1.2KOHM 5% 1/6W 3.2X1.8M
R223	0RD1201F609	RD-96T1J1K20 1.2KOHM 5% 1/6W 3.2X1.8M
R225	0RD4702F609	RD-96T1J47K0 47KOHM 5% 1/6W 3.2X1.8MM
R226	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R227	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R228	0RD4702F609	RD-96T1J47K0 47KOHM 5% 1/6W 3.2X1.8MM
R229	0RD2402F609	RD-96T1J24K0 24KOHM 5% 1/6W 3.2X1.8MM
R23	0RD0151A609	RDM92T1J1R50 1.5OHM 5% 1/2W 6.5X2.3MM
R252	0RD4702F609	RD-96T1J47K0 47KOHM 5% 1/6W 3.2X1.8MM
R253	0RD4702F609	RD-96T1J47K0 47KOHM 5% 1/6W 3.2X1.8MM
R301	0RD2701F609	RD-96T1J2K70 2.7KOHM 5% 1/6W 3.2X1.8M
R303	0RD2400A609	RDM92T1J240R 240OHM 5% 1/2W 6.5X2.3MM
R304	0RD0561A609	RDM92T1J5R60 5.6OHM 5% 1/2W 6.5X2.3MM
R306	0RD1002F609	RD-96T1J10K0 10KOHM 5% 1/6W 3.2X1.8MM
R307	0RD3601F609	RD-96T1J3K60 3.6KOHM 5% 1/6W 3.2X1.8M
R308	0RN4702F409	RN-96T1F47K0 47KOHM 1% 1/6W 3.2X1.8MM
R309	0RD4702F609	RD-96T1J47K0 47KOHM 5% 1/6W 3.2X1.8MM
R310	0RD4702F609	RD-96T1J47K0 47KOHM 5% 1/6W 3.2X1.8MM
R311	0RN0301J607	RN-01T3J3R00 30OHM 5% 1W 12.0X4.0MM NO
R314	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8M
R315	0RN0301J607	RN-01T3J3R00 30OHM 5% 1W 12.0X4.0MM NO
R316	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R317	0RD2402F609	RD-96T1J24K0 24KOHM 5% 1/6W 3.2X1.8MM
R318	0RN2001F409	RN-96T1F2K00 2KOHM 1% 1/6W 3.2X1.8MM
R319	0RN3002F409	RN-96T1F30K0 30KOHM 1% 1/6W 3.2X1.8MM
R320	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R321	0RD0561A609	RDM92T1J5R60 5.6OHM 5% 1/2W 6.5X2.3MM
R322	0RD1501F609	RD-96T1J1K50 1.5KOHM 5% 1/6W 3.2X1.8M
R323	0RD2702F609	RD-96T1J27K0 27KOHM 5% 1/6W 3.2X1.8MM
R324	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R325	0RS2701H609	RS-92T1J2K70 2.7KOHM 5% 1/2W 9.0X3.0M
R326	0RD1501A609	RDM92T1J1K50 1.5KOHM 5% 1/2W 6.5X2.3M
R328	0RN4702F409	RN-96T1F47K0 47KOHM 1% 1/6W 3.2X1.8MM
R340	0RD3000F609	RD-96T1J300R 300OHM 5% 1/6W 3.2X1.8MM
R341	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R403	0RD5600A609	RDM92T1J560R 560OHM 5% 1/2W 6.5X2.3MM
R404	0RP0050H709	SPF92T1KR050 0.05OHM 10% 1/2W 3.2X2.0
R407	0RD0332A609	RDM92T1J33R0 33OHM 5% 1/2W 6.5X2.3MM

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

LOCA. NO	PART NO	DESCRIPTION
R408	0RD6801F609	RD-96T1J6K80 6.8KOHM 5% 1/6W 3.2X1.8MM
R409	0RS2002H609	RS-92T1J20K0 20KOHM 5% 1/2W 9.0X3.0MM
R410	0RS5602H609	RS-92T1J56K0 56KOHM 5% 1/2W 9.0X3.0MM
R411	0RS1001H609	RS-92T1J1K00 1KOHM 5% 1/2W 9.0X3.0MM
R412	0RD7501A609	RDM92T1J7K50 7.5KOHM 5% 1/2W 6.5X2.3M
R415	0RD1002F609	RD-96T1J10K0 10KOHM 5% 1/6W 3.2X1.8MM
R417	0RD5103F609	RD-96T1J510K 510KOHM 5% 1/6W 3.2X1.8M
R433	0RS1801K619	SMR02R1J1K8R 1.8KOHM 5% 2W 8.6X3.5MM
R435	0RS2700K607	RSD02T3J270R 270OHM 5% 2W 12.0X4.0MM
R438	0RS0221K619	SML02R0J2R20 2.2OHM 5% 2W 8.6X3.5MM -
R440	0RMZVBK002D	RSR05V-J15K0 15KOHM 5% 5W 14X9.5X25.5
R448	0RS0221K619	SML02R0J2R20 2.2OHM 5% 2W 8.6X3.5MM -
R506	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R506	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R507	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R507	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R509	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R510	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R511	0RD3301F609	RD-96T1J3K30 3.3KOHM 5% 1/6W 3.2X1.8M
R512	0RD3301F609	RD-96T1J3K30 3.3KOHM 5% 1/6W 3.2X1.8M
R513	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R514	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R515	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R518	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R519	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R521	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R525	0RD0752F609	RD-96T1J75R0 75OHM 5% 1/6W 3.2X1.8MM
R534	0RD1504F609	CR1/8TB1M5J 1.5MOHM 5% 1/8W 3.2X1.8MM
R535	0RD2402F609	RD-96T1J24K0 24KOHM 5% 1/6W 3.2X1.8MM
R536	0RD1801F609	RD-96T1J1K80 1.8KOHM 5% 1/6W 3.2X1.8M
R537	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R538	0RD1803F609	RD-96T1J180K 180KOHM 5% 1/6W 3.2X1.8M
R539	0RD1003F609	RD-96T1J100K 100KOHM 5% 1/6W 3.2X1.8M
R540	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R543	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R545	0RD0752F609	RD-96T1J75R0 75OHM 5% 1/6W 3.2X1.8MM
R547	0RD1203F609	RD-96T1J120K 120KOHM 5% 1/6W 3.2X1.8M
R548	0RD2200F609	RD-96T1J220R 220OHM 5% 1/6W 3.2X1.8MM
R549	0RD2201F609	RD-96T1J2K20 2.2KOHM 5% 1/6W 3.2X1.8M
R550	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R551	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R552	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R553	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R554	0RD1501F609	RD-96T1J1K50 1.5KOHM 5% 1/6W 3.2X1.8M
R554	0RD3900F609	RD-96T1J390R 390OHM 5% 1/6W 3.2X1.8MM
R555	0RD6800F609	RD-96T1J680R 680OHM 5% 1/6W 3.2X1.8MM
R556	0RN3902F409	RN-96T1F39K0 39KOHM 1% 1/6W 3.2X1.8MM
R557	0RD1202F609	RD-96T1J12K0 12KOHM 5% 1/6W 3.2X1.8MM
R558	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R563	0RD1501A609	RDM92T1J1K50 1.5KOHM 5% 1/2W 6.5X2.3M
R566	0RN4701F409	RN-96T1F4K70 4.7KOHM 1% 1/6W 3.2X1.8M
R567	0RN4701F409	RN-96T1F4K70 4.7KOHM 1% 1/6W 3.2X1.8M

LOCA. NO	PART NO	DESCRIPTION
R568	0RD0912F609	RD-96T1J91R0 91OHM 5% 1/6W 3.2X1.8MM
R569	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R569	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R572	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R576	0RD0912F609	RD-96T1J91R0 91OHM 5% 1/6W 3.2X1.8MM
R577	0RD0912F609	RD-96T1J91R0 91OHM 5% 1/6W 3.2X1.8MM
R580	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8M
R581	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8M
R582	0RD4702F609	RD-96T1J47K0 47KOHM 5% 1/6W 3.2X1.8MM
R583	0RD4702F609	RD-96T1J47K0 47KOHM 5% 1/6W 3.2X1.8MM
R584	0RD0101F609	RD-96T1J1R00 1OHM 5% 1/6W 3.2X1.8MM -
R585	0RD0101F609	RD-96T1J1R00 1OHM 5% 1/6W 3.2X1.8MM -
R587	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R591	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R592	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R595	0RD6800F609	RD-96T1J680R 680OHM 5% 1/6W 3.2X1.8MM
R606	0RD8202F609	RD-96T1J82K0 82KOHM 5% 1/6W 3.2X1.8MM
R608	0RD4702F609	RD-96T1J47K0 47KOHM 5% 1/6W 3.2X1.8MM
R611	0RD1202F609	RD-96T1J12K0 12KOHM 5% 1/6W 3.2X1.8MM
R612	0RD8202F609	RD-96T1J82K0 82KOHM 5% 1/6W 3.2X1.8MM
R613	0RD4702F609	RD-96T1J47K0 47KOHM 5% 1/6W 3.2X1.8MM
R616	0RD3003F609	RD-96T1J300K 300KOHM 5% 1/6W 3.2X1.8M
R617	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R618	0RD4702F609	RD-96T1J47K0 47KOHM 5% 1/6W 3.2X1.8MM
R619	0RD3003F609	RD-96T1J300K 300KOHM 5% 1/6W 3.2X1.8M
R801	0RN2702F409	RN-96T1F27K0 27KOHM 1% 1/6W 3.2X1.8MM
R811	0RD1002F609	RD-96T1J10K0 10KOHM 5% 1/6W 3.2X1.8MM
R812	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8M
R813	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R813	0RD4702F609	RD-96T1J47K0 47KOHM 5% 1/6W 3.2X1.8MM
R816	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8M
R817	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8M
R819	0RP0050H709	SPF92T1KR050 0.05OHM 10% 1/2W 3.2X2.0
R820	0RD1000F609	RD-96T1J100R 100OHM 5% 1/6W 3.2X1.8MM
R821	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8M
R822	0RP0020J809	SPF01T1MR020 0.02OHM 20% 1W 6.5X2.3MM
R823	0RP0020J809	SPF01T1MR020 0.02OHM 20% 1W 6.5X2.3MM
R824	0RD2701F609	RD-96T1J2K70 2.7KOHM 5% 1/6W 3.2X1.8M
R825	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R826	0RD0472F609	RD-96T1J47R0 47OHM 5% 1/6W 3.2X1.8MM
R829	0RP0050H709	SPF92T1KR050 0.05OHM 10% 1/2W 3.2X2.0
R830	0RN1803F409	RN-96T1F180K 180KOHM 1% 1/6W 3.2X1.8M
R831	0RN5602F409	RN-96T1F56K0 56KOHM 1% 1/6W 3.2X1.8MM
R832	0RD3902F609	RD-96T1J39K0 39KOHM 5% 1/6W 3.2X1.8MM
R834	0RN4701F409	RN-96T1F4K70 4.7KOHM 1% 1/6W 3.2X1.8M
R835	0RKZVTA001C	RN-92T1J8M20 8.2MOHM 5% 1/2W 9.0X3.0M
R836	0RD1001F609	RD-96T1J1K00 1KOHM 5% 1/6W 3.2X1.8MM
R837	0RD5601F609	RD-96T1J5K60 5.6KOHM 5% 1/6W 3.2X1.8M
R838	0RD2200A609	RDM92T1J220R 220OHM 5% 1/2W 6.5X2.3MM
R841	0RF0201K607	FNS02T3J2R00 2OHM 5% 2W 12.0X4.0MM -
R842	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8M
R843	0RD2203F609	RD-96T1J220K 220KOHM 5% 1/6W 3.2X1.8M

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LOCA. NO	PART NO	DESCRIPTION
R844	0RD6801F609	RD-96T1J6K80 6.8KOHM 5% 1/6W 3.2X1.8M
R845	0RD0471F609	RD-96T1J4R70 4.7OHM 5% 1/6W 3.2X1.8MM
R847	0RD3900F609	RD-96T1J390R 390OHM 5% 1/6W 3.2X1.8MM
R850	0RD4701F609	RD-96T1J4K70 4.7KOHM 5% 1/6W 3.2X1.8M
R851	0RD8202F609	RD-96T1J82K0 82KOHM 5% 1/6W 3.2X1.8MM
R852	0RD1003F609	RD-96T1J100K 100KOHM 5% 1/6W 3.2X1.8M
R858	0RKZVTA001K	RN-92T1J470K 470KOHM 5% 1/2W 9.0X3.0M
R859	0RD1002A609	RDM92T1J10K0 10KOHM 5% 1/2W 6.5X2.3MM
R860	0RF0201K607	FNS02T3J2R00 20OHM 5% 2W 12.0X4.0MM -
R861	0RD3901F609	RD-96T1J3K90 3.9KOHM 5% 1/6W 3.2X1.8M
R901	0RD2200F609	RD-96T1J220R 220OHM 5% 1/6W 3.2X1.8MM
R902	0RD2200F609	RD-96T1J220R 220OHM 5% 1/6W 3.2X1.8MM
R903	0RD2200F609	RD-96T1J220R 220OHM 5% 1/6W 3.2X1.8MM
R906	0RD1201A609	RDM92T1J1K20 1.2KOHM 5% 1/2W 6.5X2.3M
R907	0RD1201A609	RDM92T1J1K20 1.2KOHM 5% 1/2W 6.5X2.3M
R908	0RD1201A609	RDM92T1J1K20 1.2KOHM 5% 1/2W 6.5X2.3M
R909	0RS2201H609	RSD92T1J2K20 2.2KOHM 5% 1/2W 6.5X2.3M
R910	0RS2201H609	RSD92T1J2K20 2.2KOHM 5% 1/2W 6.5X2.3M
R911	0RS2201H609	RSD92T1J2K20 2.2KOHM 5% 1/2W 6.5X2.3M
R912	0RD2204A609	RDM92T1J2M20 2.2MOHM 5% 1/2W 6.5X2.3M
R920	0RD4703A609	RDM92T1J470K 470KOHM 5% 1/2W 6.5X2.3M
R925	0RD2200F609	RD-96T1J220R 220OHM 5% 1/6W 3.2X1.8MM
<b>SWITCH</b>		
SW1101	140-315A	THVH472GBC 1C1P 12VDC 0.05A VERTICAL
SW1102	140-315A	THVH472GBC 1C1P 12VDC 0.05A VERTICAL
SW1103	140-315A	THVH472GBC 1C1P 12VDC 0.05A VERTICAL
SW1104	140-315A	THVH472GBC 1C1P 12VDC 0.05A VERTICAL
SW1105	140-315A	THVH472GBC 1C1P 12VDC 0.05A VERTICAL
SW1106	140-315A	THVH472GBC 1C1P 12VDC 0.05A VERTICAL
SW1111	6600VM2002A	SDKEA3012A AC 250VAC 8A 1PCS 2C1P HOR
<b>SPARK GAP, AXIAL</b>		
SG201	6918VAX002E	WSP-351M AXIAL 350V 350V - 7.5MM TP
SG901	165-004A	152F-L3N/S-23 RADIAL 1.5KV 1.5KV - 5M
SG902	165-004A	152F-L3N/S-23 RADIAL 1.5KV 1.5KV - 5M
SG903	165-004A	152F-L3N/S-23 RADIAL 1.5KV 1.5KV - 5M
SG904	6918VAX002H	WSP-122N AXIAL 1.2KV 1.2KV - - TP
SG911	6918VAX002E	WSP-351M AXIAL 350V 350V - 7.5MM TP
SG912	6918VAX002E	WSP-351M AXIAL 350V 350V - 7.5MM TP
SG913	6918VAX002E	WSP-351M AXIAL 350V 350V - 7.5MM TP
<b>FILTER &amp; CRYSTAL</b>		
FB401	125-022K	125-022K 20OHM 3.5X6MM AXIAL TP
FB802	125-022K	125-022K 20OHM 3.5X6MM AXIAL TP
FB803	125-022K	125-022K 20OHM 3.5X6MM AXIAL TP
FB833	125-022K	125-022K 20OHM 3.5X6MM AXIAL TP
FB844	125-022K	125-022K 20OHM 3.5X6MM AXIAL TP
FB845	125-022K	125-022K 20OHM 3.5X6MM AXIAL TP
FB846	125-022K	125-022K 20OHM 3.5X6MM AXIAL TP
T1111	6200JB8012T	6200JB8012T 10MH 31X31X25MM SQE2828S
T803	150-F06T	150-F06T 20MH 38X26X43MM SQE3535 RADI

LOCA. NO	PART NO	DESCRIPTION
X01	156-A01Z	HC-49/U 24.576MHZ 50PPM 24.576MHZ 50P
Z101	166-A01B	K3953M 33.90MHZ 38.90MHZ 17X3.9X8.7MM
Z102	6200QL3003G	K9650M(B39389-K9650-M100) 33.90_38.90
<b>JACK</b>		
JK1203	6613V00004Q	PJ6054Q 14.0MM 3RX1C ANGLE TR
JK201	6612M00005A	UPJ-R1-027 21P 21P/1C 3.81MM ANGLE DI
JK201	6612VJH011A	PPJ109A 15MM 2RX3C ANGLE TR 6PORTS_RE
JK202	6612VJH011X	PPJ109-22 15MM 2RX3C ANGLE TR 6PORTS_
JK202	6613V00025A	PSC002-01 24P SCART/RCA 14MM ANGLE DI
<b>MISCELLANEOUS</b>		
F1111	0FS4001B51D	Fuse,Time Delay 0218 004. GLASS 250V
F1111	0FS5001B51D	Fuse,Time Delay 0218 005. GLASS 250V
LD1101	0DD000000BA	LED,DIP SA5711-B DL-1LO(S) ROUND 5mM
PA1101	6712000011B	Receiver Module, KSM-2013TE2A 4.5TO5.5V
R855	6322TA080AB	Thermistor,NTC TP8D15LKBESMNR 8OHM
SK901	6620VBC003A	Socket,CRT PCS030A 8P 15.24MM
SW	SAA30042202	S/W,Firmware 3.14 407 MP MASTER
TH301	6322A90004A	Thermistor,NTC KC5B130L 300OHM 15% 2.671V
TH801	163-058D	Thermistor,PTC J503P83D070M290X 14OHM
TU101	6700MF0018A	Tuner,Analog TAEA-G011D PAL-B/G+I+M+D/K
VD1111	164-003G	Varistor, TVR14621 620V 10% 250pF 14MM
<b>ACCESSORIES</b>		
A1	38289U0579K	ManualUSER KA/RU/EN 112 TX
A1	38289U0579L	ManualUSER RU/EN 112 TX
A2	6710V00112S	Remote ControllerW/O PIP W/O TXT
A2	6710V00124V	Remote ControllerW/O PIP W/ TXT



**SVC. SHEET : 38549D0024A-S**



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